April 8, 2016

CERTIFIED MAIL
Return Receipt Requested

Mr. William Durham, Director
WVDEP Division of Air Quality
601 57th Street SE
Charleston, WV 25304

RE: M&G Polymers, Apple Grove, WV
Class II Administrative Update

Dear Mr. Director:

Enclosed is a Class II Administrative Update for M&G Polymers, USA, LLC. With this update, M&G proposes to remove CSS7 from the permit, increase the rates on CSS12 and 13 as a result of market requirements, and include various other minor changes and corrections identified in the preparation of the Title V permit renewal application. If you have any questions concerning this update, please contact me at (304) 576-4589

Sincerely,

Scott B. Whitwer
QHSE Manager

Enclosures:

Table of Contents
R13-1650R Revision Application
March 2016

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF AIR QUALITY

601 57th Street, SE
Charleston, WV 25304
(304) 926-0475
www.dep.wv.gov/daq

APPLICATION FOR NSR PERMIT AND TITLE V PERMIT REVISION (OPTIONAL)

PLEASE CHECK ALL THAT APPLY TO **NSR (45CSR13)** (IF KNOWN):

☐ **CONSTRUCTION** ☐ **MODIFICATION** ☐ **RELOCATION**
☐ **CLASS I ADMINISTRATIVE UPDATE** ☐ **TEMPORARY**
☒ **CLASS II ADMINISTRATIVE UPDATE** ☐ **AFTER-THE-FACT**

PLEASE CHECK TYPE OF **45CSR30 (TITLE V)** REVISION (IF ANY):

☐ **ADMINISTRATIVE AMENDMENT** ☒ **MINOR MODIFICATION**
☐ **SIGNIFICANT MODIFICATION**

IF ANY BOX ABOVE IS CHECKED, INCLUDE TITLE V REVISION INFORMATION AS **ATTACHMENT S** TO THIS APPLICATION

FOR TITLE V FACILITIES ONLY: Please refer to "Title V Revision Guidance" in order to determine your Title V Revision options (Appendix A, "Title V Permit Revision Flowchart") and ability to operate with the changes requested in this Permit Application.

Section I. General

1. Name of applicant *(as registered with the WV Secretary of State's Office):*
M&G Polymers, USA, LLC

2. Federal Employer ID No. ***(FEIN):***
1 2 1 2 9 9 8 9 0

3. Name of facility *(if different from above):*
M&G Polymers, USA, LLC

4. The applicant is the:
☐ **OWNER** ☐ **OPERATOR** ☒ **BOTH**

5A. Applicant's mailing address:
State Route 2

Apple Grove, West Virginia 25502-0088

5B. Facility's present physical address:
State Route 2

Apple Grove, West Virginia 25502-0088

6. **West Virginia Business Registration.** Is the applicant a resident of the State of West Virginia? ☒ **YES** ☐ **NO**

- If **YES,** provide a copy of the **Certificate of Incorporation/Organization/Limited Partnership** (one page) including any name change amendments or other Business Registration Certificate as **Attachment A.**
- If **NO,** provide a copy of the **Certificate of Authority/Authority of L.L.C./Registration** (one page) including any name change amendments or other Business Certificate as **Attachment A.**

7. If applicant is a subsidiary corporation, please provide the name of parent corporation:

8. Does the applicant own, lease, have an option to buy or otherwise have control of the *proposed site?* ☒ **YES** ☐ **NO**

- If **YES,** please explain: **Owns**

- If **NO,** you are not eligible for a permit for this source.

9. Type of plant or facility (stationary source) to be **constructed, modified, relocated, administratively updated** or **temporarily permitted** (e.g., coal preparation plant, primary crusher, etc.): Plastic Manufacturer

10. North American Industry Classification System **(NAICS)** code for the facility:
325211

11A. DAQ Plant ID No. (for existing facilities only):
0 5 3 – 0 0 0 0 2

11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only):
R13-1650R and R30-05300054-2011

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

12A.

- For **Modifications, Administrative Updates** or **Temporary permits** at an existing facility, please provide directions to the *present location* of the facility from the nearest state road;
- For **Construction** or **Relocation permits,** please provide directions to the *proposed new site location* from the nearest state road. Include a **MAP** as **Attachment B**.

WV Route 2 approximately thirteen miles south of Point Pleasant and thirty miles north of Huntington.

12.B. New site address (if applicable):	12C. Nearest city or town:	12D. County:
NA	**Apple Grove**	**Mason**
12.E. UTM Northing (KM): **4,280.0**	12F. UTM Easting (KM): **397.9**	12G. UTM Zone: **17**

13. Briefly describe the proposed change(s) at the facility:
This modification is to remove equipment no longer in service, increase production rates and correct design heat inputs on equipment .

14A. Provide the date of anticipated installation or change: / / – If this is an **After-The-Fact** permit application, provide the date upon which the proposed change did happen: / /	14B. Date of anticipated Start-Up if a permit is granted: 05/26/2017

14C. Provide a **Schedule** of the planned **Installation** of/**Change** to and **Start-Up** of each of the units proposed in this permit application as **Attachment C** (if more than one unit is involved).

15. Provide maximum projected **Operating Schedule** of activity/activities outlined in this application:
Hours Per Day **24** Days Per Week **7** Weeks Per Year **52**

16. Is demolition or physical renovation at an existing facility involved? ☐ **YES** ☒ **NO**

17**. Risk Management Plans.** If this facility is subject to 112(r) of the 1990 CAAA, or will become subject due to proposed changes (for applicability help see www.epa.gov/ceppo), submit your **Risk Management Plan (RMP)** to U. S. EPA Region III.

18**. Regulatory Discussion.** List all Federal and State air pollution control regulations that you believe are applicable to the proposed process *(if known).* A list of possible applicable requirements is also included in Attachment S of this application (Title V Permit Revision Information). Discuss applicability and proposed demonstration(s) of compliance *(if known).* Provide this information as **Attachment D.**

Section II. Additional attachments and supporting documents.

19. Include a check payable to WVDEP – Division of Air Quality with the appropriate **application fee** (per 45CSR22 and 45CSR13).

20. Include a **Table of Contents** as the first page of your application package.

21. Provide a **Plot Plan,** e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is or is to be located as **Attachment E** (Refer to ***Plot Plan Guidance***) **.**
– Indicate the location of the nearest occupied structure (e.g. church, school, business, residence).

22. Provide a **Detailed Process Flow Diagram(s)** showing each proposed or modified emissions unit, emission point and control device as **Attachment F.**

23. Provide a **Process Description** as **Attachment G.**
– Also describe and quantify to the extent possible all changes made to the facility since the last permit review (if applicable).

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

24. Provide **Material Safety Data Sheets (MSDS)** for all materials processed, used or produced as **Attachment H.**

– For chemical processes, provide a MSDS for each compound emitted to the air.

25. Fill out the **Emission Units Table** and provide it as **Attachment I.**

26. Fill out the **Emission Points Data Summary Sheet (Table 1 and Table 2)** and provide it as **Attachment J.**

27. Fill out the **Fugitive Emissions Data Summary Sheet** and provide it as **Attachment K.**

28. Check all applicable **Emissions Unit Data Sheets** listed below:

☐ Bulk Liquid Transfer Operations	☐ Haul Road Emissions	☐ Quarry
☐ Chemical Processes	☐ Hot Mix Asphalt Plant	☐ Solid Materials Sizing, Handling and Storage Facilities
☐ Concrete Batch Plant	☐ Incinerator	☐ Storage Tanks
☐ Grey Iron and Steel Foundry	☐ Indirect Heat Exchanger	
☒ General Emission Unit, specify		

Fill out and provide the **Emissions Unit Data Sheet(s)** as **Attachment L.**

29. Check all applicable **Air Pollution Control Device Sheets** listed below:

☐ Absorption Systems	☒ Baghouse	☐ Flare
☐ Adsorption Systems	☐ Condenser	☐ Mechanical Collector
☐ Afterburner	☐ Electrostatic Precipitator	☐ Wet Collecting System

☒ Other Collectors, specify Hot Oiler Heater

Fill out and provide the **Air Pollution Control Device Sheet(s)** as **Attachment M.**

30. Provide all **Supporting Emissions Calculations** as **Attachment N,** or attach the calculations directly to the forms listed in Items 28 through 31.

31. **Monitoring, Recordkeeping, Reporting and Testing Plans.** Attach proposed monitoring, recordkeeping, reporting and testing plans in order to demonstrate compliance with the proposed emissions limits and operating parameters in this permit application. Provide this information as **Attachment O.**

➢ Please be aware that all permits must be practically enforceable whether or not the applicant chooses to propose such measures. Additionally, the DAQ may not be able to accept all measures proposed by the applicant. If none of these plans are proposed by the applicant, DAQ will develop such plans and include them in the permit.

32. **Public Notice.** At the time that the application is submitted, place a **Class I Legal Advertisement** in a newspaper of general circulation in the area where the source is or will be located (See 45CSR§13-8.3 through 45CSR§13-8.5 and ***Example Legal Advertisement*** for details). Please submit the **Affidavit of Publication** as **Attachment P** immediately upon receipt.

33**. Business Confidentiality Claims.** Does this application include confidential information (per 45CSR31)?

☐ **YES** ☒ **NO**

➢ If **YES,** identify each segment of information on each page that is submitted as confidential and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's *"**Precautionary Notice – Claims of Confidentiality"*** guidance found in the ***General Instructions*** as **Attachment Q.**

Section III. Certification of Information

34. **Authority/Delegation of Authority.** Only required when someone other than the responsible official signs the application. Check applicable **Authority Form** below:

☒ Authority of Corporation or Other Business Entity	☐ Authority of Partnership
☐ Authority of Governmental Agency	☐ Authority of Limited Partnership

Submit completed and signed **Authority Form** as **Attachment R.**

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

35A. **Certification of Information.** To certify this permit application, a Responsible Official (per 45CSR§13-2.22 and 45CSR§30-2.28) or Authorized Representative shall check the appropriate box and sign below.

Certification of Truth, Accuracy, and Completeness

I, the undersigned ☐ **Responsible Official** / ☒ **Authorized Representative,** hereby certify that all information contained in this application and any supporting documents appended hereto, is true, accurate, and complete based on information and belief after reasonable inquiry I further agree to assume responsibility for the construction, modification and/or relocation and operation of the stationary source described herein in accordance with this application and any amendments thereto, as well as the Department of Environmental Protection, Division of Air Quality permit issued in accordance with this application, along with all applicable rules and regulations of the West Virginia Division of Air Quality and W.Va. Code § 22-5-1 et seq. (State Air Pollution Control Act). If the business or agency changes its Responsible Official or Authorized Representative, the Director of the Division of Air Quality will be notified in writing within 30 days of the official change.

Compliance Certification

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

SIGNATURE _____ *(Please use blue ink)* DATE: 4-8-2016 *(Please use blue ink)*

35B. Printed name of signee: Scott Whitwer		35C. Title: QHSE Manager
35D. E-mail: Scott.B.Whitwer@gruppomgus.com	36E. Phone: 304-576-4589	36F. FAX: 304-576-4625
36A. Printed name of contact person (if different from above): Same		36B. Title:
36C. E-mail:	36D. Phone:	36E. FAX:

PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:

- ☒ **Attachment A: Business Certificate**
- ☒ **Attachment B: Map(s)**
- ☒ **Attachment C: Installation and Start Up Schedule**
- ☒ **Attachment D: Regulatory Discussion**
- ☒ **Attachment E: Plot Plan**
- ☒ **Attachment F: Detailed Process Flow Diagram(s)**
- ☒ **Attachment G: Process Description**
- ☒ **Attachment H: Material Safety Data Sheets (MSDS)**
- ☒ **Attachment I: Emission Units Table**
- ☒ **Attachment J: Emission Points Data Summary Sheet**
- ☒ **Attachment K: Fugitive Emissions Data Summary Sheet**
- ☒ **Attachment L: Emissions Unit Data Sheet(s)**
- ☒ **Attachment M: Air Pollution Control Device Sheet(s)**
- ☒ **Attachment N: Supporting Emissions Calculations**
- ☒ **Attachment O: Monitoring/Recordkeeping/Reporting/Testing Plans**
- ☐ **Attachment P: Public Notice**
- ☐ **Attachment Q: Business Confidential Claims**
- ☒ **Attachment R: Authority Forms**
- ☒ **Attachment S: Title V Permit Revision Information**
- ☒ **Application Fee**

Please mail an original and three (3) copies of the complete permit application with the signature(s) to the DAQ, Permitting Section, at the address listed on the first page of this application. Please DO NOT fax permit applications.

FOR AGENCY USE ONLY – IF THIS IS A TITLE V SOURCE:

- ☐ ***Forward 1 copy of the application to the Title V Permitting Group and:***
- ☐ ***For Title V Administrative Amendments:***
  - ☐ ***NSR permit writer should notify Title V permit writer of draft permit,***
- ☐ ***For Title V Minor Modifications:***
  - ☐ ***Title V permit writer should send appropriate notification to EPA and affected states within 5 days of receipt,***
  - ☐ ***NSR permit writer should notify Title V permit writer of draft permit.***
- ☐ ***For Title V Significant Modifications processed in parallel with NSR Permit revision:***
  - ☐ ***NSR permit writer should notify a Title V permit writer of draft permit,***
  - ☐ ***Public notice should reference both 45CSR13 and Title V permits,***
  - ☐ ***EPA has 45 day review period of a draft permit.***

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

ATTACHMENT A – BUSINESS CERTIFICATE

WEST VIRGINIA
STATE TAX DEPARTMENT
BUSINESS REGISTRATION CERTIFICATE

ISSUED TO:
M & G POLYMERS USA LLC
STATE RT 2
APPLE GROVE, WV 25502-0002

BUSINESS REGISTRATION ACCOUNT NUMBER: **1051-6342**

This certificate is issued on: 07/1/2011

This certificate is issued by
the West Virginia State Tax Commissioner
in accordance with Chapter 11, Article 12, of the West Virginia Code

The person or organization identified on this certificate is registered to conduct business in the State of West Virginia at the location above.

This certificate is not transferrable and must be displayed at the location for which issued.

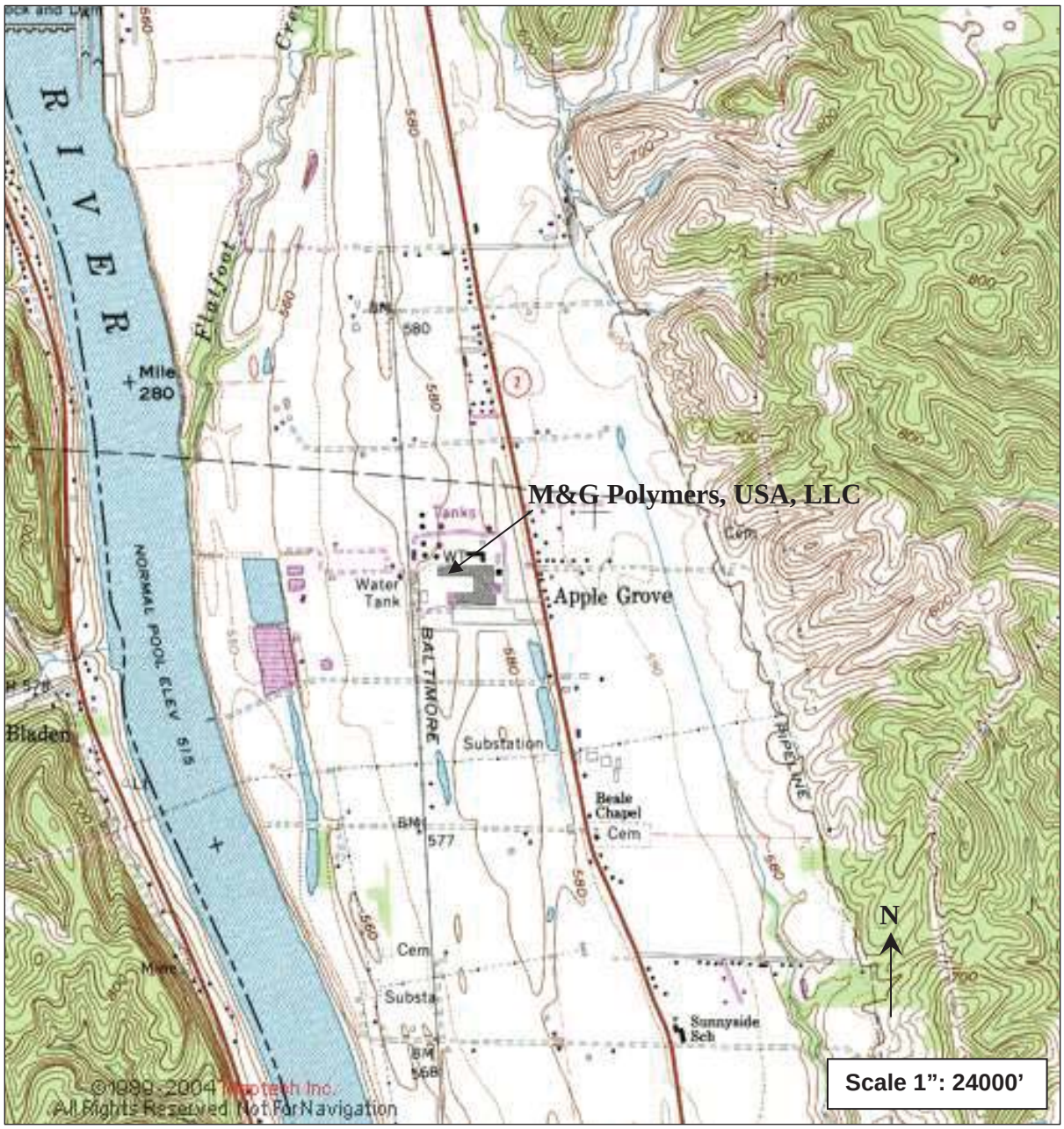
This certificate shall be permanent until cessation of the business for which the certificate of registration was granted or until it is suspended, revoked or cancelled by the Tax Commissioner.

Change in name or change of location shall be considered a cessation of the business and a new certificate shall be required.

TRAVELING/STREET VENDORS: Must carry a copy of this certificate in every vehicle operated by them. CONTRACTORS, DRILLING OPERATORS, TIMBER/LOGGING OPERATIONS: Must have a copy of this certificate displayed at every job site within West Virginia.

atL006 v.4
L2116402304

ATTACHMENT B – SITE LOCATION MAP



Attachment B

Site Location Map

ATTACHMENT C

Installation and Start Up Schedule

The permit application request is to remove from the permit most of the CSS-7 line. The process heater (C2B-B-7020) is subject to 40 CFR 63 Subpart DDDDD. The equipment requested from removal from the permit is non-operational.

In addition, the rates on CSS-12 and CSS-13 production lines will increase due to the change in the physical properties of the polymer that will be produced on that line. No additional equipment is required for this change.

The facility will increase the production rates on CSS-12 and CSS-13 production lines once the permit is issued.

Minor changes were made to the design capacities of crystallizers and pre-heaters after a thorough review during the preparation of the Title V permit renewal application.

In permit determination PD15-099 approved on December 3, 2015, M&G Polymers changed the heat transfer fluid from Thermoil 66® to Dowtherm RP®. That change occurred after the approval of the permit determination.

Attachment D

Regulatory Discussion

45CSR02	Plant's indirect heat exchangers are fired on natural gas, have a design input capacity greater than 10 MMBtu/hr, and comply with the rule's allowable PM Limits.
45CSR04	The Plant does not have any odor violations.
45CSR06	No on-site incinerators or flares are associated with the processes.
45CSR07	Solid material is handled and is vented through baghouses and/or filters. The particulate emission and opacity provisions apply. PM emissions meet the allowable limits and opacity standards under this rule.
45CSR10	Plant's indirect heat exchangers are fired on natural gas, have a design heat input capacity greater than 10 mmbtu/hr, and comply with the rule's allowable SO_2 limits.
45CSR11	A standby plan will be prepared when requested by the Director.
45CSR13	M&G has facilities operating under existing permits. This application is being submitted as a modification.
45CSR15	The Plant does not have facilities regulated under 40CFR61.
45CSR16	Several storage tanks are subject to the the recordkeeping only requirements of 40CFR60, Subpart Kb
45CSR21	Rule 21 is not applicable to M & G's operations since the facility is not located in one of the identified counties.
45CSR25	The Plant does not have hazardous waste storage, treatment ore disposal facilities subject to this rule.
45CSR27	Toxic Air Pollutants are used in this facility. However, the amounts emitted are below the Rule's deminimis values.
45CSR30	The Apple Grove Plant operates under an existing Title V permit. The renewal application will be due October 2015. This application is requested to help with this renewal.
45CSR34	Portions of the Plant are subject to the MACT requirements of 40CFR63, Subpart JJJ, Subpart FFFF, and Subpart DDDDD. This application requests the removal of the CP7 line. The CP7 heater will no longer be subject to Subpart DDDDD.

ATTACHMENT E – PLOT PLAN

BUILDING NO. & DESCRIPTION	BUILDING NO. & DESCRIPTION
1A Resin 1-4 Lines	69 DI Storage Bldg. (15'x 20')
1B Resin addition 5-18 Lines	70 #3 Well House
1C CSS I & II	71 #1 Well House
1D CSS III	72 #4 Well House
2 FRA Bldg (Hot Rod & Salvage)	73 #2 Cooling Tower(South)
3A Warehouse #1	73A #2 Cooling Tower Add.(North)
3B Warehouse #2 & #3	74 #1 Fire Pump House
3D Warehouse Bulk Loading	75 Chlorinator House
4 DMT Building	76 Tankage HCC
5A Utility	77 Gas Meter House
5B Utility Addition	78 Maintenance Training(24'x 60')
5C Utility Addition	79 Courtyard Butler Bldg.(24'x 60')
5D Air Compressor Bldg.	81 Burn-Out Bldg.
6 Fibers Plant	82 #2 Well House
7 Process Bldg. CP-1	83 #5 Well House
7A CP-2	84 #1 Cooling Tower
7B CSS-B	85 Maintenance Shop
8 Storeroom, Lab, Oper. Center	85A Maintenance Shop Addition
9 Process Bldg. CP-3	89 CP-1/2 Maintenance Shop
9A Process Bldg. CP-4	90 Contractor Maintenance Shop
9B Operations Center CP-3/4	96 #6 Well House
21 Valve House	98 #8 Well House
23 Foam Storage Bldg.	99 Guard House
24 Chemical Control Bldg.	90A #3 Cooling Tower
25 #1 PUMP HOUSE	91 #4 Cooling Tower
30 Hot Oil Furnace Bldg.(SCHACK)	91 Gensic Filter House
30A Hot Oil Furnace Bldg.(BORN)	92 Barge Shelter House
40 CSS Warehouse	93 #1 TPA Silo
51 Office Bldg.	93A #2 TPA Silo
55 #4 Railcar Load/Unload Bldg.	93B #3 TPA Silo
56 #3 Railcar Load/Unload Control	94 #2 Fire Pump House
56A Bldg. 66 Break Rm	95 Water Treatment Add. (Utility)
57 PCB Bldg.	95A Chemical Storage Bldg
58 Potable Water Bldg.	95B Zeolite Addition
59 Activity House	96 Hazardous Waste Bldg.
60 CP-1 Fire Water Pumphouse	97 Construction Butler Bldg.
61 Cooling Tower #5	(80'x 72')
62 CP-3 T-66 Heater Bldg.(Born)	98 #1 Rail Car Unloading Shed
62A CP-4 T-66 Heater Bldg.(Born)	99 #2 Rail Car Unloading Shed
63 CP-3 Maintenance Bldg.	Bulk RR. Car Unloading CR/HCC
64 CP-3 DI Water Bldg.	
66 #3 Railcar Load/Unload Bldg.	
67 RR Track Scale Bldg.	
68 Foam House & EQ Tank	

Ranney Well
Sewage Disposal
Secondary Clarifier #2
Secondary Clarifier #1
F-5007 Primary Clarifier
F-5029 Aeration Tank
F-5009 Aeration Basin Stage#1
F-5010 Aeration Basin Stage#2
F-5027 Equalization Tank
Nitrogen Generator Area
Surge Basin
Storm Pond
Sludge Basin
Fire Reserve TF-4
Eth.Glycol TF-5
Eth.Glycol TF-8
Eth.Glycol E4Y-F-1800
Fuel Oil TF-9
Recupic Stg.Tk. TF-6
F.P. Wtr.Tk
Pre.Cond F-5011
Water Stg.Tk.
Still Area
RR Unloading Bridge
#3 Filtered Wtr.Sys.
#1 Filtered Wtr.Sys.
Lapped Area
Primary Sub.
Propane Tks.
Gasoline Tks.
Guard House
Truck Parking
Parking Facilities
Diesel Stor. Tk
Barge Dock
Ohio River
Wetland
WV Route 2
Existing Power Line Row(VP)
N87°39'53"W
Exist. 138KV Overhead Elec. Line
APPALACHIAN POWER CO. APPLE GROVE SUBSTATION HUNTINGTON, W.V.

REVISIONS								
NO.	DATE	JOB	DESCRIPTION	MADE	CHK'D	APP'D	APP'D	APP'D
1	8/7/95		GENERAL UPDATE	RAB				

ACCOUNT NUMBER:
FILM DATES:

DRAWING CODE:

POINT PLEASANT POLYESTER PLANT
SHELL CHEMICAL COMPANY

OVERALL SITE PLAN

		DATE		DATE	SCALE:	ISSUE DATE:	REV.
DRAWN:	C.Kelley	1/95	APPROVED:		1" = 140'	2-3-95	1
CHECKED:			APPROVED:		DWG. No.	PP-100-84	
APPROVED:			APPROVED:				

SHEET 1 OF 5

ATTACHMENT F – PROCESS FLOW DIAGRAM

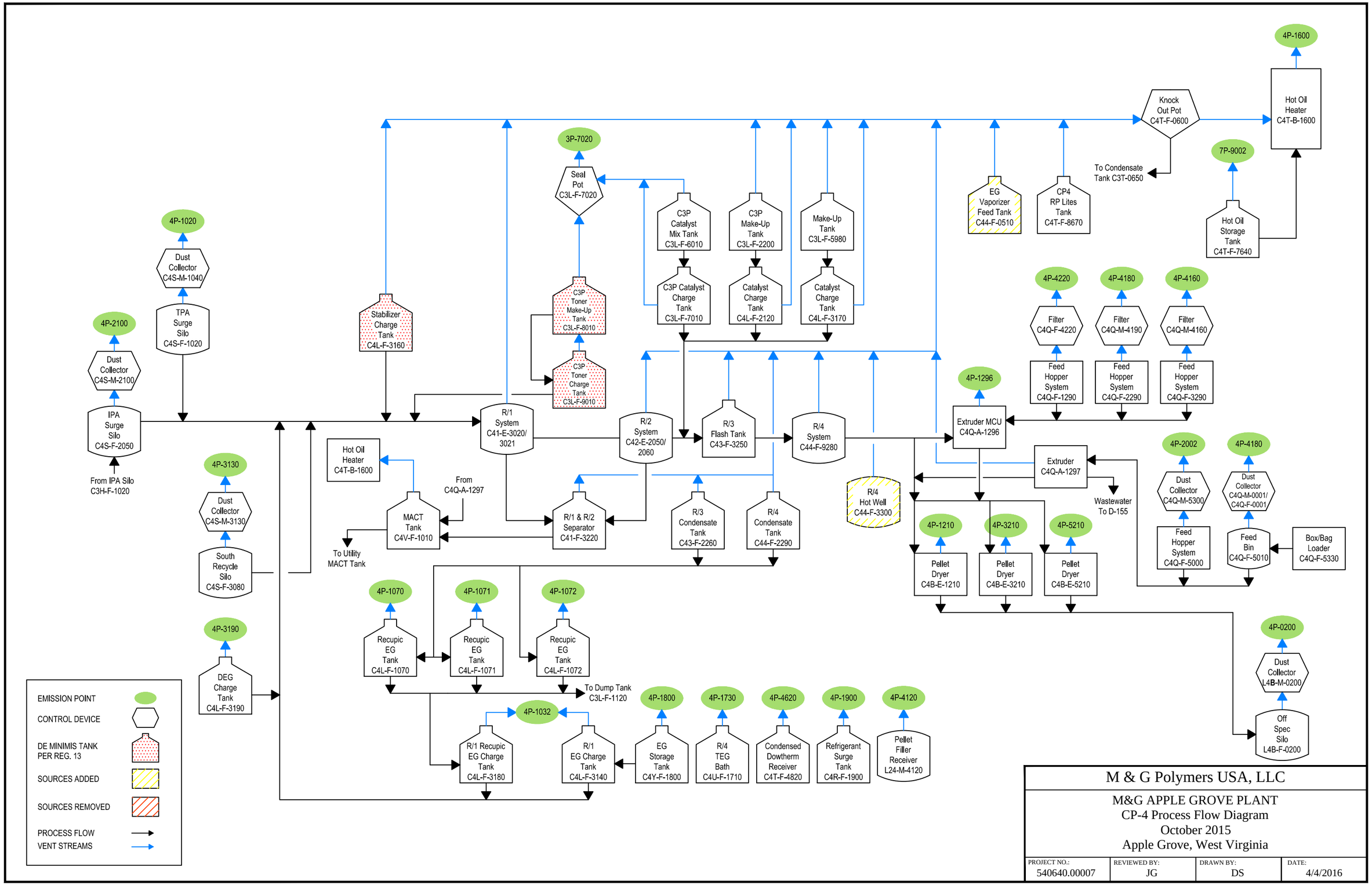
Close Loop N2 System
TPA Surge Silo C3H-F-1020
Colorant Charge Tank C3L-F-2201
Colorant Make-Up Tank C3L-F-2200
Seal Pot C3H-F-4020
Stabilizer Surge Tank C3L-F-4100
Stabilizer Charge Tank C3L-F-3160
Stabilizer Make-Up Tank C3L-F-4210
Stabliizer Make-Up Tank C3L-F-4211
Stabliizer Make-Up Tank C3L-F-5040
Additive Charge Tank C3L-F-5990
To CP4
Slurry Tank C3H-F-1020
Slurry Feed Tank C3H-F-3010
3P-2100
C3S-M-2100
Storage Bin Silo C3H-F-1020
From C3S-F-1020 (Closed Looped System)
3P-3130
Dust Collector C3S-M-3120
North Recycle Silo C45-F-3080
3P-3190
DEG Charge Tank C3L-F-3190
Hot Oil Heater C4T-B-1600
To Existing Utility MACT Tank
MACT Tank C4V-F-1010
R/1 System C31-E-1020/ 1020A/1021
R/1 & R/2 Condensate Tank C31-F-1220
3P-7020
Seal Pot C3L-F-7020
Toner Make-Up Tank C3L-F-8010
Toner Charge Tank C3L-F-9010
CP3 Catalyst Tank C3L-F-3170
Catalyst Make-Up Tank C3L-F-6010
Catalyst Charge Tank C3L-F-7010
R/2 System C32-E-1051
R/3 System C32-F-2260
R/3 Condensate Tank C33-F-2260
R/4A Condensate Tank C34-F-2290
R/3 Bis Condensate Tank C32-F-6010
R4 Jet System Knockout Tank C34-F-5020
R/4A System
R/4B System
R/4B Condensate Tank C34-F-8290
Knock Out Pot C3T-F-0600
3P-1600
Hot Oil Heater C3T-B-1600
3P-7280
Exhaust Gas Condensate Holding Tank C3T-F-0660
3P-7280
Hot Oil Storage Tank C3T-F-7280
3P-1700
Hot Oil Heater C3T-F-1700
CP3 RP Lites Tank C3T-F-2670
3P-1210
Pellet Dryer C38-E-1210
3P-3210
Pellet Dryer C38-E-3210
3P-5210
Pellet Dryer C38-E-5210
3P-7210
Pellet Dryer C38-E-7210
To CSS Units
3P-0200
Dust Collector L4A-M-0200
Off Spec Silo L4A-F-0200
3P-1070
Recupic EG Tank C3L-F-1070
3P-1071
Recupic EG Tank C3L-F-1071
3P-1072
Recupic EG Tank C3L-F-1072
3P-1120
Recupic EG Dump Tank C3L-F-1120
3P-9
EG #2 Storage Tank UTG-F-3010
3P-8
EG #1 Storage Tank UTG-F-3020
3P-3180
R/1 Recupic EG Charge Tank C3L-F-3180
3P-1032
R/2 Recupic EG Charge Tank C3L-F-3160
3P-3140
R/1 EG Charge Tank C3L-F-3140
3P-1730
R/3 TEG Bath C3U-F-1730
3P-4620
Concensed Dowtherm Receiver C3T-F-4620
3P-1900
Refrigerant Surge Tank C3T-F-1900

EMISSION POINT
CONTROL DEVICE
DE MINIMIS TANK PER REG. 13
SOURCES ADDED
SOURCES REMOVED
PROCESS FLOW
VENT STREAMS

M & G Polymers USA, LLC

M&G APPLE GROVE PLANT
CP-3 Process Flow Diagram
October 2015
Apple Grove, West Virginia

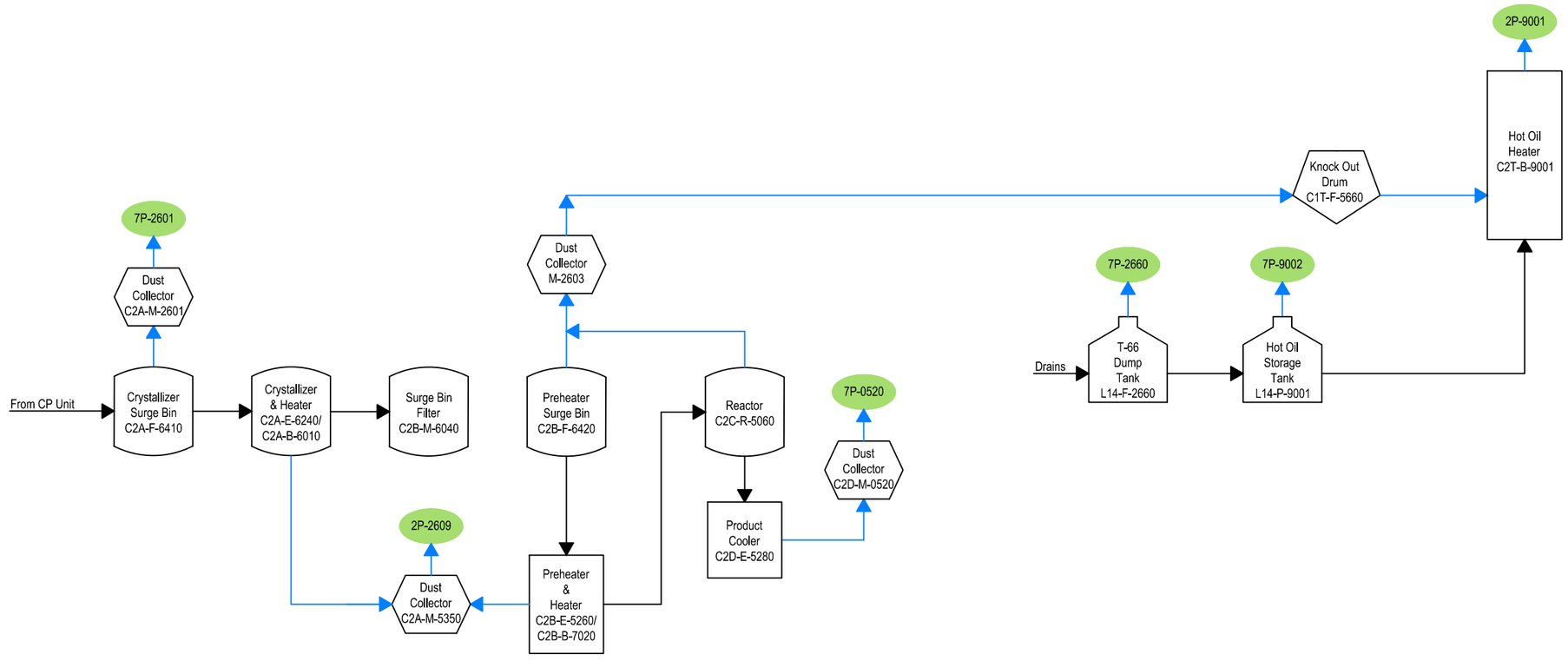
PROJECT NO.:	REVIEWED BY:	DRAWN BY:	DATE:
540640.00007	JG	DS	4/4/2016



M & G Polymers USA, LLC

M&G APPLE GROVE PLANT
CP-4 Process Flow Diagram
October 2015
Apple Grove, West Virginia

PROJECT NO.:	REVIEWED BY:	DRAWN BY:	DATE:
540640.00007	JG	DS	4/4/2016



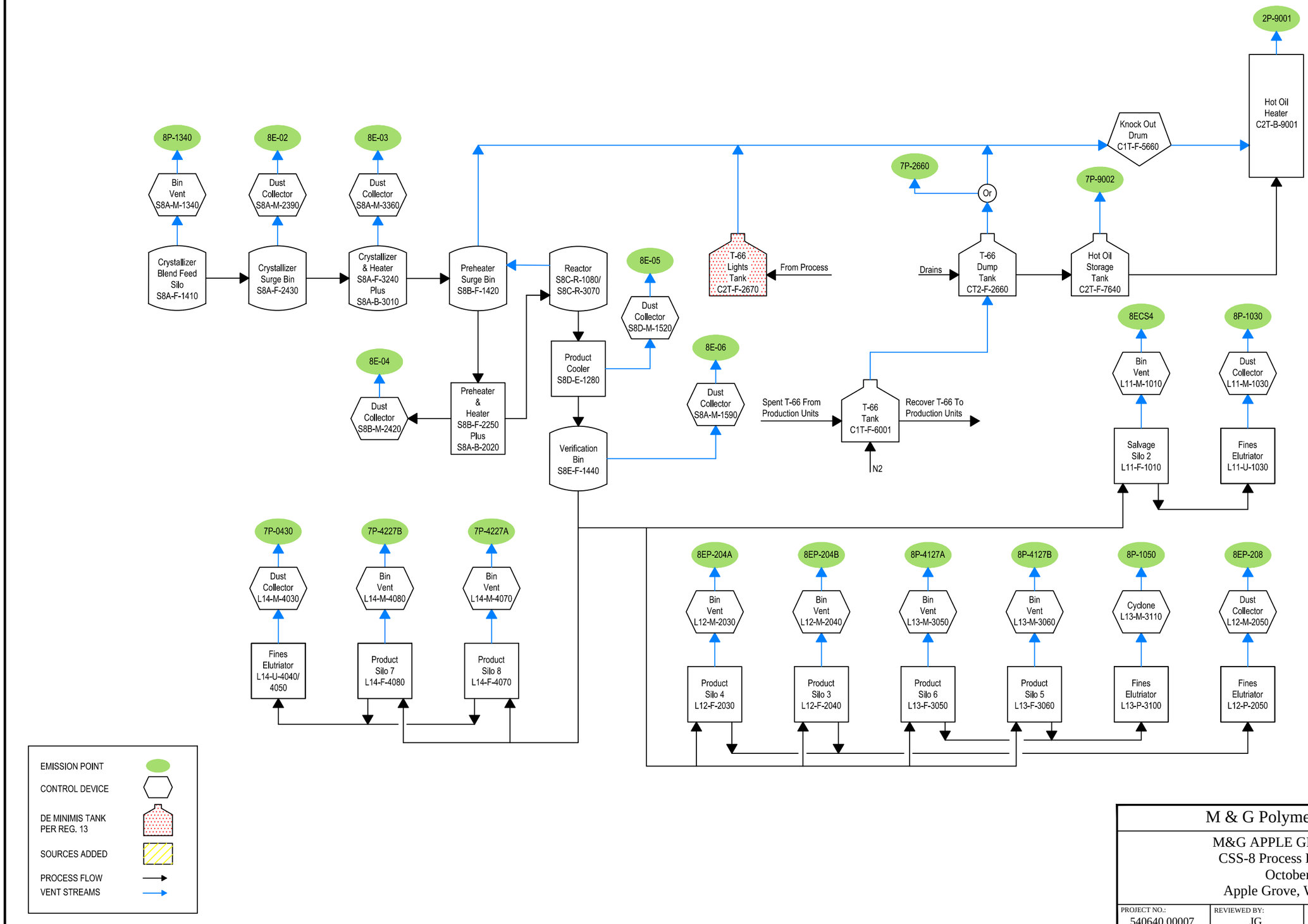
Note:
CSS-7 No longer in service.

EMISSION POINT
CONTROL DEVICE
DE MINIMIS TANK PER REG. 13
SOURCES ADDED
PROCESS FLOW
VENT STREAMS

M & G Polymers USA, LLC

M&G APPLE GROVE PLANT
CSS-7 Process Flow Diagram
October 2015
Apple Grove, West Virginia

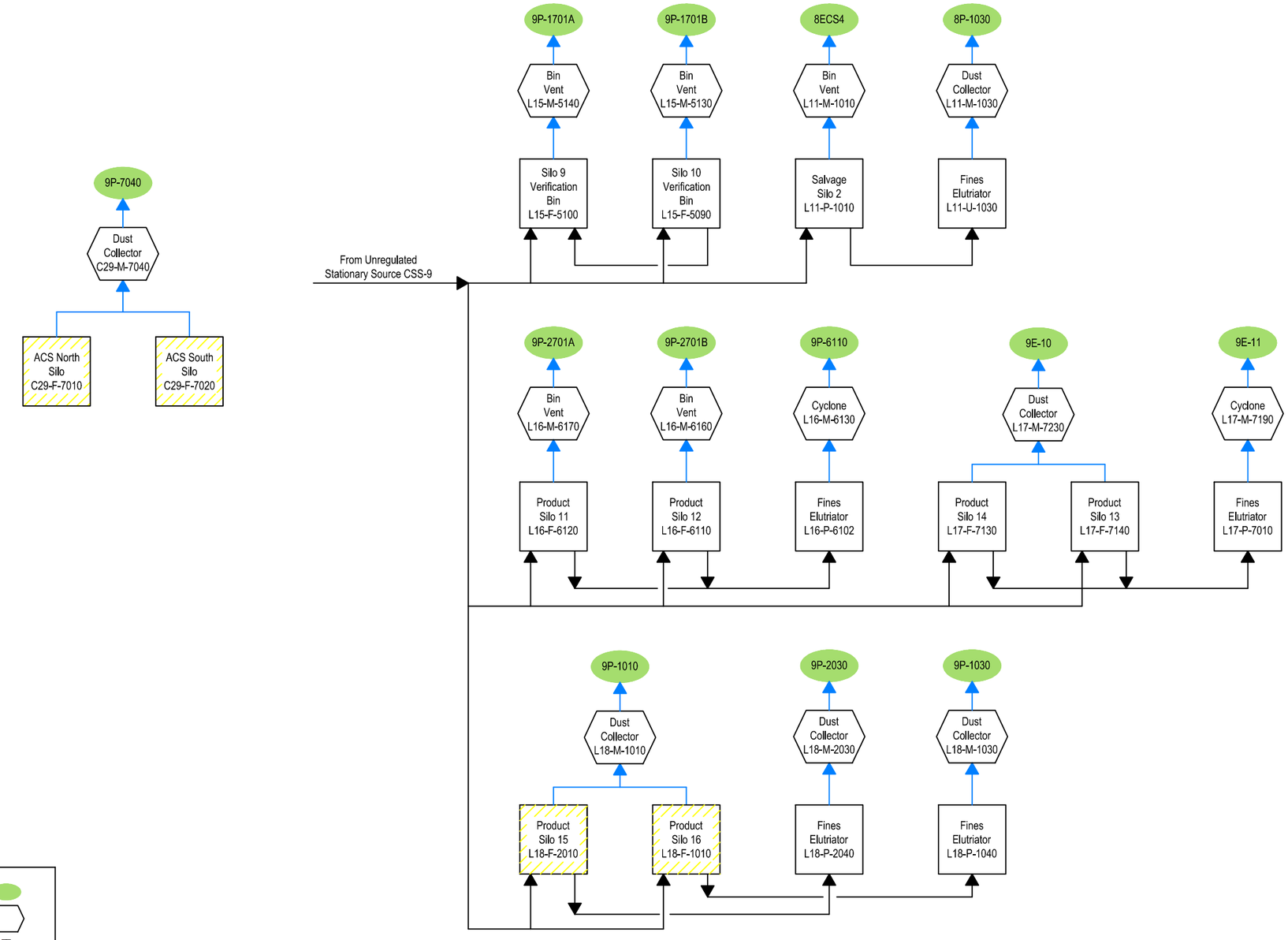
PROJECT NO.:	REVIEWED BY:	DRAWN BY:	DATE:
540640.00007	JG	DS	4/4/2016



M & G Polymers USA, LLC

M&G APPLE GROVE PLANT
CSS-8 Process Flow Diagram
October 2015
Apple Grove, West Virginia

PROJECT NO.:	REVIEWED BY:	DRAWN BY:	DATE:
540640.00007	JG	DS	4/4/2016



EMISSION POINT

CONTROL DEVICE

DE MINIMIS TANK PER REG. 13

SOURCES ADDED

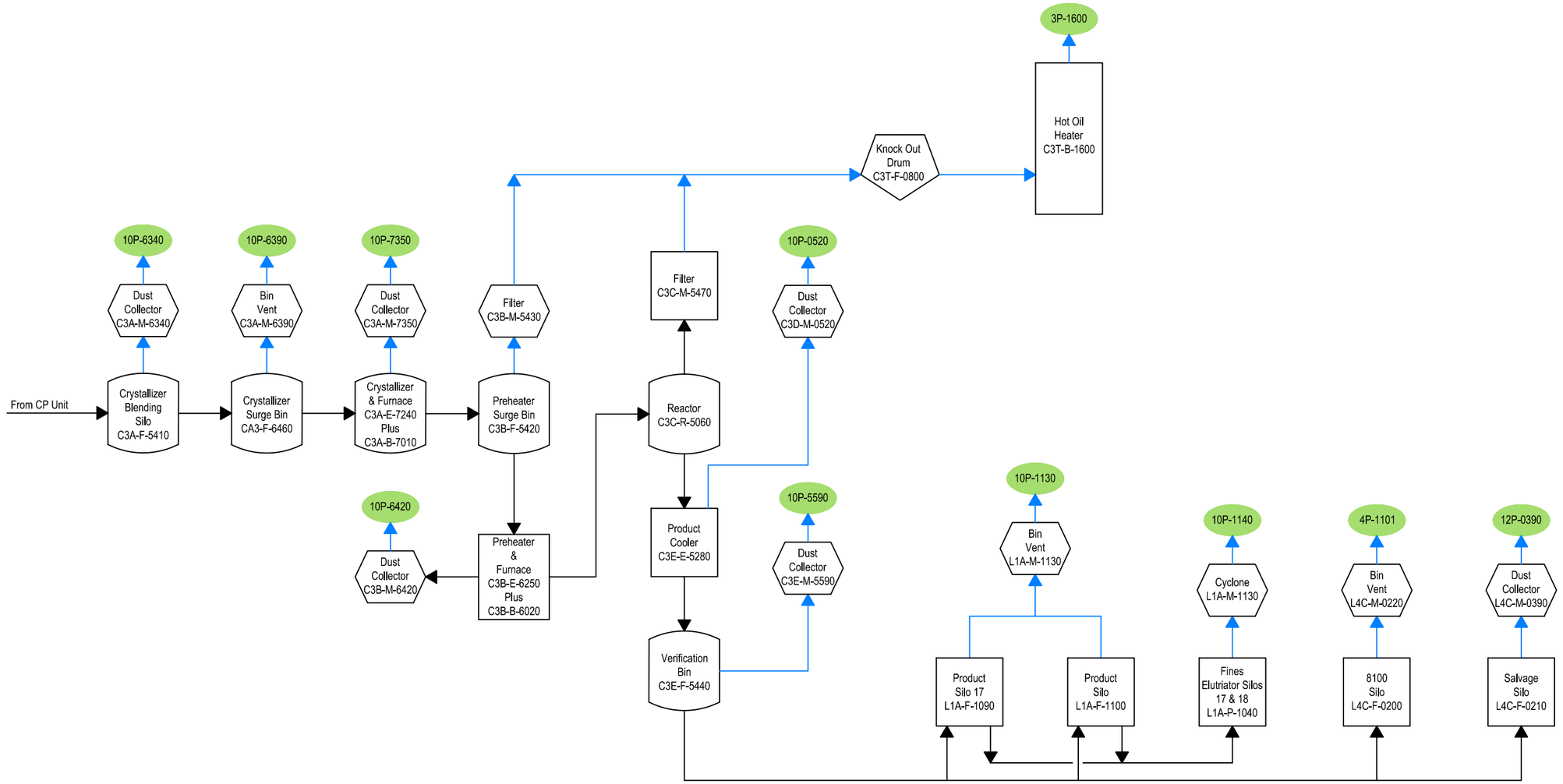
PROCESS FLOW

VENT STREAMS

M & G Polymers USA, LLC

M&G APPLE GROVE PLANT
CSS-9 Process Flow Diagram
October 2015
Apple Grove, West Virginia

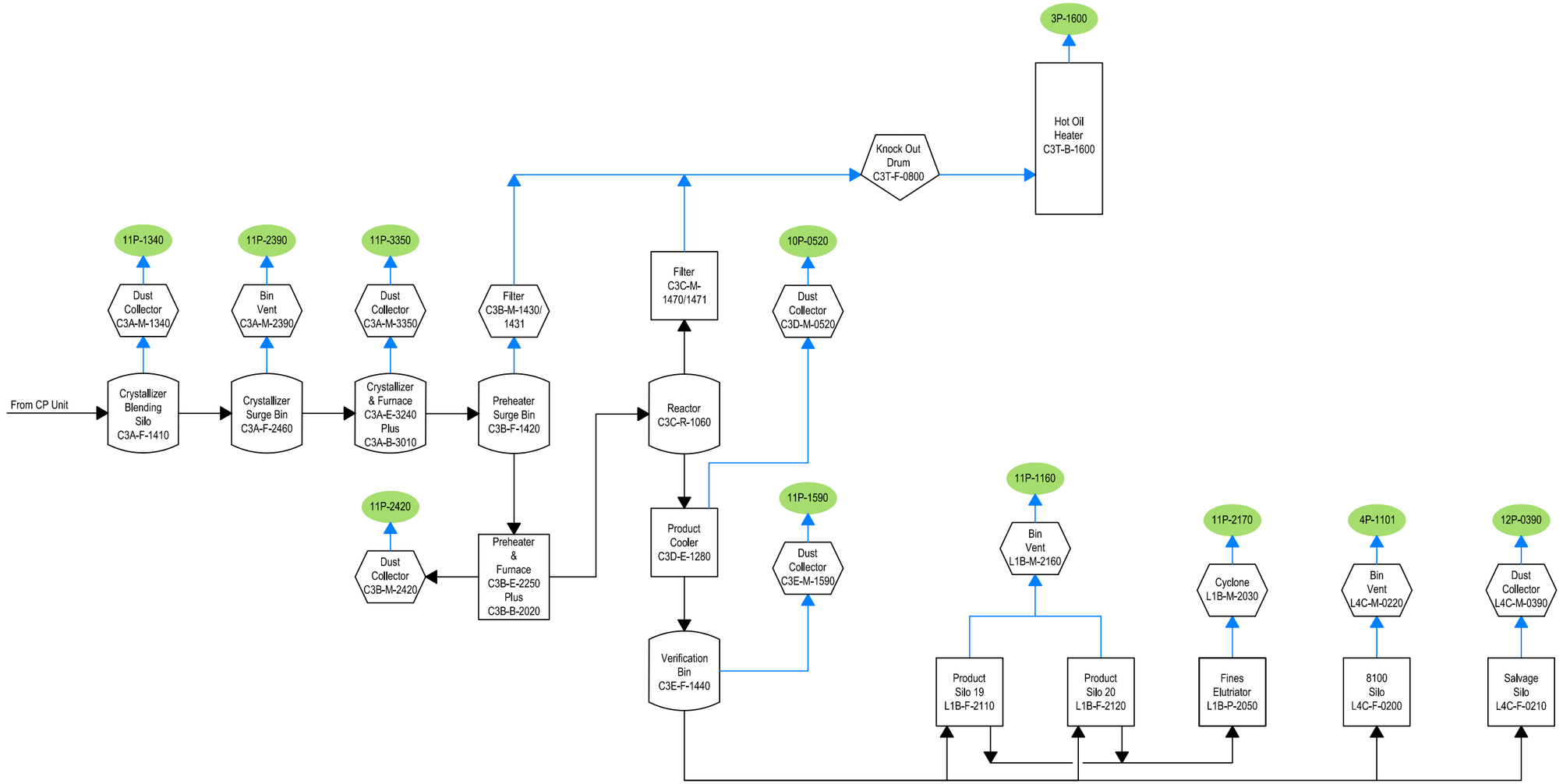
PROJECT NO.:	REVIEWED BY:	DRAWN BY:	DATE:
540640.00007	JG	DS	4/4/2016



M & G Polymers USA, LLC

M&G APPLE GROVE PLANT
CSS-10 Process Flow Diagram
October 2015
Apple Grove, West Virginia

PROJECT NO.:	REVIEWED BY:	DRAWN BY:	DATE:
540640.00007	JG	DS	4/4/2016

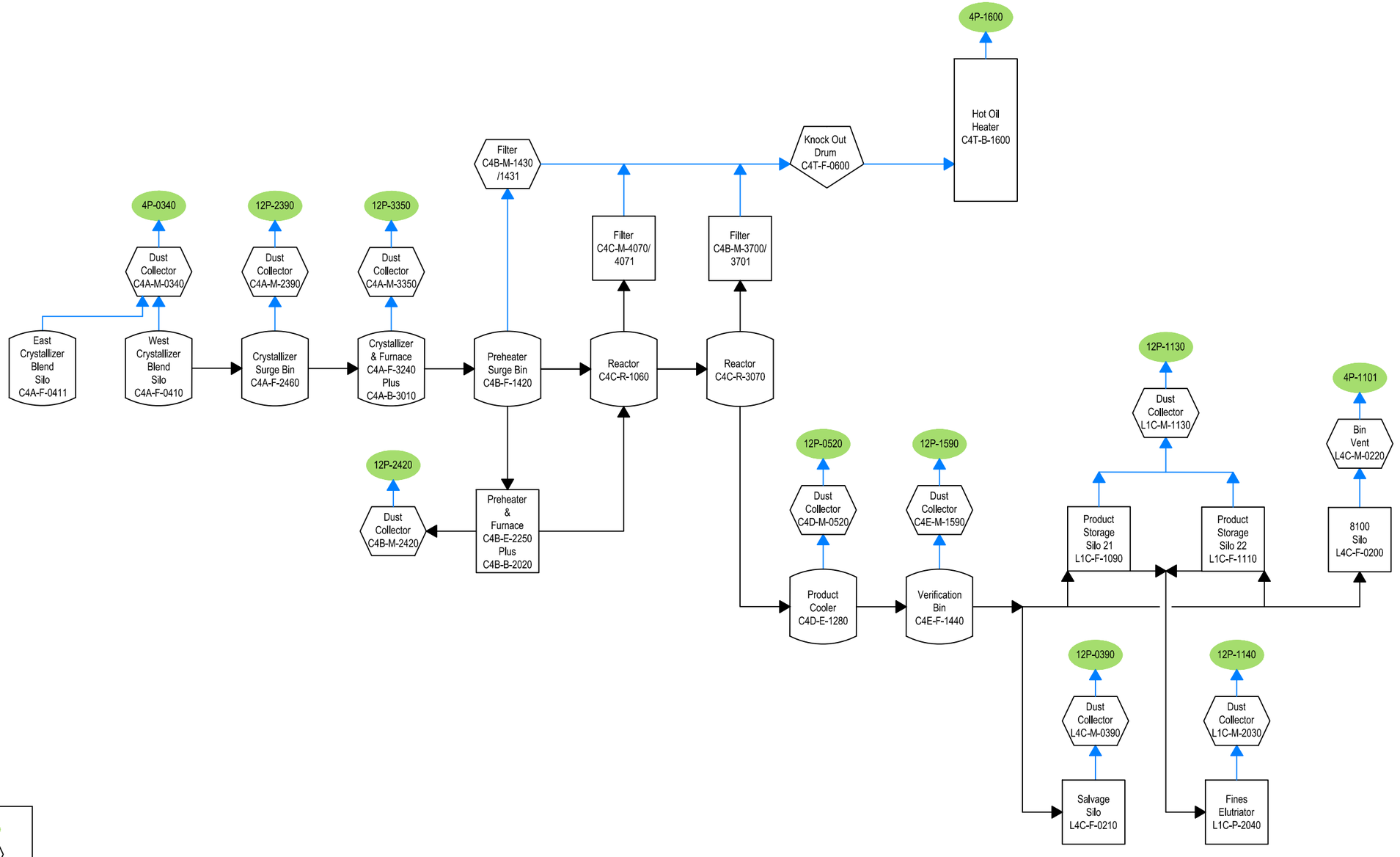


EMISSION POINT
CONTROL DEVICE
DE MINIMIS TANK PER REG. 13
SOURCES ADDED
PROCESS FLOW
VENT STREAMS

M & G Polymers USA, LLC

M&G APPLE GROVE PLANT
CSS-11 Process Flow Diagram
October 2015
Apple Grove, West Virginia

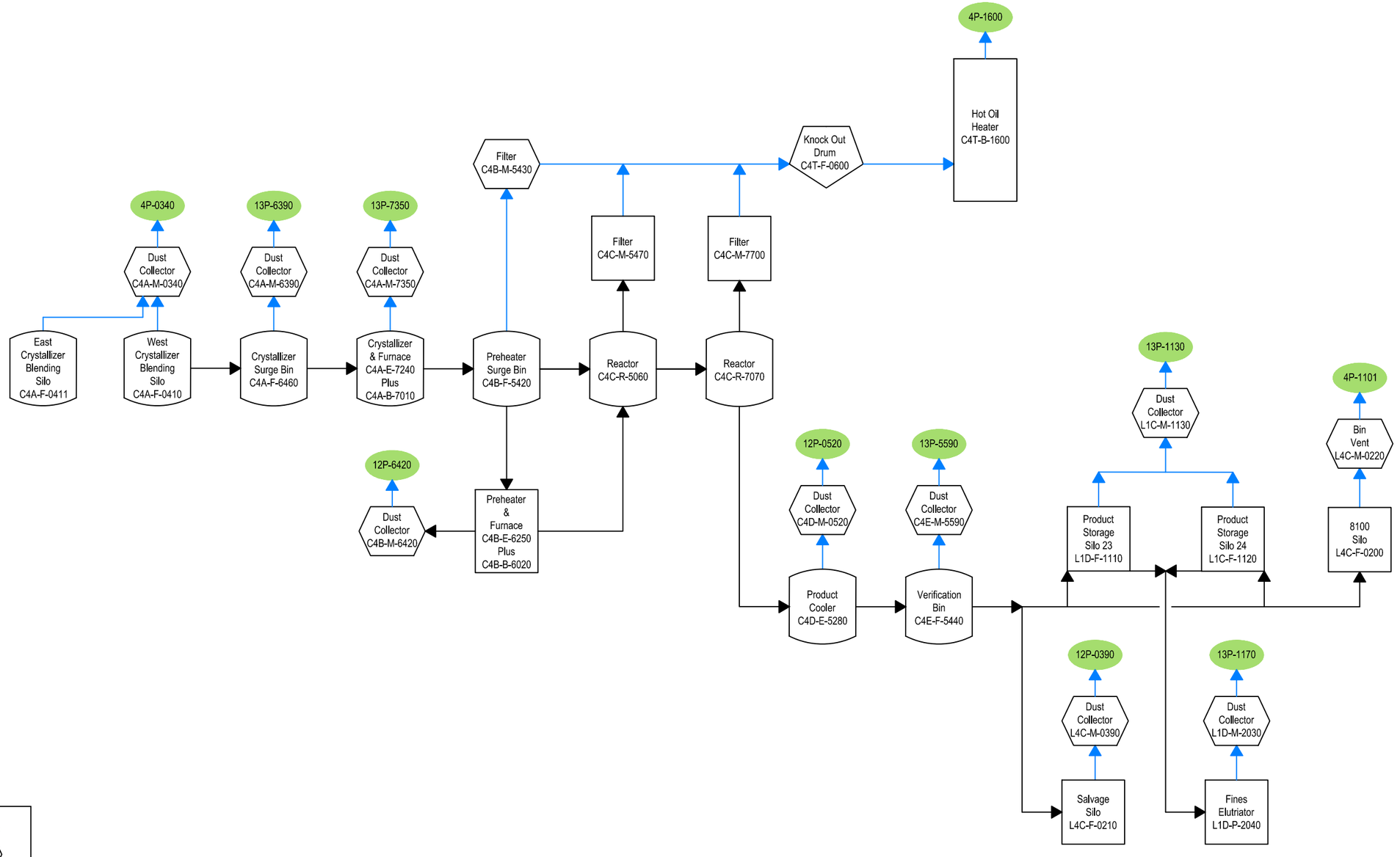
PROJECT NO.:	REVIEWED BY:	DRAWN BY:	DATE:
540640.00007	JG	DS	4/4/2016



M & G Polymers USA, LLC

M&G APPLE GROVE PLANT
CSS-12 Process Flow Disgram
October 2015
Apple Grove, West Virginia

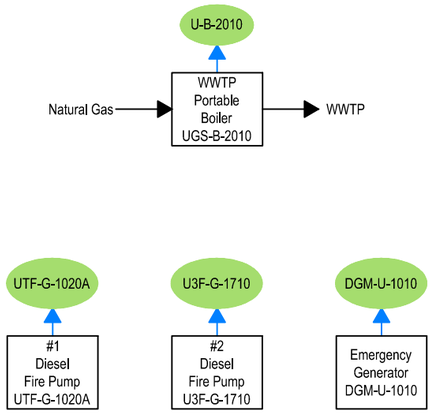
PROJECT NO.:	REVIEWED BY:	DRAWN BY:	DATE:
540640.00007	JG	DS	4/4/2016



M & G Polymers USA, LLC

M&G APPLE GROVE PLANT
CSS-13 Process Flow Diagram
October 2015
Apple Grove, West Virginia

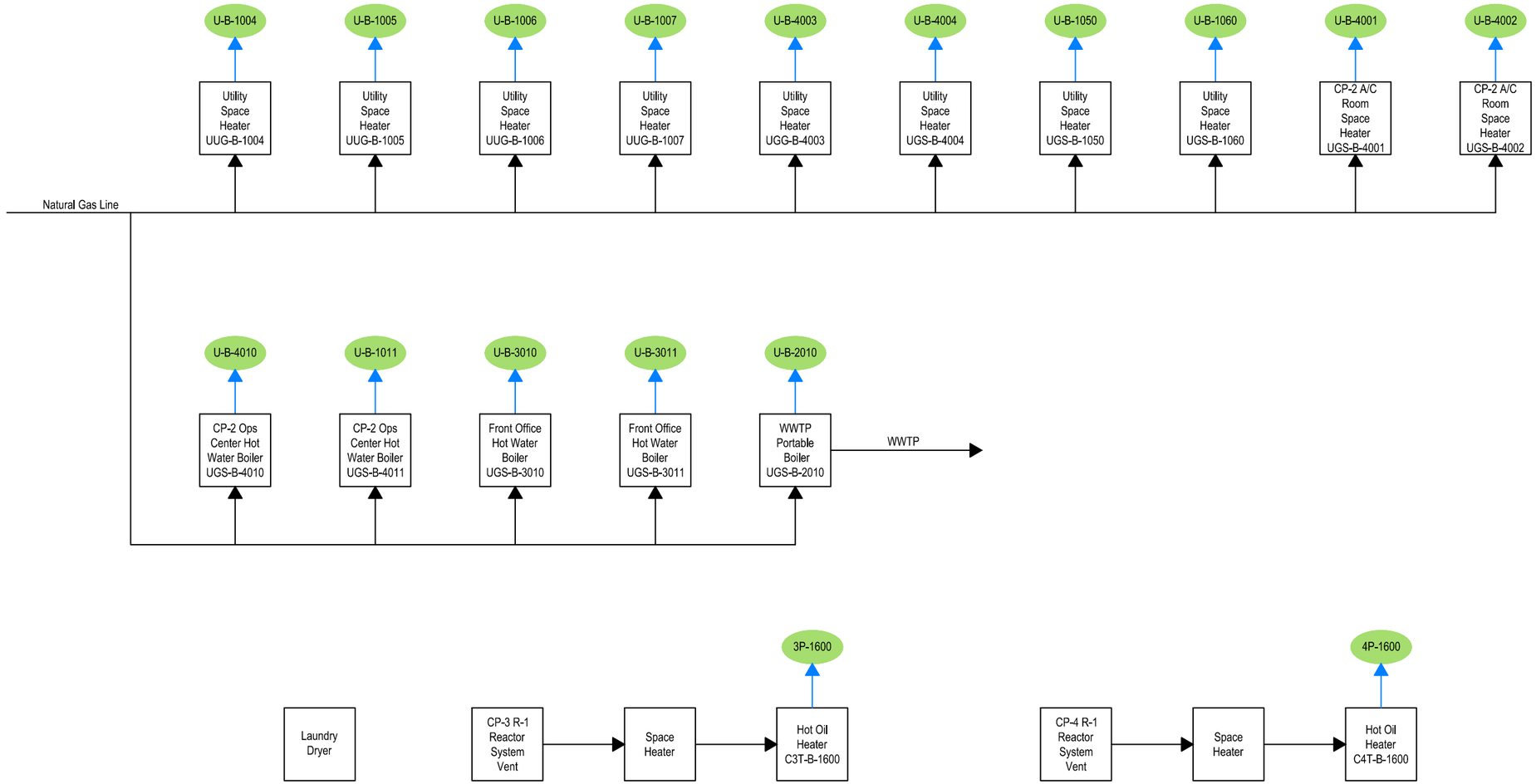
PROJECT NO.:	REVIEWED BY:	DRAWN BY:	DATE:
540640.00007	JG	DS	4/4/2016



M & G Polymers USA, LLC

M&G APPLE GROVE PLANT
Utility Process Flow Diagram
October 2015
Apple Grove, West Virginia

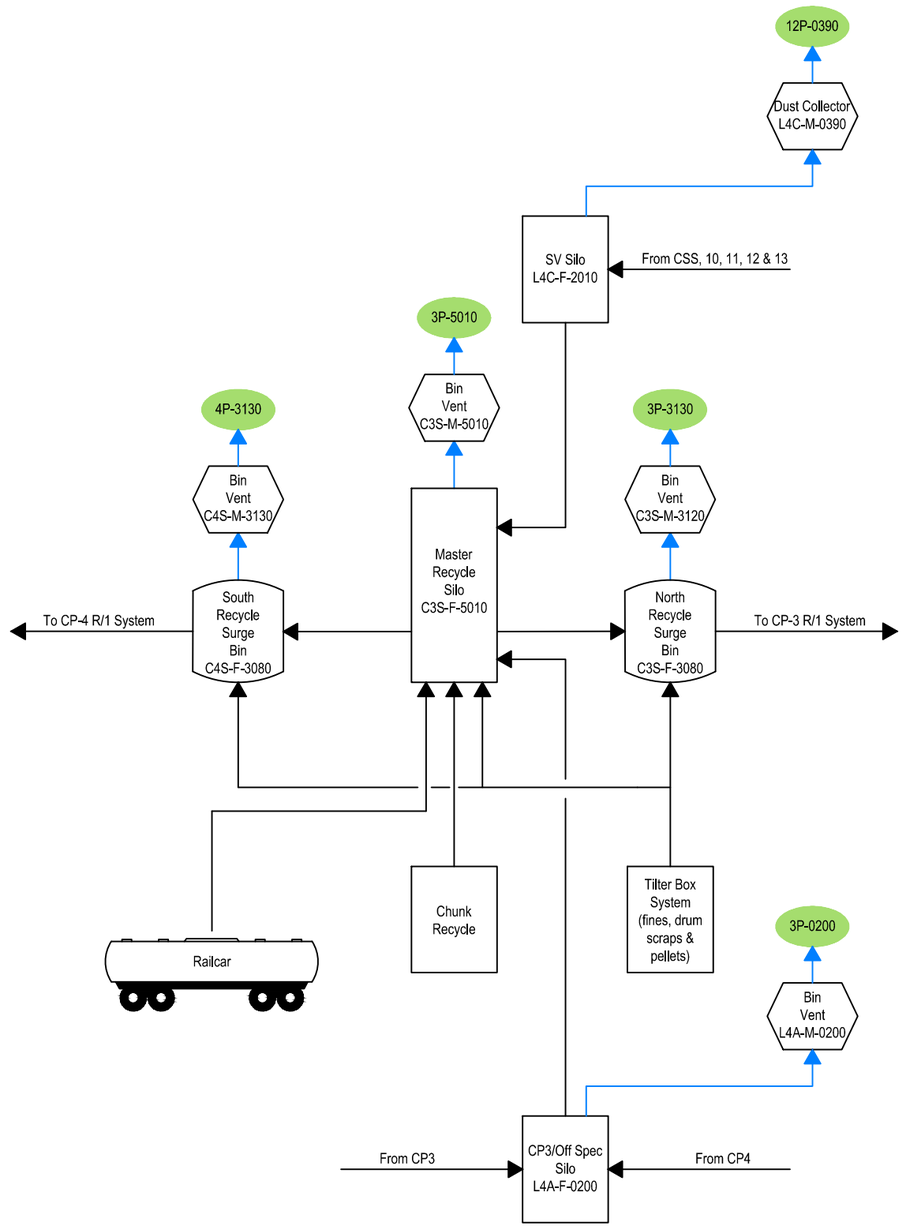
PROJECT NO.:	REVIEWED BY:	DRAWN BY:	DATE:
540640.00007	JG	DS	4/4/2016



M & G Polymers USA, LLC

M&G APPLE GROVE PLANT
Utility Process Flow Diagram
October 2015
Apple Grove, West Virginia

PROJECT NO.:	REVIEWED BY:	DRAWN BY:	DATE:
540640.00007	JG	DS	4/4/2016



EMISSION POINT

CONTROL DEVICE

DE MINIMIS TANK
PER REG. 13

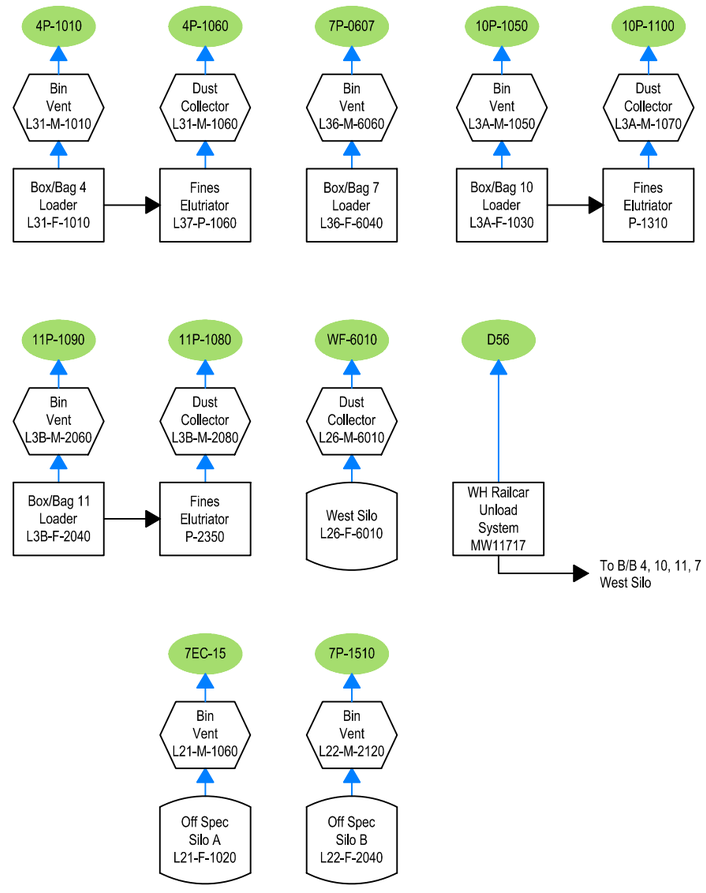
PROCESS FLOW

VENT STREAMS

M & G Polymers USA, LLC

M&G APPLE GROVE PLANT
Off Spec Process Flow Diagram
October 2015
Apple Grove, West Virginia

PROJECT NO.:	REVIEWED BY:	DRAWN BY:	DATE:
540640.00007	JG	DS	4/4/2016



M & G Polymers USA, LLC

M&G APPLE GROVE PLANT
Warehouse Flow Diagram
October 2015
Apple Grove, West Virginia

PROJECT NO.:	REVIEWED BY:	DRAWN BY:	DATE:
540640.00007	JG	DS	4/4/2016

Attachment G

Process Description

M&G Polymers is submitting this administrative amendment application to allow for increased production rates on CSS-12 and CSS-13 production lines and removal of most of the CSS-7 equipment. The CSS-8 Boxing Silo is being removed from service. The baghouse will be moved to the Warehouse West Silo (L26-M-6010). The Title V permit (R30-0530054-2011) identified the Warehouse West Silo had a baghouse but the emission unit does not and has not been in service since this discovery.

The heat transfer fluid, Therminol 66® was replaced with Dowtherm RP® in the CP-3 unit. The current equipment is designed to accommodate this change. The heat transfer material is used in a closed loop system, and there was no equipment changes (piping or tanks) associated with this change. During normal operations emissions are vented to the Hot Oil Heater (C3T-B-1600) during stripping. Emissions are calculated to be less than 0.01 lb/hr of total HAPs (Total HAPs include: benzene, toluene, ethyl benzene and naphthalene) and less than 0.01 TPY of Total HAPs that could be emitted from emission point 3P-1600. Please note that the 1,4 Dioxane emissions are corrected from 0.01 lb/hr and 0.01 TPY to 0.001 lb/hr and 0.001 TPY.

ATTACHMENT H - MSDS

SAFETY DATA SHEET
THE DOW CHEMICAL COMPANY

Product name: DOWTHERM™ RP Heat Transfer Fluid **Issue Date:** 04/16/2015
Print Date: 06/15/2015

THE DOW CHEMICAL COMPANY encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. IDENTIFICATION

Product name: DOWTHERM™ RP Heat Transfer Fluid

Recommended use of the chemical and restrictions on use
Identified uses: Intended as a heat transfer fluid for closed-loop systems. We recommend that you use this product in a manner consistent with the listed use. If your intended use is not consistent with the stated use, please contact your sales or technical service representative.

COMPANY IDENTIFICATION
THE DOW CHEMICAL COMPANY
2030 WILLARD H DOW CENTER
MIDLAND MI 48674-0000
UNITED STATES

Customer Information Number: 800-258-2436
SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: 800-424-9300
Local Emergency Contact: 800-424-9300

2. HAZARDS IDENTIFICATION

Hazard classification
This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Other hazards
no data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: Naphthalene, 1,2,3,4-tetrahydro-5-(1-phenylethyl)-
This product is a substance.

Component	CASRN	Concentration

1,2,3,4-Tetrahydro-5-(1-phenylethyl)naphthalene	60466-61-7	>= 85.0 %
1,2,3,4-Tetrahydro-6-(1-phenylethyl)naphthalene	6196-98-1	<= 15.0 %

4. FIRST AID MEASURES

Description of first aid measures
General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

Skin contact: Wash off with plenty of water.

Eye contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist. Suitable emergency eye wash facility should be available in work area.

Ingestion: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

Most important symptoms and effects, both acute and delayed: Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed
Notes to physician: Maintain adequate ventilation and oxygenation of the patient. If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIREFIGHTING MEASURES

Suitable extinguishing media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Unsuitable extinguishing media: Do not use direct water stream. May spread fire.

Special hazards arising from the substance or mixture
Hazardous combustion products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards: Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Liquid mist of this product can burn. Flammable concentrations of vapor can accumulate at temperatures above flash point; see Section 9.

Advice for firefighters
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Do not use direct water stream. May spread fire. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Keep upwind of spill. Ventilate area of leak or spill. Refer to section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. Spills or discharge to natural waterways is likely to kill aquatic organisms.

Methods and materials for containment and cleaning up: Small spills: Absorb with materials such as: Non-combustible material. Collect in suitable and properly labeled containers. Large spills: Contain spilled material if possible. Dike area to contain spill. Wash the spill site with large quantities of water. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid contact with eyes, skin, and clothing. Avoid breathing vapor. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Conditions for safe storage: Store in original container. Store away from incompatible materials. See STABILITY AND REACTIVITY section. Additional storage and handling information on this product may be obtained by calling your sales or customer service contact.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
Exposure limits are listed below, if they exist.

None established

Exposure controls
Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

Eye/face protection: Use chemical goggles.

Skin protection

Hand protection: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Examples of preferred glove barrier materials include: Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Polyvinyl chloride ("PVC" or "vinyl"). Styrene/butadiene rubber. Viton. Examples of acceptable glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection: When prolonged or frequently repeated contact could occur, use protective clothing chemically resistant to this material. Selection of specific items such as faceshield, boots, apron, or full-body suit will depend on the task.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions, no respiratory protection should be needed; however, if material is heated or sprayed, use an approved air-purifying respirator.
The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	Liquid.
Color	Colorless to yellow
Odor	Mild
Odor Threshold	No test data available
pH	Not applicable
Melting point/range	-34 °C (-29 °F) *Literature*
Freezing point	-34 °C (-29 °F) *Literature*

Boiling point (760 mmHg)	332 - 355 °C (630 - 671 °F) *Literature*
Flash point	**closed cup** 194 °C (381 °F) *Pensky-Martens Closed Cup ASTM D 93*
Evaporation Rate (Butyl Acetate = 1)	< 0.1 *Estimated.*
Flammability (solid, gas)	Not applicable to liquids
Lower explosion limit	0.39 % vol *Literature* Approximately
Upper explosion limit	4.59 % vol *Literature*
Vapor Pressure	<= 1.0 mmHg at 20 °C (68 °F) *Literature*
Relative Vapor Density (air = 1)	Not available
Relative Density (water = 1)	1.03 at 16 °C (61 °F) *Literature*
Water solubility	< 0.01 % at 25 °C (77 °F) *Literature*
Partition coefficient: n-octanol/water	log Pow: 6.11 *Estimated.*
Auto-ignition temperature	385 °C (725 °F) *ASTM E659*
Decomposition temperature	No test data available
Kinematic Viscosity	30.8 cSt at 25 °C (77 °F) *Literature*
Explosive properties	no data available
Oxidizing properties	no data available
Molecular weight	236.4 g/mol *Literature*

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: no data available

Chemical stability: Thermally stable at typical use temperatures.

Possibility of hazardous reactions: Polymerization will not occur.

Conditions to avoid: Exposure to elevated temperatures can cause product to decompose.

Incompatible materials: Avoid contact with oxidizing materials. Avoid contact with: Mineral acids.

Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials.

11. TOXICOLOGICAL INFORMATION

Toxicological information on this product or its components appear in this section when such data is available.

Acute toxicity

Acute oral toxicity

Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

LD50, Rat, > 2,000 mg/kg No deaths occurred at this concentration.

Acute dermal toxicity
Prolonged skin contact is unlikely to result in absorption of harmful amounts.

LD50, Rabbit, > 2,000 mg/kg No deaths occurred at this concentration.

Acute inhalation toxicity
At room temperature, exposure to vapor is minimal due to low volatility. If material is heated or aerosol/mist is produced, concentrations may be attained that are sufficient to cause respiratory irritation and other effects. May cause central nervous system effects. Symptoms may include headache, dizziness and drowsiness, progressing to incoordination and unconsciousness.
The LC50 has not been determined.

Skin corrosion/irritation
Brief contact is essentially nonirritating to skin.
Prolonged contact may cause skin irritation with local redness.
Repeated exposure may cause irritation, even a burn.

Serious eye damage/eye irritation
May cause moderate eye irritation.
Corneal injury is unlikely.

Sensitization
Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Repeated skin application to laboratory animals did not produce systemic toxicity.

Carcinogenicity
No relevant data found.

Teratogenicity
Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

Reproductive toxicity
In animal studies, did not interfere with reproduction.

Mutagenicity
In vitro genetic toxicity studies were negative.

Aspiration Hazard
Based on physical properties, not likely to be an aspiration hazard.

COMPONENTS INFLUENCING TOXICOLOGY:

1,2,3,4-Tetrahydro-5-(1-phenylethyl)naphthalene

Acute inhalation toxicity
At room temperature, exposure to vapor is minimal due to low volatility. If material is heated or aerosol/mist is produced, concentrations may be attained that are sufficient to cause respiratory irritation and other effects. May cause central nervous system effects. Symptoms may include headache, dizziness and drowsiness, progressing to incoordination and unconsciousness.

The LC50 has not been determined.

1,2,3,4-Tetrahydro-6-(1-phenylethyl)naphthalene

Acute inhalation toxicity
At room temperature, exposure to vapor is minimal due to low volatility. If material is heated or aerosol/mist is produced, concentrations may be attained that are sufficient to cause respiratory irritation and other effects. May cause central nervous system effects. Symptoms may include headache, dizziness and drowsiness, progressing to incoordination and unconsciousness.

The LC50 has not been determined.

12. ECOLOGICAL INFORMATION

Ecotoxicological information on this product or its components appear in this section when such data is available.

Toxicity

Acute toxicity to aquatic invertebrates
LC50, Daphnia magna (Water flea), 48 Hour, 0.0225 mg/l

Acute toxicity to algae/aquatic plants
Material is very highly toxic to aquatic organisms on an acute basis (LC50/EC50 <0.1 mg/L in the most sensitive species).

EbC50, Pseudokirchneriella subcapitata (green algae), 96 Hour, Biomass, > 0.07 mg/l

Toxicity to bacteria
EC50, activated sludge, 3 Hour, 0.062 mg/l, OECD 209 Test

Persistence and degradability
Biodegradability: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability. Material is inherently biodegradable (reaches > 20% biodegradation in OECD test(s) for inherent biodegradability).
10-day Window: Fail
Biodegradation: 6 %
Exposure time: 28 d
Method: OECD Test Guideline 301B or Equivalent

10-day Window: Not applicable
Biodegradation: > 40 %
Exposure time: 28 d
Method: OECD Test Guideline 302B or Equivalent

Bioaccumulative potential

Bioaccumulation: Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).
Partition coefficient: n-octanol/water(log Pow): 6.11 Estimated.

Mobility in soil

Expected to be relatively immobile in soil (Koc > 5000).
Partition coefficient(Koc): > 5000 Estimated.

13. DISPOSAL CONSIDERATIONS

Disposal methods: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Reclaimer. Incinerator or other thermal destruction device.

14. TRANSPORT INFORMATION

DOT

Not regulated for transport

Classification for SEA transport (IMO-IMDG):

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(1,2,3,4-Tetrahydro-5-(1-phenylethyl)naphthalene)
UN number	UN 3082
Class	9
Packing group	III
Marine pollutant	1,2,3,4-Tetrahydro-5-(1-phenylethyl)naphthalene
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.(1,2,3,4-Tetrahydro-5-(1-phenylethyl)naphthalene)
UN number	UN 3082
Class	9

Packing group III

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

OSHA Hazard Communication Standard
This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312
Acute Health Hazard

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Pennsylvania Worker and Community Right-To-Know Act:
To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)
This product contains no listed substances knownto the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

United States TSCA Inventory (TSCA)
All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

16. OTHER INFORMATION

Hazard Rating System
NFPA

Health	Fire	Reactivity
1	1	0

Revision

Identification Number: 101199007 / A001 / Issue Date: 04/16/2015 / Version: 9.0
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Information Source and References
This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

THE DOW CHEMICAL COMPANY urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

ATTACHMENT I – EQUIPMENT LIST FORM

Attachment I

Emission Units Table

(includes all emission units and air pollution control devices that will be part of this permit application review, regardless of permit status)

Emission Unit ID[1]	Emission Point ID[2]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Type[3] and Date of Change	Control Device[4]
C2A-F-5410	7P-2601	CSS-7 Crystallizer Surge Bin	1988	3,500 ft^3	Removal	C2A-M-2601
C2A-E-5240 C2A-M-5350	7P-2609	CSS-7 Crystallizer and Heater	1988	9,000 pph 1.4 MMBtu/hr	Removal	C2A-M-5350
C2B-B-7020 C2B-E-5250	7P-2609	CSS-7 Preheater and Heater	1988	9,000 pph 1.48 MMBtu/hr	Removal	C2A-M-5350
C2D-E-5280	7P-0520	CSS-7 Product Cooler	1988	14,156 acfm	Removal	C2D-M-0520
C2B-F-5420	2P-9001	CSS-7 Preheater Surge Bin	1988	943 ft^3	Removal	M-2603 C2T-B-9001
C2B-M-5040	2P-9001	CSS-7 Surge Bin Filter	1988	1,200 acfm	Removal	M-2603 C2T-B-9001
C2C-R-5060	2P-9001	CSS-7 R/6 Reactor	1988	1,958 ft^3	Removal	M-2603 C2T-B-9001
L37-F-7050	8E-08	CSS-8 Boxing Silo	1991	1,200 ft^3	Removal	L37-M-7130
C4A-F-0410 C4A-F-0411	4P-0340	West CSS-12/13 Crystallizer Blend Silo East CSS-12/13 Crystallizer Blend Silo	1994/2013	3,500 ft^3 4,000 ft^3	Modification	C4A-M-0340
C4D-E-1280 C4D-E-5280	12P-0520	CSS-12 Product Cooler CSS-13 Product Cooler	1996	42.6 ft^2	Modification	C4D-M-0520
C4B-F-1420	4P-1600	CSS-12 Preheater Surge Bin	1996	785 ft^2	Modification	C4B-M-1430 C4T-B-1600
C4C-R-3070	4P-1600	CSS-12 2nd Reactor	1996	2,110 ft^3	Modification	C4B-M-1430 C4T-B-1600
C4C-R-1060	4P-1600	CSS-12 1st Reactor	1996	1,958 ft^3	Modification	C4T-B-1600
C4A-E-3240 C4A-B-3010	12P-3350	CSS-12 Crystallizer CSS-12 Crystallizer Furnace	1996	93.5 ft^2 3.04 MMBTU/hr	Modification	C4A-M-3350
C4B-E-2250 C4B-B-2020	12P-2420	CSS-12 Preheater and CSS-12 Preheater Furnace	1996	43 ft^2 1.6 MMBTU/hr	Modification	C4B-M-2420
C4A-E-7240 C4A-B-7010	13P-7350	CSS-13 Crystallizer CSS-13 Crystallizer Furnace	1996	93.5 ft^2/ 3.04 MMBtu/hr	Modification	C4A-M-7350
C4B-E-6250 C4B-B-6020	12P-6420	CSS-13 Preheater CSS-13 Preheater Furnace	1996	43 ft^2 1.6 MMBtu/hr	Modification	C4B-M-6420
C4B-F-5420	4P-1600	CSS-13 Preheater Surge Bin	1996	1,390 ft^3	Modification	C4B-M-5430 C4C-M-7700 C4T-B-1600
C4C-R-5060	4P-1600	CSS-13 1st Reactor	1996	1,958 ft^3	Modification	C4C-M-5470 C4T-B-1600
C4C-R-7070	4P-1600	CSS-13 2nd Reactor	1996	2,110 ft^3	Modification	C4B-M-5430 C4C-M-7700 C4T-B-1600

[1]For Emission Units (or Sources) use the following system: 1S, 2S, 3S,... or other appropriate designation.

[2]For Emission Points use the following numbering system: 1E, 2E, 3E, …or other appropriate designation.

[3]New, modification, removal

[4]For Control Devices use the following system: 1C, 2C, 3C,…or other appropriate designation.

Attachment I

Emission Units Table

(includes all emission units and air pollution control devices that will be part of this permit application review, regardless of permit status)

Emission Unit ID[1]	Emission Point ID[2]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Type[3] and Date of Change	Control Device[4]
L26-F-6010	WF-6010	Warehouse West Silo	1959	750 ft^3	Modification	L26-M-6010
S8A-F-3240 S8A-B-3010	8E-03	CSS-8 Crystallizer CSS-8 Crystallizer Furnace	1991	68.4 ft^2 2.8 MMBtu/hr	Modification	S8A-M-3360
S8B-F-2250 S8B-B-2020	8E-04	CSS-8 Preheater CSS-8 Preheater Furnace	1991	27 ft^2 1.2 MMBtu/hr	Modification	S8B-M-2420
C3A-E-7240 C3A-B-7010	10P-7350	CSS-10 Crystallizer CSS-10 Crystallizer Furnace	1994	93.5 ft^2 3.04 MMBtu/hr	Modification	C3A-M-7350
C3B-F-6250 C3B-B-6020	10P-6420	CSS-10 Preheater CSS-10 Preheater Furnace	1994	27.75 ft^2 1.6 MMBtu/hr	Modification	C3B-M-6420
C3A-E-3240 C3A-B-3010	11P-3350	CSS-11 Crystallizer CSS-11 Crystallizer Furnace	1994	93.5 ft^2 3.04 MMBtu/hr	Modification	C3A-M-3350
C3B-E-2250 C3B-B-2020	11P-2420	CSS-11 Preheater CSS-11 Preheater Furnace	1994	27.75 ft^2 1.6 MMBtu/hr	Modification	C3B-M-2420
C3T-B-1600	3P-1600	Hot Oil Heater	1994	53.1 MMBtu/hr	Modification	NA

[1]For Emission Units (or Sources) use the following system: 1S, 2S, 3S,... or other appropriate designation.

[2]For Emission Points use the following numbering system: 1E, 2E, 3E, …or other appropriate designation.

[3]New, modification, removal

[4]For Control Devices use the following system: 1C, 2C, 3C,…or other appropriate designation.

ATTACHMENT J – Emission Points Data Summary Sheets

Attachment J
EMISSION POINTS DATA SUMMARY SHEET

Table 1: Emissions Data

Emission Point ID No. *(Must match Emission Units Table & Plot Plan)*	Emission Point Type[1]	Emission Unit Vented Through This Point *(Must match Emission Units Table & Plot Plan)*		Air Pollution Control Device *(Must match Emission Units Table & Plot Plan)*		Vent Time for Emission Unit *(chemical processes only)*		All Regulated Pollutants - Chemical Name/CAS[3] *(Speciate VOCs & HAPS)*	Maximum Potential Uncontrolled Emissions[4]		Maximum Potential Controlled Emissions[5]		Emission Form or Phase *(At exit conditions, Solid, Liquid or Gas/Vapor)*	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^4)
		ID No.	Source	ID No.	Device Type	Short Term[2]	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
4P-0340	Upward Vertical Stack	C4A-F-0410 C4A-F-0411	West CSS-12/13 Crystallizer Blend Silo East CSS-12/13 Crystallizer Blend Silo	C4A-M-0340	Dust Collector	C	8,760	PM/PM10	5.44	1.65	0.05	0.02	Solid	EE	NA
12P-0520	Upward Vertical Stack	C4D-E-1280 C4D-E-5280	CSS-12 Product Cooler CSS-13 Product Cooler	C4D-M-0520	Baghouse	C	8,760	Ethylene Glycol (CAS NO. 107-21-1) Acetaldehyde (CAS NO. 75-07-0) VOC PM/PM10	0.22 0.01 0.28 4.17	0.92 0.03 1.17 15.28	0.22 0.01 0.28 0.04	0.92 0.03 1.17 0.15	Gas/Vapor Gas/Vapor Gas/Vapor Solid	EE	NA

Table 1: Emissions Data

Emission Point ID No. *(Must match Emission Units Table & Plot Plan)*	Emission Point Type[1]	Emission Unit Vented Through This Point *(Must match Emission Units Table & Plot Plan)*		Air Pollution Control Device *(Must match Emission Units Table & Plot Plan)*		Vent Time for Emission Unit *(chemical processes only)*		All Regulated Pollutants - Chemical Name/CAS[3] *(Speciate VOCs & HAPS)*	Maximum Potential Uncontrolled Emissions[4]		Maximum Potential Controlled Emissions[5]		Emission Form or Phase *(At exit conditions, Solid, Liquid or Gas/Vapor)*	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^4)
		ID No.	Source	ID No.	Device Type	Short Term[2]	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
4P-1600	Upward Vertical Stack	C4B-F-1420*	CSS-12 Preheater Surge Bin	C4B-M-1430	Baghouse	C	8,760	Carbon Monoxide (CAS No. 630-08-0)	1.90	8.14	1.90	8.14	Gas Vapor	EE	NA
				C4T-B-1600	Hot Oil Heater			NOx	3.20	14.00	3.20	14.00	Gas Vapor		
		C4C-R-3070	CSS-12 1st Reactor					Ethylene Glycol (CAS No. 107-21-1)	3.55	11.84	0.01	0.02	Gas Vapor		
		C4C-R-1060	CSS-12 2nd Reactor					Acetaldehyde (CAS NO. 75-07-0)	29.61	112.53	0.06	0.23	Gas Vapor		
		C4B-F-5420	CSS-13 Preheater Surge Bin					1,4 Dioxane	0.59	0.59	0.001	0.001	Gas Vapor		
								VOC	236.11	1006.9	0.40	1.72	Gas Vapor		
		C4C-R-5060	CSS-13 1st Reactor					PM/PM10/PM2.5	0.13	0.56	0.13	0.56	Solid		
								SOx	0.06	0.23	0.06	0.23	Gas Vapor		
								Carbon Dioxide (CAS No. 124-38-9)	6641	29088	6641	29088	Gas Vapor		
		C4C-R-7070	CSS-13 2nd Reactor					Methane (CAS No. 74-82-8)	0.11	0.43	0.11	0.43	Gas Vapor		
								Nitrous Oxide (CAS # 10024-97-2)	0.01	0.04	0.01	0.04	Gas Vapor		

Table 1: Emissions Data

Emission Point ID No. *(Must match Emission Units Table & Plot Plan)*	Emission Point Type[1]	Emission Unit Vented Through This Point *(Must match Emission Units Table & Plot Plan)*		Air Pollution Control Device *(Must match Emission Units Table & Plot Plan)*		Vent Time for Emission Unit *(chemical processes only)*		All Regulated Pollutants - Chemical Name/CAS[3] *(Speciate VOCs & HAPS)*	Maximum Potential Uncontrolled Emissions[4]		Maximum Potential Controlled Emissions[5]		Emission Form or Phase *(At exit conditions, Solid, Liquid or Gas/Vapor)*	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^4)
		ID No.	Source	ID No.	Device Type	Short Term[2]	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
12P-3350	Upward Vertical Stack	C4A-E-3240	CSS-12 Crystallizer & Heater	C4A-M-3350	Baghouse	C	8,760	CO	0.07	0.26	0.07	0.26	Gas/Vapor	EE	NA
								NOx	0.31	1.32	0.31	1.32	Gas/Vapor		
								Ethylene Glycol (CAS NO. 107-21-1)	0.42	1.82	0.42	1.82	Gas/Vapor		
								Acetaldehyde (CAS NO. 75-07-0)	0.08	0.36	0.08	0.36	Gas/Vapor		
								VOC	0.51	2.23	0.51	2.23	Gas/Vapor		
								PM/PM10/PM2.5	0.60	3.00	0.01	0.03	Solid		
								SO2	0.02	0.02	0.02	0.02	Gas/Vapor		
								Carbon Dioxide (CAS No. 124-38-9)	448	1963	448	1963	Gas/Vapor		
								Methane (CAS No. 74-82-8)	0.01	0.03	0.01	0.03	Gas/Vapor		
								Nitrous Oxide (CAS # 10024-97-2	<0.01	<0.01	<0.01	<0.01	Gas/Vapor		

Table 1: Emissions Data

Emission Point ID No. *(Must match Emission Units Table & Plot Plan)*	Emission Point Type[1]	Emission Unit Vented Through This Point *(Must match Emission Units Table & Plot Plan)*		Air Pollution Control Device *(Must match Emission Units Table & Plot Plan)*		Vent Time for Emission Unit *(chemical processes only)*		All Regulated Pollutants - Chemical Name/CAS[3] *(Speciate VOCs & HAPS)*	Maximum Potential Uncontrolled Emissions[4]		Maximum Potential Controlled Emissions[5]		Emission Form or Phase *(At exit conditions, Solid, Liquid or Gas/Vapor)*	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^4)
		ID No.	Source	ID No.	Device Type	Short Term[2]	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
12P-2420	Upward Vertical Stack	C4B-E-2250	CSS-12 Preheater and Heater	C4B-M-2420	Baghouse	C	8,760	CO	0.02	0.07	0.02	0.09	Gas/Vapor	EE	NA
								NOx	0.08	0.32	0.08	0.34	Gas/Vapor		
								Ethylene Glycol (CAS NO. 107-21-1)	0.11	0.42	0.11	0.49	Gas/Vapor		
								Acetaldehyde (CAS NO. 75-07-0)	0.18	0.75	0.18	0.79	Gas/Vapor		
								VOC	0.32	1.36	0.32	1.43	Gas/Vapor		
								PM/PM10/PM2.5	0.95	1.90	0.01	0.03	Solid		
								SOx	0.02	0.02	0.02	0.02	Gas/Vapor		
								Carbon Dioxide (CAS No. 124-38-9)	236	1033	236	1033	Gas/Vapor		
								Methane (CAS No. 74-82-8)	<0.01	0.02	<0.01	<0.02	Gas/Vapor		
								Nitrous Oxide (CAS # 10024-97-2	<0.01	<0.01	<0.01	<0.02	Gas/Vapor		

Table 1: Emissions Data

Emission Point ID No. *(Must match Emission Units Table & Plot Plan)*	Emission Point Type[1]	Emission Unit Vented Through This Point *(Must match Emission Units Table & Plot Plan)*		Air Pollution Control Device *(Must match Emission Units Table & Plot Plan)*		Vent Time for Emission Unit *(chemical processes only)*		All Regulated Pollutants - Chemical Name/CAS[3] *(Speciate VOCs & HAPS)*	Maximum Potential Uncontrolled Emissions[4]		Maximum Potential Controlled Emissions[5]		Emission Form or Phase *(At exit conditions, Solid, Liquid or Gas/Vapor)*	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^4)
		ID No.	Source	ID No.	Device Type	Short Term[2]	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
13P-7350	Upward Vertical Stack	C4A-E-7240 C4A-B-7010	CSS-13 Crystallizer CSS-13 Heater	C4A-M-7350	Baghouse	C	8,760	CO	0.03	0.16	0.03	0.13	Gas/Vapor	EE	NA
								NOx	0.13	0.57	0.13	0.57	Gas/Vapor		
								Ethylene Glycol (CAS NO. 107-21-1)	0.42	1.74	0.42	1.74	Gas/Vapor		
								Acetaldehyde (CAS NO. 75-07-0)	0.08	0.36	0.08	0.36	Gas/Vapor		
								VOC	0.51	2.21	0.51	2.21	Gas/Vapor		
								PM/PM10	0.61	3.04	0.01	0.03	Solid		
								SO2	0.01	0.01	0.01	0.01	Gas/Vapor		
								Carbon Dioxide (CAS No. 124-38-9)	448	1963	448	1963	Gas/Vapor		
								Methane (CAS No. 74-82-8)	0.01	0.03	0.01	0.03	Gas/Vapor		
								Nitrous Oxide (CAS # 10024-97-2	<0.01	<0.01	<0.01	<0.01	Gas/Vapor		

Table 1: Emissions Data

Emission Point ID No. *(Must match Emission Units Table & Plot Plan)*	Emission Point Type[1]	Emission Unit Vented Through This Point *(Must match Emission Units Table & Plot Plan)*		Air Pollution Control Device *(Must match Emission Units Table & Plot Plan)*		Vent Time for Emission Unit *(chemical processes only)*		All Regulated Pollutants - Chemical Name/CAS[3] *(Speciate VOCs & HAPS)*	Maximum Potential Uncontrolled Emissions[4]		Maximum Potential Controlled Emissions[5]		Emission Form or Phase *(At exit conditions, Solid, Liquid or Gas/Vapor)*	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^4)
		ID No.	Source	ID No.	Device Type	Short Term[2]	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
12P-6420	Upward Vertical Stack	C4B-E-6250 C4B-B-6020	CSS-13 Preheater CSS-13 Preheater Furnance	C4B-M-6420	Baghouse	C	8,760	CO	0.03	0.15	0.03	0.15	Gas/Vapor	EE	NA
								NOx	0.12	0.51	0.12	0.51	Gas/Vapor		
								Ethylene Glycol (CAS NO. 107-21-1)	0.11	0.49	0.11	0.49	Gas/Vapor		
								Acetaldehyde (CAS NO. 75-07-0)	0.18	0.79	0.18	0.79	Gas/Vapor		
								VOC	0.32	1.43	0.32	1.43	Gas/Vapor		
								PM/PM10	0.66	3.30	0.01	0.03	Solid		
								SO2	0.01	0.01	0.01	0.01	Gas/Vapor		
								Carbon Dioxide (CAS No. 124-38-9)	236	1033	236	1033	Gas/Vapor		
								Methane (CAS No. 74-82-8)	<0.01	0.02	<0.01	0.02	Gas/Vapor		
								Nitrous Oxide (CAS # 10024-97-2	<0.01	<0.01	<0.01	<0.01	Gas/Vapor		
WF-6010	Upward Vertical Stack	L26-M-6010	Warehouse West Silo	L26-F-6010	NA	C	8,760	PM/PM10	0.08	0.35	<0.01	<0.01	Solid	EE	NA

Table 1: Emissions Data

Emission Point ID No. *(Must match Emission Units Table & Plot Plan)*	Emission Point Type[1]	Emission Unit Vented Through This Point *(Must match Emission Units Table & Plot Plan)*		Air Pollution Control Device *(Must match Emission Units Table & Plot Plan)*		Vent Time for Emission Unit *(chemical processes only)*		All Regulated Pollutants - Chemical Name/CAS[3] *(Speciate VOCs & HAPS)*	Maximum Potential Uncontrolled Emissions[4]		Maximum Potential Controlled Emissions[5]		Emission Form or Phase *(At exit conditions, Solid, Liquid or Gas/Vapor)*	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^4)
		ID No.	Source	ID No.	Device Type	Short Term[2]	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
8E-03	Upward Vertical Stack	S8A-F-3240 S8A-B-3010	CSS-8 Crystallizer CSS-8 Heater	S8A-M-3260	Baghouse	C	8,760	CO	0.06	0.25	0.06	0.25	Gas/Vapor	EE	NA
								NOx	0.29	1.17	0.29	1.17	Gas/Vapor		
								Ethylene Glycol (CAS NO. 107-21-1)	0.04	0.16	0.04	0.16	Gas/Vapor		
								VOC	0.11	0.45	0.11	0.45	Gas/Vapor		
								PM/PM10	9.12	40.37	0.09	0.40	Solid		
								SO2	0.01	0.01	0.01	0.01	Gas/Vapor		
								Carbon Dioxide (CAS No. 124-38-9)	413	1,808	413	1,808	Gas/Vapor		
								Methane (CAS No. 74-82-8)	0.01	0.03	0.01	0.03	Gas/Vapor		
								Nitrous Oxide (CAS # 10024-97-2	<0.01	<0.01	<0.01	<0.01	Gas/Vapor		

Table 1: Emissions Data

Emission Point ID No. *(Must match Emission Units Table & Plot Plan)*	Emission Point Type[1]	Emission Unit Vented Through This Point *(Must match Emission Units Table & Plot Plan)*		Air Pollution Control Device *(Must match Emission Units Table & Plot Plan)*		Vent Time for Emission Unit *(chemical processes only)*		All Regulated Pollutants - Chemical Name/CAS[3] *(Speciate VOCs & HAPS)*	Maximum Potential Uncontrolled Emissions[4]		Maximum Potential Controlled Emissions[5]		Emission Form or Phase *(At exit conditions, Solid, Liquid or Gas/Vapor)*	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^4)
		ID No.	Source	ID No.	Device Type	Short Term[2]	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
8E-04	Upward Vertical Stack	S8B-F-2250 S8B-B-2020	CSS-8 Preheater CSS-8 Heater	S8B-M-2420	Baghouse	C	8,760	CO	0.02	0.11	0.02	0.11	Gas/Vapor	EE	NA
								NOx	0.12	0.49	0.12	0.49	Gas/Vapor		
								Ethylene Glycol (CAS NO. 107-21-1)	0.03	0.12	0.03	0.12	Gas/Vapor		
								Acetaldehyde (CAS NO. 75-07-0)	0.04	0.19	0.04	0.19	Gas/Vapor		
								VOC	0.13	0.59	0.13	0.59	Gas/Vapor		
								PM/PM10	4.53	22.04	0.05	0.22	Solid		
								SO2	0.01	0.01	0.01	0.01	Gas/Vapor		
								Carbon Dioxide (CAS No. 124-38-9)	177	775	177	775	Gas/Vapor		
								Methane (CAS No. 74-82-8)	<0.01	0.01	<0.01	0.01	Gas/Vapor		
								Nitrous Oxide (CAS # 10024-97-2	<0.01	<0.01	<0.01	<0.01	Gas/Vapor		

Table 1: Emissions Data

Emission Point ID No. *(Must match Emission Units Table & Plot Plan)*	Emission Point Type[1]	Emission Unit Vented Through This Point *(Must match Emission Units Table & Plot Plan)*		Air Pollution Control Device *(Must match Emission Units Table & Plot Plan)*		Vent Time for Emission Unit *(chemical processes only)*		All Regulated Pollutants - Chemical Name/CAS[3] *(Speciate VOCs & HAPS)*	Maximum Potential Uncontrolled Emissions[4]		Maximum Potential Controlled Emissions[5]		Emission Form or Phase *(At exit conditions, Solid, Liquid or Gas/Vapor)*	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^4)
		ID No.	Source	ID No.	Device Type	Short Term[2]	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
10P-7350	Upward Vertical Stack	C3A-E-7240 C3A-B-7010	CSS-10 Crystallizer CSS-10 Heater	C3A-M-7350	Baghouse	C	8,760	CO	0.02	0.09	0.02	0.09	Gas/Vapor	EE	NA
								NOx	0.08	0.35	0.08	0.35	Gas/Vapor		
								Ethylene Glycol (CAS NO. 107-21-1)	0.30	1.25	0.30	1.25	Gas/Vapor		
								Acetaldehyde (CAS NO. 75-07-0)	0.06	0.23	0.06	0.23	Gas/Vapor		
								VOC	0.37	1.53	0.37	1.53	Gas/Vapor		
								PM/PM10	0.41	2.03	0.01	0.02	Solid		
								SO2	0.01	0.01	0.01	0.01	Gas/Vapor		
								Carbon Dioxide (CAS No. 124-38-9)	448	1963	448	1963	Gas/Vapor		
								Methane (CAS No. 74-82-8)	0.01	0.03	0.01	0.03	Gas/Vapor		
								Nitrous Oxide (CAS # 10024-97-2	<0.01	<0.01	<0.01	<0.01	Gas/Vapor		

Table 1: Emissions Data

Emission Point ID No. *(Must match Emission Units Table & Plot Plan)*	Emission Point Type[1]	Emission Unit Vented Through This Point *(Must match Emission Units Table & Plot Plan)*		Air Pollution Control Device *(Must match Emission Units Table & Plot Plan)*		Vent Time for Emission Unit *(chemical processes only)*		All Regulated Pollutants - Chemical Name/CAS[3] *(Speciate VOCs & HAPS)*	Maximum Potential Uncontrolled Emissions[4]		Maximum Potential Controlled Emissions[5]		Emission Form or Phase *(At exit conditions, Solid, Liquid or Gas/Vapor)*	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^4)
		ID No.	Source	ID No.	Device Type	Short Term[2]	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
10P-6420	Upward Vertical Stack	C3B-E-6250 C3B-B-6020	CSS-10 Preheater CSS-10 Preheater Furnace	C3B-M-6420	Baghouse	C	8,760	CO	0.02	0.07	0.02	0.07	Gas/Vapor	EE	NA
								NOx	0.08	0.36	0.08	0.36	Gas/Vapor		
								Ethylene Glycol (CAS NO. 107-21-1)	0.08	0.35	0.08	0.35	Gas/Vapor		
								Acetaldehyde (CAS NO. 75-07-0)	0.13	0.57	0.13	0.57	Gas/Vapor		
								VOC	0.24	1.07	0.24	1.07	Gas/Vapor		
								PM/PM10	0.49	2.13	0.01	0.02	Solid		
								SO2	0.01	0.01	0.01	0.01	Gas/Vapor		
								Carbon Dioxide (CAS No. 124-38-9)	236	1033	236	1033	Gas/Vapor		
									<0.01	0.02	<0.01	0.02	Gas/Vapor		
								Methane	<0.01	<0.01	<0.01	<0.01	Gas/Vapor		
11P-3350	Upward Vertical Stack	C3A-E-3240 C3A-B-3010	CSS-11 Crystallizer CSS-11 Heater	C3A-M-3350	Baghouse	C	8,760	CO	0.03	0.13	0.03	0.13	Gas/Vapor	EE	NA
								NOx	0.15	0.65	0.15	0.65	Gas/Vapor		
								Ethylene Glycol (CAS NO. 107-21-1)	0.30	1.25	0.30	1.25	Gas/Vapor		
								Acetaldehyde (CAS NO. 75-07-0)	0.06	0.23	0.06	0.23	Gas/Vapor		
								VOC	0.37	1.53	0.37	1.53	Gas/Vapor		
								PM/PM10	11.46	4.91	0.11	0.05	Solid		
								SO2	0.01	0.01	0.01	0.01	Gas/Vapor		
								Carbon Dioxide (CAS No. 124-38-9)	448	1963	448	1963	Gas/Vapor		
								Methane (CAS No. 74-82-8)	0.01	0.03	0.01	0.03	Gas/Vapor		
								Nitrous Oxide (CAS # 10024-97-2	<0.01	<0.01	<0.01	<0.01	Gas/Vapor		

Table 1: Emissions Data

Emission Point ID No. *(Must match Emission Units Table & Plot Plan)*	Emission Point Type[1]	Emission Unit Vented Through This Point *(Must match Emission Units Table & Plot Plan)*		Air Pollution Control Device *(Must match Emission Units Table & Plot Plan)*		Vent Time for Emission Unit *(chemical processes only)*		All Regulated Pollutants - Chemical Name/CAS[3] *(Speciate VOCs & HAPS)*	Maximum Potential Uncontrolled Emissions[4]		Maximum Potential Controlled Emissions[5]		Emission Form or Phase *(At exit conditions, Solid, Liquid or Gas/Vapor)*	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^4)
		ID No.	Source	ID No.	Device Type	Short Term[2]	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
11P-2420	Upward Vertical Stack	C3B-E-2250 C3B-B-2020	CSS-11 Preheater CSS-11 Preheater Furnace	C3B-M-2420	Baghouse	C	8,760	CO	0.01	0.05	0.01	0.05	Gas/Vapor	EE	NA
								NOx	0.07	0.29	0.07	0.29	Gas/Vapor		
								Ethylene Glycol (CAS NO. 107-21-1)	0.08	0.35	0.08	0.35	Gas/Vapor		
								Acetaldehyde (CAS NO. 75-07-0)	0.13	0.57	0.13	0.57	Gas/Vapor		
								VOC	0.24	1.07	0.24	1.07	Gas/Vapor		
								PM/PM10	0.01	0.02	0.01	0.02	Solid		
								SO2	0.01	0.01	0.01	0.01	Gas/Vapor		
								Carbon Dioxide (CAS No. 124-38-9)	236	1033	236	1033	Gas/Vapor		
								Methane (CAS No. 74-82-8)	<0.01	0.02	<0.01	0.02	Gas/Vapor		
								Nitrous Oxide (CAS # 10024-97-2	<0.01	<0.01	<0.01	<0.01	Gas/Vapor		

Table 1: Emissions Data

Emission Point ID No. *(Must match Emission Units Table & Plot Plan)*	Emission Point Type[1]	Emission Unit Vented Through This Point *(Must match Emission Units Table & Plot Plan)*		Air Pollution Control Device *(Must match Emission Units Table & Plot Plan)*		Vent Time for Emission Unit *(chemical processes only)*		All Regulated Pollutants - Chemical Name/CAS[3] *(Speciate VOCs & HAPS)*	Maximum Potential Uncontrolled Emissions[4]		Maximum Potential Controlled Emissions[5]		Emission Form or Phase *(At exit conditions, Solid, Liquid or Gas/Vapor)*	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^4)
		ID No.	Source	ID No.	Device Type	Short Term[2]	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
3P-1600	Upward Vertical Stack	C3T-B-1600	Hot Oil Heater	NA	NA	C	8760	Carbon Monoxide (CAS No. 630-08-0)	1.86	8.14	1.86	8.14	Gas Vapor	EE	
								NOx	3.19	14.00	3.19	14.00	Gas Vapor		
								Ethylene Glycol (CAS No. 107-21-1)	3.50	10.00	0.01	0.02	Gas Vapor		
								Acetaldehyde (CAS NO. 75-07-0)	520.00	750.0	0.05	0.19	Gas Vapor		
								1,4 Dioxane CAS NO. 54841-74-6)	5.00	5.00	0.001	0.001	Gas Vapor		
								VOC	1.32	2.77	1.32	2.77	Gas Vapor		
								PM/PM10/PM2.5	0.11	0.47	0.11	0.47	Solid		
								SOx	0.05	0.23	0.05	0.23	Gas Vapor		
								Carbon Dioxide (CAS No. 124-38-9)	6641	29088	6641	29088	Gas Vapor		
								Methane (CAS No. 74-82-8)	0.10	0.43	0.10	0.43	Gas Vapor		
								Nitrous Oxide (CAS # 10024-97-2)	0.01	0.04	0.01	0.04	Gas Vapor		
								Benzene (Cas # 71-43-2)	0.09	0.01	<0.01	<0.01	Gas Vapor		
								Toluene (CAS No. 108-88-3)	0.74	0.11	<0.01	<0.01	Gas Vapor		
								Ethylbenzene (CAS No. 100-41-4)	0.04	0.01	<0.01	<0.01	Gas Vapor		
								Naphathalene (CAS No. 91-20-3)	0.009	<0.01	<0.01	<0.01	Gas Vapor		

The EMISSION POINTS DATA SUMMARY SHEET provides a summation of emissions by emission unit. Note that uncaptured process emission unit emissions are not typically considered to be fugitive and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET. Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions). Please complete the FUGITIVE EMISSIONS DATA SUMMARY SHEET for fugitive emission activities.

* Only emission units in CSS-12 and CSS-13 listed.

1 Please add descriptors such as upward vertical stack, downward vertical stack, horizontal stack, relief vent, rain cap, etc.

2 Indicate by "C" if venting is continuous. Otherwise, specify the average short-term venting rate with units, for intermittent venting (ie., 15 min/hr). Indicate as many rates as needed to clarify frequency of venting (e.g., 5 min/day, 2 days/wk).

3 List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. **LIST** Acids, CO, CS_2, VOCs, H_2S, Inorganics, Lead, Organics, O_3, NO, NO_2, SO_2, SO_3, all applicable Greenhouse Gases (including CO_2 and methane), etc. **DO NOT LIST** H_2, H_2O, N_2, O_2, and Noble Gases.

4 Give maximum potential emission rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

5 Give maximum potential emission rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

6 Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).

7 Provide for all pollutant emissions. Typically, the units of parts per million by volume (ppmv) are used. If the emission is a mineral acid (sulfuric, nitric, hydrochloric or phosphoric) use units of milligram per dry cubic meter (mg/m^3) at standard conditions (68 °F and 29.92 inches Hg) (see 45CSR7). If the pollutant is SO_2, use units of ppmv (See 45CSR10).

Attachment J
EMISSION POINTS DATA SUMMARY SHEET

Table 2: Release Parameter Data								
Emission Point ID No. *(Must match Emission Units Table)*	Inner Diameter (ft.)	Exit Gas			Emission Point Elevation (ft)		UTM Coordinates (km)	
		Temp. (^{0}F)	Volumetric Flow [1] (acfm) *at operating conditions*	Velocity (fps)	Ground Level *(Height above mean sea level)*	Stack Height [2] *(Release height of emissions above ground level)*	Northing	Easting
12P-0520	2	297	23,846	123.9	583	35	4,280.0	397.9
12P-1590	0.5	100	1,166.3	99	583	65	4,280.0	397.9
12P-1130	1.33	100	540.4	6.48	583	55	4,280.0	397.9
12P-1140	0.67	90	2,493	117.9	583	30	4,280.0	397.9
12P-0390	0.67	140	2,154	101.8	583	55	4,280.0	397.9
12P-2060	1	100	2.8	0.06	583	45	4,280.0	397.9
12P-2080	0.067	90	928.6	43.9	583	30	4,280.0	397.9
4P-1600	4	550	15,031	19.94	583	100	4,280.0	397.9
12P-2390	0.83	14	1,664	50.64	583	280	4,280.0	397.9
12P-3350	0.83	305	2,333	71.87	583	250	4,280.0	397.9
12P-2420	0.67	450	1,291.6	12.18	583	200	4,280.0	397.9
13P-6390	0.83	14	1,664	50.64	583	280	4,280.0	397.9
13P-7350	0.83	305	2,333	71.87	583	250	4,280.0	397.9
12P-6420	0.67	450	1,291.6	12.18	583	200	4,280.0	397.9
13P-5590	0.5	100	1,166.3	99	583	65	4,280.0	397.9
13P-1130	1.33	100	540.4	6.48	583	55	4,280.0	397.9
13P-1170	0.67	90	2,493	117.9	583	30	4,280.0	397.9
13P-2080	0.067	90	928.6	43.9	583	30	4,280.0	397.9
WP-6010		150	700		583		4,280.0	397.9

3P-1600	4	550	15,031	19.94	583	100	4,280.0	397.9

[1] Give at operating conditions. Include inerts.
[2] Release height of emissions above ground level.

ATTACHMENT K – Fugitive Emissions Data Summary Sheets

Attachment K

FUGITIVE EMISSIONS DATA SUMMARY SHEET

The FUGITIVE EMISSIONS SUMMARY SHEET provides a summation of fugitive emissions. Fugitive emissions are those emissions which could not reasonably pass through a stack, chimney, vent or other functionally equivalent opening. Note that uncaptured process emissions are not typically considered to be fugitive, and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET.

Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions).

APPLICATION FORMS CHECKLIST - FUGITIVE EMISSIONS
1.) Will there be haul road activities? ☐ Yes ☒ No ☐ If YES, then complete the HAUL ROAD EMISSIONS UNIT DATA SHEET.
2.) Will there be Storage Piles? ☐ Yes ☒ No ☐ If YES, complete Table 1 of the NONMETALLIC MINERALS PROCESSING EMISSIONS UNIT DATA SHEET.
3.) Will there be Liquid Loading/Unloading Operations? ☐ Yes ☒ No ☐ If YES, complete the BULK LIQUID TRANSFER OPERATIONS EMISSIONS UNIT DATA SHEET.
4.) Will there be emissions of air pollutants from Wastewater Treatment Evaporation? ☐ Yes ☒ No ☐ If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET.
5.) Will there be Equipment Leaks (e.g. leaks from pumps, compressors, in-line process valves, pressure relief devices, open-ended valves, sampling connections, flanges, agitators, cooling towers, etc.)? ☐ Yes ☒ No ☐ If YES, complete the LEAK SOURCE DATA SHEET section of the CHEMICAL PROCESSES EMISSIONS UNIT DATA SHEET.
6.) Will there be General Clean-up VOC Operations? ☐ Yes ☒ No ☐ If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET.
7.) Will there be any other activities that generate fugitive emissions? ☐ Yes ☒ No ☐ If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET or the most appropriate form.
If you answered "NO" to all of the items above, it is not necessary to complete the following table, "Fugitive Emissions Summary."

FUGITIVE EMISSIONS SUMMARY	All Regulated Pollutants - Chemical Name/CAS [1]	Maximum Potential Uncontrolled Emissions [2]		Maximum Potential Controlled Emissions [3]		Est. Method Used [4]
		lb/hr	ton/yr	lb/hr	ton/yr	
Haul Road/Road Dust Emissions Paved Haul Roads						
Unpaved Haul Roads						
Storage Pile Emissions						
Loading/Unloading Operations						
Wastewater Treatment Evaporation & Operations						
Equipment Leaks		Does not apply		Does not apply		
General Clean-up VOC Emissions						
Other						

[1] List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. LIST Acids, CO, CS_2, VOCs, H_2S, Inorganics, Lead, Organics, O_3, NO, NO_2, SO_2, SO_3, all applicable Greenhouse Gases (including CO_2 and methane), etc. DO NOT LIST H_2, H_2O, N_2, O_2, and Noble Gases.

[2] Give rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

[3] Give rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

[4] Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).

ATTACHMENT L – Emissions Unit Data Sheets

Attachment L EMISSIONS UNIT
DATA SHEET GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): CA4-F-0410 / CA4-F-0411

1. Name or type and model of proposed affected source:
   West CSS-12/13 Crystallizer Blend Silo
   East CSS-12/13 Crystallizer Blend Silo

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:
   Polyester Pellets - 25,000 lb/hr
   Air – 1527 scfm

4. Name(s) and maximum amount of proposed material(s) produced per hour:
   Polyester Pellets – 25,000 lbhr

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

Not Applicable

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable): Not Applicable

(a) Type and amount in appropriate units of fuel(s) to be burned:

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input: $\times 10^6$ BTU/hr.

7. Projected operating schedule:

Hours/Day 24	Days/Week 7	Weeks/Year 52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:			
@ 450 °F and 14.72 psia			
a.	NO_X	lb/hr	grains/ACF
b.	SO_2	lb/hr	grains/ACF
c.	CO	lb/hr	grains/ACF
d.	PM_{10}	5.44 lb/hr	grains/ACF
e.	Hydrocarbons	lb/hr	grains/ACF
f.	VOCs	lb/hr	grains/ACF
g.	Pb	lb/hr	grains/ACF
h.	Specify other(s)		
		lb/hr	grains/ACF
		lb/hr	grains/ACF
		lb/hr	grains/ACF
		lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping
REPORTING	**TESTING**
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

Not Applicable

Attachment L EMISSIONS UNIT
DATA SHEET GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): C4D-E-1280 C4D-E-5280

1. Name or type and model of proposed affected source:
   CSS-12 Product Cooler
   CSS-13 Product Cooler

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:
   Polyester Pellets - 25,000 lb/hr
   Air – 1527 scfm

4. Name(s) and maximum amount of proposed material(s) produced per hour:
   Polyester Pellets – 25,000 lbhr

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

Not Applicable

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable): Not Applicable

(a) Type and amount in appropriate units of fuel(s) to be burned:

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input: $\times 10^6$ BTU/hr.

7. Projected operating schedule:

Hours/Day 24	Days/Week 7	Weeks/Year 52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@ 450 °F and 14.72 psia

a.	NO_X	lb/hr	grains/ACF
b.	SO_2	lb/hr	grains/ACF
c.	CO	lb/hr	grains/ACF
d.	PM_{10}	4.17 lb/hr	grains/ACF
e.	Hydrocarbons	lb/hr	grains/ACF
f.	VOCs	0.28 lb/hr	grains/ACF
g.	Pb	lb/hr	grains/ACF
h.	Specify other(s)		
	Ethylene Glycol	0.22 lb/hr	grains/ACF
	Acetaldehyde	0.01 lb/hr	grains/ACF
		lb/hr	grains/ACF
		lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping
REPORTING	**TESTING**
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

Not Applicable

Attachment L EMISSIONS UNIT
DATA SHEET GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): C4C-R-3070

1. Name or type and model of proposed affected source:
   CSS-12 2nd Reactor

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:
   Polyester Pellets - 25,000 lb/hr

4. Name(s) and maximum amount of proposed material(s) produced per hour:
   Polyester Pellets - 25,000 lb/hr

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

   Not Applicable

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable): Not Applicable

(a) Type and amount in appropriate units of fuel(s) to be burned:

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash: Not Applicable

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input: $\times 10^6$ BTU/hr.

7. Projected operating schedule:

Hours/Day 24	Days/Week 7	Weeks/Year 52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used: **INCLUDED IN HOT OIL HEATER EMSSIONS (C4T-B-1600)**			
@		°F and	psia
a.	NO_X	lb/hr	grains/ACF
b.	SO_2	lb/hr	grains/ACF
c.	CO	lb/hr	grains/ACF
d.	PM_{10}	lb/hr	grains/ACF
e.	Hydrocarbons	lb/hr	grains/ACF
f.	VOCs	lb/hr	grains/ACF
g.	Pb	lb/hr	grains/ACF
h.	Specify other(s)		
		lb/hr	grains/ACF
		lb/hr	grains/ACF
		lb/hr	grains/ACF
		lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping
REPORTING	**TESTING**
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

Not Applicable

Attachment L EMISSIONS UNIT
DATA SHEET GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): C4B-F-1420

1. Name or type and model of proposed affected source:
   CSS-12 Preheater Surge BIn

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:
   Polyester Pellets - 25,000 lb/hr

4. Name(s) and maximum amount of proposed material(s) produced per hour:
   Polyester Pellets - 25,000 lb/hr

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

   Not Applicable

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable): Not Applicable

(a) Type and amount in appropriate units of fuel(s) to be burned:

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash: Not Applicable

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input: $\times 10^6$ BTU/hr.

7. Projected operating schedule:

Hours/Day 24	Days/Week 7	Weeks/Year 52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used: **INCLUDED IN HOT OIL HEATER EMSSIONS (C4T-B-1600)**		
@	°F and	psia
a. NO_X	lb/hr	grains/ACF
b. SO_2	lb/hr	grains/ACF
c. CO	lb/hr	grains/ACF
d. PM_{10}	lb/hr	grains/ACF
e. Hydrocarbons	lb/hr	grains/ACF
f. VOCs	lb/hr	grains/ACF
g. Pb	lb/hr	grains/ACF
h. Specify other(s)		
	lb/hr	grains/ACF
	lb/hr	grains/ACF
	lb/hr	grains/ACF
	lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping
REPORTING	**TESTING**
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

Not Applicable

Attachment L EMISSIONS UNIT
DATA SHEET GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): C4C-R-1060

1. Name or type and model of proposed affected source:
   CSS-12 1st Reactor

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:
   Polyester Pellets - 25,000 lb/hr

4. Name(s) and maximum amount of proposed material(s) produced per hour:
   Polyester Pellets - 25,000 lb/hr

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

   Not Applicable

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable): Not Applicable

(a) Type and amount in appropriate units of fuel(s) to be burned:

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash: Not Applicable

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input: $\times 10^6$ BTU/hr.

7. Projected operating schedule:

Hours/Day 24	Days/Week 7	Weeks/Year 52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used: **INCLUDED IN HOT OIL HEATER EMSSIONS (C4T-B-1600)**		
@	°F and	psia
a. NO_X	lb/hr	grains/ACF
b. SO_2	lb/hr	grains/ACF
c. CO	lb/hr	grains/ACF
d. PM_{10}	lb/hr	grains/ACF
e. Hydrocarbons	lb/hr	grains/ACF
f. VOCs	lb/hr	grains/ACF
g. Pb	lb/hr	grains/ACF
h. Specify other(s)		
	lb/hr	grains/ACF
	lb/hr	grains/ACF
	lb/hr	grains/ACF
	lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping
REPORTING	**TESTING**
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

Not Applicable

Attachment L EMISSIONS UNIT
DATA SHEET GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): C4A-E-3240 / C4A-B-3010

1. Name or type and model of proposed affected source:
   CSS-12 Crystallizer
   CSS-12 Crystallizer Furnace

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:
   Polyester Pellets - 25,000 lb/hr
   Air – 1527 SCFM

4. Name(s) and maximum amount of proposed material(s) produced per hour:
   Polyester Pellets – 25,000 lb/hr

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

Not Applicable

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned: Natural Gas

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:
1 natural gas burner

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:
Not Applicable

(g) Proposed maximum design heat input: 3.04×10^6 BTU/hr.

7. Projected operating schedule:

Hours/Day 24	Days/Week 7	Weeks/Year 52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@200 °F and 14.9 psia

a.	NO_X	0.31 lb/hr	grains/ACF
b.	SO_2	0.01 lb/hr	grains/ACF
c.	CO	0.07 lb/hr	grains/ACF
d.	PM_{10}	0.60 lb/hr	grains/ACF
e.	Hydrocarbons	lb/hr	grains/ACF
f.	VOCs	0.37 lb/hr	grains/ACF
g.	Pb	lb/hr	grains/ACF
h.	Specify other(s)		
	Ethylene Glycol	0.42 lb/hr	grains/ACF
	Acetaldehyde	0.08 lb/hr	grains/ACF
	Carbon Dioxide	448 lb/hr	grains/ACF
	Methane Nitrous Oxide	0.01 lb/hr <0.01 lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping
REPORTING	**TESTING**
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

Not Applicable

Attachment L EMISSIONS UNIT
DATA SHEET GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): C4B-E-2250 / C4B-B-2020

1. Name or type and model of proposed affected source:
   CSS-12 Preheater
   CSS-12 Preheater Furnace

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:
   Polyester Pellets - 25,000 lb/hr
   Air – 1527 SCFM

4. Name(s) and maximum amount of proposed material(s) produced per hour:
   Polyester Pellets - 25,000 lb/hr

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

   Not Applicable

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned: Natural Gas

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input: 0.97×10^{6} BTU/hr.

7. Projected operating schedule:

Hours/Day 24	Days/Week 7	Weeks/Year 52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:			
@		°F and	psia
a.	NO_X	0.08 lb/hr	grains/ACF
b.	SO_2	0.01 lb/hr	grains/ACF
c.	CO	0.02 lb/hr	grains/ACF
d.	PM_{10}	0.66 lb/hr	grains/ACF
e.	Hydrocarbons	lb/hr	grains/ACF
f.	VOCs	0.32 lb/hr	grains/ACF
g.	Pb	lb/hr	grains/ACF
h.	Specify other(s)		
	Ethylene Glycol	0.11 lb/hr	grains/ACF
	Acetaldehyde	0.18 lb/hr	grains/ACF
	Carbon Dioxide	236 lb/hr	grains/ACF
	Methane Nitrous Oxide	<0.01 <0.01 lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping
REPORTING	**TESTING**
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

Not Applicable

Attachment L EMISSIONS UNIT
DATA SHEET GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): C4A-E-7240 / C4A-B-7010

1. Name or type and model of proposed affected source:
   CSS-13 Crystallizer
   CSS-13 Crystallizer Furnace

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:
   Polyester Pellets - 25,000 lb/hr
   Air – 1527 scfm

4. Name(s) and maximum amount of proposed material(s) produced per hour:
Polyester Pellets - 25,000 lb/hr

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

Not Applicable

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned:

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input: 3.04×10^{6} BTU/hr.

7. Projected operating schedule:

Hours/Day 24	Days/Week 7	Weeks/Year 52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@140 °F and 14.9 psia

a.	NO_X	0.13 lb/hr	grains/ACF
b.	SO_2	0.01 lb/hr	grains/ACF
c.	CO	0.03 lb/hr	grains/ACF
d.	PM_{10}	3.04 lb/hr	grains/ACF
e.	Hydrocarbons	lb/hr	grains/ACF
f.	VOCs	0.51 lb/hr	grains/ACF
g.	Pb	lb/hr	grains/ACF
h.	Specify other(s)		
	Ethylene Glycol	0.42 lb/hr	grains/ACF
	Acetaldehyde	0.08 lb/hr	grains/ACF
	Carbon Dioxide	448 lb/hr	grains/ACF
	Methane Nitrous Oxide	0.01 lb/hr <0.01 lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping
REPORTING	**TESTING**
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

Not Applicable

Attachment L EMISSIONS UNIT
DATA SHEET GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): C4B-E-6250 / C4B-B-6020

1. Name or type and model of proposed affected source:
   CSS-13 Preheater
   CSS-13 Preheater Furnace

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:
   Polyester Pellets - 25,000 lb/hr
   Air - 1527 scfm

4. Name(s) and maximum amount of proposed material(s) produced per hour:
   Polyester Pellets - 25,000 lb/hr

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

   Not Applicable

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned: Natural Gas

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input: 1.6×10^6 BTU/hr.

7. Projected operating schedule:

Hours/Day 24	Days/Week 7	Weeks/Year 52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@200 °F and 14.9 psia

a.	NO_X	0.12 lb/hr	grains/ACF
b.	SO_2	0.01 lb/hr	grains/ACF
c.	CO	0.03 lb/hr	grains/ACF
d.	PM_{10}	0.66 lb/hr	grains/ACF
e.	Hydrocarbons	lb/hr	grains/ACF
f.	VOCs	0.32 lb/hr	grains/ACF
g.	Pb	lb/hr	grains/ACF
h.	Specify other(s)		
	Ethylene Glycol	0.11 lb/hr	grains/ACF
	Acetaldehyde	0.18 lb/hr	grains/ACF
	Carbon Dioxide	236 lb/hr	grains/ACF
	Methane Nitrous Oxide	<0.01 lb/hr <0.01 lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping
REPORTING	**TESTING**
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

Not Applicable

Attachment L EMISSIONS UNIT
DATA SHEET GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): C4B-F-5420

1. Name or type and model of proposed affected source:
   CSS-13 Preheater Surge Bin

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:
   Polyester Pellets - 25,000 lb/hr

4. Name(s) and maximum amount of proposed material(s) produced per hour:
   Polyester Pellets - 25,000 lb/hr

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

   Not Applicable

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable): Not Applicable

(a) Type and amount in appropriate units of fuel(s) to be burned:

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash: Not Applicable

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input: $\times 10^6$ BTU/hr.

7. Projected operating schedule:

Hours/Day 24	Days/Week 7	Weeks/Year 52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used: **INCLUDED IN HOT OIL HEATER EMSSIONS (C4T-B-1600)**			
@		°F and	psia
a.	NO_X	lb/hr	grains/ACF
b.	SO_2	lb/hr	grains/ACF
c.	CO	lb/hr	grains/ACF
d.	PM_{10}	lb/hr	grains/ACF
e.	Hydrocarbons	lb/hr	grains/ACF
f.	VOCs	lb/hr	grains/ACF
g.	Pb	lb/hr	grains/ACF
h.	Specify other(s)		
		lb/hr	grains/ACF
		lb/hr	grains/ACF
		lb/hr	grains/ACF
		lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping
REPORTING	**TESTING**
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

Not Applicable

Attachment L EMISSIONS UNIT
DATA SHEET GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): C4C-R-5060

1. Name or type and model of proposed affected source:
   CSS-13 1st Reactor

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:
   Polyester Pellets - 25,000 lb/hr

4. Name(s) and maximum amount of proposed material(s) produced per hour:
   Polyester Pellets - 25,000 lb/hr

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

   Not Applicable

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable): Not Applicable

(a) Type and amount in appropriate units of fuel(s) to be burned:

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash: Not Applicable

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input: $\times 10^6$ BTU/hr.

7. Projected operating schedule:

Hours/Day 24	Days/Week 7	Weeks/Year 52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used: **INCLUDED IN HOT OIL HEATER EMSSIONS (C4T-B-1600)**			
@		°F and	psia
a.	NO_X	lb/hr	grains/ACF
b.	SO_2	lb/hr	grains/ACF
c.	CO	lb/hr	grains/ACF
d.	PM_{10}	lb/hr	grains/ACF
e.	Hydrocarbons	lb/hr	grains/ACF
f.	VOCs	lb/hr	grains/ACF
g.	Pb	lb/hr	grains/ACF
h.	Specify other(s)		
		lb/hr	grains/ACF
		lb/hr	grains/ACF
		lb/hr	grains/ACF
		lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping
REPORTING	**TESTING**
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

Not Applicable

Attachment L EMISSIONS UNIT
DATA SHEET GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): C4C-R-7070

1. Name or type and model of proposed affected source:
   CSS-13 2nd Reactor

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:
   Polyester Pellets - 25,000 lb/hr

4. Name(s) and maximum amount of proposed material(s) produced per hour:
   Polyester Pellets - 25,000 lb/hr

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

   Not Applicable

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable): Not Applicable

(a) Type and amount in appropriate units of fuel(s) to be burned:

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash: Not Applicable

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input: $\times 10^6$ BTU/hr.

7. Projected operating schedule:

Hours/Day 24	Days/Week 7	Weeks/Year 52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used: **INCLUDED IN HOT OIL HEATER EMSSIONS (C4T-B-1600)**		
@	°F and	psia
a. NO_X	lb/hr	grains/ACF
b. SO_2	lb/hr	grains/ACF
c. CO	lb/hr	grains/ACF
d. PM_{10}	lb/hr	grains/ACF
e. Hydrocarbons	lb/hr	grains/ACF
f. VOCs	lb/hr	grains/ACF
g. Pb	lb/hr	grains/ACF
h. Specify other(s)		
	lb/hr	grains/ACF
	lb/hr	grains/ACF
	lb/hr	grains/ACF
	lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping
REPORTING	**TESTING**
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

Not Applicable

Attachment L EMISSIONS UNIT
DATA SHEET GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): L26-M-6010

1. Name or type and model of proposed affected source:
   Warehouse West Silo

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:
   Polyester Pellets - 25,000 lb/hr

4. Name(s) and maximum amount of proposed material(s) produced per hour:
   Polyester Pellets - 25,000 lb/hr

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

   Not Applicable

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable): Not Applicable

(a) Type and amount in appropriate units of fuel(s) to be burned:

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash: Not Applicable

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input: $\times 10^6$ BTU/hr.

7. Projected operating schedule:

Hours/Day 24	Days/Week 7	Weeks/Year 52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:			
@		°F and	psia
a.	NO_X	lb/hr	grains/ACF
b.	SO_2	lb/hr	grains/ACF
c.	CO	lb/hr	grains/ACF
d.	PM_{10}	0.08 lb/hr	grains/ACF
e.	Hydrocarbons	lb/hr	grains/ACF
f.	VOCs	lb/hr	grains/ACF
g.	Pb	lb/hr	grains/ACF
h.	Specify other(s)		
		lb/hr	grains/ACF
		lb/hr	grains/ACF
		lb/hr	grains/ACF
		lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping
REPORTING	**TESTING**
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

Not Applicable

Attachment L EMISSIONS UNIT
DATA SHEET GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): S8A-F-3240 / S8A-B-3010

1. Name or type and model of proposed affected source:
   CSS-8 Crystallizer
   CSS-8 Crystallizer Furnace

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:
   Polyester Pellets - 18,000 lb/hr
   Air – 1527 SCFM

4. Name(s) and maximum amount of proposed material(s) produced per hour:
   Polyester Pellets – 18,000 lb/hr

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

Not Applicable

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned: Natural Gas

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:
1 natural gas burner

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:
Not Applicable

(g) Proposed maximum design heat input: 2.8 $\times 10^6$ BTU/hr.

7. Projected operating schedule:

Hours/Day 24	Days/Week 7	Weeks/Year 52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@200 °F and 14.9 psia

a.	NO_X	0.29 lb/hr	grains/ACF
b.	SO_2	0.01 lb/hr	grains/ACF
c.	CO	0.06 lb/hr	grains/ACF
d.	PM_{10}	9.12 lb/hr	grains/ACF
e.	Hydrocarbons	lb/hr	grains/ACF
f.	VOCs	0.11 lb/hr	grains/ACF
g.	Pb	lb/hr	grains/ACF
h.	Specify other(s)		
	Ethylene Glycol	0.04 lb/hr	grains/ACF
	Carbon Dioxide	413 lb/hr	grains/ACF
	Methane	0.01 lb/hr	grains/ACF
	Nitrous Oxide	<0.01 lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping
REPORTING	**TESTING**
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

Not Applicable

Attachment L EMISSIONS UNIT
DATA SHEET GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): S8B-F-2250/ S8B-B-2020

1. Name or type and model of proposed affected source:
   CSS-8 Preheater
   CSS-8 Preheater Furnace

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:
   Polyester Pellets - 18,000 lb/hr
   Air – 1527 SCFM

4. Name(s) and maximum amount of proposed material(s) produced per hour:
   Polyester Pellets - 18,000 lb/hr

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

   Not Applicable

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned: Natural Gas

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input 1.2×10^{6} BTU/hr.

7. Projected operating schedule:

Hours/Day 24	Days/Week 7	Weeks/Year 52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@ °F and psia

a.	NO_X	0.13 lb/hr	grains/ACF
b.	SO_2	0.01 lb/hr	grains/ACF
c.	CO	0.02 lb/hr	grains/ACF
d.	PM_{10}	4.53 lb/hr	grains/ACF
e.	Hydrocarbons	lb/hr	grains/ACF
f.	VOCs	0.13 lb/hr	grains/ACF
g.	Pb	lb/hr	grains/ACF
h.	Specify other(s)		
	Ethylene Glycol	0.03 lb/hr	grains/ACF
	Acetaldehyde	0.04 lb/hr	grains/ACF
	Carbon Dioxide	177 lb/hr	grains/ACF
	Methane Nitrous Oxide	<0.01 <0.01 lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping
REPORTING	**TESTING**
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

Not Applicable

Attachment L EMISSIONS UNIT
DATA SHEET GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): C3A-E-7240/ C3A-B-7010

1. Name or type and model of proposed affected source:
   CSS-10 Crystallizer
   CSS-10 Crystallizer Furnace

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:
   Polyester Pellets - 18,000 lb/hr
   Air – 1527 SCFM

4. Name(s) and maximum amount of proposed material(s) produced per hour:
   Polyester Pellets – 18,000 lb/hr

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

Not Applicable

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned: Natural Gas

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:
1 natural gas burner

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:
Not Applicable

(g) Proposed maximum design heat input: 3.04×10^6 BTU/hr.

7. Projected operating schedule:

Hours/Day 24	Days/Week 7	Weeks/Year 52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@200 °F and 14.9 psia

a.	NO_X	0.08 lb/hr	grains/ACF
b.	SO_2	0.01 lb/hr	grains/ACF
c.	CO	0.02 lb/hr	grains/ACF
d.	PM_{10}	4.05 lb/hr	grains/ACF
e.	Hydrocarbons	lb/hr	grains/ACF
f.	VOCs	0.37 lb/hr	grains/ACF
g.	Pb	lb/hr	grains/ACF
h.	Specify other(s)		
	Ethylene Glycol	0.30 lb/hr	grains/ACF
	Acetaldehyde	0.06 lb/hr	grains/ACF
	Carbon Dioxide	448 lb/hr	grains/ACF
	Methane Nitrous Oxide	0.01 lb/hr <0.01 lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping
REPORTING	**TESTING**
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

Not Applicable

Attachment L EMISSIONS UNIT
DATA SHEET GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): C3B-F-6250 / C3B-B-6020

1. Name or type and model of proposed affected source:
   CSS-10 Preheater
   CSS-10 Preheater Furnace

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:
   Polyester Pellets - 18,000 lb/hr
   Air – 1527 SCFM

4. Name(s) and maximum amount of proposed material(s) produced per hour:
   Polyester Pellets - 18,000 lb/hr

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

   Not Applicable

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned: Natural Gas

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input: 1.6×10^{6} BTU/hr.

7. Projected operating schedule:

Hours/Day 24	Days/Week 7	Weeks/Year 52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@ °F and psia

a.	NO_X	0.08 lb/hr	grains/ACF
b.	SO_2	0.01 lb/hr	grains/ACF
c.	CO	0.03 lb/hr	grains/ACF
d.	PM_{10}	0.49 lb/hr	grains/ACF
e.	Hydrocarbons	lb/hr	grains/ACF
f.	VOCs	0.24 lb/hr	grains/ACF
g.	Pb	lb/hr	grains/ACF
h.	Specify other(s)		
	Ethylene Glycol	0.08 lb/hr	grains/ACF
	Acetaldehyde	0.13 lb/hr	grains/ACF
	Carbon Dioxide	236 lb/hr	grains/ACF
	Methane Nitrous Oxide	<0.01 <0.01 lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping
REPORTING	**TESTING**
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

Not Applicable

Attachment L EMISSIONS UNIT
DATA SHEET GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): C3A-E-3240 / C3A-B-3010

1. Name or type and model of proposed affected source:
   CSS-11 Crystallizer
   CSS-11 Crystallizer Furnace

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:
   Polyester Pellets - 18,000 lb/hr
   Air – 1527 SCFM

4. Name(s) and maximum amount of proposed material(s) produced per hour:
   Polyester Pellets – 18,000 lb/hr

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

Not Applicable

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned: Natural Gas

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:
1 natural gas burner

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:
Not Applicable

(g) Proposed maximum design heat input: 3.04×10^6 BTU/hr.

7. Projected operating schedule:

Hours/Day 24	Days/Week 7	Weeks/Year 52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@200 °F and 14.9 psia

a.	NO_X	0.15 lb/hr	grains/ACF
b.	SO_2	0.01 lb/hr	grains/ACF
c.	CO	0.03 lb/hr	grains/ACF
d.	PM_{10}	11.46 lb/hr	grains/ACF
e.	Hydrocarbons	lb/hr	grains/ACF
f.	VOCs	0.37 lb/hr	grains/ACF
g.	Pb	lb/hr	grains/ACF
h.	Specify other(s)		
	Ethylene Glycol	0.30 lb/hr	grains/ACF
	Acetaldehyde	0.06 lb/hr	grains/ACF
	Carbon Dioxide	448 lb/hr	grains/ACF
	Methane Nitrous Oxide	0.01 lb/hr <0.01 lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping
REPORTING	**TESTING**
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

Not Applicable

Attachment L EMISSIONS UNIT
DATA SHEET GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): C3B-E-2250 C3B-B-2020

1. Name or type and model of proposed affected source:
   CSS-11 Preheater
   CSS-11 Preheater Furnace

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:
   Polyester Pellets - 18,000 lb/hr
   Air – 1527 SCFM

4. Name(s) and maximum amount of proposed material(s) produced per hour:
Polyester Pellets - 18,000 lb/hr

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

Not Applicable

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned: Natural Gas

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input: 1.6×10^6 BTU/hr.

7. Projected operating schedule:

Hours/Day 24	Days/Week 7	Weeks/Year 52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@ °F and psia

a.	NO_X	0.17 lb/hr	grains/ACF
b.	SO_2	0.01 lb/hr	grains/ACF
c.	CO	0.14 lb/hr	grains/ACF
d.	PM_{10}	0.95 lb/hr	grains/ACF
e.	Hydrocarbons	lb/hr	grains/ACF
f.	VOCs	0.23 lb/hr	grains/ACF
g.	Pb	lb/hr	grains/ACF
h.	Specify other(s)		
	Ethylene Glycol	0.08 lb/hr	grains/ACF
	Acetaldehyde	0.13 lb/hr	grains/ACF
	Carbon Dioxide	200 lb/hr	grains/ACF
	Methane Nitrous Oxide	<0.01 <0.01 lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping
REPORTING	**TESTING**
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

Not Applicable

Attachment L EMISSIONS UNIT
DATA SHEET GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): C4T-B-1600

1. Name or type and model of proposed affected source:
   Hot Oil Heater

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:

Process waste gases

2. Name(s) and maximum amount of proposed material(s) produced per hour:

NA

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

Not Applicable

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned: Natural Gas

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used: 53.1 MMBtu/hr

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input: 53.1×10^6 BTU/hr.

7. Projected operating schedule:

Hours/Day 24	Days/Week 7	Weeks/Year 52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@ °F and psia

a.	NO_X	3.20 lb/hr	grains/ACF
b.	SO_2	0.06 lb/hr	grains/ACF
c.	CO	1.90 lb/hr	grains/ACF
d.	PM_{10}	13 lb/hr	grains/ACF
e.	Hydrocarbons	lb/hr	grains/ACF
f.	VOCs	201.36 lb/hr	grains/ACF
g.	Pb	lb/hr	grains/ACF
h.	Specify other(s)		
	Ethylene Glycol	3.55 lb/hr	grains/ACF
	Acetaldehyde	29.6 lb/hr	grains/ACF
	Carbon Dioxide	6641 lb/hr	grains/ACF
	Methane Nitrous Oxide	0.10 0.01 lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@ °F and psia

a.	NO_X	lb/hr	grains/ACF
b.	SO_2	lb/hr	grains/ACF
c.	CO	lb/hr	grains/ACF
d.	PM_{10}	lb/hr	grains/ACF
e.	Hydrocarbons	lb/hr	grains/ACF
f.	VOCs	lb/hr	grains/ACF
g.	Pb	lb/hr	grains/ACF
h.	Specify other(s)		
	1, 4 Dioxane	0.59 lb/hr	grains/ACF
	Benzene	0.08 lb/hr	grains/ACF
	Toluene	0.74 lb/hr	grains/ACF
	Ethyl benzene	0.04 lb/hr	grains/ACF
	Naphthalene	<0.01	

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping
REPORTING	**TESTING**
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

Not Applicable

Attachment L EMISSIONS UNIT
DATA SHEET GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): C3T-B-1600

1. Name or type and model of proposed affected source:
   Hot Oil Heater

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:

Process waste gases

3. Name(s) and maximum amount of proposed material(s) produced per hour:

NA

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

Not Applicable

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned: Natural Gas

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used: 53.1 MMBtu/hr

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input: 53.1×10^6 BTU/hr.

7. Projected operating schedule:

Hours/Day 24	Days/Week 7	Weeks/Year 52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@ °F and psia

a.	NO_X	3.19 lb/hr	grains/ACF
b.	SO_2	0.05 lb/hr	grains/ACF
c.	CO	1.86 lb/hr	grains/ACF
d.	PM_{10}	11 lb/hr	grains/ACF
e.	Hydrocarbons	lb/hr	grains/ACF
f.	VOCs	660.0 lb/hr	grains/ACF
g.	Pb	lb/hr	grains/ACF
h.	Specify other(s)		
	Ethylene Glycol	3.50 lb/hr	grains/ACF
	Acetaldehyde	520 lb/hr	grains/ACF
	Carbon Dioxide	6641 lb/hr	grains/ACF
	Methane Nitrous Oxide	0.10 0.01 lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@ °F and psia

a.	NO_X	lb/hr	grains/ACF
b.	SO_2	lb/hr	grains/ACF
c.	CO	lb/hr	grains/ACF
d.	PM_{10}	lb/hr	grains/ACF
e.	Hydrocarbons	lb/hr	grains/ACF
f.	VOCs	lb/hr	grains/ACF
g.	Pb	lb/hr	grains/ACF
h.	Specify other(s)		
	1, 4 Dioxane	5.00 lb/hr	grains/ACF
	Benzene	0.08 lb/hr	grains/ACF
	Toluene	0.74 lb/hr	grains/ACF
	Ethyl benzene	0.04 lb/hr	grains/ACF
	Naphthalene	<0.01	

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping
REPORTING	**TESTING**
See Attachment O – Monitoring and Recordkeeping	See Attachment O – Monitoring and Recordkeeping

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

Not Applicable

ATTACHMENT M – AIR POLLUTION CONTROL DEVICE SHEETS

Attachment M
Air Pollution Control Device Sheet
(BAGHOUSE)

Control Device ID No. (must match Emission Units Table): C4A-M-0340

Equipment Information and Filter Characteristics

1. Manufacturer: Mikropul
   Model No. 95-10-40 TRB

2. Total number of compartments: 1

3. Number of compartment online for normal operation: 1

4. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency.

5. Baghouse Configuration (check one): ☐ Open Pressure ☒ Closed Pressure ☐ Closed Suction ☐ Electrostatically Enhanced Fabric ☐ Other, Specify

6. Filter Fabric Bag Material:
   - ☐ Nomex nylon
   - ☐ Wool
   - ☒ Polyester
   - ☐ Polypropylene
   - ☐ Acrylics
   - ☐ Ceramics
   - ☐ Fiber Glass
   - ☐ Cotton Weight ____ oz./sq.yd
   - ☐ Teflon Thickness ____ in
   - ☐ Others, specify

7. Bag Dimension:
   Diameter 4.5 in.
   Length 10 ft.

8. Total cloth area: 1790 ft^2

9. Number of bags: 152

10. Operating air to cloth ratio: 7.81 ft/min

11. Baghouse Operation: ☒ Continuous ☐ Automatic ☐ Intermittent

12. Method used to clean bags:
   - ☐ Mechanical Shaker
   - ☐ Pneumatic Shaker
   - ☐ Bag Collapse
   - ☐ Manual Cleaning
   - ☐ Sonic Cleaning
   - ☐ Reverse Air Flow
   - ☒ Pulse Jet
   - ☐ Reverse Jet
   - ☐ Reverse Air Jet
   - ☐ Other:

13. Cleaning initiated by:
   - ☒ Timer
   - ☐ Frequency if timer actuated
   - ☐ Expected pressure drop range ____ in. of water
   - ☐ Other

14. Operation Hours: Max. per day: 24 Max. per yr: 8760

15. Collection efficiency: Rating: 99 % Guaranteed minimum: 99 %

Gas Stream Characteristics

16. Gas flow rate into the collector: 13,990 ACFM at 405 °F and 14.7 PSIA
    ACFM: Design: ____ PSIA Maximum: ____ PSIA Average Expected: ____ PSIA

17. Water Vapor Content of Effluent Stream: ____ lb. Water/lb. Dry Air

18. Gas Stream Temperature: ____ °F

19. Fan Requirements: ____ hp
    OR ____ ft^3/min

20. Stabilized static pressure loss across baghouse. Pressure Drop: High 6 in. H_2O Low 6 in. H_2O

21. Particulate Loading: Inlet: 0.013 grain/scf Outlet: 1.4×10^{-4} grain/scf

22. Type of Pollutant(s) to be collected (if particulate give specific type):

Polyester fines

23. Is there any SO_3 in the emission stream? ☒ No ☐ Yes SO_3 content: ppmv

24. Emission rate of pollutant (specify) into and out of collector at maximum design operating conditions:

	IN		OUT	
Pollutant	**lb/hr**	**grains/acf**	**lb/hr**	**grains/acf**
PM/PM10	5.44	0.045	0.01	$8.3x10^{-5}$

25. Complete the table:

	Particle Size Distribution at Inlet to Collector	**Fraction Efficiency of Collector**
Particulate Size Range (microns)	**Weight % for Size Range**	**Weight % for Size Range**
0 – 2	Unknown	
2 – 4		95+%
4 – 6		99.9%
6 – 8		
8 – 10		
10 – 12		
12 – 16		
16 – 20		
20 – 30		
30 – 40		
40 – 50		
50 – 60		
60 – 70		
70 – 80		
80 – 90		
90 – 100		
>100		

26. How is filter monitored for indications of deterioration (e.g., broken bags)?
    - ☐ Continuous Opacity
    - ☒ Pressure Drop
    - ☐ Alarms-Audible to Process Operator
    - ☐ Visual opacity readings, Frequency:
    - ☐ Other, specify:

27. Describe any recording device and frequency of log entries:
    Pressure drop reading is check once per month.

28. Describe any filter seeding being performed:
    None

29. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification):
    None

30. Describe the collection material disposal system:
    Through a rotary valve feed to a drum. Material is recycled back into the process.

31. Have you included ***Baghouse Control Device*** in the Emissions Points Data Summary Sheet? Yes

32. **Proposed Monitoring, Recordkeeping, Reporting, and Testing**
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING:	RECORDKEEPING:
See Attachment O	See Attachment O
REPORTING:	TESTING:
See Attachment O	See Attachment O

MONITORING: Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.

RECORDKEEPING: Please describe the proposed recordkeeping that will accompany the monitoring.

REPORTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.

TESTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.

33. Manufacturer's Guaranteed Capture Efficiency for each air pollutant.
99.9%

34. Manufacturer's Guaranteed Control Efficiency for each air pollutant.
99%

35. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.
None

Attachment M
Air Pollution Control Device Sheet
(BAGHOUSE)

Control Device ID No. (must match Emission Units Table): C4D-M-0520

Equipment Information and Filter Characteristics

1. Manufacturer: Flex-Kleen
   Model No. 966

2. Total number of compartments: 1

3. Number of compartment online for normal operation: 1

4. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency.

5. Baghouse Configuration (check one): ☐ Open Pressure ☒ Closed Pressure ☐ Closed Suction ☐ Electrostatically Enhanced Fabric ☐ Other, Specify

6. Filter Fabric Bag Material:
   - ☐ Nomex nylon
   - ☐ Wool
   - ☒ Polyester
   - ☐ Polypropylene
   - ☐ Acrylics
   - ☐ Ceramics
   - ☐ Fiber Glass
   - ☐ Cotton Weight ____ oz./sq.yd
   - ☐ Teflon Thickness ____ in
   - ☐ Others, specify

7. Bag Dimension:
   Diameter 4.5 in.
   Length 10 ft.

8. Total cloth area: 2724 ft^2

9. Number of bags: 310

10. Operating air to cloth ratio: 8.0 ft/min

11. Baghouse Operation: ☒ Continuous ☐ Automatic ☐ Intermittent

12. Method used to clean bags:
   - ☐ Mechanical Shaker
   - ☐ Pneumatic Shaker
   - ☐ Bag Collapse
   - ☐ Manual Cleaning
   - ☐ Sonic Cleaning
   - ☐ Reverse Air Flow
   - ☒ Pulse Jet
   - ☐ Reverse Jet
   - ☐ Reverse Air Jet
   - ☐ Other:

13. Cleaning initiated by:
   - ☒ Timer
   - ☐ Expected pressure drop range ____ in. of water
   - ☐ Frequency if timer actuated
   - ☐ Other

14. Operation Hours: Max. per day: 24 Max. per yr: 8760

15. Collection efficiency: Rating: 99 % Guaranteed minimum: 99 %

Gas Stream Characteristics

16. Gas flow rate into the collector: 23,298 ACFM at 302 °F and 14.9 PSIA
    ACFM: Design: ____ PSIA Maximum: ____ PSIA Average Expected: ____ PSIA

17. Water Vapor Content of Effluent Stream: ____ lb. Water/lb. Dry Air

18. Gas Stream Temperature: ____ °F

19. Fan Requirements: ____ hp
    OR ____ ft^3/min

20. Stabilized static pressure loss across baghouse. Pressure Drop: High 6 in. H_2O Low 6 in. H_2O

21. Particulate Loading: Inlet: 0.03 grain/scf Outlet: 2.8×10^{-4} grain/scf

22. Type of Pollutant(s) to be collected (if particulate give specific type):

Polyester fines

23. Is there any SO_3 in the emission stream? ☒ No ☐ Yes SO_3 content: ppmv

24. Emission rate of pollutant (specify) into and out of collector at maximum design operating conditions:

	IN		OUT	
Pollutant	**lb/hr**	**grains/acf**	**lb/hr**	**grains/acf**
PM/PM10	4.17	0.02	0.04	2.0×10^{-4}

25. Complete the table:

	Particle Size Distribution at Inlet to Collector	**Fraction Efficiency of Collector**
Particulate Size Range (microns)	**Weight % for Size Range**	**Weight % for Size Range**
0 – 2	Unknown	
2 – 4		95+%
4 – 6		99.9%
6 – 8		
8 – 10		
10 – 12		
12 – 16		
16 – 20		
20 – 30		
30 – 40		
40 – 50		
50 – 60		
60 – 70		
70 – 80		
80 – 90		
90 – 100		
>100		

26. How is filter monitored for indications of deterioration (e.g., broken bags)?
- ☐ Continuous Opacity
- ☒ Pressure Drop
- ☐ Alarms-Audible to Process Operator
- ☐ Visual opacity readings, Frequency:
- ☐ Other, specify:

27. Describe any recording device and frequency of log entries:
Pressure drop reading is check once per month.

28. Describe any filter seeding being performed:
None

29. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification):
None

30. Describe the collection material disposal system:
Through a rotary valve feed to a drum. Material is recycled back into the process.

31. Have you included ***Baghouse Control Device*** in the Emissions Points Data Summary Sheet? Yes

32. **Proposed Monitoring, Recordkeeping, Reporting, and Testing**
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING:	RECORDKEEPING:
See Attachment O	See Attachment O
REPORTING:	TESTING:
See Attachment O	See Attachment O

MONITORING: Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.

RECORDKEEPING: Please describe the proposed recordkeeping that will accompany the monitoring.

REPORTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.

TESTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.

33. Manufacturer's Guaranteed Capture Efficiency for each air pollutant.
99.9%

34. Manufacturer's Guaranteed Control Efficiency for each air pollutant.
99%

35. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.
None

Attachment M
Air Pollution Control Device Sheet
(OTHER COLLECTORS)

Control Device ID No. (must match Emission Units Table): C4B-M-1430

Equipment Information

1. Manufacturer: NA Model No.	2. Control Device Name: CSS-12 Filter Type: 95 ft2 woven fiberglass cartridge filter
3. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency.	
4. On a separate sheet(s) supply all data and calculations used in selecting or designing this collection device.	
5. Provide a scale diagram of the control device showing internal construction.	
6. Submit a schematic and diagram with dimensions and flow rates.	
7. Guaranteed minimum collection efficiency for each pollutant collected: 99.9	
8. Attached efficiency curve and/or other efficiency information.	
9. Design inlet volume: SCFM	10. Capacity:
11. Indicate the liquid flow rate and describe equipment provided to measure pressure drop and flow rate, if any.	
12. Attach any additional data including auxiliary equipment and operation details to thoroughly evaluate the control equipment.	
13. Description of method of handling the collected material(s) for reuse of disposal. Recycled back into process	

Gas Stream Characteristics

14. Are halogenated organics present?	☐ Yes	☒ No
Are particulates present?	☐ Yes	☒ No
Are metals present?	☐ Yes	☒ No

15. Inlet Emission stream parameters:	Maximum	Typical
Pressure (mmHg):		
Heat Content (BTU/scf):		
Oxygen Content (%):		
Moisture Content (%):		
Relative Humidity (%):		

16. Type of pollutant(s) controlled: ☐ SO_x ☐ Odor ☐ Particulate (type): ☒ Other: Nitrogen	
17. Inlet gas velocity: ft/sec	18. Pollutant specific gravity:
19. Gas flow into the collector: NA ACF @ 550°F and 10 PSIG	20. Gas stream temperature: Inlet: °F Outlet: °F
21. Gas flow rate: Design Maximum: ACFM Average Expected: ACFM	22. Particulate Grain Loading in grains/scf: Inlet: Outlet:

23. Emission rate of each pollutant (specify) into and out of collector:

Pollutant	IN Pollutant		Emission Capture Efficiency %	OUT Pollutant		Control Efficiency %
	lb/hr	grains/acf		lb/hr	grains/acf	
A Nitrogen	0.95	0.008	99.9%	0.01	8.3×10^{-5}	99%
B						
C						
D						
E						

24. Dimensions of stack: **NA vents to C4T-B-1600** Height ft. Diameter ft.

25. Supply a curve showing proposed collection efficiency versus gas volume from 25 to 130 percent of design rating of collector.

Particulate Distribution : Not Applicable

26. Complete the table:	Particle Size Distribution at Inlet to Collector	Fraction Efficiency of Collector
Particulate Size Range (microns)	**Weight % for Size Range**	**Weight % for Size Range**
0 – 2		
2 – 4		
4 – 6		
6 – 8		
8 – 10		
10 – 12		
12 – 16		
16 – 20		
20 – 30		
30 – 40		
40 – 50		
50 – 60		
60 – 70		
70 – 80		
80 – 90		
90 – 100		
>100		

27. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification): NA

28. Describe the collection material disposal system: Filters are landfilled.

29. Have you included ***Other Collectores Control Device*** in the Emissions Points Data Summary Sheet?

30. **Proposed Monitoring, Recordkeeping, Reporting, and Testing**
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING: See Attachment O	RECORDKEEPING: See Attachment O
REPORTING: See Attachment O	TESTING: See Attachment O

MONITORING: Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.

RECORDKEEPING: Please describe the proposed recordkeeping that will accompany the monitoring.

REPORTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.

TESTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.

31. Manufacturer's Guaranteed Control Efficiency for each air pollutant. 99%

32. Manufacturer's Guaranteed Control Efficiency for each air pollutant. 99%

33. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty. NA

Attachment M
Air Pollution Control Device Sheet
(OTHER COLLECTORS)

Control Device ID No. (must match Emission Units Table): C4T-B-1600

Equipment Information

1. Manufacturer: Born Inc. Model No. H-149-85	2. Control Device Name: CP4 Hot Oil Heater Type: Hot Oil Heater
3. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency.	
4. On a separate sheet(s) supply all data and calculations used in selecting or designing this collection device.	
5. Provide a scale diagram of the control device showing internal construction.	
6. Submit a schematic and diagram with dimensions and flow rates.	
7. Guaranteed minimum collection efficiency for each pollutant collected: 99.9	
8. Attached efficiency curve and/or other efficiency information.	
9. Design inlet volume: SCFM	10. Capacity:
11. Indicate the liquid flow rate and describe equipment provided to measure pressure drop and flow rate, if any.	
12. Attach any additional data including auxiliary equipment and operation details to thoroughly evaluate the control equipment.	
13. Description of method of handling the collected material(s) for reuse of disposal. No materials collected.	

Gas Stream Characteristics

14. Are halogenated organics present?	☐ Yes	☒ No
Are particulates present?	☐ Yes	☒ No
Are metals present?	☐ Yes	☒ No

15. Inlet Emission stream parameters:	Maximum	Typical
Pressure (mmHg):		
Heat Content (BTU/scf):		
Oxygen Content (%):		
Moisture Content (%):		
Relative Humidity (%):		

16. Type of pollutant(s) controlled: ☐ SO_x ☐ Particulate (type):	☐ Odor ☒ Other VOCs and HAPs
17. Inlet gas velocity: ft/sec	18. Pollutant specific gravity:
19. Gas flow into the collector: NA @ 400°F and 15.7 PSIA	20. Gas stream temperature: Inlet: °F Outlet: °F
21. Gas flow rate: Design Maximum: 20,000 ACFM Average Expected: 19,930 ACFM	22. Particulate Grain Loading in grains/scf: Inlet: Outlet:

23. Emission rate of each pollutant (specify) into and out of collector:

Pollutant	IN Pollutant		Emission Capture Efficiency %	OUT Pollutant		Control Efficiency %
	lb/hr	grains/acf		lb/hr	grains/acf	
A VOCs	201.36		99.9%	0.40		99.8%
B Ethylene Glycol	3.55		99.9%	0.01		99.8%
C Acetaldehyde	29.6		99.9%	0.06		99.8%
D 1,4 Dioxane	0.59		99.9%	<0.01		99.8%
E Other HAPs(only 288 hr/ yr)	0.86		99.9%	<0.01		99.8%

24. Dimensions of stack: Height 100 ft. Diameter 4 ft.

25. Supply a curve showing proposed collection efficiency versus gas volume from 25 to 130 percent of design rating of collector.

Particulate Distribution: Not Applicable

26. Complete the table: Particulate Size Range (microns)	Particle Size Distribution at Inlet to Collector: Weight % for Size Range	Fraction Efficiency of Collector: Weight % for Size Range
0 – 2	NA	NA
2 – 4		
4 – 6		
6 – 8		
8 – 10		
10 – 12		
12 – 16		
16 – 20		
20 – 30		
30 – 40		
40 – 50		
50 – 60		
60 – 70		
70 – 80		
80 – 90		
90 – 100		
>100		

27. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification): NA

28. Describe the collection material disposal system: NA.

29. Have you included ***Other Collectores Control Device*** in the Emissions Points Data Summary Sheet?

30. **Proposed Monitoring, Recordkeeping, Reporting, and Testing**
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING: See Attachment O	RECORDKEEPING: See Attachment O
REPORTING: See Attachment O	TESTING: See Attachment O

MONITORING:	Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.
RECORDKEEPING:	Please describe the proposed recordkeeping that will accompany the monitoring.
REPORTING:	Please describe any proposed emissions testing for this process equipment on air pollution control device.
TESTING:	Please describe any proposed emissions testing for this process equipment on air pollution control device.

31. Manufacturer's Guaranteed Control Efficiency for each air pollutant. 99.8%

32. Manufacturer's Guaranteed Control Efficiency for each air pollutant. 99.8%

33. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty. NA

Attachment M
Air Pollution Control Device Sheet
(BAGHOUSE)

Control Device ID No. (must match Emission Units Table): C4A-M-3350

Equipment Information and Filter Characteristics

1. Manufacturer: Flex-Kleen
   Model No. 120WXTC34M276

2. Total number of compartments: 1

3. Number of compartment online for normal operation: 1

4. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency.

5. Baghouse Configuration: (check one)
   ☐ Open Pressure ☒ Closed Pressure ☐ Closed Suction
   ☐ Electrostatically Enhanced Fabric
   ☐ Other, Specify

6. Filter Fabric Bag Material:
   ☐ Nomex nylon ☐ Wool
   ☒ Polyester ☐ Polypropylene
   ☐ Acrylics ☐ Ceramics
   ☐ Fiber Glass
   ☐ Cotton Weight oz./sq.yd
   ☐ Teflon Thickness in
   ☐ Others, specify

7. Bag Dimension:
   Diameter 4.5 in.
   Length 10 ft.

8. Total cloth area: 3251 ft^2

9. Number of bags: 314

10. Operating air to cloth ratio: 7.8 ft/min

11. Baghouse Operation: ☒ Continuous ☐ Automatic ☐ Intermittent

12. Method used to clean bags:
   ☐ Mechanical Shaker ☐ Sonic Cleaning ☐ Reverse Air Jet
   ☐ Pneumatic Shaker ☐ Reverse Air Flow ☐ Other:
   ☐ Bag Collapse ☒ Pulse Jet
   ☐ Manual Cleaning ☐ Reverse Jet

13. Cleaning initiated by:
   ☒ Timer ☐ Frequency if timer actuated
   ☐ Expected pressure drop range in. of water ☐ Other

14. Operation Hours: Max. per day: 24
   Max. per yr: 8760

15. Collection efficiency: Rating: 99 %
   Guaranteed minimum: 99 %

Gas Stream Characteristics

16. Gas flow rate into the collector: 29,593 ACFM at 305 °F and 14.45 PSIA
   ACFM: Design: PSIA Maximum: PSIA Average Expected: PSIA

17. Water Vapor Content of Effluent Stream: lb. Water/lb. Dry Air

18. Gas Stream Temperature: °F

19. Fan Requirements: hp
   OR ft^3/min

20. Stabilized static pressure loss across baghouse. Pressure Drop: High 6 in. H_2O
   Low 6 in. H_2O

21. Particulate Loading: Inlet: 0.0055 grain/scf Outlet: 5.8×10^{-5} grain/scf

22. Type of Pollutant(s) to be collected (if particulate give specific type):

Polyester fines

23. Is there any SO_3 in the emission stream? ☒ No ☐ Yes SO_3 content: ppmv

24. Emission rate of pollutant (specify) into and out of collector at maximum design operating conditions:

	IN		OUT	
Pollutant	**lb/hr**	**grains/acf**	**lb/hr**	**grains/acf**
PM/PM10	0.95	0.004	0.01	$3.9x10^{-5}$

25. Complete the table:

	Particle Size Distribution at Inlet to Collector	**Fraction Efficiency of Collector**
Particulate Size Range (microns)	**Weight % for Size Range**	**Weight % for Size Range**
0 – 2	Unknown	
2 – 4		95+%
4 – 6		99.9%
6 – 8		
8 – 10		
10 – 12		
12 – 16		
16 – 20		
20 – 30		
30 – 40		
40 – 50		
50 – 60		
60 – 70		
70 – 80		
80 – 90		
90 – 100		
>100		

26. How is filter monitored for indications of deterioration (e.g., broken bags)?
- ☐ Continuous Opacity
- ☒ Pressure Drop
- ☐ Alarms-Audible to Process Operator
- ☐ Visual opacity readings, Frequency:
- ☐ Other, specify:

27. Describe any recording device and frequency of log entries:
Pressure drop reading is check once per month.

28. Describe any filter seeding being performed:
None

29. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification):
None

30. Describe the collection material disposal system:
Through a rotary valve feed to a drum. Material is recycled back into the process.

31. Have you included ***Baghouse Control Device*** in the Emissions Points Data Summary Sheet? Yes

32. **Proposed Monitoring, Recordkeeping, Reporting, and Testing**
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING:	RECORDKEEPING:
See Attachment O	See Attachment O
REPORTING:	TESTING:
See Attachment O	See Attachment O

MONITORING: Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.

RECORDKEEPING: Please describe the proposed recordkeeping that will accompany the monitoring.

REPORTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.

TESTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.

33. Manufacturer's Guaranteed Capture Efficiency for each air pollutant.
99.9%

34. Manufacturer's Guaranteed Control Efficiency for each air pollutant.
99%

35. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.
None

Attachment M
Air Pollution Control Device Sheet
(BAGHOUSE)

Control Device ID No. (must match Emission Units Table): C4B-M-2420

Equipment Information and Filter Characteristics

1. Manufacturer: Flex-Kleen
   Model No. 12010XTC180M152 AZRZRIIG

2. Total number of compartments: 1

3. Number of compartment online for normal operation: 1

4. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency.

5. Baghouse Configuration (check one): ☐ Open Pressure ☒ Closed Pressure ☐ Closed Suction ☐ Electrostatically Enhanced Fabric ☐ Other, Specify

6. Filter Fabric Bag Material:
   - ☐ Nomex nylon
   - ☐ Wool
   - ☒ Polyester
   - ☐ Polypropylene
   - ☐ Acrylics
   - ☐ Ceramics
   - ☐ Fiber Glass
   - ☐ Cotton Weight ____ oz./sq.yd
   - ☐ Teflon Thickness ____ in
   - ☐ Others, specify

7. Bag Dimension:
   Diameter 4.5 in.
   Length 10 ft.

8. Total cloth area: 1790 ft^2

9. Number of bags: 152

10. Operating air to cloth ratio: 7.81 ft/min

11. Baghouse Operation: ☒ Continuous ☐ Automatic ☐ Intermittent

12. Method used to clean bags:
   - ☐ Mechanical Shaker
   - ☐ Pneumatic Shaker
   - ☐ Bag Collapse
   - ☐ Manual Cleaning
   - ☐ Sonic Cleaning
   - ☐ Reverse Air Flow
   - ☒ Pulse Jet
   - ☐ Reverse Jet
   - ☐ Reverse Air Jet
   - ☐ Other:

13. Cleaning initiated by:
   - ☒ Timer
   - ☐ Frequency if timer actuated
   - ☐ Expected pressure drop range ____ in. of water
   - ☐ Other

14. Operation Hours: Max. per day: 24 Max. per yr: 8760

15. Collection efficiency: Rating: 99 % Guaranteed minimum: 99 %

Gas Stream Characteristics

16. Gas flow rate into the collector: 13,990 ACFM at 405 °F and 14.7 PSIA
    ACFM: Design: ____ PSIA Maximum: ____ PSIA Average Expected: ____ PSIA

17. Water Vapor Content of Effluent Stream: ____ lb. Water/lb. Dry Air

18. Gas Stream Temperature: ____ °F

19. Fan Requirements: ____ hp
    OR ____ ft^3/min

20. Stabilized static pressure loss across baghouse. Pressure Drop: High 6 in. H_2O Low 6 in. H_2O

21. Particulate Loading: Inlet: 0.013 grain/scf Outlet: 1.4×10^{-4} grain/scf

22. Type of Pollutant(s) to be collected (if particulate give specific type):

Polyester fines

23. Is there any SO_3 in the emission stream? ☒ No ☐ Yes SO_3 content: ppmv

24. Emission rate of pollutant (specify) into and out of collector at maximum design operating conditions:

	IN		OUT	
Pollutant	**lb/hr**	**grains/acf**	**lb/hr**	**grains/acf**
PM/PM10	0.95	0.008	0.01	$8.3x10^{-5}$

25. Complete the table:

	Particle Size Distribution at Inlet to Collector	**Fraction Efficiency of Collector**
Particulate Size Range (microns)	**Weight % for Size Range**	**Weight % for Size Range**
0 – 2	Unknown	
2 – 4		95+%
4 – 6		99.9%
6 – 8		
8 – 10		
10 – 12		
12 – 16		
16 – 20		
20 – 30		
30 – 40		
40 – 50		
50 – 60		
60 – 70		
70 – 80		
80 – 90		
90 – 100		
>100		

26. How is filter monitored for indications of deterioration (e.g., broken bags)?
- ☐ Continuous Opacity
- ☒ Pressure Drop
- ☐ Alarms-Audible to Process Operator
- ☐ Visual opacity readings, Frequency:
- ☐ Other, specify:

27. Describe any recording device and frequency of log entries:
Pressure drop reading is check once per month.

28. Describe any filter seeding being performed:
None

29. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification):
None

30. Describe the collection material disposal system:
Through a rotary valve feed to a drum. Material is recycled back into the process.

31. Have you included ***Baghouse Control Device*** in the Emissions Points Data Summary Sheet? Yes

32. **Proposed Monitoring, Recordkeeping, Reporting, and Testing**
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING:	RECORDKEEPING:
See Attachment O	See Attachment O
REPORTING:	TESTING:
See Attachment O	See Attachment O

MONITORING: Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.

RECORDKEEPING: Please describe the proposed recordkeeping that will accompany the monitoring.

REPORTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.

TESTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.

33. Manufacturer's Guaranteed Capture Efficiency for each air pollutant.
99.9%

34. Manufacturer's Guaranteed Control Efficiency for each air pollutant.
99%

35. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.
None

Attachment M
Air Pollution Control Device Sheet
(BAGHOUSE)

Control Device ID No. (must match Emission Units Table): C4A-M-7350

Equipment Information and Filter Characteristics

1. Manufacturer: Flex-Kleen
   Model No. 120WXTC34M276

2. Total number of compartments: 1

3. Number of compartment online for normal operation: 1

4. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency.

5. Baghouse Configuration: (check one)
   ☐ Open Pressure ☒ Closed Pressure ☐ Closed Suction
   ☐ Electrostatically Enhanced Fabric
   ☐ Other, Specify

6. Filter Fabric Bag Material:
   ☐ Nomex nylon ☐ Wool
   ☒ Polyester ☐ Polypropylene
   ☐ Acrylics ☐ Ceramics
   ☐ Fiber Glass
   ☐ Cotton Weight oz./sq.yd
   ☐ Teflon Thickness in
   ☐ Others, specify

7. Bag Dimension:
   Diameter 4.5 in.
   Length 10 ft.

8. Total cloth area: 3251 ft^2

9. Number of bags: 314

10. Operating air to cloth ratio: 7.8 ft/min

11. Baghouse Operation: ☒ Continuous ☐ Automatic ☐ Intermittent

12. Method used to clean bags:
   ☐ Mechanical Shaker ☐ Sonic Cleaning ☐ Reverse Air Jet
   ☐ Pneumatic Shaker ☐ Reverse Air Flow ☐ Other:
   ☐ Bag Collapse ☒ Pulse Jet
   ☐ Manual Cleaning ☐ Reverse Jet

13. Cleaning initiated by:
   ☒ Timer ☐ Frequency if timer actuated
   ☐ Expected pressure drop range in. of water ☐ Other

14. Operation Hours: Max. per day: 24
   Max. per yr: 8760

15. Collection efficiency: Rating: 99 %
   Guaranteed minimum: 99 %

Gas Stream Characteristics

16. Gas flow rate into the collector: 29,593 ACFM at 305 °F and 14.45 PSIA
   ACFM: Design: PSIA Maximum: PSIA Average Expected: PSIA

17. Water Vapor Content of Effluent Stream: lb. Water/lb. Dry Air

18. Gas Stream Temperature: °F

19. Fan Requirements: hp
   OR ft^3/min

20. Stabilized static pressure loss across baghouse. Pressure Drop: High 6 in. H_2O
   Low 6 in. H_2O

21. Particulate Loading: Inlet: 0.0055 grain/scf Outlet: 5.8×10^{-5} grain/scf

22. Type of Pollutant(s) to be collected (if particulate give specific type):

Polyester fines

23. Is there any SO_3 in the emission stream? ☒ No ☐ Yes SO_3 content: ppmv

24. Emission rate of pollutant (specify) into and out of collector at maximum design operating conditions:

	IN		OUT	
Pollutant	**lb/hr**	**grains/acf**	**lb/hr**	**grains/acf**
PM/PM10	0.95	0.004	0.01	$3.9x10^{-5}$

25. Complete the table:

	Particle Size Distribution at Inlet to Collector	**Fraction Efficiency of Collector**
Particulate Size Range (microns)	**Weight % for Size Range**	**Weight % for Size Range**
0 – 2	Unknown	
2 – 4		95+%
4 – 6		99.9%
6 – 8		
8 – 10		
10 – 12		
12 – 16		
16 – 20		
20 – 30		
30 – 40		
40 – 50		
50 – 60		
60 – 70		
70 – 80		
80 – 90		
90 – 100		
>100		

26. How is filter monitored for indications of deterioration (e.g., broken bags)?
    - ☐ Continuous Opacity
    - ☒ Pressure Drop
    - ☐ Alarms-Audible to Process Operator
    - ☐ Visual opacity readings, Frequency:
    - ☐ Other, specify:

27. Describe any recording device and frequency of log entries:
    Pressure drop reading is check once per month.

28. Describe any filter seeding being performed:
    None

29. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification):
    None

30. Describe the collection material disposal system:
    Through a rotary valve feed to a drum. Material is recycled back into the process.

31. Have you included ***Baghouse Control Device*** in the Emissions Points Data Summary Sheet? Yes

32. **Proposed Monitoring, Recordkeeping, Reporting, and Testing**
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING:	RECORDKEEPING:
See Attachment O	See Attachment O
REPORTING:	TESTING:
See Attachment O	See Attachment O

MONITORING: Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.

RECORDKEEPING: Please describe the proposed recordkeeping that will accompany the monitoring.

REPORTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.

TESTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.

33. Manufacturer's Guaranteed Capture Efficiency for each air pollutant.
99.9%

34. Manufacturer's Guaranteed Control Efficiency for each air pollutant.
99%

35. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.
None

Attachment M
Air Pollution Control Device Sheet
(BAGHOUSE)

Control Device ID No. (must match Emission Units Table): C3B-M-6420

Equipment Information and Filter Characteristics

1. Manufacturer: Flex-Kleen
   Model No. 12010XTC180M152 AZRZRIIG

2. Total number of compartments: 1

3. Number of compartment online for normal operation: 1

4. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency.

5. Baghouse Configuration (check one): ☐ Open Pressure ☒ Closed Pressure ☐ Closed Suction ☐ Electrostatically Enhanced Fabric ☐ Other, Specify

6. Filter Fabric Bag Material:
   - ☐ Nomex nylon
   - ☐ Wool
   - ☒ Polyester
   - ☐ Polypropylene
   - ☐ Acrylics
   - ☐ Ceramics
   - ☐ Fiber Glass
   - ☐ Cotton Weight ____ oz./sq.yd
   - ☐ Teflon Thickness ____ in
   - ☐ Others, specify

7. Bag Dimension:
   Diameter 4.5 in.
   Length 10 ft.

8. Total cloth area: 1790 ft^2

9. Number of bags: 152

10. Operating air to cloth ratio: 7.81 ft/min

11. Baghouse Operation: ☒ Continuous ☐ Automatic ☐ Intermittent

12. Method used to clean bags:
   - ☐ Mechanical Shaker
   - ☐ Pneumatic Shaker
   - ☐ Bag Collapse
   - ☐ Manual Cleaning
   - ☐ Sonic Cleaning
   - ☐ Reverse Air Flow
   - ☒ Pulse Jet
   - ☐ Reverse Jet
   - ☐ Reverse Air Jet
   - ☐ Other:

13. Cleaning initiated by:
   - ☒ Timer
   - ☐ Frequency if timer actuated
   - ☐ Expected pressure drop range ____ in. of water
   - ☐ Other

14. Operation Hours: Max. per day: 24 Max. per yr: 8760

15. Collection efficiency: Rating: 99 % Guaranteed minimum: 99 %

Gas Stream Characteristics

16. Gas flow rate into the collector: 13,990 ACFM at 405 °F and 14.7 PSIA
    ACFM: Design: ____ PSIA Maximum: ____ PSIA Average Expected: ____ PSIA

17. Water Vapor Content of Effluent Stream: ____ lb. Water/lb. Dry Air

18. Gas Stream Temperature: ____ °F

19. Fan Requirements: ____ hp
    OR ____ ft^3/min

20. Stabilized static pressure loss across baghouse. Pressure Drop: High 6 in. H_2O Low 6 in. H_2O

21. Particulate Loading: Inlet: 0.013 grain/scf Outlet: 1.4×10^{-4} grain/scf

22. Type of Pollutant(s) to be collected (if particulate give specific type):

Polyester fines

23. Is there any SO_3 in the emission stream? ☒ No ☐ Yes SO_3 content: ppmv

24. Emission rate of pollutant (specify) into and out of collector at maximum design operating conditions:

	IN		OUT	
Pollutant	**lb/hr**	**grains/acf**	**lb/hr**	**grains/acf**
PM/PM10	0.95	0.008	0.01	$8.3x10^{-5}$

25. Complete the table:

	Particle Size Distribution at Inlet to Collector	**Fraction Efficiency of Collector**
Particulate Size Range (microns)	**Weight % for Size Range**	**Weight % for Size Range**
0 – 2	Unknown	
2 – 4		95+%
4 – 6		99.9%
6 – 8		
8 – 10		
10 – 12		
12 – 16		
16 – 20		
20 – 30		
30 – 40		
40 – 50		
50 – 60		
60 – 70		
70 – 80		
80 – 90		
90 – 100		
>100		

26. How is filter monitored for indications of deterioration (e.g., broken bags)?
- ☐ Continuous Opacity
- ☒ Pressure Drop
- ☐ Alarms-Audible to Process Operator
- ☐ Visual opacity readings, Frequency:
- ☐ Other, specify:

27. Describe any recording device and frequency of log entries:
Pressure drop reading is check once per month.

28. Describe any filter seeding being performed:
None

29. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification):
None

30. Describe the collection material disposal system:
Through a rotary valve feed to a drum. Material is recycled back into the process.

31. Have you included ***Baghouse Control Device*** in the Emissions Points Data Summary Sheet? Yes

32. **Proposed Monitoring, Recordkeeping, Reporting, and Testing**
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING:	RECORDKEEPING:
See Attachment O	See Attachment O
REPORTING:	TESTING:
See Attachment O	See Attachment O

MONITORING: Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.

RECORDKEEPING: Please describe the proposed recordkeeping that will accompany the monitoring.

REPORTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.

TESTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.

33. Manufacturer's Guaranteed Capture Efficiency for each air pollutant.
99.9%

34. Manufacturer's Guaranteed Control Efficiency for each air pollutant.
99%

35. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.
None

Attachment M
Air Pollution Control Device Sheet
(OTHER COLLECTORS)

Control Device ID No. (must match Emission Units Table): C4B-M-5430

Equipment Information

1. Manufacturer: NA Model No.	2. Control Device Name: CSS-13 Nitrogen Filter Type: 95 ft2 woven fiberglass cartridge filter
3. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency.	
4. On a separate sheet(s) supply all data and calculations used in selecting or designing this collection device.	
5. Provide a scale diagram of the control device showing internal construction.	
6. Submit a schematic and diagram with dimensions and flow rates.	
7. Guaranteed minimum collection efficiency for each pollutant collected: 99.9	
8. Attached efficiency curve and/or other efficiency information.	
9. Design inlet volume: SCFM	10. Capacity:
11. Indicate the liquid flow rate and describe equipment provided to measure pressure drop and flow rate, if any.	
12. Attach any additional data including auxiliary equipment and operation details to thoroughly evaluate the control equipment.	
13. Description of method of handling the collected material(s) for reuse of disposal. Recycled back into process	

Gas Stream Characteristics

14. Are halogenated organics present?	☐ Yes	☒ No
Are particulates present?	☐ Yes	☒ No
Are metals present?	☐ Yes	☒ No

15. Inlet Emission stream parameters:	Maximum	Typical
Pressure (mmHg):		
Heat Content (BTU/scf):		
Oxygen Content (%):		
Moisture Content (%):		
Relative Humidity (%):		

16. Type of pollutant(s) controlled: ☐ SO_x ☐ Odor ☐ Particulate (type): ☒ Other Nitrogen	
17. Inlet gas velocity: ft/sec	18. Pollutant specific gravity:
19. Gas flow into the collector: NA @ 550°F and 10 PSIG	20. Gas stream temperature: Inlet: °F Outlet: °F
21. Gas flow rate: Design Maximum: ACFM Average Expected: ACFM	22. Particulate Grain Loading in grains/scf: Inlet: Outlet:

23. Emission rate of each pollutant (specify) into and out of collector:

Pollutant	IN Pollutant		Emission Capture Efficiency %	OUT Pollutant		Control Efficiency %
	lb/hr	grains/acf		lb/hr	grains/acf	
A Nitrogen	0.95	0.008	99.9%	0.01	8.3×10^{-5}	99%
B						
C						
D						
E						

24. Dimensions of stack: **NA vents to C4T-B-1600** Height ft. Diameter ft.

25. Supply a curve showing proposed collection efficiency versus gas volume from 25 to 130 percent of design rating of collector.

Particulate Distribution

26. Complete the table: Particulate Size Range (microns)	Particle Size Distribution at Inlet to Collector Weight % for Size Range	Fraction Efficiency of Collector Weight % for Size Range
0 – 2	Unknown	
2 – 4		95+%
4 – 6		99.9%
6 – 8		
8 – 10		
10 – 12		
12 – 16		
16 – 20		
20 – 30		
30 – 40		
40 – 50		
50 – 60		
60 – 70		
70 – 80		
80 – 90		
90 – 100		
>100		

27. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification): NA

28. Describe the collection material disposal system: Filters are landfilled.

29. Have you included ***Other Collectores Control Device*** in the Emissions Points Data Summary Sheet?

30. **Proposed Monitoring, Recordkeeping, Reporting, and Testing**
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING: See Attachment O	RECORDKEEPING: See Attachment O
REPORTING: See Attachment O	TESTING: See Attachment O

MONITORING:	Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.
RECORDKEEPING:	Please describe the proposed recordkeeping that will accompany the monitoring.
REPORTING:	Please describe any proposed emissions testing for this process equipment on air pollution control device.
TESTING:	Please describe any proposed emissions testing for this process equipment on air pollution control device.

31. Manufacturer's Guaranteed Control Efficiency for each air pollutant. 99%

32. Manufacturer's Guaranteed Control Efficiency for each air pollutant. 99%

33. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty. NA

Attachment M
Air Pollution Control Device Sheet
(OTHER COLLECTORS)

Control Device ID No. (must match Emission Units Table): C4C-M-7700

Equipment Information

1. Manufacturer: NA Model No.	2. Control Device Name: CSS-13 Filter Type: 33.5 ft2 woven fiberglass cartridge filter
3. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency.	
4. On a separate sheet(s) supply all data and calculations used in selecting or designing this collection device.	
5. Provide a scale diagram of the control device showing internal construction.	
6. Submit a schematic and diagram with dimensions and flow rates.	
7. Guaranteed minimum collection efficiency for each pollutant collected: 99.9	
8. Attached efficiency curve and/or other efficiency information.	
9. Design inlet volume: SCFM	10. Capacity:
11. Indicate the liquid flow rate and describe equipment provided to measure pressure drop and flow rate, if any.	
12. Attach any additional data including auxiliary equipment and operation details to thoroughly evaluate the control equipment.	
13. Description of method of handling the collected material(s) for reuse of disposal. Recycled back into process	

Gas Stream Characteristics

14. Are halogenated organics present?	☐ Yes	☒ No
Are particulates present?	☐ Yes	☒ No
Are metals present?	☐ Yes	☒ No

15. Inlet Emission stream parameters:	Maximum	Typical
Pressure (mmHg):		
Heat Content (BTU/scf):		
Oxygen Content (%):		
Moisture Content (%):		
Relative Humidity (%):		

16. Type of pollutant(s) controlled: ☐ SO_x ☐ Odor ☐ Particulate (type): ☒ Other Nitrogen	
17. Inlet gas velocity: ft/sec	18. Pollutant specific gravity:
19. Gas flow into the collector: NA @ 550°F and 10 PSIG	20. Gas stream temperature: Inlet: °F Outlet: °F
21. Gas flow rate: Design Maximum: ACFM Average Expected: ACFM	22. Particulate Grain Loading in grains/scf: Inlet: Outlet:

23. Emission rate of each pollutant (specify) into and out of collector:

Pollutant	IN Pollutant		Emission Capture Efficiency %	OUT Pollutant		Control Efficiency %
	lb/hr	grains/acf		lb/hr	grains/acf	
A Nitrogen	0.95	0.008	99.9%	0.01	8.3×10^{-5}	99%
B						
C						
D						
E						

24. Dimensions of stack: **NA vents to C4T-B-1600** Height ft. Diameter ft.

25. Supply a curve showing proposed collection efficiency versus gas volume from 25 to 130 percent of design rating of collector.

Particulate Distribution: Not Applicable

26. Complete the table:	Particle Size Distribution at Inlet to Collector	Fraction Efficiency of Collector
Particulate Size Range (microns)	**Weight % for Size Range**	**Weight % for Size Range**
0 – 2	NA	NA
2 – 4		
4 – 6		
6 – 8		
8 – 10		
10 – 12		
12 – 16		
16 – 20		
20 – 30		
30 – 40		
40 – 50		
50 – 60		
60 – 70		
70 – 80		
80 – 90		
90 – 100		
>100		

27. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification): NA

28. Describe the collection material disposal system: Filters are landfilled.

29. Have you included ***Other Collectores Control Device*** in the Emissions Points Data Summary Sheet?

30. **Proposed Monitoring, Recordkeeping, Reporting, and Testing**
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING: See Attachment O	RECORDKEEPING: See Attachment O
REPORTING: See Attachment O	TESTING: See Attachment O

MONITORING:	Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.
RECORDKEEPING:	Please describe the proposed recordkeeping that will accompany the monitoring.
REPORTING:	Please describe any proposed emissions testing for this process equipment on air pollution control device.
TESTING:	Please describe any proposed emissions testing for this process equipment on air pollution control device.

31. Manufacturer's Guaranteed Control Efficiency for each air pollutant. 99%

32. Manufacturer's Guaranteed Control Efficiency for each air pollutant. 99%

33. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty. NA

Attachment M
Air Pollution Control Device Sheet
(OTHER COLLECTORS)

Control Device ID No. (must match Emission Units Table): C4C-M-5470

Equipment Information

1. Manufacturer: NA Model No.	2. Control Device Name: CSS-13 Filter Type: Filter
3. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency.	
4. On a separate sheet(s) supply all data and calculations used in selecting or designing this collection device.	
5. Provide a scale diagram of the control device showing internal construction.	
6. Submit a schematic and diagram with dimensions and flow rates.	
7. Guaranteed minimum collection efficiency for each pollutant collected: 99.9	
8. Attached efficiency curve and/or other efficiency information.	
9. Design inlet volume: SCFM	10. Capacity:
11. Indicate the liquid flow rate and describe equipment provided to measure pressure drop and flow rate, if any.	
12. Attach any additional data including auxiliary equipment and operation details to thoroughly evaluate the control equipment.	
13. Description of method of handling the collected material(s) for reuse of disposal. Recycled back into process	

Gas Stream Characteristics

14. Are halogenated organics present?	☐ Yes	☒ No
Are particulates present?	☐ Yes	☒ No
Are metals present?	☐ Yes	☒ No

15. Inlet Emission stream parameters:	Maximum	Typical
Pressure (mmHg):		
Heat Content (BTU/scf):		
Oxygen Content (%):		
Moisture Content (%):		
Relative Humidity (%):		

16. Type of pollutant(s) controlled: ☐ SO_x ☐ Odor ☐ Particulate (type): ☒ Other Nitrogen	
17. Inlet gas velocity: ft/sec	18. Pollutant specific gravity:
19. Gas flow into the collector: NA @ 550°F and 10 PSIG	20. Gas stream temperature: Inlet: °F Outlet: °F
21. Gas flow rate: Design Maximum: ACFM Average Expected: ACFM	22. Particulate Grain Loading in grains/scf: Inlet: Outlet:

23. Emission rate of each pollutant (specify) into and out of collector:

Pollutant	IN Pollutant		Emission Capture Efficiency %	OUT Pollutant		Control Efficiency %
	lb/hr	grains/acf		lb/hr	grains/acf	
A Nitrogen	0.95	0.008	99.9%	0.01	8.3×10^{-5}	99%
B						
C						
D						
E						

24. Dimensions of stack: **NA vents to C4T-B-1600** Height ft. Diameter ft.

25. Supply a curve showing proposed collection efficiency versus gas volume from 25 to 130 percent of design rating of collector.

Particulate Distribution: Not Applicable

26. Complete the table:	Particle Size Distribution at Inlet to Collector	Fraction Efficiency of Collector
Particulate Size Range (microns)	**Weight % for Size Range**	**Weight % for Size Range**
0 – 2	NA	NA
2 – 4		
4 – 6		
6 – 8		
8 – 10		
10 – 12		
12 – 16		
16 – 20		
20 – 30		
30 – 40		
40 – 50		
50 – 60		
60 – 70		
70 – 80		
80 – 90		
90 – 100		
>100		

27. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification): NA

28. Describe the collection material disposal system: Filters are landfilled.

29. Have you included ***Other Collectores Control Device*** in the Emissions Points Data Summary Sheet?

30. **Proposed Monitoring, Recordkeeping, Reporting, and Testing**
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING: See Attachment O	RECORDKEEPING: See Attachment O
REPORTING: See Attachment O	TESTING: See Attachment O

MONITORING:	Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.
RECORDKEEPING:	Please describe the proposed recordkeeping that will accompany the monitoring.
REPORTING:	Please describe any proposed emissions testing for this process equipment on air pollution control device.
TESTING:	Please describe any proposed emissions testing for this process equipment on air pollution control device.

31. Manufacturer's Guaranteed Control Efficiency for each air pollutant. 99%

32. Manufacturer's Guaranteed Control Efficiency for each air pollutant. 99%

33. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty. NA

Attachment M
Air Pollution Control Device Sheet
(BAGHOUSE)

Control Device ID No. (must match Emission Units Table): L26-M-6010

Equipment Information and Filter Characteristics

1. Manufacturer: Flex-Kleen
   Model No.

2. Total number of compartments: 1

3. Number of compartment online for normal operation: 1

4. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency.

5. Baghouse Configuration: (check one)
   ☐ Open Pressure ☒ Closed Pressure ☐ Closed Suction
   ☐ Electrostatically Enhanced Fabric
   ☐ Other, Specify

6. Filter Fabric Bag Material:
   ☐ Nomex nylon ☐ Wool
   ☒ Polyester ☐ Polypropylene
   ☐ Acrylics ☐ Ceramics
   ☐ Fiber Glass
   ☐ Cotton Weight oz./sq.yd
   ☐ Teflon Thickness in
   ☐ Others, specify

7. Bag Dimension:
   Diameter 4.5 in.
   Length 8 ft.

8. Total cloth area: 100 ft^2

9. Number of bags: 9

10. Operating air to cloth ratio: 7.0 ft/min

11. Baghouse Operation: ☒ Continuous ☐ Automatic ☐ Intermittent

12. Method used to clean bags:
   ☐ Mechanical Shaker ☐ Sonic Cleaning ☐ Reverse Air Jet
   ☐ Pneumatic Shaker ☐ Reverse Air Flow ☐ Other:
   ☐ Bag Collapse ☒ Pulse Jet
   ☐ Manual Cleaning ☐ Reverse Jet

13. Cleaning initiated by:
   ☒ Timer ☐ Frequency if timer actuated
   ☐ Expected pressure drop range in. of water ☐ Other

14. Operation Hours: Max. per day: 24
   Max. per yr: 8760

15. Collection efficiency: Rating: 99 %
   Guaranteed minimum: 99 %

Gas Stream Characteristics

16. Gas flow rate into the collector: 700 ACFM at 150 °F and 14.9 PSIA
   ACFM: Design: PSIA Maximum: PSIA Average Expected: PSIA

17. Water Vapor Content of Effluent Stream: lb. Water/lb. Dry Air

18. Gas Stream Temperature: °F

19. Fan Requirements: hp
   OR ft^3/min

20. Stabilized static pressure loss across baghouse. Pressure Drop: High 6 in. H_2O
   Low 6 in. H_2O

21. Particulate Loading: Inlet: 0.11 grain/scf Outlet: 8.2×10^{-4} grain/scf

22. Type of Pollutant(s) to be collected (if particulate give specific type):

Polyester fines

23. Is there any SO_3 in the emission stream? ☒ No ☐ Yes SO_3 content: ppmv

24. Emission rate of pollutant (specify) into and out of collector at maximum design operating conditions:

	IN		OUT	
Pollutant	**lb/hr**	**grains/acf**	**lb/hr**	**grains/acf**
PM/PM10	1.39	0.11	0.01	8.2×10^{-4}

25. Complete the table:

	Particle Size Distribution at Inlet to Collector	**Fraction Efficiency of Collector**
Particulate Size Range (microns)	**Weight % for Size Range**	**Weight % for Size Range**
0 – 2	Unknown	
2 – 4		95+%
4 – 6		99.9%
6 – 8		
8 – 10		
10 – 12		
12 – 16		
16 – 20		
20 – 30		
30 – 40		
40 – 50		
50 – 60		
60 – 70		
70 – 80		
80 – 90		
90 – 100		
>100		

26. How is filter monitored for indications of deterioration (e.g., broken bags)?
    - ☐ Continuous Opacity
    - ☒ Pressure Drop
    - ☐ Alarms-Audible to Process Operator
    - ☐ Visual opacity readings, Frequency:
    - ☐ Other, specify:

27. Describe any recording device and frequency of log entries:
    Pressure drop reading is check once per month.

28. Describe any filter seeding being performed:
    None

29. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification):
    None

30. Describe the collection material disposal system:
    Through a rotary valve feed to a drum. Material is recycled back into the process.

31. Have you included ***Baghouse Control Device*** in the Emissions Points Data Summary Sheet? Yes

32. **Proposed Monitoring, Recordkeeping, Reporting, and Testing**
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING:	RECORDKEEPING:
See Attachment O	See Attachment O
REPORTING:	TESTING:
See Attachment O	See Attachment O

MONITORING: Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.

RECORDKEEPING: Please describe the proposed recordkeeping that will accompany the monitoring.

REPORTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.

TESTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.

33. Manufacturer's Guaranteed Capture Efficiency for each air pollutant.
99.9%

34. Manufacturer's Guaranteed Control Efficiency for each air pollutant.
99%

35. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.
None

Attachment M
Air Pollution Control Device Sheet
(BAGHOUSE)

Control Device ID No. (must match Emission Units Table): S8A-M-3360

Equipment Information and Filter Characteristics

1. Manufacturer: Flex-Kleen
   Model No. 120WXTC34M276

2. Total number of compartments: 1

3. Number of compartment online for normal operation: 1

4. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency.

5. Baghouse Configuration: (check one)
   ☐ Open Pressure ☒ Closed Pressure ☐ Closed Suction
   ☐ Electrostatically Enhanced Fabric
   ☐ Other, Specify

6. Filter Fabric Bag Material:
   ☐ Nomex nylon ☐ Wool
   ☒ Polyester ☐ Polypropylene
   ☐ Acrylics ☐ Ceramics
   ☐ Fiber Glass
   ☐ Cotton Weight oz./sq.yd
   ☐ Teflon Thickness in
   ☐ Others, specify

7. Bag Dimension:
   Diameter 4.5 in.
   Length 10 ft.

8. Total cloth area: 3251 ft^2

9. Number of bags: 314

10. Operating air to cloth ratio: 7.8 ft/min

11. Baghouse Operation: ☒ Continuous ☐ Automatic ☐ Intermittent

12. Method used to clean bags:
   ☐ Mechanical Shaker ☐ Sonic Cleaning ☐ Reverse Air Jet
   ☐ Pneumatic Shaker ☐ Reverse Air Flow ☐ Other:
   ☐ Bag Collapse ☒ Pulse Jet
   ☐ Manual Cleaning ☐ Reverse Jet

13. Cleaning initiated by:
   ☒ Timer ☐ Frequency if timer actuated
   ☐ Expected pressure drop range in. of water ☐ Other

14. Operation Hours: Max. per day: 24
   Max. per yr: 8760

15. Collection efficiency: Rating: 99 %
   Guaranteed minimum: 99 %

Gas Stream Characteristics

16. Gas flow rate into the collector: 29,593 ACFM at 305 °F and 14.45 PSIA
   ACFM: Design: PSIA Maximum: PSIA Average Expected: PSIA

17. Water Vapor Content of Effluent Stream: lb. Water/lb. Dry Air

18. Gas Stream Temperature: °F

19. Fan Requirements: hp
   OR ft^3/min

20. Stabilized static pressure loss across baghouse. Pressure Drop: High 6 in. H_2O
   Low 6 in. H_2O

21. Particulate Loading: Inlet: 0.0055 grain/scf Outlet: 5.8×10^{-5} grain/scf

22. Type of Pollutant(s) to be collected (if particulate give specific type):

Polyester fines

23. Is there any SO_3 in the emission stream? ☒ No ☐ Yes SO_3 content: ppmv

24. Emission rate of pollutant (specify) into and out of collector at maximum design operating conditions:

	IN		OUT	
Pollutant	**lb/hr**	**grains/acf**	**lb/hr**	**grains/acf**
PM/PM10	0.95	0.004	0.01	$3.9x10^{-5}$

25. Complete the table:

	Particle Size Distribution at Inlet to Collector	**Fraction Efficiency of Collector**
Particulate Size Range (microns)	**Weight % for Size Range**	**Weight % for Size Range**
0 – 2	Unknown	
2 – 4		95+%
4 – 6		99.9%
6 – 8		
8 – 10		
10 – 12		
12 – 16		
16 – 20		
20 – 30		
30 – 40		
40 – 50		
50 – 60		
60 – 70		
70 – 80		
80 – 90		
90 – 100		
>100		

26. How is filter monitored for indications of deterioration (e.g., broken bags)?
- ☐ Continuous Opacity
- ☒ Pressure Drop
- ☐ Alarms-Audible to Process Operator
- ☐ Visual opacity readings, Frequency:
- ☐ Other, specify:

27. Describe any recording device and frequency of log entries:
Pressure drop reading is check once per month.

28. Describe any filter seeding being performed:
None

29. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification):
None

30. Describe the collection material disposal system:
Through a rotary valve feed to a drum. Material is recycled back into the process.

31. Have you included ***Baghouse Control Device*** in the Emissions Points Data Summary Sheet? Yes

32. **Proposed Monitoring, Recordkeeping, Reporting, and Testing**
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING:	RECORDKEEPING:
See Attachment O	See Attachment O
REPORTING:	TESTING:
See Attachment O	See Attachment O

MONITORING: Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.

RECORDKEEPING: Please describe the proposed recordkeeping that will accompany the monitoring.

REPORTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.

TESTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.

33. Manufacturer's Guaranteed Capture Efficiency for each air pollutant.
99.9%

34. Manufacturer's Guaranteed Control Efficiency for each air pollutant.
99%

35. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.
None

Attachment M
Air Pollution Control Device Sheet
(BAGHOUSE)

Control Device ID No. (must match Emission Units Table): S8B-M-2420

Equipment Information and Filter Characteristics

1. Manufacturer: Flex-Kleen
   Model No. 12010XTC180M152 AZRZRIIG

2. Total number of compartments: 1

3. Number of compartment online for normal operation: 1

4. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency.

5. Baghouse Configuration (check one): ☐ Open Pressure ☒ Closed Pressure ☐ Closed Suction ☐ Electrostatically Enhanced Fabric ☐ Other, Specify

6. Filter Fabric Bag Material:
   ☐ Nomex nylon ☐ Wool
   ☒ Polyester ☐ Polypropylene
   ☐ Acrylics ☐ Ceramics
   ☐ Fiber Glass
   ☐ Cotton Weight oz./sq.yd
   ☐ Teflon Thickness in
   ☐ Others, specify

7. Bag Dimension:
   Diameter 4.5 in.
   Length 10 ft.

8. Total cloth area: 1790 ft^2

9. Number of bags: 152

10. Operating air to cloth ratio: 7.81 ft/min

11. Baghouse Operation: ☒ Continuous ☐ Automatic ☐ Intermittent

12. Method used to clean bags:
   ☐ Mechanical Shaker ☐ Sonic Cleaning ☐ Reverse Air Jet
   ☐ Pneumatic Shaker ☐ Reverse Air Flow ☐ Other:
   ☐ Bag Collapse ☒ Pulse Jet
   ☐ Manual Cleaning ☐ Reverse Jet

13. Cleaning initiated by:
   ☒ Timer ☐ Frequency if timer actuated
   ☐ Expected pressure drop range in. of water ☐ Other

14. Operation Hours: Max. per day: 24 Max. per yr: 8760

15. Collection efficiency: Rating: 99 % Guaranteed minimum: 99 %

Gas Stream Characteristics

16. Gas flow rate into the collector: 13,990 ACFM at 405 °F and 14.7 PSIA
   ACFM: Design: PSIA Maximum: PSIA Average Expected: PSIA

17. Water Vapor Content of Effluent Stream: lb. Water/lb. Dry Air

18. Gas Stream Temperature: °F

19. Fan Requirements: hp
   OR ft^3/min

20. Stabilized static pressure loss across baghouse. Pressure Drop: High 6 in. H_2O
   Low 6 in. H_2O

21. Particulate Loading: Inlet: 0.013 grain/scf Outlet: 1.4×10^{-4} grain/scf

22. Type of Pollutant(s) to be collected (if particulate give specific type):

Polyester fines

23. Is there any SO_3 in the emission stream? ☒ No ☐ Yes SO_3 content: ppmv

24. Emission rate of pollutant (specify) into and out of collector at maximum design operating conditions:

	IN		OUT	
Pollutant	**lb/hr**	**grains/acf**	**lb/hr**	**grains/acf**
PM/PM10	0.95	0.008	0.01	$8.3x10^{-5}$

25. Complete the table:

	Particle Size Distribution at Inlet to Collector	**Fraction Efficiency of Collector**
Particulate Size Range (microns)	**Weight % for Size Range**	**Weight % for Size Range**
0 – 2	Unknown	
2 – 4		95+%
4 – 6		99.9%
6 – 8		
8 – 10		
10 – 12		
12 – 16		
16 – 20		
20 – 30		
30 – 40		
40 – 50		
50 – 60		
60 – 70		
70 – 80		
80 – 90		
90 – 100		
>100		

26. How is filter monitored for indications of deterioration (e.g., broken bags)?
    - ☐ Continuous Opacity
    - ☒ Pressure Drop
    - ☐ Alarms-Audible to Process Operator
    - ☐ Visual opacity readings, Frequency:
    - ☐ Other, specify:

27. Describe any recording device and frequency of log entries:
    Pressure drop reading is check once per month.

28. Describe any filter seeding being performed:
    None

29. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification):
    None

30. Describe the collection material disposal system:
    Through a rotary valve feed to a drum. Material is recycled back into the process.

31. Have you included ***Baghouse Control Device*** in the Emissions Points Data Summary Sheet? Yes

32. **Proposed Monitoring, Recordkeeping, Reporting, and Testing**
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING:	RECORDKEEPING:
See Attachment O	See Attachment O
REPORTING:	TESTING:
See Attachment O	See Attachment O

MONITORING: Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.

RECORDKEEPING: Please describe the proposed recordkeeping that will accompany the monitoring.

REPORTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.

TESTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.

33. Manufacturer's Guaranteed Capture Efficiency for each air pollutant.
99.9%

34. Manufacturer's Guaranteed Control Efficiency for each air pollutant.
99%

35. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.
None

Attachment M
Air Pollution Control Device Sheet
(BAGHOUSE)

Control Device ID No. (must match Emission Units Table): C3A-M-7350

Equipment Information and Filter Characteristics

1. Manufacturer: Flex-Kleen
   Model No. 120WXTC34M276

2. Total number of compartments: 1

3. Number of compartment online for normal operation: 1

4. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency.

5. Baghouse Configuration: (check one)
   ☐ Open Pressure ☒ Closed Pressure ☐ Closed Suction
   ☐ Electrostatically Enhanced Fabric
   ☐ Other, Specify

6. Filter Fabric Bag Material:
   ☐ Nomex nylon ☐ Wool
   ☒ Polyester ☐ Polypropylene
   ☐ Acrylics ☐ Ceramics
   ☐ Fiber Glass
   ☐ Cotton Weight oz./sq.yd
   ☐ Teflon Thickness in
   ☐ Others, specify

7. Bag Dimension:
   Diameter 4.5 in.
   Length 10 ft.

8. Total cloth area: 3251 ft^2

9. Number of bags: 314

10. Operating air to cloth ratio: 7.8 ft/min

11. Baghouse Operation: ☒ Continuous ☐ Automatic ☐ Intermittent

12. Method used to clean bags:
   ☐ Mechanical Shaker ☐ Sonic Cleaning ☐ Reverse Air Jet
   ☐ Pneumatic Shaker ☐ Reverse Air Flow ☐ Other:
   ☐ Bag Collapse ☒ Pulse Jet
   ☐ Manual Cleaning ☐ Reverse Jet

13. Cleaning initiated by:
   ☒ Timer ☐ Frequency if timer actuated
   ☐ Expected pressure drop range in. of water ☐ Other

14. Operation Hours: Max. per day: 24
   Max. per yr: 8760

15. Collection efficiency: Rating: 99 %
   Guaranteed minimum: 99 %

Gas Stream Characteristics

16. Gas flow rate into the collector: 29,593 ACFM at 305 °F and 14.45 PSIA
   ACFM: Design: PSIA Maximum: PSIA Average Expected: PSIA

17. Water Vapor Content of Effluent Stream: lb. Water/lb. Dry Air

18. Gas Stream Temperature: °F

19. Fan Requirements: hp
   OR ft^3/min

20. Stabilized static pressure loss across baghouse. Pressure Drop: High 6 in. H_2O
   Low 6 in. H_2O

21. Particulate Loading: Inlet: 0.0055 grain/scf Outlet: 5.8×10^{-5} grain/scf

22. Type of Pollutant(s) to be collected (if particulate give specific type):

Polyester fines

23. Is there any SO_3 in the emission stream? ☒ No ☐ Yes SO_3 content: ppmv

24. Emission rate of pollutant (specify) into and out of collector at maximum design operating conditions:

	IN		OUT	
Pollutant	**lb/hr**	**grains/acf**	**lb/hr**	**grains/acf**
PM/PM10	0.95	0.004	0.01	$3.9x10^{-5}$

25. Complete the table:

	Particle Size Distribution at Inlet to Collector	**Fraction Efficiency of Collector**
Particulate Size Range (microns)	**Weight % for Size Range**	**Weight % for Size Range**
0 – 2	Unknown	
2 – 4		95+%
4 – 6		99.9%
6 – 8		
8 – 10		
10 – 12		
12 – 16		
16 – 20		
20 – 30		
30 – 40		
40 – 50		
50 – 60		
60 – 70		
70 – 80		
80 – 90		
90 – 100		
>100		

26. How is filter monitored for indications of deterioration (e.g., broken bags)?
- ☐ Continuous Opacity
- ☒ Pressure Drop
- ☐ Alarms-Audible to Process Operator
- ☐ Visual opacity readings, Frequency:
- ☐ Other, specify:

27. Describe any recording device and frequency of log entries:
Pressure drop reading is check once per month.

28. Describe any filter seeding being performed:
None

29. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification):
None

30. Describe the collection material disposal system:
Through a rotary valve feed to a drum. Material is recycled back into the process.

31. Have you included ***Baghouse Control Device*** in the Emissions Points Data Summary Sheet? Yes

32. **Proposed Monitoring, Recordkeeping, Reporting, and Testing**
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING:	RECORDKEEPING:
See Attachment O	See Attachment O
REPORTING:	TESTING:
See Attachment O	See Attachment O

MONITORING: Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.

RECORDKEEPING: Please describe the proposed recordkeeping that will accompany the monitoring.

REPORTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.

TESTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.

33. Manufacturer's Guaranteed Capture Efficiency for each air pollutant.
99.9%

34. Manufacturer's Guaranteed Control Efficiency for each air pollutant.
99%

35. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.
None

Attachment M
Air Pollution Control Device Sheet
(BAGHOUSE)

Control Device ID No. (must match Emission Units Table): C4B-M-6420

Equipment Information and Filter Characteristics

1. Manufacturer: Flex-Kleen
   Model No. 12010XTC180M152 AZRZRIIG

2. Total number of compartments: 1

3. Number of compartment online for normal operation: 1

4. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency.

5. Baghouse Configuration (check one): ☐ Open Pressure ☒ Closed Pressure ☐ Closed Suction ☐ Electrostatically Enhanced Fabric ☐ Other, Specify

6. Filter Fabric Bag Material:
   ☐ Nomex nylon ☐ Wool
   ☒ Polyester ☐ Polypropylene
   ☐ Acrylics ☐ Ceramics
   ☐ Fiber Glass
   ☐ Cotton Weight oz./sq.yd
   ☐ Teflon Thickness in
   ☐ Others, specify

7. Bag Dimension:
   Diameter 4.5 in.
   Length 10 ft.

8. Total cloth area: 1790 ft^2

9. Number of bags: 152

10. Operating air to cloth ratio: 7.81 ft/min

11. Baghouse Operation: ☒ Continuous ☐ Automatic ☐ Intermittent

12. Method used to clean bags:
   ☐ Mechanical Shaker ☐ Sonic Cleaning ☐ Reverse Air Jet
   ☐ Pneumatic Shaker ☐ Reverse Air Flow ☐ Other:
   ☐ Bag Collapse ☒ Pulse Jet
   ☐ Manual Cleaning ☐ Reverse Jet

13. Cleaning initiated by:
   ☒ Timer ☐ Frequency if timer actuated
   ☐ Expected pressure drop range in. of water ☐ Other

14. Operation Hours: Max. per day: 24 Max. per yr: 8760

15. Collection efficiency: Rating: 99 % Guaranteed minimum: 99 %

Gas Stream Characteristics

16. Gas flow rate into the collector: 13,990 ACFM at 405 °F and 14.7 PSIA
   ACFM: Design: PSIA Maximum: PSIA Average Expected: PSIA

17. Water Vapor Content of Effluent Stream: lb. Water/lb. Dry Air

18. Gas Stream Temperature: °F

19. Fan Requirements: hp
   OR ft^3/min

20. Stabilized static pressure loss across baghouse. Pressure Drop: High 6 in. H_2O
   Low 6 in. H_2O

21. Particulate Loading: Inlet: 0.013 grain/scf Outlet: 1.4×10^{-4} grain/scf

22. Type of Pollutant(s) to be collected (if particulate give specific type):

Polyester fines

23. Is there any SO_3 in the emission stream? ☒ No ☐ Yes SO_3 content: ppmv

24. Emission rate of pollutant (specify) into and out of collector at maximum design operating conditions:

	IN		OUT	
Pollutant	**lb/hr**	**grains/acf**	**lb/hr**	**grains/acf**
PM/PM10	0.95	0.008	0.01	$8.3x10^{-5}$

25. Complete the table:

	Particle Size Distribution at Inlet to Collector	**Fraction Efficiency of Collector**
Particulate Size Range (microns)	**Weight % for Size Range**	**Weight % for Size Range**
0 – 2	Unknown	
2 – 4		95+%
4 – 6		99.9%
6 – 8		
8 – 10		
10 – 12		
12 – 16		
16 – 20		
20 – 30		
30 – 40		
40 – 50		
50 – 60		
60 – 70		
70 – 80		
80 – 90		
90 – 100		
>100		

26. How is filter monitored for indications of deterioration (e.g., broken bags)?
- ☐ Continuous Opacity
- ☒ Pressure Drop
- ☐ Alarms-Audible to Process Operator
- ☐ Visual opacity readings, Frequency:
- ☐ Other, specify:

27. Describe any recording device and frequency of log entries:
Pressure drop reading is check once per month.

28. Describe any filter seeding being performed:
None

29. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification):
None

30. Describe the collection material disposal system:
Through a rotary valve feed to a drum. Material is recycled back into the process.

31. Have you included ***Baghouse Control Device*** in the Emissions Points Data Summary Sheet? Yes

32. **Proposed Monitoring, Recordkeeping, Reporting, and Testing**
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING:	RECORDKEEPING:
See Attachment O	See Attachment O
REPORTING:	TESTING:
See Attachment O	See Attachment O

MONITORING: Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.

RECORDKEEPING: Please describe the proposed recordkeeping that will accompany the monitoring.

REPORTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.

TESTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.

33. Manufacturer's Guaranteed Capture Efficiency for each air pollutant.
99.9%

34. Manufacturer's Guaranteed Control Efficiency for each air pollutant.
99%

35. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.
None

Attachment M
Air Pollution Control Device Sheet
(BAGHOUSE)

Control Device ID No. (must match Emission Units Table): C3A-M-3350

Equipment Information and Filter Characteristics

1. Manufacturer: Flex-Kleen
   Model No. 120WXTC34M276

2. Total number of compartments: 1

3. Number of compartment online for normal operation: 1

4. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency.

5. Baghouse Configuration: (check one)
   ☐ Open Pressure ☒ Closed Pressure ☐ Closed Suction
   ☐ Electrostatically Enhanced Fabric
   ☐ Other, Specify

6. Filter Fabric Bag Material:
   ☐ Nomex nylon ☐ Wool
   ☒ Polyester ☐ Polypropylene
   ☐ Acrylics ☐ Ceramics
   ☐ Fiber Glass
   ☐ Cotton Weight oz./sq.yd
   ☐ Teflon Thickness in
   ☐ Others, specify

7. Bag Dimension:
   Diameter 4.5 in.
   Length 10 ft.

8. Total cloth area: 3251 ft^2

9. Number of bags: 314

10. Operating air to cloth ratio: 7.8 ft/min

11. Baghouse Operation: ☒ Continuous ☐ Automatic ☐ Intermittent

12. Method used to clean bags:
   ☐ Mechanical Shaker ☐ Sonic Cleaning ☐ Reverse Air Jet
   ☐ Pneumatic Shaker ☐ Reverse Air Flow ☐ Other:
   ☐ Bag Collapse ☒ Pulse Jet
   ☐ Manual Cleaning ☐ Reverse Jet

13. Cleaning initiated by:
   ☒ Timer ☐ Frequency if timer actuated
   ☐ Expected pressure drop range in. of water ☐ Other

14. Operation Hours: Max. per day: 24
   Max. per yr: 8760

15. Collection efficiency: Rating: 99 %
   Guaranteed minimum: 99 %

Gas Stream Characteristics

16. Gas flow rate into the collector: 29,593 ACFM at 305 °F and 14.45 PSIA
   ACFM: Design: PSIA Maximum: PSIA Average Expected: PSIA

17. Water Vapor Content of Effluent Stream: lb. Water/lb. Dry Air

18. Gas Stream Temperature: °F

19. Fan Requirements: hp
   OR ft^3/min

20. Stabilized static pressure loss across baghouse. Pressure Drop: High 6 in. H_2O
   Low 6 in. H_2O

21. Particulate Loading: Inlet: 0.0055 grain/scf Outlet: 5.8×10^{-5} grain/scf

22. Type of Pollutant(s) to be collected (if particulate give specific type):

Polyester fines

23. Is there any SO_3 in the emission stream? ☒ No ☐ Yes SO_3 content: ppmv

24. Emission rate of pollutant (specify) into and out of collector at maximum design operating conditions:

	IN		OUT	
Pollutant	**lb/hr**	**grains/acf**	**lb/hr**	**grains/acf**
PM/PM10	0.95	0.004	0.01	$3.9x10^{-5}$

25. Complete the table:

	Particle Size Distribution at Inlet to Collector	**Fraction Efficiency of Collector**
Particulate Size Range (microns)	**Weight % for Size Range**	**Weight % for Size Range**
0 – 2	Unknown	
2 – 4		95+%
4 – 6		99.9%
6 – 8		
8 – 10		
10 – 12		
12 – 16		
16 – 20		
20 – 30		
30 – 40		
40 – 50		
50 – 60		
60 – 70		
70 – 80		
80 – 90		
90 – 100		
>100		

26. How is filter monitored for indications of deterioration (e.g., broken bags)?
    - ☐ Continuous Opacity
    - ☒ Pressure Drop
    - ☐ Alarms-Audible to Process Operator
    - ☐ Visual opacity readings, Frequency:
    - ☐ Other, specify:

27. Describe any recording device and frequency of log entries:
    Pressure drop reading is check once per month.

28. Describe any filter seeding being performed:
    None

29. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification):
    None

30. Describe the collection material disposal system:
    Through a rotary valve feed to a drum. Material is recycled back into the process.

31. Have you included ***Baghouse Control Device*** in the Emissions Points Data Summary Sheet? Yes

32. **Proposed Monitoring, Recordkeeping, Reporting, and Testing**
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING:	RECORDKEEPING:
See Attachment O	See Attachment O
REPORTING:	TESTING:
See Attachment O	See Attachment O

MONITORING:	Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.
RECORDKEEPING:	Please describe the proposed recordkeeping that will accompany the monitoring.
REPORTING:	Please describe any proposed emissions testing for this process equipment on air pollution control device.
TESTING:	Please describe any proposed emissions testing for this process equipment on air pollution control device.

33. Manufacturer's Guaranteed Capture Efficiency for each air pollutant.
99.9%

34. Manufacturer's Guaranteed Control Efficiency for each air pollutant.
99%

35. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.
None

Attachment M
Air Pollution Control Device Sheet
(BAGHOUSE)

Control Device ID No. (must match Emission Units Table): C3B-M-2420

Equipment Information and Filter Characteristics

1. Manufacturer: Flex-Kleen
   Model No. 12010XTC180M152 AZRZRIIG

2. Total number of compartments: 1

3. Number of compartment online for normal operation: 1

4. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency.

5. Baghouse Configuration (check one): ☐ Open Pressure ☒ Closed Pressure ☐ Closed Suction ☐ Electrostatically Enhanced Fabric ☐ Other, Specify

6. Filter Fabric Bag Material:
   - ☐ Nomex nylon
   - ☐ Wool
   - ☒ Polyester
   - ☐ Polypropylene
   - ☐ Acrylics
   - ☐ Ceramics
   - ☐ Fiber Glass
   - ☐ Cotton Weight ____ oz./sq.yd
   - ☐ Teflon Thickness ____ in
   - ☐ Others, specify

7. Bag Dimension:
   Diameter 4.5 in.
   Length 10 ft.

8. Total cloth area: 1790 ft^2

9. Number of bags: 152

10. Operating air to cloth ratio: 7.81 ft/min

11. Baghouse Operation: ☒ Continuous ☐ Automatic ☐ Intermittent

12. Method used to clean bags:
   - ☐ Mechanical Shaker
   - ☐ Pneumatic Shaker
   - ☐ Bag Collapse
   - ☐ Manual Cleaning
   - ☐ Sonic Cleaning
   - ☐ Reverse Air Flow
   - ☒ Pulse Jet
   - ☐ Reverse Jet
   - ☐ Reverse Air Jet
   - ☐ Other:

13. Cleaning initiated by:
   - ☒ Timer
   - ☐ Expected pressure drop range ____ in. of water
   - ☐ Frequency if timer actuated
   - ☐ Other

14. Operation Hours: Max. per day: 24 Max. per yr: 8760

15. Collection efficiency: Rating: 99 % Guaranteed minimum: 99 %

Gas Stream Characteristics

16. Gas flow rate into the collector: 13,990 ACFM at 405 °F and 14.7 PSIA
    ACFM: Design: ____ PSIA Maximum: ____ PSIA Average Expected: ____ PSIA

17. Water Vapor Content of Effluent Stream: ____ lb. Water/lb. Dry Air

18. Gas Stream Temperature: ____ °F

19. Fan Requirements: ____ hp OR ____ ft^3/min

20. Stabilized static pressure loss across baghouse. Pressure Drop: High 6 in. H_2O Low 6 in. H_2O

21. Particulate Loading: Inlet: 0.013 grain/scf Outlet: 1.4×10^{-4} grain/scf

22. Type of Pollutant(s) to be collected (if particulate give specific type):

Polyester fines

23. Is there any SO_3 in the emission stream? ☒ No ☐ Yes SO_3 content: ppmv

24. Emission rate of pollutant (specify) into and out of collector at maximum design operating conditions:

	IN		OUT	
Pollutant	**lb/hr**	**grains/acf**	**lb/hr**	**grains/acf**
PM/PM10	0.95	0.008	0.01	$8.3x10^{-5}$

25. Complete the table:

	Particle Size Distribution at Inlet to Collector	**Fraction Efficiency of Collector**
Particulate Size Range (microns)	**Weight % for Size Range**	**Weight % for Size Range**
0 – 2	Unknown	
2 – 4		95+%
4 – 6		99.9%
6 – 8		
8 – 10		
10 – 12		
12 – 16		
16 – 20		
20 – 30		
30 – 40		
40 – 50		
50 – 60		
60 – 70		
70 – 80		
80 – 90		
90 – 100		
>100		

26. How is filter monitored for indications of deterioration (e.g., broken bags)?
- ☐ Continuous Opacity
- ☒ Pressure Drop
- ☐ Alarms-Audible to Process Operator
- ☐ Visual opacity readings, Frequency:
- ☐ Other, specify:

27. Describe any recording device and frequency of log entries:
Pressure drop reading is check once per month.

28. Describe any filter seeding being performed:
None

29. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification):
None

30. Describe the collection material disposal system:
Through a rotary valve feed to a drum. Material is recycled back into the process.

31. Have you included ***Baghouse Control Device*** in the Emissions Points Data Summary Sheet? Yes

32. **Proposed Monitoring, Recordkeeping, Reporting, and Testing**
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING:	RECORDKEEPING:
See Attachment O	See Attachment O
REPORTING:	TESTING:
See Attachment O	See Attachment O

MONITORING: Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.

RECORDKEEPING: Please describe the proposed recordkeeping that will accompany the monitoring.

REPORTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.

TESTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.

33. Manufacturer's Guaranteed Capture Efficiency for each air pollutant.
99.9%

34. Manufacturer's Guaranteed Control Efficiency for each air pollutant.
99%

35. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.
None

ATTACHMENT N – SUPPORTING CALCULATIONS

Summary - Before

Group	Unit	HAP Emissions						Criteria Pollutants									
		EG		AA		1,4-Dioxane		VOC		PM/PM10		CO		NOx		SO2	
		lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
CP3	CP3 Born Heater	0.01	0.02	1.04	1.50	0.01	0.010	1.32	2.77	0.11	0.470	1.86	8.14	3.19	14.00	0.05	0.23
CP4	CP4 Born Heater	0.01	0.02	0.05	0.19	0.00	0.001	0.34	1.45	0.11	0.470	1.90	8.14	3.20	14.00	0.06	0.23
CSS7	CSS7 Process Equipment	0.38	0.14	0.14	0.56			0.05	2.37	0.05	0.140	0.05	0.18	0.23	0.91	0.01	0.01
CSS8	CSS8 Process Equipment	0.07	0.28	0.04	0.19			0.17	0.73	0.11	0.490	0.06	0.28	0.32	1.30	0.02	0.020
CSS10	CSS10 Process Equipment	0.38	1.60	0.19	0.80			0.04	2.54	0.04	0.054	0.04	0.19	0.13	0.88	0.00	0.006
CSS11	CSS11 Process Equipment	0.38	1.60	0.19	0.80			0.07	2.54	0.07	0.040	0.04	0.16	0.19	0.83	0.01	0.014
CSS12	CSS12 Process Equipment	0.54	2.32	0.20	0.85			0.18	3.47	0.18	0.189	0.04	0.20	0.20	0.00	0.01	0.00
CSS13	CSS13 Process Equipment	0.38	1.60	0.19	0.83			0.04	2.63	0.04	0.073	0.05	0.22	0.20	0.88	0.00	0.006
Warehouse	Warehouse									0.00	0.000						
	Totals:	2.14	7.58	2.04	5.72	0.011	0.011	2.21	18.50	0.71	1.93	4.04	17.51	7.66	32.80	0.16	0.52

Summary - Before

Group	Unit	Greenhouse Gas					
		CO2		Methane		N2O	
		lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
CP3	CP3 Born Heater	6,641	29,088	0.10	0.43	0.010	0.04
CP4	CP4 Born Heater	6,641	29,088	0.10	0.43	0.010	0.04
CSS7	CSS7 Process Equipment	425	1,860	0.01	0.03	0.001	0.003
CSS8	CSS8 Process Equipment	461	2,021	0.01	0.03	0.001	0.003
CSS10	CSS10 Process Equipment	592	2,594	0.01	0.04	0.001	0.004
CSS11	CSS11 Process Equipment	586	2,568	0.01	0.04	0.001	0.004
CSS12	CSS12 Process Equipment	591	2,590	0.01	0.04	0.001	0.004
CSS13	CSS13 Process Equipment	585	2,564	0.01	0.04	0.001	0.004
Warehouse	Warehouse						
	Totals:	16,523	72,373	0.25	1.08	0.02	0.11

		HAP Emissions						Criteria Pollutants									
		EG		AA		1,4-Dioxane		VOC		PM/PM10		CO		NOx		SO2	
Group	Unit	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
CP3	**CP3 Born Heater**	0.01	0.02	1.04	1.50	0.001	0.001	1.32	2.77	0.11	0.47	1.86	8.14	3.19	14.00	0.05	0.23
CP4	CP4 Born Heater	0.01	0.02	0.06	0.23	0.001	0.001	0.40	1.72	0.13	0.557	1.90	8.14	3.20	14.00	0.06	0.23
CSS7	CSS7 Process Equipment	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00
CSS8	CSS8 Process Equipment	0.07	0.28	0.04	0.19			0.24	1.04	0.14	0.624	0.08	0.36	0.41	1.66	0.03	0.025
CSS10	CSS10 Process Equipment	0.38	1.60	0.19	0.80			0.61	2.60	0.05	0.062	0.05	0.23	0.16	1.02	0.00	0.007
CSS11	CSS11 Process Equipment	0.38	1.60	0.19	0.80			0.61	2.60	0.12	0.066	0.04	0.18	0.22	0.94	0.01	0.017
CSS12	CSS12 Process Equipment	0.75	3.22	0.27	1.18			1.11	4.82	0.18	0.292	0.09	0.35	0.39	1.66	0.03	0.026
CSS13	CSS13 Process Equipment	0.53	2.22	0.26	1.15			0.83	3.63	0.07	0.113	0.06	0.28	0.25	1.09	0.00	0.007
Warehouse	Warehouse									0.00	0.004						
	Totals:	2.12	8.97	2.05	5.85	0.002	0.002	5.13	19.18	0.79	2.19	4.09	17.68	7.82	34.37	0.18	0.54

Group	Unit	Greenhouse Gas					
		CO2		Methane		N2O	
		lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
CP3	**CP3 Born Heater**	6,641	29,088	0.10	0.43	0.010	0.04
CP4	CP4 Born Heater	6,641	29,088	0.10	0.43	0.010	0.04
CSS7	CSS7 Process Equipment	0	0.00	0.00	0.00	0.00	0.00
CSS8	CSS8 Process Equipment	590	2,583	0.01	0.04	0.001	0.004
CSS10	CSS10 Process Equipment	684	2,997	0.01	0.04	0.001	0.004
CSS11	CSS11 Process Equipment	684	2,997	0.01	0.04	0.001	0.004
CSS12	CSS12 Process Equipment	684	2,997	0.01	0.04	0.001	0.004
CSS13	CSS13 Process Equipment	684	2,997	0.01	0.04	0.001	0.004
Warehouse	Warehouse						
	Totals:	16,608	72,745	0.25	1.09	0.02	0.11

Group	Unit	HAP Emissions						Criteria Pollutants									
		EG		AA		1,4-Dioxane		VOC		PM/PM10		CO		NOx		SO2	
		lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
CP3	CP3 Born Heater	0.00	0.00	0.00	0.00	-0.009	-0.009	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
CP4	CP4 Born Heater	0.00	0.00	0.01	0.04	0.000	0.000	0.06	0.27	0.02	0.09	0.00	0.00	0.00	0.00	0.00	0
CSS7	CSS7 Process Equipment	-0.38	-0.14	-0.14	-0.56	0.000	0.000	-0.05	-2.37	-0.05	-0.14	-0.05	-0.18	-0.23	-0.91	-0.01	-0.01
CSS8	CSS8 Process Equipment	0.00	0.000	0.00	0.00	0.000	0.000	0.07	0.31	0.03	0.13	0.02	0.08	0.09	0.36	0.01	0.01
CSS10	CSS10 Process Equipment	0.00	0.000	0.00	0.00	0.000	0.000	0.57	0.06	0.00	0.01	0.01	0.04	0.03	0.14	0.00	0.00
CSS11	CSS11 Process Equipment	0.00	0.000	0.00	0.00	0.000	0.000	0.54	0.06	0.05	0.03	0.00	0.02	0.03	0.11	0.00	0.00
CSS12	CSS12 Process Equipment	0.21	0.902	0.08	0.33	0.000	0.000	0.93	1.35	0.00	0.10	0.05	0.15	0.19	1.66	0.02	0.03
CSS13	CSS13 Process Equipment	0.15	0.622	0.07	0.32	0.000	0.000	0.80	1.00	0.04	0.04	0.01	0.06	0.05	0.21	0.00	0.00
Warehouse	Warehouse	0.00	0.000	0.00	0.00	0.000	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Totals:	-0.02	1.39	0.02	0.13	-0.01	-0.01	2.92	0.68	0.08	0.26	0.04	0.17	0.16	1.57	0.02	0.03

Summary - Difference

Group	Unit	Greenhouse Gas					
		CO2		Methane		N2O	
		lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
CP3	CP3 Born Heater	0	0	0.00	0.00	0.00	0.000
CP4	CP4 Born Heater	0	0	0.00	0.00	0.00	0.000
CSS7	CSS7 Process Equipment	-425	-1,860	-0.01	-0.03	0.00	-0.003
CSS8	CSS8 Process Equipment	128	562	0.00	0.01	0.00	0.001
CSS10	CSS10 Process Equipment	92	402	0.00	0.01	0.00	0.001
CSS11	CSS11 Process Equipment	98	428	0.00	0.01	0.00	0.001
CSS12	CSS12 Process Equipment	93	407	0.00	0.01	0.00	0.001
CSS13	CSS13 Process Equipment	99	433	0.00	0.01	0.00	0.001
Warehouse	Warehouse	0	0	0.00	0.00	0.00	0.000
	Totals:	85	372	0.00	0.01	0.00	0.001

Production (lb/month)

PTE

Month	CP 3	CP 4	CSS 7	CSS 8	CSS 9	CSS 10	CSS 11	CSS 12	CSS 13
January	52,080,000	29,760,000	9,672,000	13,392,000	31,248,000	13,392,000	13,392,000	13,392,000	13,392,000
February	47,040,000	26,880,000	8,736,000	12,096,000	28,224,000	12,096,000	12,096,000	12,096,000	12,096,000
March	52,080,000	29,760,000	9,672,000	13,392,000	31,248,000	13,392,000	13,392,000	13,392,000	13,392,000
April	50,400,000	28,800,000	9,360,000	12,960,000	30,240,000	12,960,000	12,960,000	12,960,000	12,960,000
May	52,080,000	29,760,000	9,672,000	13,392,000	31,248,000	13,392,000	13,392,000	13,392,000	13,392,000
June	50,400,000	28,800,000	9,360,000	12,960,000	30,240,000	12,960,000	12,960,000	12,960,000	12,960,000
July	52,080,000	29,760,000	9,672,000	13,392,000	31,248,000	13,392,000	13,392,000	13,392,000	13,392,000
August	52,080,000	29,760,000	9,672,000	13,392,000	31,248,000	13,392,000	13,392,000	13,392,000	13,392,000
September	50,400,000	28,800,000	9,360,000	12,960,000	30,240,000	12,960,000	12,960,000	12,960,000	12,960,000
October	52,080,000	29,760,000	9,672,000	13,392,000	31,248,000	13,392,000	13,392,000	13,392,000	13,392,000
November	50,400,000	28,800,000	9,360,000	12,960,000	30,240,000	12,960,000	12,960,000	12,960,000	12,960,000
December	52,080,000	28,800,000	9,672,000	13,392,000	31,248,000	13,392,000	13,392,000	13,392,000	13,392,000
Total (ppy)	613,200,000	349,440,000	113,880,000	157,680,000	367,920,000	157,680,000	157,680,000	157,680,000	157,680,000
Total (tpy)	306,600	157,680	56,940	78,840	183,960	78,840	78,840	78,840	78,840
Avg. (pph)	70,000	39,890	13,000	18,000	42,000	18,000	18,000	18,000	18,000
Permit Limit (pph)	70,000	40,000	13,000	18,000	42,000	18,000	18,000	18,000	18,000
Permit Limit (tpy)	306,600	157,680	56,940	78,840	183,960	78,840	78,840	78,840	78,840
Total CP and CSS Unit (ppy)	2,232,840,000								

Operating Hours

Month	CP-3	CP-4	CSS-7	CSS 8	CSS 9	CSS 10	CSS 11	CSS 12	CSS 13
January	744	744	744	744	744	744	744	744	744
February	672	672	672	672	672	672	672	672	672
March	744	744	744	744	744	744	744	744	744
April	720	720	720	720	720	720	720	720	720
May	744	744	744	744	744	744	744	744	744
June	720	720	720	720	720	720	720	720	720
July	744	744	744	744	744	744	744	744	744
August	744	744	744	744	744	744	744	744	744
September	720	720	720	720	720	720	720	720	720
October	744	744	744	744	744	744	744	744	744
November	720	720	720	720	720	720	720	720	720
December	744	744	744	744	744	744	744	744	744
Total	**8,760**	**8,760**	**8,760**	**8,760**	**8,760**	**8,760**	**8,760**	**8,760**	**8,760**

Production (lb/month)

PTE

Month	CP 3	CP 4	CSS 7	CSS 8	CSS 9	CSS 10	CSS 11	CSS 12	CSS 13
January	52,080,000	29,760,000	0	13,392,000	31,248,000	13,392,000	13,392,000	18,600,000	18,600,000
February	47,040,000	26,880,000	0	12,096,000	28,224,000	12,096,000	12,096,000	16,800,000	16,800,000
March	52,080,000	29,760,000	0	13,392,000	31,248,000	13,392,000	13,392,000	18,600,000	18,600,000
April	50,400,000	28,800,000	0	12,960,000	30,240,000	12,960,000	12,960,000	18,000,000	18,000,000
May	52,080,000	29,760,000	0	13,392,000	31,248,000	13,392,000	13,392,000	18,600,000	18,600,000
June	50,400,000	28,800,000	0	12,960,000	30,240,000	12,960,000	12,960,000	18,000,000	18,000,000
July	52,080,000	29,760,000	0	13,392,000	31,248,000	13,392,000	13,392,000	18,600,000	18,600,000
August	52,080,000	29,760,000	0	13,392,000	31,248,000	13,392,000	13,392,000	18,600,000	18,600,000
September	50,400,000	28,800,000	0	12,960,000	30,240,000	12,960,000	12,960,000	18,000,000	18,000,000
October	52,080,000	29,760,000	0	13,392,000	31,248,000	13,392,000	13,392,000	18,600,000	18,600,000
November	50,400,000	28,800,000	0	12,960,000	30,240,000	12,960,000	12,960,000	18,000,000	18,000,000
December	52,080,000	28,800,000	0	13,392,000	31,248,000	13,392,000	13,392,000	18,600,000	18,600,000
Total (ppy)	613,200,000	349,440,000	0	157,680,000	367,920,000	157,680,000	157,680,000	219,000,000	219,000,000
Total (tpy)	306,600	157,680	0	78,840	183,960	78,840	78,840	109,500	109,500
Avg. (pph)	70,000	39,890	0	18,000	42,000	18,000	18,000	25,000	25,000
Permit Limit (pph)	70,000	40,000	13,000	18,000	42,000	18,000	18,000	18,000	18,000
Permit Limit (tpy)	306,600	157,680	56,940	78,840	183,960	78,840	78,840	78,840	78,840
Total CP and CSS Unit (ppy)	2,241,600,000								

Operating Hours

Month	CP-3	CP-4	CSS-7	CSS 8	CSS 9	CSS 10	CSS 11	CSS 12	CSS 13
January	744	744	744	744	744	744	744	744	744
February	672	672	672	672	672	672	672	672	672
March	744	744	744	744	744	744	744	744	744
April	720	720	720	720	720	720	720	720	720
May	744	744	744	744	744	744	744	744	744
June	720	720	720	720	720	720	720	720	720
July	744	744	744	744	744	744	744	744	744
August	744	744	744	744	744	744	744	744	744
September	720	720	720	720	720	720	720	720	720
October	744	744	744	744	744	744	744	744	744
November	720	720	720	720	720	720	720	720	720
December	744	744	744	744	744	744	744	744	744
Total	**8,760**	**8,760**	**8,760**	**8,760**	**8,760**	**8,760**	**8,760**	**8,760**	**8,760**

Natural Gas Usage

PTE

NG Heat Content 960 Btu/scf

Unit Description		Btu Rating (mmBtu/hr)	NG Usage (mmscf) Annual
Production			
	CP-2 Born Heater	24	219.000
	CP-3 Born Heater	53.1	411.000
	CP-4 Born Heater	53.1	411.000
	CSS 7		
	Crystallizer Heater	1.4	12.775
	Preheater Heater	1.48	13.505
	CSS 8		
	Crystallizer Heater	2.15	19.619
	Preheater Heater	0.98	8.943
	CSS 10		
	Crystallizer Heater	3.04	27.740
	Preheater Heater	0.977	8.915
	CSS 11		
	Crystallizer Heater	3	27.375
	Preheater Heater	0.977	8.915
	CSS 12		
	Crystallizer Heater	3.04	27.740
	Preheater Heaters	0.97	8.851
	CSS 13		
	Crystallizer Heater	3	27.375
	Preheater Heaters	0.97	8.851

Natural Gas Usage

PTE

NG Heat Content 960 Btu/scf

Unit Description		Btu Rating (mmBtu/hr)	NG Usage (mmscf) Annual
Production			
	CP-2 Born Heater	24	219.000
	CP-3 Born Heater	53.1	411.000
	CP-4 Born Heater	53.1	411.000
	CSS 7		
	Crystallizer Heater	0	0.000
	Preheater Heater	0	0.000
	CSS 8		
	Crystallizer Heater	2.8	25.550
	Preheater Heater	1.2	10.950
	CSS 10		
	Crystallizer Heater	3.04	27.740
	Preheater Heater	1.6	14.600
	CSS 11		
	Crystallizer Heater	3.04	27.740
	Preheater Heater	1.6	14.600
	CSS 12		
	Crystallizer Heater	3.04	27.740
	Preheater Heaters	1.6	14.600
	CSS 13		
	Crystallizer Heater	3.04	27.740
	Preheater Heaters	1.6	14.600

Process Emissions

PTE

Permitted Production Rate	56,940	(tpy)
Actual Production Rate	56,940	(tpy)
Production Ratio	1.00	

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Control Type	Permitted Emission Rates													
					EG		AA		VOC		PM/PM10		CO		NOx		SO2	
					pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
7P-2609	C2A-E-5240/ C2A-B-5010 C2B-B-7020/ C2B-E-5250	Crystallizer and Heater Preheater and Heater	C2A-M-5350	Baghouse	0.26	1.10	0.13	0.54	0.42	1.80	0.01	0.04	0.05	0.18	0.23	0.91	0.01	0.01
7P-2601	C2A-F-5410	Crystallizer Surge Bin	C2A-M-2601	Baghouse							0.01	0.01						
7P-0520	C2D-E-5280	Product Cooler	C2D-M-0520	Baghouse	0.12	0.46	0.01	0.02	0.14	0.57	0.03	0.09						
				Totals:	0.38	1.56	0.14	0.56	0.56	2.37	0.05	0.14	0.05	0.18	0.23	0.91	0.01	0.01

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Control Type	Actual Emission Rates													
					EG		AA		VOC		PM/PM10		CO		NOx		SO2	
					pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
7P-2609	C2A-E-5240/ C2A-B-5010 C2B-B-7020/ C2B-E-5250	Crystallizer and Heater Preheater and Heater	C2A-M-5350	Baghouse	0.26	1.10	0.13	0.54	0.42	1.80	0.01	0.04	0.05	0.18	0.23	0.91	0.01	0.01
7P-2601	C2A-F-5410	Crystallizer Surge Bin	C2A-M-2601	Baghouse							0.01	0.01						
7P-0520	C2D-E-5280	Product Cooler	C2D-M-0520	Baghouse	0.12	0.46	0.01	0.02	0.14	0.57	0.03	0.09						
				Totals:	**0.38**	**1.56**	**0.14**	**0.56**	**0.56**	**2.37**	**0.05**	**0.14**	**0.05**	**0.18**	**0.23**	**0.91**	**0.01**	**0.01**

CSS-7 Operating Hours 8,760 (hr/yr)

Emission Factors

	Greenhouse Gases (based on 40 CFR 98 Subpart C factors)		
	CO2	**Methane**	**N2O (UC)**
Factor (kg/ MMBtu)	66.88	1.00E-03	1.00E-04

TPY GHG =Factor (kg/MMBtu)x fuel (MMscf/yr)xHeat value(Btu/scf)x2.2046 (lb/kg) / 2000

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Total Gas Usage (mmscf/yr)	Greenhouse Gas Emissions								
					CO2			Methane			N2O		
					pph	ppy	tpy	pph	ppy	tpy	pph	ppy	tpy
7P-2609	C2A-E-5240/ C2A-B-5010 C2B-B-7020/ C2B-E-5250	Crystallizer and Heater Preheater and Heater	NA	26.28	425	3,719,826	1,860	0.01	55.62	0.03	0.00	5.56	0.00
				Totals:	**425**	**3719826**	**1860**	**0.01**	**55.62**	**0.028**	**0.001**	**5.562**	**0.003**

Process Emissions

PTE

Permitted Production Rate	56,940	(tpy)
Actual Production Rate	0	(tpy)
Production Ratio	0.00	

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Control Type	Permitte EG pph	EG tpy	AA pph	AA tpy	VOC pph	VOC tpy	PM/PM10 pph	PM/PM10 tpy	CO pph	CO tpy	NOx pph	NOx tpy	SO2 pph	SO2 tpy
7P-2609	C2A-E-5240/ C2A-B-5010 C2B-B-7020/ C2B-E-5250	Crystallizer and Heater Preheater and Heater	C2A-M-5350	Baghouse	0.26	1.10	0.13	0.54	0.42	1.80	0.01	0.04	0.05	0.18	0.23	0.91	0.01	0.01
7P-2601	C2A-F-5410	Crystallizer Surge Bin	C2A-M-2601	Baghouse							0.01	0.01						
7P-0520	C2D-E-5280	Product Cooler	C2D-M-0520	Baghouse	0.12	0.46	0.01	0.02	0.14	0.57	0.03	0.09						
				Totals:	0.38	1.56	0.14	0.56	0.56	2.37	0.05	0.14	0.05	0.18	0.23	0.91	0.01	0.01

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Control Type	Actual Emission Rates EG pph	EG tpy	AA pph	AA tpy	VOC pph	VOC tpy	PM/PM10 pph	PM/PM10 tpy	CO pph	CO tpy	NOx pph	NOx tpy	SO2 pph	SO2 tpy
7P-2609	C2A-E-5240/ C2A-B-5010 C2B-B-7020/ C2B-E-5250	Crystallizer and Heater Preheater and Heater	C2A-M-5350	Baghouse	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7P-2601	C2A-F-5410	Crystallizer Surge Bin	C2A-M-2601	Baghouse							0.00	0.00						
7P-0520	C2D-E-5280	Product Cooler	C2D-M-0520	Baghouse	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
				Totals:	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

CSS-7 Operating Hours 0 (hr/yr)

Emission Factors

	Greenhouse Gases (based on 40 CFR 98 Subpart C factors)		
	CO2	Methane	N2O (UC)
Factor (kg/ MMBtu)	66.88	1.00E-03	1.00E-04

TPY GHG =Factor (kg/MMBtu)x fuel (MMscf/yr)xHeat value(Btu/scf)x2.2046 (lb/kg) / 2000

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Total Gas Usage (mmscf/yr)	Greenhouse Gas Emissions								
					CO2			Methane			N2O		
					pph	ppy	tpy	pph	ppy	tpy	pph	ppy	tpy
7P-2609	C2A-E-5240/ C2A-B-5010 C2B-B-7020/ C2B-E-5250	Crystallizer and Heater Preheater and Heater	NA	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
				Totals:	**0**	**0**	**0**	**0.00**	**0.00**	**0.000**	**0.000**	**0.000**	**0.000**

Process Emissions

PTE

				Actual		Permitted	
Permitted Production Rate	78,840	(tpy)	Crystallizer	19.619	(mmscf/yr)	Crystallizer	19.619 (mmscf/yr)
Actual Production Rate	78,840	(tpy)	Preheater	8.943	(mmscf/yr)	Preheater	8.943 (mmscf/yr)
Production Ratio	1.00						

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Control Type	Permitted Emission Rates													
					EG		AA		Total VOC		PM/PM10		CO		NOx		SO2	
					pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
8E-08	L37-F-7050	Boxing Silo	L37-M-7130	Dust Collector							0.01	0.01						
8E-03	S8A-E-3240/ S8A-B-3010	CSS-8 Crystallizer CSS-8 Crystallizer Furnace	S8A-M-3350	Dust Collector	0.04	0.16			0.09	0.38	0.07	0.31	0.05	0.19	0.22	0.90	0.01	0.01
8E-04	S8B-E-2250/ S8B-B-2020	CSS-8 Preheater CSS-8 Preheater Furnace	S8BM-2420	Dust Collector	0.03	0.12	0.04	0.19	0.08	0.35	0.04	0.18	0.02	0.09	0.10	0.40	0.01	0.01
				Totals:	0.07	0.28	0.04	0.19	0.17	0.73	0.11	0.49	0.07	0.28	0.32	1.30	0.02	0.02

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Control Type	Actual Emission Rates													
					EG		AA		Total VOC		PM/PM10		CO		NOx		SO2	
					pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
8E-08	L37-F-7050	Boxing Silo	L37-M-7130	Dust Collector							0.01	0.01						
8E-03	S8A-E-3240/ S8A-B-3010	CSS-8 Crystallizer CSS-8 Crystallizer Furnace	S8A-M-3350	Dust Collector	0.04	0.16			0.09	0.38	0.07	0.31	0.04	0.19	0.22	0.90	0.01	0.01
8E-04	S8B-E-2250/ S8B-B-2020	CSS-8 Preheater CSS-8 Preheater Furnace	S8B-M-2420	Dust Collector	0.03	0.12	0.04	0.19	0.08	0.35	0.04	0.18	0.02	0.09	0.10	0.40	0.01	0.01
				Totals:	**0.07**	**0.28**	**0.04**	**0.19**	**0.17**	**0.73**	**0.11**	**0.49**	**0.06**	**0.28**	**0.32**	**1.30**	**0.02**	**0.02**

CSS-8 Operating Hours 8,760 (hr/yr)

	Greenhouse Gases (based on 40 CFR 98 Subpart C factors)		
	CO2	Methane	N2O (UC)
Factor (kg/ MMBtu)	66.88	1.00E-03	1.00E-04

TPY GHG =Factor (kg/MMBtu)x fuel (MMscf/yr)xHeat value(Btu/scf)x2.2046 (lb/kg) / 2000

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Total Gas Usage (mmscf/yr)	Greenhouse Gas Emissions								
					CO2			Methane			N2O		
					pph	ppy	tpy	pph	ppy	tpy	pph	ppy	tpy
8E-03	S8A-E-3240/ S8A-B-3010	CSS-8 Crystallizer CSS-8 Crystallizer Furnace	NA	19.61875	317	2,776,954	1,388	0.005	41.52	0.02	0.000	4.15	0.002
8E-04	S8B-E-2250/ S8B-B-2020	CSS-8 Preheater Furnace	NA	8.9425	144	1,265,774	633	0.002	18.93	0.01	0.000	1.89	0.001
			Totals:		**461**	**4042728**	**2021**	**0.007**	**60.45**	**0.03**	**0.0007**	**6.045**	**0.003**

Process Emissions

PTE

				Actual			Permitted	
Permitted Production Ra	78,840	(tpy)	Crystallizer	25.550	(mmscf/yr)	Crystallizer	19.619	(mmscf/yr)
Actual Production Rate	78,840	(tpy)	Preheater	10.950	(mmscf/yr)	Preheater	8.943	(mmscf/yr)
Production Ratio	1.00							

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Control Type	Permitted Emission Rates													
					EG		AA		Total VOC		PM/PM10		CO		NOx		SO2	
					pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
8E-03	S8A-E-3240/ S8A-B-3010	CSS-8 Crystallizer CSS-8 Crystallizer Furnace	S8A-M-3350	Dust Collector	0.04	0.16			0.09	0.38	0.07	0.31	0.05	0.19	0.22	0.90	0.01	0.01
8E-04	S8B-E-2250/ S8B-B-2020	CSS-8 Preheater CSS-8 Preheater Furnace	S8BM-2420	Dust Collector	0.03	0.12	0.04	0.19	0.08	0.35	0.04	0.18	0.02	0.09	0.10	0.40	0.01	0.01
				Totals:	0.07	0.28	0.04	0.19	0.17	0.73	0.11	0.49	0.07	0.28	0.32	1.30	0.02	0.02
Emission Point ID	**Emission Unit ID**	**Emisison Unit Name**	**Control Device ID**	**Control Type**	**Actual Emission Rates**													
					EG		**AA**		**Total VOC**		**PM/PM10**		**CO**		**NOx**		**SO2**	
					pph	**tpy**	**pph**	**tpy**	**pph**	**tpy**	**pph**	**tpy**	**pph**	**tpy**	**pph**	**tpy**	**pph**	**tpy**
8E-03	S8A-E-3240/ S8A-B-3010	CSS-8 Crystallizer CSS-8 Crystallizer Furnace	S8A-M-3350	Dust Collector	0.04	0.16			0.11	0.45	0.09	0.40	0.06	0.25	0.29	1.17	0.01	0.01
8E-04	S8B-E-2250/ S8B-B-2020	CSS-8 Preheater CSS-8 Preheater Furnace	S8B-M-2420	Dust Collector	0.03	0.12	0.04	0.19	0.13	0.59	0.05	0.22	0.02	0.11	0.12	0.49	0.01	0.01
				Totals:	**0.07**	**0.28**	**0.04**	**0.19**	**0.24**	**1.04**	**0.14**	**0.62**	**0.08**	**0.36**	**0.41**	**1.66**	**0.03**	**0.03**

Greenhouse Gss Emissions

CSS-8 Operating Hour 8,760 (hr/yr)

	Greenhouse Gases (based on 40 CFR 98 Subpart C factors)			
	CO2	Methane	N2O (UC)	
Factor (kg/ MMBtu)	66.88	1.00E-03	1.00E-04	

TPY GHG =Factor (kg/MMBtu)x fuel (MMscf/yr)xHeat value(Btu/scf)x2.2046 (lb/kg) / 2000

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Total Gas Usage (mmscf/yr)	Greenhouse Gas Emissions								
					CO2			Methane			N2O		
					pph	ppy	tpy	pph	ppy	tpy	pph	ppy	tpy
8E-03	S8A-E-3240/ S8A-B-3010	CSS-8 Crystallizer CSS-8 Crystallizer Furnace	NA	25.55	413	3,616,498	1,808	0.01	54.07	0.03	0.001	5.41	0.003
8E-04	S8B-E-2250/ S8B-B-2020	CSS-8 Preheater CSS-8 Preheater Furnace	NA	10.95	177	1,549,928	775	0.00	23.17	0.01	0.000	2.32	0.001
			Totals:		**590**	**5,166,425**	**2583**	**0.01**	**77.25**	**0.04**	**0.001**	**7.72**	**0.004**

Process Emissions

PTE

				Actual			Permitted	
Permitted Production Rate	78,840	(tpy)	Crystallizer	27.740	(mmscf/yr)	Crystallizer	27.375	(mmscf/yr)
Actual Production Rate	78,840	(tpy)	Preheater	8.915	(mmscf/yr)	Preheater	8.915	(mmscf/yr)
Production Ratio	1.00							

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Control Type	Permitted Emission Rates													
					EG		AA		VOC		PM/PM10		CO		NOx		SO2	
					pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
10P-7350	C3A-E-7240 C3A-B-7010	Crystallizer Crystallizer Furnace	C3A-M-7350	Baghouse	0.30	1.25	0.06	0.23	0.37	1.53	0.04	0.04	0.02	0.13	0.08	0.65	0.00	0.00
10P-6420	C3B-E-6250 C3B-B-6020	Preheater Preheater Furnace	C3B-M-6420	Baghouse	0.08	0.35	0.13	0.57	0.23	1.01	0.00	0.01	0.02	0.06	0.05	0.22	0.00	0.00
				Totals:	0.38	1.60	0.19	0.80	0.60	2.54	0.04	0.05	0.04	0.19	0.13	0.87	0.00	0.01
Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Control Type	Actual Emission Rates													
					EG		AA		VOC		PM/PM10		CO		NOx		SO2	
					pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
10P-7350	C3A-E-7240 C3A-B-7010	Crystallizer Crystallizer Furnace	C3A-M-7350	Baghouse	0.30	1.25	0.06	0.23	0.37	1.53	0.04	0.04	0.02	0.13	0.08	0.66	0.00	0.00
10P-6420	C3B-E-6250 C3B-B-6020	Preheater Preheater Furnace	C3B-M-6420	Baghouse	0.08	0.35	0.13	0.57	0.23	1.01	0.00	0.01	0.02	0.06	0.05	0.22	0.00	0.00
				Totals:	**0.38**	**1.60**	**0.19**	**0.80**	**0.60**	**2.54**	**0.04**	**0.05**	**0.04**	**0.19**	**0.13**	**0.88**	**0.00**	**0.01**

Greenhouse Gas Emissions

CSS-10 Operating Hours 8,760 (hr/yr)

	Greenhouse Gases (based on 40 CFR 98 Subpart C factors)			
	CO2	Methane	N2O (UC)	
Factor (kg/ MMBtu)	66.88	1.00E-03	1.00E-04	

TPY GHG =Factor (kg/MMBtu)x fuel (MMscf/yr)xHeat value(Btu/scf)x2.2046 (lb/kg) / 2000

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Total Gas Usage (mmscf/yr)	Greenhouse Gas Emissions								
					CO2			Methane			N2O		
					pph	ppy	tpy	pph	ppy	tpy	pph	ppy	tpy
10P-7350	C3A-E-7240 C3A-B-7010	Crystallizer Crystallizer Furnace	NA	27.74	448	3,926,483	1,963	0.01	58.71	0.03	0.001	5.87	0.003
10P-6420	C3B-E-6250 C3B-B-6020	Preheater Preheater Furnace	NA	8.915125	144	1,261,899	631	0.00	18.87	0.01	0.000	1.89	0.001
				Totals:	**592**	**5188383**	**2594**	**0.01**	**78**	**0.04**	**0.001**	**7.76**	**0.004**

Process Emissions

PTE

				Actual		Permitted	
Permitted Production Rate	78,840	(tpy)	Crystallizer	27.740	(mmscf/yr)	Crystallizer	27.375 (mmscf/yr)
Actual Production Rate	78,840	(tpy)	Preheater	14.600	(mmscf/yr)	Preheater	8.915 (mmscf/yr)
Production Ratio	1.00						

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Control Type	Permitted Emission Rates													
					EG		AA		VOC		PM/PM10		CO		NOx		SO2	
					pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
10P-7350	C3A-E-7240 C3A-B-7010	Crystallizer Crystallizer Furnace	C3A-M-7350	Baghouse	0.30	1.25	0.06	0.23	0.37	1.53	0.04	0.04	0.02	0.13	0.08	0.65	0.00	0.00
10P-6420	C3B-E-6250 C3B-B-6020	Preheater Preheater Furnace	C3B-M-6420	Baghouse	0.08	0.35	0.13	0.57	0.23	1.01	0.00	0.01	0.02	0.06	0.05	0.22	0.00	0.00
				Totals:	0.38	1.60	0.19	0.80	0.60	2.54	0.04	0.05	0.04	0.19	0.13	0.87	0.00	0.01
Emission Point ID	**Emission Unit ID**	**Emisison Unit Name**	**Control Device ID**	**Control Type**	**Actual Emission Rates**													
					EG		**AA**		**VOC**		**PM/PM10**		**CO**		**NOx**		**SO2**	
					pph	**tpy**	**pph**	**tpy**	**pph**	**tpy**	**pph**	**tpy**	**pph**	**tpy**	**pph**	**tpy**	**pph**	**tpy**
10P-7350	C3A-E-7240 C3A-B-7010	Crystallizer Crystallizer Furnace	C3A-M-7350	Baghouse	0.30	1.25	0.06	0.23	0.37	1.53	0.04	0.04	0.02	0.13	0.08	0.66	0.00	0.00
10P-6420	C3B-E-6250 C3B-B-6020	Preheater Preheater Furnace	C3B-M-6420	Baghouse	0.08	0.35	0.13	0.57	0.24	1.07	0.00	0.02	0.03	0.10	0.08	0.36	0.00	0.00
				Totals:	**0.38**	**1.60**	**0.19**	**0.80**	**0.61**	**2.60**	**0.05**	**0.06**	**0.05**	**0.23**	**0.16**	**1.02**	**0.00**	**0.01**

Greenhouse Gas Emissions

CSS-10 Operating Hours 8,760 (hr/yr)

	Greenhouse Gases (based on 40 CFR 98 Subpart C factors)			
	CO2	Methane	N2O (UC)	
Factor (kg/ MMBtu)	66.88	1.00E-03	1.00E-04	

TPY GHG =Factor (kg/MMBtu)x fuel (MMscf/yr)xHeat value(Btu/scf)x2.2046 (lb/kg) / 2000

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Total Gas Usage (mmscf/yr)	Greenhouse Gas Emissions								
					CO2			Methane			N2O		
					pph	ppy	tpy	pph	ppy	tpy	pph	ppy	tpy
10P-7350	C3A-E-7240 C3A-B-7010	Crystallizer Crystallizer Furnace	NA	27.74	448	3,926,483	1,963	0.01	58.71	0.03	0.001	5.87	0.003
10P-6420	C3B-E-6250 C3B-B-6020	Preheater Preheater Furnace	NA	14.6	236	2,066,570	1,033	0.00	30.90	0.02	0.000	3.09	0.002
			Totals:		**684**	**5993053**	**2997**	**0.01**	**90**	**0.04**	**0.001**	**8.96**	**0.004**

Process Emissions

PTE

			Actual			Permitted		
Permitted Production Rate	78,840	(tpy)	Crystallizer	27.375	(mmscf/yr)	Crystallizer	27.740	(mmscf/yr)
Actual Production Rate	78,840	(tpy)	Preheater	8.915	(mmscf/yr)	Preheater	8.915	(mmscf/yr)
Production Ratio	1.00							

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Control Type	Permitted Emission Rates													
					EG		AA		VOC		PM/PM10		CO		NOx		SO2	
					pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
11P-3350	C3A-E-3240 C3A-B-3010	CSS-11 Crystallizer CSS-11 Crystallizer furnace	C3A-M-3350	Baghouse	0.30	1.25	0.06	0.23	0.37	1.53	0.07	0.03	0.03	0.13	0.15	0.65	0.01	0.01
11P-2420	C3B-E-2250 C3B-B-2020	CSS-11 Preheater CSS-11 Preheater Furnace	C3B-M-2420	Baghouse	0.08	0.35	0.13	0.57	0.23	1.01	0.00	0.01	0.01	0.03	0.04	0.18	0.00	0.00
				Totals:	0.38	1.60	0.19	0.80	0.60	2.54	0.07	0.04	0.04	0.16	0.19	0.83	0.01	0.01

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Control Type	Actual Emission Rates													
					EG		AA		VOC		PM/PM10		CO		NOx		SO2	
					pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
11P-3350	C3A-E-3240 C3A-B-3010	CSS-11 Crystallizer CSS-11 Crystallizer furnace	C3A-M-3350	Baghouse	0.30	1.25	0.06	0.23	0.37	1.53	0.07	0.03	0.03	0.13	0.15	0.65	0.01	0.01
11P-2420	C3B-E-2250 C3B-B-2020	CSS-11 Preheater CSS-11 Preheater Furnace	C3B-M-2420	Baghouse	0.08	0.35	0.13	0.57	0.23	1.01	0.00	0.01	0.01	0.03	0.04	0.18	0.00	0.00
				Totals:	**0.38**	**1.60**	**0.19**	**0.80**	**0.60**	**2.54**	**0.07**	**0.04**	**0.04**	**0.16**	**0.19**	**0.83**	**0.01**	**0.01**

Greenhouse Gas Emissions

CSS-11 Operating Hours 8,760 (hr/yr)

	Greenhouse Gases (based on 40 CFR 98 Subpart C factors)			
	CO2	Methane	N2O (UC)	
Factor (kg/ MMBtu)	66.88	1.00E-03	1.00E-04	

TPY GHG =Factor (kg/MMBtu)x fuel (MMscf/yr)xHeat value(Btu/scf)x2.2046 (lb/kg) / 2000

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Total Gas Usage (mmscf/yr)	Greenhouse Gas Emissions								
					CO2			Methane			N2O		
					pph	ppy	tpy	pph	ppy	tpy	pph	ppy	tpy
11P-3350	C3A-E-3240 C3A-B-3010	CSS-11 Crystallizer CSS-11 Crystallizer furnace	NA	27.375	442	3,874,819	1,937	0.01	57.94	0.03	0.001	5.79	0.003
11P-2420	C3B-E-2250 C3B-B-2020	CSS-11 Preheater CSS-11 Preheater Furnace	NA	8.915125	144	1,261,899	631	0.00	18.87	0.01	0.000	1.89	0.001
				Totals:	**586**	**5136718**	**2568**	**0.01**	**77**	**0.04**	**0.001**	**7.68**	**0.004**

Process Emissions

PTE

			Actual			Permitted		
Permitted Production Rate	78,840	(tpy)	Crystallizer	27.740	(mmscf/yr)	Crystallizer	27.740	(mmscf/yr)
Actual Production Rate	78,840	(tpy)	Preheater	14.600	(mmscf/yr)	Preheater	8.915	(mmscf/yr)
Production Ratio	1.00							

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Control Type	Permitted Emission Rates													
					EG		AA		VOC		PM/PM10		CO		NOx		SO2	
					pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
11P-3350	C3A-E-3240 C3A-B-3010	CSS-11 Crystallizer CSS-11 Crystallizer furnace	C3A-M-3350	Baghouse	0.30	1.25	0.06	0.23	0.37	1.53	0.07	0.03	0.03	0.13	0.15	0.65	0.01	0.01
11P-2420	C3B-E-2250 C3B-B-2020	CSS-11 Preheater CSS-11 Preheater Furnace	C3B-M-2420	Baghouse	0.08	0.35	0.13	0.57	0.23	1.01	0.00	0.01	0.01	0.03	0.04	0.18	0.00	0.00
				Totals:	0.38	1.60	0.19	0.80	0.60	2.54	0.07	0.04	0.04	0.16	0.19	0.83	0.01	0.01

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Control Type	Actual Emission Rates													
					EG		AA		VOC		PM/PM10		CO		NOx		SO2	
					pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
11P-3350	C3A-E-3240 C3A-B-3010	CSS-11 Crystallizer CSS-11 Crystallizer furnace	C3A-M-3350	Baghouse	0.30	1.25	0.06	0.23	0.37	1.53	0.11	0.05	0.03	0.13	0.15	0.65	0.01	0.01
11P-2420	C3B-E-2250 C3B-B-2020	CSS-11 Preheater CSS-11 Preheater Furnace	C3B-M-2420	Baghouse	0.08	0.35	0.13	0.57	0.24	1.07	0.00	0.02	0.01	0.05	0.07	0.29	0.00	0.01
				Totals:	**0.38**	**1.60**	**0.19**	**0.80**	**0.61**	**2.60**	**0.12**	**0.07**	**0.04**	**0.18**	**0.22**	**0.94**	**0.01**	**0.02**

Greenhouse Gas Emissions

CSS-11 Operating Hours 8,760 (hr/yr)

	Greenhouse Gases (based on 40 CFR 98 Subpart C factors)			
	CO2	Methane	N2O (UC)	
Factor (kg/ MMBtu)	66.88	1.00E-03	1.00E-04	

TPY GHG =Factor (kg/MMBtu)x fuel (MMscf/yr)xHeat value(Btu/scf)x2.2046 (lb/kg) / 2000

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Total Gas Usage (mmscf/yr)	Greenhouse Gas Emissions								
					CO2			Methane			N2O		
					pph	ppy	tpy	pph	ppy	tpy	pph	ppy	tpy
11P-3350	C3A-E-3240 C3A-B-3010	CSS-11 Crystallizer CSS-11 Crystallizer furnace	NA	27.74	448	3,926,483	1,963	0.01	58.71	0.03	0.001	5.87	0.003
11P-2420	C3B-E-2250 C3B-B-2020	CSS-11 Preheater CSS-11 Preheater Furnace	NA	14.6	236	2,066,570	1,033	0.00	30.90	0.02	0.000	3.09	0.002
			Totals:		**684**	**5993053**	**2997**	**0.01**	**89.61**	**0.04**	**0.001**	**8.96**	**0.004**

Process Emissions

PTE

			Actual			**Permitted**		
Permitted Production Rate	78,840	(tpy)	Crystallizer	#####	(mmscf/yr)	Crystallizer	27.740	(mmscf/yr)
Actual Production Rate	78,840	(tpy)	Preheater	8.851	(mmscf/yr)	Preheater	8.851	(mmscf/yr)
Production Ratio	1.00							

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Control Type	Permitted Emission Rates													
					EG		AA		VOC		PM/PM10		CO		NOx		SO2	
					pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
4P-0340	C4A-F-0410 C4A-F-0411	West CSS-12/13 Crystallizer Blend Silo East CSS-12/13 Crystallizer Blend Silo	C4A-M-0340	Dust Collector							0.03	0.01						
12P-2420	C4B-E-2250	Preheater Preheater Furnace	C4B-M-2420	Baghouse	0.08	0.35	0.13	0.57	0.23	1.01	0.00	0.02	0.02	0.09	0.07	0.31	0.00	0.00
12P-3350	C4A-E-3240	Crystallizer Crystallizer Furnace	C4A-M-3350	Baghouse	0.30	1.31	0.06	0.26	0.37	1.62	0.01	0.03	0.02	0.09	0.13	0.57	0.00	0.00
12P-0520	C4D-E-1280 C4D-E-5280	CSS-12 Product Cooler CSS-13 Product Cooler	C4D-M-0520	Baghouse	0.16	0.66	0.01	0.02	0.20	0.84	0.03	0.11						
12P-1130	L1C-F-1110 L1C-F-1090	Product Storage Silo 21 Product Storage Silo 22	L1C-M-1130	Baghouse							0.00	0.00						
12P-0390	L4C-F-0210	Salvage Silo	L1C-M-0390	Baghouse							0.10	0.00						
12P-1590	C4E-F-1440	Verification Bin	C4E-M-1590	Baghouse							0.00	0.01						
12P-2390	C4A-F-2460	Crystallizer Surge Bin	C4A-M-2390	Baghouse							0.00	0.01						
12P-1140	L1C-M-1140	Fines Elutriator Silos 21 & 22	NA	NA							0.00	0.00						
				Totals:	0.54	2.32	0.20	0.85	0.80	3.47	0.18	0.19	0.04	0.18	0.20	0.88	0.00	0.01

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Control Type	Actual Emission Rates													
					EG		AA		VOC		PM/PM10		CO		NOx		SO2	
					pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
4P-0340	C4A-F-0410 C4A-F-0411	West CSS-12/13 Crystallizer Blend Silo East CSS-12/13 Crystallizer Blend Silo	C4A-M-0340	Dust Collector							0.03	0.01						
12P-2420	C4B-E-2250	Preheater Preheater Furnace	C4B-M-2420	Baghouse	0.08	0.35	0.13	0.57	0.23	1.01	0.00	0.02	0.02	0.09	0.07	0.31	0.00	0.00
12P-3350	C4A-E-3240	Crystallizer Crystallizer Furnace	C4A-M-3350	Baghouse	0.30	1.31	0.06	0.26	0.37	1.62	0.01	0.03	0.02	0.09	0.13	0.57	0.00	0.00
12P-0520	C4D-E-1280 C4D-E-5280	CSS-12 Product Cooler CSS-13 Product Cooler	C4D-M-0520	Baghouse	0.16	0.66	0.01	0.02	0.20	0.84	0.03	0.11						
12P-1130	L1C-F-1110 L1C-F-1090	Product Storage Silo 21 Product Storage Silo 22	L1C-M-1130	Baghouse							0.00	0.00						
12P-0390	L4C-F-0210	Salvage Silo	L1C-M-0390	Baghouse							0.10	0.00						
12P-1590	C4E-F-1440	Verification Bin	C4E-M-1590	Baghouse							0.00	0.01						
12P-2390	C4A-F-2460	Crystallizer Surge Bin	C4A-M-2390	Baghouse							0.00	0.01						
12P-1140	L1C-M-1140	Fines Elutriator Silos 21 & 22	NA	NA							0.00	0.00						
				Totals:	**0.54**	**2.32**	**0.20**	**0.85**	**0.80**	**3.47**	**0.18**	**0.19**	**0.04**	**0.18**	**0.20**	**0.88**	**0.00**	**0.01**

Greenhouse Gas Emissions

CSS-12 Operating Hours 8,760 (hr/yr)

	Greenhouse Gases (based on 40 CFR 98 Subpart C factors)			
	CO2	**Methane**	**N2O (UC)**	
Factor (kg/ MMBtu)	66.88	1.00E-03	1.00E-04	

TPY GHG =Factor (kg/MMBtu)x fuel (MMscf/yr)xHeat value(Btu/scf)x2.2046 (lb/kg) / 2000

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Total Gas Usage (mmscf/yr)	Greenhouse Gas Emissions								
					CO2			Methane			N2O		
					pph	ppy	tpy	pph	ppy	tpy	pph	ppy	tpy
12P-3350	C4A-E-3240	Crystallizer Crystallizer Furnace	NA	27.74	448	3,926,483	1,963	0.01	58.71	0.03	0.001	5.87	0.003
12P-2420	C4B-E-2250	Preheater Preheater Furnace	NA	8.85125	143	1,252,858	626	0.00	18.73	0.01	0.000	1.87	0.001
			Totals:		**591**	**5179341**	**2590**	**0.01**	**77**	**0.04**	**0.001**	**7.74**	**0.004**

Process Emissions

PTE

			Actual			**Permitted**		
Permitted Production Rate	78,840	(tpy)	Crystallizer	27.740	(mmscf/yr)	Crystallizer	27.740	(mmscf/yr)
Actual Production Rate	109,500	(tpy)	Preheater	14.600	(mmscf/yr)	Preheater	8.851	(mmscf/yr)
Production Ratio	1.39							

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Control Type	Permitted Emission Rates													
					EG		AA		VOC		PM/PM10		CO		NOx		SO2	
					pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
4P-0340	C4A-F-0410 C4A-F-0411	West CSS-12/13 Crystallizer Blend Silo East CSS-12/13 Crystallizer Blend Silo	C4A-M-0340	Dust Collector							0.03	0.01						
12P-2420	C4B-E-2250 C4B-B-2020	Preheater Preheater Furnace	C4B-M-2420	Baghouse	0.08	0.35	0.13	0.57	0.23	1.01	0.00	0.02	0.02	0.09	0.08	0.34	0.010	0.01
12P-3350	C4A-E-3240 C4A-B-3010	Crystallizer Crystallizer Furnace	C4A-M-3350	Baghouse	0.30	1.31	0.06	0.26	0.37	1.62	0.01	0.03	0.04	0.16	0.19	0.80	0.010	0.01
12P-0520	C4D-E-1280 C4D-E-5280	CSS-12 Product Cooler CSS-13 Product Cooler	C4D-M-0520	Baghouse	0.16	0.66	0.01	0.02	0.20	0.84	0.03	0.11						
12P-1130	L1C-F-1110 L1C-F-1090	Product Storage Silo 21 Product Storage Silo 22	L1C-M-1130	Baghouse							0.01	0.01						
12P-0390	L4C-F-0210	Salvage Silo	L1C-M-0390	Baghouse							0.01	0.01						
12P-1590	C4E-F-1440	Verification Bin	C4E-M-1590	Baghouse							0.01	0.01						
12P-2390	C4A-F-2460	Crystallizer Surge Bin	C4A-M-2390	Baghouse							0.01	0.01						
12P-1140	L1C-M-1140	Fines Elutriator Silos 21 & 22	NA	NA							0.01	0.01						
				Totals:	0.54	2.32	0.20	0.85	0.80	3.47	0.12	0.21	0.06	0.25	0.27	1.14	0.02	0.02

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Control Type	Actual Emission Rates													
					EG		AA		VOC		PM/PM10		CO		NOx		SO2	
					pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
4P-0340	C4A-F-0410 C4A-F-0411	West CSS-12/13 Crystallizer Blend Silo East CSS-12/13 Crystallizer Blend Silo	C4A-M-0340	Dust Collecto							0.05	0.02						
12P-2420	C4B-E-2250 C4B-B-2020	Preheater Preheater Furnace	C4B-M-2420	Baghouse	0.11	0.49	0.18	0.79	0.32	1.43	0.01	0.03	0.02	0.09	0.08	0.34	0.01	0.01
12P-3350	C4A-E-3240 C4A-B-3010	Crystallizer Crystallizer Furnace	C4A-M-3350	Baghouse	0.42	1.82	0.08	0.36	0.51	2.23	0.01	0.03	0.07	0.26	0.31	1.32	0.02	0.02
12P-0520	C4D-E-1280 C4D-E-5280	CSS-12 Product Cooler CSS-13 Product Cooler	C4D-M-0520	Baghouse	0.22	0.92	0.01	0.03	0.28	1.17	0.04	0.15						
12P-1130	L1C-F-1110 L1C-F-1090	Product Storage Silo 21 Product Storage Silo 22	L1C-M-1130	Baghouse							0.01	0.01						
12P-0390	L4C-F-0210	Salvage Silo	L1C-M-0390	Baghouse							0.01	0.01						
12P-1590	C4E-F-1440	Verification Bin	C4E-M-1590	Baghouse							0.01	0.007						
12P-2390	C4A-F-2460	Crystallizer Surge Bin	C4A-M-2390	Baghouse							0.01	0.01						
12P-1140	L1C-M-1140	Fines Elutriator Silos 21 & 22	NA	NA							0.01	0.01						
				Totals:	**0.75**	**3.22**	**0.27**	**1.18**	**1.11**	**4.82**	**0.18**	**0.29**	**0.09**	**0.35**	**0.39**	**1.66**	**0.03**	**0.03**

Greenhouse Gas Emissions

CSS-12 Operating Hours 8,760 (hr/yr)

	Greenhouse Gases (based on 40 CFR 98 Subpart C factors)			
	CO2	Methane	N2O (UC)	
Factor (kg/ MMBtu)	66.88	1.00E-03	1.00E-04	

TPY GHG =Factor (kg/MMBtu)x fuel (MMscf/yr)xHeat value(Btu/scf)x2.2046 (lb/kg) / 2000

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Total Gas Usage (mmscf/yr)	Greenhouse Gas Emissions								
					CO2			Methane			N2O		
					pph	ppy	tpy	pph	ppy	tpy	pph	ppy	tpy
12P-3350	C4A-E-3240 C4A-B-3010	Crystallizer Crystallizer Furnace	NA	27.74	448	3,926,483	1,963	0.01	58.71	0.03	0.001	5.87	0.003
12P-2420	C4B-E-2250 C4B-B-2020	Preheater Preheater Furnace	NA	14.6	236	2,066,570	1,033	0.00	30.90	0.02	0.000	3.09	0.002
				Totals:	**684**	**5993053**	**2997**	**0.01**	**90**	**0.04**	**0.001**	**8.96**	**0.004**

Process Emissions

PTE

				Actual			Permitted	
Permitted Production Rate	78,840	(tpy)	Crystallizer	27.375	(mmscf/yr)	Crystallizer	27.375	(mmscf/yr)
Actual Production Rate	78,840	(tpy)	Preheater	8.851	(mmscf/yr)	Preheater	8.851	(mmscf/yr)
Production Ratio	1.00							

Ensure Pemitted Rates are Current

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Control Type	Permitted Emission Rates													
					EG		AA		VOC		PM/PM10		CO		NOx		SO2	
					pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
13P-7350	C4A-E-7240 C4A-B-7010	Crystallizer Crystallizer Furnace	C4A-M-7350	Baghouse	0.30	1.25	0.06	0.26	0.37	1.62	0.01	0.03	0.03	0.13	0.13	0.57	0.00	0.00
12P-6390	C4A-F-6460	Crystallizer Surge Bin	C4A-M-6390	Baghouse							0.00	0.01						
13P-1170	L1D-M-1130	Fines Elutriator Silos 23 & 24	NA	NA							0.01	0.00						
13P-1130	L1D-F-1110 L1D-F-1120	Product Storage Silo 23 Product Storage Silo 24	L1D-M-1130	Baghouse							0.00	0.00						
13P-5590	C4E-F-5440	Verification Bin	C4E-M-5590	Baghouse							0.01	0.01						
12P-6420	C4B-E-6250 C4B-B-6020	Preheater Preheater Furnace	C4B-M-6420	Baghouse	0.08	0.35	0.13	0.57	0.23	1.01	0.00	0.02	0.02	0.09	0.07	0.31	0.00	0.00
				Totals:	0.38	1.60	0.19	0.83	0.60	2.63	0.04	0.07	0.05	0.22	0.20	0.88	0.00	0.01

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Control Type	Actual Emission Rates													
					EG		AA		VOC		PM/PM10		CO		NOx		SO2	
					pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
13P-7350	C4A-E-7240 C4A-B-7010	Crystallizer Crystallizer Furnace	C4A-M-7350	Baghouse	0.30	1.25	0.06	0.26	0.37	1.62	0.01	0.03	0.03	0.13	0.13	0.57	0.00	0.00
12P-6390	C4A-F-6460	Crystallizer Surge Bin	C4A-M-6390	Baghouse							0.00	0.01						
13P-1170	L1D-M-1130	Fines Elutriator Silos 23 & 24	NA	NA							0.01	0.00						
13P-1130	L1D-F-1110 L1D-F-1120	Product Storage Silo 23 Product Storage Silo 24	L1D-M-1130	Baghouse							0.00	0.00						
13P-5590	C4E-F-5440	Verification Bin	C4E-M-5590	Baghouse							0.01	0.01						
12P-6420	C4B-E-6250 C4B-B-6020	Preheater Preheater Furnace	C4B-M-6420	Baghouse	0.08	0.35	0.13	0.57	0.23	1.01	0.00	0.02	0.02	0.09	0.07	0.31	0.00	0.00
				Totals:	**0.38**	**1.60**	**0.19**	**0.83**	**0.60**	**2.63**	**0.04**	**0.07**	**0.05**	**0.22**	**0.20**	**0.88**	**0.00**	**0.01**

Greenhouse Gas Emissions

CSS-13 Operating Hours 8,760 (hr/yr)

	Greenhouse Gases (based on 40 CFR 98 Subpart C factors)			
	CO2	Methane	N2O (UC)	
Factor (kg/ MMBtu)	66.88	1.00E-03	1.00E-04	

TPY GHG =Factor (kg/MMBtu)x fuel (MMscf/yr)xHeat value(Btu/scf)x2.2046 (lb/kg) / 2000

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Total Gas Usage (mmscf/yr)	Greenhouse Gas Emissions								
					CO2			Methane			N2O		
					pph	ppy	tpy	pph	ppy	tpy	pph	ppy	tpy
13P-7350	C4A-E-7240 C4A-B-7010	Crystallizer Crystallizer Furnace	NA	27.375	442	3,874,819	1,937	0.01	57.94	0.03	0.001	5.79	0.003
12P-6420	C4B-E-6250	Preheater Preheater Furnace	NA	8.85125	143	1,252,858	626	0.00	18.73	0.01	0.000	1.87	0.001
			Totals:		**585**	**5127677**	**2564**	**0.01**	**76.67**	**0.04**	**0.001**	**7.67**	**0.004**

Process Emissions

PTE

				Actual		Permitted	
Permitted Production Rate	78,840	(tpy)	Crystallizer	27.740	(mmscf/yr)	Crystallizer	27.375 (mmscf/yr)
Actual Production Rate	109,500	(tpy)	Preheater	14.600	(mmscf/yr)	Preheater	8.851 (mmscf/yr)
Production Ratio	1.39						

Ensure Pemitted Rates are Current

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Control Type	Permitted Emission Rates													
					EG		AA		VOC		PM/PM10		CO		NOx		SO2	
					pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
13P-7350	C4A-E-7240 C4A-B-7010	Crystallizer Crystallizer Furnace	C4A-M-7350	Baghouse	0.30	1.25	0.06	0.26	0.37	1.62	0.01	0.03	0.03	0.13	0.13	0.57	0.00	0.00
12P-6390	C4A-F-6460	Crystallizer Surge Bin	C4A-M-6390	Baghouse							0.00	0.01						
13P-1170	L1D-M-1130	Fines Elutriator Silos 23 & 24	NA	NA							0.01	0.00						
13P-2080	C4E-M-2080	Fines Elutriator	NA	NA							0.01	0.00						
13P-1130	L1D-F-1110 L1D-F-1120	Product Storage Silo 23 Product Storage Silo 24	L1D-M-1130	Baghouse							0.010	0.01						
13P-5590	C4E-F-5440	Verification Bin	C4E-M-5590	Baghouse							0.010	0.01						
12P-6420	C4B-E-6250 C4B-B-6020	Preheater Preheater Furnace	C4B-M-6420	Baghouse	0.08	0.35	0.13	0.57	0.23	1.01	0.004	0.02	0.02	0.09	0.07	0.31	0.00	0.00
				Totals:	0.38	1.60	0.19	0.83	0.60	2.63	0.05	0.09	0.05	0.22	0.20	0.88	0.00	0.01

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Control Type	Actual Emission Rates													
					EG		AA		VOC		PM/PM10		CO		NOx		SO2	
					pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
13P-7350	C4A-E-7240 C4A-B-7010	Crystallizer Crystallizer Furnace	C4A-M-7350	Baghouse	0.42	1.74	0.08	0.36	0.51	2.21	0.01	0.03	0.03	0.13	0.13	0.58	0.00	0.00
12P-6390	C4A-F-6460	Crystallizer Surge Bin	C4A-M-6390	Baghouse							0.003	0.01						
13P-1170	L1D-M-1130	Fines Elutriator Silos 23 & 24	NA	NA							0.01	0.01						
13P-2080	C4E-M-2080	Fines Elutriator	NA	NA							0.01	0.01						
13P-1130	L1D-F-1110 L1D-F-1120	Product Storage Silo 23 Product Storage Silo 24	L1D-M-1130	Baghouse							0.0139	0.01						
13P-5590	C4E-F-5440	Verification Bin	C4E-M-5590	Baghouse							0.014	0.01						
12P-6420	C4B-E-6250 C4B-B-6020	Preheater Preheater Furnace	C4B-M-6420	Baghouse	0.11	0.49	0.18	0.79	0.32	1.43	0.01	0.03	0.03	0.15	0.12	0.51	0.00	0.00
				Totals:	**0.53**	**2.22**	**0.26**	**1.15**	**0.83**	**3.63**	**0.07**	**0.11**	**0.06**	**0.28**	**0.25**	**1.09**	**0.00**	**0.01**

Greenhouse Gas Emissions

CSS-13 Operating Hours 8,760 (hr/yr)

	Greenhouse Gases (based on 40 CFR 98 Subpart C factors)			
	CO2	Methane	N2O (UC)	
Factor (kg/ MMBtu)	66.88	1.00E-03	1.00E-04	

TPY GHG =Factor (kg/MMBtu)x fuel (MMscf/yr)xHeat value(Btu/scf)x2.2046 (lb/kg) / 2000

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Total Gas Usage (mmscf/yr)	Greenhouse Gas Emissions								
					CO2			Methane			N2O		
					pph	ppy	tpy	pph	ppy	tpy	pph	ppy	tpy
13P-7350	C4A-E-7240 C4A-B-7010	Crystallizer Crystallizer Furnace	NA	27.74	448	3,926,483	1,963	0.01	58.71	0.03	0.00	5.87	0.003
12P-6420	C4B-E-6250	Preheater Preheater Furnace	NA	14.6	236	2,066,570	1,033	0.00	30.90	0.02	0.00	3.09	0.002
			Totals:		**684**	**5993053**	**2997**	**0.01**	**90**	**0.04**	**0.001**	**8.96**	**0.004**

Process Heater Emissions

PTE

Actual			Permitted				
CP2 Born NG Usage	278.000	(mmscf/yr)	CP2 Born NG Usage	278	(mmscf/yr)	CP3 Production Ratio	1.00
CP3 Born NG Usage	411.000	(mmscf/yr)	CP3 Born NG Usage	411	(mmscf/yr)	CP4 Production Ratio	1.00
CP3 Bono NG Usage	210.000	(mmscf/yr)	CP3 Bono NG Usage	210	(mmscf/yr)	CSS8 Production Ratio	1.00
CP4 Born NG Usage	411.000	(mmscf/yr)	CP4 Born NG Usage	411	(mmscf/yr)		

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Permitted Emission Rates															
				EG		AA		1,4-Dioxane		VOC		PM/PM10		CO		NOx		SO2	
				pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
3P-1600	C3T-B-1600	CP3 Born Heater	NA	0.01	0.02	1.04	1.50	0.01	0.01	1.32	2.77	0.11	0.47	1.86	8.14	3.19	14.00	0.05	0.23
4P-1600	C4T-B-1600	CP4 Born Heater	NA	0.01	0.02	0.05	0.19	0.001	0.001	0.34	1.45	0.11	0.47	1.90	8.14	3.20	14.00	0.06	0.23
				Actual Emission Rates															
Unit	Emission Point ID	Emission Unit ID	Emisison Unit Name	EG		AA		1,4-Dioxane		VOC		PM/PM10		CO		NOx		SO2	
				pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
CP3	3P-1600	C3T-B-1600	Hot Oil Heater	0.01	0.02	1.04	1.50	0.010	0.010	1.32	2.77	0.11	0.47	1.86	8.14	3.19	14.00	0.05	0.23
CP4	4P-1600	C4T-B-1600	Hot Oil Heater	0.01	0.02	0.05	0.19	0.001	0.001	0.34	1.45	0.11	0.47	1.90	8.14	3.20	14.00	0.06	0.23

Greenhouse Gas Emissions

CSS8 Operating Hours	8,760	(hr/yr)
CP3 Operating Hours	8,760	(hr/yr)
CP3 Bono Operating Hour	8,760	(hr/yr)
CP4 Operating Hours	8,760	(hr/yr)

Emission Factors

	Greenhouse Gases (based on 40 CFR 98 Subpart C factors)			
	CO2	**Methane**	**N2O (UC)**	
Factor (kg/ MMBtu)	66.88	1.00E-03	1.00E-04	

TPY GHG =Factor (kg/MMBtu)x fuel (MMscf/yr)xHeat value(Btu/scf)x2.2046 (lb/kg) / 2000

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Total Gas Usage (mmscf/yr)	Greenhouse Gas Emissions								
					CO2			Methane			N2O		
					pph	ppy	tpy	pph	ppy	tpy	pph	ppy	tpy
3P-1600	C3T-B-1600	CP3 Born Heater	NA	411	6,641	58,175,366	29,088	0.10	869.85	0.43	0.01	86.98	0.04
4P-1600	C4T-B-1600	CP4 Born Heater	NA	411	6,641	58,175,366	29,088	0.10	869.85	0.43	0.01	86.98	0.04

Process Heater Emissions

PTE

Actual			Permitted				
CP2 Born NG Usage	278.000	(mmscf/yr)	CP2 Born NG Usage	278	(mmscf/yr)	CP3 Production Ratio	1.00
CP3 Born NG Usage	411.000	(mmscf/yr)	CP3 Born NG Usage	411	(mmscf/yr)	CP4 CSS-12 CSS-13 Prod	1.18
CP3 Bono NG Usage	210.000	(mmscf/yr)	CP3 Bono NG Usage	210	(mmscf/yr)	CSS8 Production Ratio	1.00
CP4 Born NG Usage	411.000	(mmscf/yr)	CP4 Born NG Usage	411	(mmscf/yr)		

Ensure Pemitted Rates are Current

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Permitted Emission Rates															
				EG		AA		1,4-Dioxane		VOC		PM/PM10		CO		NOx		SO2	
				pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
3P-1600	C3T-B-1600	CP3 Born Heater	NA	0.01	0.02	1.04	1.50	0.01	0.01	1.32	2.77	0.11	0.47	1.86	8.14	3.19	14.00	0.05	0.23
4P-1600	C4T-B-1600	CP4 Born Heater	NA	0.006	0.02	0.05	0.19	0.001	0.001	0.34	1.45	0.11	0.47	1.90	8.14	3.20	14.00	0.06	0.23
				Actual Emission Rates															
Unit	Emission Point ID	Emission Unit ID	Emisison Unit Name	EG		AA		1,4-Dioxane		VOC		PM/PM10		CO		NOx		SO2	
				pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
CP3	3P-1600	C3T-B-1600	Hot Oil Heater	0.01	0.02	1.04	1.50	0.001	0.001	1.32	2.77	0.11	0.47	1.86	8.14	3.19	14.00	0.05	0.23
CP4	4P-1600	C4T-B-1600	Hot Oil Heater	0.01	0.02	0.06	0.23	0.001	0.001	0.40	1.72	0.13	0.56	1.90	8.14	3.20	14.00	0.06	0.23

Greenhouse Gas Emissions

CSS8 Operating Hours	8,760	(hr/yr)
CP3 Operating Hours	8,760	(hr/yr)
CP3 Bono Operating Hour	8,760	(hr/yr)
CP4 Operating Hours	8,760	(hr/yr)

Emission Factors

	Greenhouse Gases (based on 40 CFR 98 Subpart C factors)			
	CO2	**Methane**	**N2O (UC)**	
Factor (kg/ MMBtu)	66.88	1.00E-03	1.00E-04	

TPY GHG =Factor (kg/MMBtu)x fuel (MMscf/yr)xHeat value(Btu/scf)x2.2046 (lb/kg) / 2000

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Total Gas Usage (mmscf/yr)	Greenhouse Gas Emissions								
					CO2			Methane			N2O		
					pph	ppy	tpy	pph	ppy	tpy	pph	ppy	tpy
3P-1600	C3T-B-1600	CP3 Born Heater	NA	411	6,641	58,175,366	29,088	0.10	869.85	0.43	0.01	86.98	0.04
4P-1600	C4T-B-1600	CP4 Born Heater	NA	411	6,641	58,175,366	29,088	0.10	869.85	0.43	0.01	86.98	0.04

Warehouse Emissions

PTE

Warehouse Operating Hours: 8760 (hr)

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Control Type	Permitted Emission Rates		
					PM/PM10		
					pph	ppy	tpy
WF-6010	L26-F-6010	Warehouse West Silo	NA	NA	0.0799	700.00	0.3500
				Totals:	**0.08**	**700.00**	**0.350000**

Warehouse Emissions

PTE

Warehouse Operating Hours: 8760 (hr)

Emission Point ID	Emission Unit ID	Emisison Unit Name	Control Device ID	Control Type	Permitted Emission Rates PM/PM10 pph	ppy	tpy
WF-6010	L26-F-6010	Warehouse West Silo	L26-M-6010	Baghouse	0.0008	7.00	0.0035
				Totals:	**0.00**	**7.00**	**0.003500**

M&G Polymers | November 2015
Permit Determination | Dowtherm RP change

Basis
C3T-F-7260 Hot Oil Storage Tank 17700 gallons
Dowtherm Lights based on Dow 2/2/2010 letter
8.13 wt% lights generated per year

% HAPs in lights		VP (mm Hg)	Molecular Weight
Benzene	1.30%	100	78
Toluene	31.60%	36.7	92
Ethyl Benzene	6.10%	10	106
Naphthalene	13.30%	1	128
Other VOC	47.70%	<1	300

Total lbs Dowtherm RP in tank:
17,700 gal x 8.34 lb/gal x 1.03 152,047 lbs

Total lights in tank
152,047 lbs x 0.0813 = 12,361 lbs/yr lights generated

Benzene	=12,361 lb/yr x 1.3%	161	lbs/yr
Toluene	=12,361 lb/yr x 31.6%	3,906	lbs/yr
Ethyl Benzene	=12,361 lb/yr x 6.1%	754	lbs/yr
Naphthalene	=12,361 lb/yr x 13.3%	1,644	lbs/yr
Other VOC	=12,361 lb/yr x 47.7%	5,896	lbs/yr (Assume Dowtherm RP)

Stripping occurs every 2 months for a day:
2 days/event x 24 hr/day x 6 events/year = 288 hr/yr

2 cfm will be used to stripp lights
2 ft3/min x 60 min/hr x 288 hr/yr = 34560 ft3/yr

Emission Estimate: (All lights accumlate in lights tank

					mole fraction liq
Benzene	=161 lbs/yr x 1 1bm/78 lb/lbm	2.1	lbm/yr	x 1/84.1	0.025
Toluene	=3,906 lbs/yr x 1 1bm/92 lb/lbm	42.5	lbm/yr	x 1/84.1	0.505
Ethyl Benzene	=754 lbs/yr x 1 1bm/106 lb/lbm	7.1	lbm/yr	x 1/84.1	0.085
Naphthalene	=1,644 lbs/yr x 1 1bm/128 lb/lbm	12.8	lbm/yr	x 1/84.1	0.153
Other VOC	=5,896 lbs/yr x 1 1bm/300 lb/lbm	19.7	lbm/yr	x 1/84.1	0.234
		84.1			

Benzene	=0.025*(100 mm Hg/760 mm Hg) * 34,560 ft^3/yr =	112	ft^3/yr
Toluene	=0.505*(36.7 mm Hg/760 mm Hg) *34,560 ft^3/yr =	842	ft^3/yr
Ethyl Benzene	=0.085*(106 mm Hg/760 mm Hg) * 34,560 ft^3/yr =	38	ft^3/yr
Naphthalene	=0.153*(128 mm Hg/760 mm Hg) * 34,560 ft^3/yr =	7	ft^3/yr
Other VOC	=0.234*(1 mm Hg/760 mm Hg) * 34,560 ft^3/yr =	11	ft^3/yr

Uncontrolled Emissions

Benzene	=112 ft^3/yr x lbm/359 ft^3 x 78 lb/lbm x 1 yr/288 hr	0.08	lb/hr	0.01	TPY
Toluene	=842 ft^3/yr x lbm/359 ft^3 x 92 lb/lbm x 1 yr/288 hr	0.75	lb/hr	0.11	TPY
Ethyl Benzene	=38 ft^3/yr x lbm/359 ft^3 x 106 lb/lbm x 1 yr/288 hr	0.04	lb/hr	0.01	TPY
Naphthalene	=7 ft^3/yr x lbm/359 ft^3 x 128 lb/lbm x 1 yr/288 hr	0.01	lb/hr	0.001	TPY
Other VOC	=11 ft^3/yr x lbm/359 ft^3 x 300 lb/lbm x 1 yr/288 hr	0.03	lb/hr	0.004	TPY

Controlled Emissions		lb/hr		TPY
Benzene	=0.08 lb/hr x (1-0.998)	0.0002	=0.0002 lb/hr x 288 hr/yr x 1 ton/2000 lb	2E-05
Toluene	=0.75 lb/hr x (1-0.998)	0.0015	=0.0015 lb/hr x 288 hr/yr x 1 ton/2000 lb	2E-04
Ethyl Benzene	=0.04 lb/hr x (1-0.998)	0.00008	=0.00008 lb/hr x 288 hr/yr x 1 ton/2000 lb	1E-05
Naphthalene	=0.01 lb/hr x (1-0.998)	0.00002	=0.00008 lb/hr x 288 hr/yr x 1 ton/2000 lb	2E-06
Other VOC	=0.03 lb/hr x (1-0.998)	0.00006	=0.00006 lb/hr x 288 hr/yr x 1 ton/2000 lb	9E-06

ATTACHMENT O – MONITORING / RECORDKEEPING / REPORTING / TESTING PLANS

ATTACHMENT O – MONITORING / RECORDKEEPING / REPORTING / TESTING PLANS

M&G Polymers is request no changes to the current Monitoring / Recordkeeping / Reporting and Testing requirements found in R13-1650R.

ATTACHMENT P – PUBLIC NOTICE

AIR QUALITY PERMIT NOTICE
Notice of Application

Notice is given that M&G Polymers, USA, LLC has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a Class II Administrative Update, for a PET manufacturing facility located on State Route 2, in Apple Grove, in Mason County, West Virginia. The latitude and longitude coordinates are: 38.662696,-82.173526

The applicant estimates the increases/decreases of the following Regulated Air Pollutants will be: Ethylene Glycol 1.39 TPY, Acetaldehyde 0.13 TPY, 1,4 Dioxane -0.01 TPY, Volatile Organic Compounds 0.68 TPY, PM/PM10 0.26 TPY, Carbon Monoxide 0.16 TPY, NOx 1.57 TPY, and Sulfur Dioxide 0.03 TPY.

Startup of operation is planned to begin on or about the 26 day of May, 2016. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street, SE, Charleston, WV 25304, for at least 30 calendar days from the date of publication of this notice.

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, extension 1250, during normal business hours.
Dated this the 13 day of April, 2016.

By: M&G Polymers, USA, LLC
Richard Maack
Site Manager
State Route 2
Apple Grove WV 25502-008

ATTACHMENT R – AUTHORITY OF CORPORATION

LIMITED DELEGATION OF AUTHORITY
ENVIRONMENTAL, HEALTH AND SAFETY MATTERS

I hereby certify that I am the duly elected and qualified Vice President, Finance of M & G Polymers USA, LLC, a Delaware limited liability company (the "LLC"), and hereby further certify that:

As Vice President, Finance of M & G Polymers USA, LLC, I hereby authorize the site manager, Richard Maack or his duly appointed successor, or the QA / Environmental Manager, Scott Whitwer or his duly appointed successor, to execute on behalf of the LLC any notices, applications, forms, reports, manifests or similar documents required to be submitted to a governmental authority pursuant to: (A) any federal, state or local statutes, laws, ordinances, rules or regulations relating or pertaining to: (i) the protection of the environment; (ii) the protection of human beings from exposure to regulated substances; (iii) pollution or pollution control; (iv) employee safety in the workplace; or (v) the presence, use, generation, collection, distribution, labeling, storage, treatment, transportation or disposal of regulated substances (hereinafter "Environmental, Health and Safety Laws"); (B) the terms or conditions of any permit, license or other authorization required pursuant to applicable Environmental, Health and Safety Laws for the operation of the Apple Grove plant (hereinafter "Environmental Permits"); or (C) at the order or direction of such governmental authority pursuant to Environmental, Health and Safety Laws.

As Vice President, Finance of M & G Polymers USA, LLC, I hereby authorize the Site Manager, Richard Maack or his duly appointed successor, or the QA / Environmental Manager, Scott Whitwer or his duly appointed successor, to execute on behalf of the LLC documents which pursuant to applicable Environmental, Health and Safety Laws the Apple Grove Plant is required to maintain in its files.

As Vice President, Finance of M & G Polymers USA, LLC, I hereby authorize the Site Manager, Richard Maack or his duly appointed successor, to delegate the authority granted herein to execute any written instrument or document described herein to the extent that Richard Maack or his duly appointed successor, in the exercise of the duties of Site Manager, reasonably deems necessary for compliance with Environmental, Health and Safety Laws, Environmental Permits or the orders or directives of governmental authorities issued pursuant to applicable Environmental, Health and Safety Laws.

By: 
Diane E. Mitchell
Vice President, Finance of M & G Polymers USA, LLC
April 15, 2015

ATTACHMENT S – TITLE V PERMIT REVISION INFORMATION

Attachment S

Title V Permit Revision Information

1. New Applicable Requirements Summary	
Mark all applicable requirements associated with the changes involved with this permit revision:	
☐ SIP	☐ FIP
☒ Minor source NSR (45CSR13)	☐ PSD (45CSR14)
☐ NESHAP (45CSR15)	☐ Nonattainment NSR (45CSR19)
☐ Section 111 NSPS (Subpart(s)_____)	☐ Section 112(d) MACT standards (Subpart(s)_____)
☐ Section 112(g) Case-by-case MACT	☐ 112(r) RMP
☐ Section 112(i) Early reduction of HAP	☐ Consumer/commercial prod. reqts., section 183(e)
☐ Section 129 Standards/Reqts.	☐ Stratospheric ozone (Title VI)
☐ Tank vessel reqt., section 183(f)	☐ Emissions cap 45CSR§30-2.6.1
☐ NAAQS, increments or visibility (temp. sources)	☐ 45CSR27 State enforceable only rule
☐ 45CSR4 State enforceable only rule	☐ Acid Rain (Title IV, 45CSR33)
☐ Emissions Trading and Banking (45CSR28)	☐ Compliance Assurance Monitoring (40CFR64) [(1)]
☐ NO_x Budget Trading Program Non-EGUs (45CSR1)	☐ NO_x Budget Trading Program EGUs (45CSR26)
[(1)] If this box is checked, please include **Compliance Assurance Monitoring (CAM) Form(s)** for each Pollutants Specific Emission Unit (PSEU) (See Attachment H to Title V Application). If this box is not checked, please explain why **Compliance Assurance Monitoring** is not applicable:	

2. Non Applicability Determinations

List all requirements, which the source has determined not applicable to this permit revision and for which a permit shield is requested. The listing shall also include the rule citation and a rationale for the determination.

- SIP/FIP – not specifically a list facility under either plan.
- NESHAP (45CSR15) – No NESHAP standards apply.
- Secion 111 NSPS – No NSPS standards apply.
- Section 112(g) – Case-by-case MACT – revision is not subject to a case-by-case MACT.
- Section 129 – Facility does not own a solid waste incinerator.
- Section 183(f) – Facility does not own or operate any tank vessels per section 183(f) and is located in an ozone attainment area.
- NAAQs – Facility is a permanent source and a contemporary source
- 45CSR4 – No imposed requirements per 45CSR4
- 45CSR28 – No emissions are banked or traded per this regulation
- 45CSR1 – Boilers maximum heat input are less than section 4's 250mmBTU/hr applicability.
- 45CSR14 – Facility has no PSD permits and revision will not trigger thresholds.
- 45CSR19 = Revision does not trigger thresholds. Area is listed as attainment.
- Section 112(d) MACT standards – Revision is not subject to any additional promulgated MACT standard.
- 112(r) RMP – Does not affect facility RMP
- Section 183(e) – Facility does not produce a 183(e) list consumer or commercial product
- Stratospheric ozone (Title VI) – Revision does not involve any regulated pollutant.
- Emission Cap 45CFR section 30-2.6.1 – facility has no emission cap agreement per section 2.6.1
- 45CSR27 – Facility does not emit TAPS
- 45CSR33 – Facility is not subject to the Acid Rain provisions listed in section 1.5
- 45CFR64 – Monitoring requirements have already been established.
- 45CSR26 – Boilers are not defines as DGS's.
- Section 112(i) – Early HAP reduction – Facility did not utilize the early reduction program.

☐ **Permit Shield Requested** *(not applicable to Minor Modifications)*

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

3. Suggested Title V Draft Permit Language

Are there any changes involved with this Title V Permit revision outside of the scope of the NSR Permit revision? ☐ Yes ☒ No If Yes, describe the changes below.

Also, please provide **Suggested Title V Draft Permit language** for the proposed Title V Permit revision (including all applicable requirements associated with the permit revision and any associated monitoring /recordkeeping/ reporting requirements), OR attach a marked up pages of current Title V Permit. Please include appropriate citations (Permit or Consent Order number, condition number and/or rule citation (e.g. 45CSR§7-4.1)) for those requirements being added / revised.

4. Active NSR Permits/Permit Determinations/Consent Orders Associated With This Permit Revision

Permit or Consent Order Number	Date of Issuance	Permit/Consent Order Condition Number
R13-1650F	12/10/2013	NA
	/ /	

5. Inactive NSR Permits/Obsolete Permit or Consent Orders Conditions Associated With This Revision

Permit or Consent Order Number	Date of Issuance	Permit/Consent Order Condition Number
NA	MM/DD/YYYY	
	/ /	

6. Change in Potential Emissions

Pollutant	Change in Potential Emissions (+ or -), TPY
Ethylene Glycol	+1.39
Acetaldehyde	+0.13
1,4 Dioxane	-0.01
VOCs	+0.68
PM/PM10	+0.26
CO	+0.16
NOx	+1.57
SO2	+0.03

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

7. Certification For Use Of Minor Modification Procedures *(Required Only for Minor Modification Requests)*

Note: *This certification must be signed by a responsible official. Applications without a signed certification will be returned as incomplete. The criteria for allowing the use of Minor Modification Procedures are as follows:*

i. Proposed changes do not violate any applicable requirement;

ii. Proposed changes do not involve significant changes to existing monitoring, reporting, or recordkeeping requirements in the permit;

iii. Proposed changes do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient air quality impacts, or a visibility increment analysis;

iv. Proposed changes do not seek to establish or change a permit term or condition for which there is no underlying applicable requirement and which permit or condition has been used to avoid an applicable requirement to which the source would otherwise be subject (synthetic minor). Such terms and conditions include, but are not limited to a federally enforceable emissions cap used to avoid classification as a modification under any provision of Title I or any alternative emissions limit approved pursuant to regulations promulgated under § 112(j)(5) of the Clean Air Act;

v. Proposed changes do not involve preconstruction review under Title I of the Clean Air Act or 45CSR14 and 45CSR19;

vi. Proposed changes are not required under any rule of the Director to be processed as a significant modification;

Notwithstanding subparagraph 45CSR§30-6.5.a.1.A. (items i through vi above), minor permit modification procedures may be used for permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, to the extent that such minor permit modification procedures are explicitly provided for in rules of the Director which are approved by the U.S. EPA as a part of the State Implementation Plan under the Clean Air Act, or which may be otherwise provided for in the Title V operating permit issued under 45CSR30.

Pursuant to 45CSR§30-6.5.a.2.C., the proposed modification contained herein meets the criteria for use of Minor permit modification procedures as set forth in Section 45CSR§30-6.5.a.1.A. The use of Minor permit modification procedures are hereby requested for processing of this application.

(Signed): _____ *(Please use blue ink)* Date: 04 / 08 / 16 *(Please use blue ink)*

Named (typed): *Scott Whitwer* Title: *QHSE Manager*

Note: Please check if the following included (if applicable):

☐	Compliance Assurance Monitoring Form(s)
☐	Suggested Title V Draft Permit Language

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

Deleted from current App
Missing from previous permits, added here
Moved from one unit to a different one

Current Permit:

Emission Point ID	Control Device	Emission Unit ID	Emission Unit Description	Design Capacity	Year Installed
			CP3		
3P-3130	C4S-M-3130 Baghouse	C4S-F-3010	CP3 Recycle Surge Bin	1,170 ft^3	1994
3P-3190	None	C3L-F-3190	CP3 DEG Charge Tank	275 Gallons	1994
~~3P-155~~	~~None~~	~~D-155~~	~~CP3 CP4 MACT Tank~~	~~10,000 Gallons~~	~~2001~~
3P-1070	None	C3L-F-1070	CP3 Recupic EG Tank	12,700 Gallons	1994
3P-1071	None	C3L-F-1071	CP3 Recupic EG Tank	12,700 Gallons	1994
3P-1072	None	C3L-F-1072	CP3 Recupic EG Tank	12,700 Gallons	1994
3P-1032	None	C3L-F-3180	CP3 R/1 Recupic EG Charge Tank	1,730 Gallons	1994
		C3L-F-3140	CP3 R/1 EG Charge Tank	1,730 Gallons	1994
		C3L-F-3150	CP3 R/2 EG Charge Tank	275 Gallons	1994
3P-2100					
3P-7020	C3L-F-7020 Seal Pot	C3L-F-6010	CP3 Catalyst Mix Tank	455 ft^3	2001
		C3L-F-6510	CP3 Catalyst Mix Tank	455 ft^3	2009
		C3L-F-7010	CP3/CP4 Catalyst Feed Tank	455 ft^3	2001
		C3L-F-8010	CP3/CP4 Toner Make-Up Tank	277 ft^3	2001
		C3L-F-9010	CP3/CP4 Toner Charge Tank	277 ft^3	2001
3P-2570	**None**	**C3L-F-2570**	**CP3 Catalyst Slurry Tank**	**516 Gallons**	**1994**
3P-2580	**None**	**C3L-F-2580**	**CP3 Catalyst Slurry Tank**	**516 Gallons**	**1994**
3P-8	None	UTG-F-3020	CP3 EG Storage Tank	675,000 Gallons	1966
3P-9	None	UTG-F-3010	CP3 EG Storage Tank	675,000 Gallons	1966
3P-1120	None	C3L-F-1120	CP3/CP4 Recupic EG Dump Tank	5,000 Gallons	1994
3P-1210	None	C38-E-1210	CP3 Pellet Dryers	12,500 pph	1994
3P-3210	None	C38-E-3210	CP3 Pellet Dryers	12,500 pph	1994
3P-5210	None	C38-E-5210	CP3 Pellet Dryers	12,500 pph	1994
3P-7210	None	C38-E-7210	CP3 Pellet Dryers	12,500 pph	2007
3P-0200	L4A-M-0200 Baghouse	L4A-F-0200	CP3 Off Spec Silo	8' x 32' s/s	1994
3P-0650	None	C3T-F-0650	CP3 Condensate Holding Tank	58 ft^3	1994
3P-1730	None	C3U-F-1730	CP3 R/3 TEG Bath	8" x 30" t/t	1994
3P-1900	None	C3T-F-1900	CP3 Refrigerant Surge Tank	955 Gallons	1994
3P-4620	None	C3T-F-4620	CP3 Condensed Dowtherm Receiver	116 Gallons	1994
3P-5010	C3S-M-5010 Baghouse	C3S-F-5010	Master Recycle Silo	4,000 ft^3	1974/
3P-7260	None	C3T-F-7260	CP3 Hot Oil Storage Tank	17,700 Gallons	1994
3P-1600	C3T-B-1600 Hot Oil Heater	C3L-F-2220	CP3 Colorant Make-Up Tank	400 Gallons	1994
		C3L-F-2201	CP3 Colorant Charge Tank	400 Gallons	1994
		C3L-F-3160	CP3 Stabilizer Charge Tank	275 Gallons	1994
		C3L-F-4211	CP3/CP4 Stabilizer Make-Up Tank	400 Gallons	1994
		C3L-F-4100	CP3/CP4 Stabilizer Surge Tank	516 Gallons	1994
		C3L-F-4210	CP3/CP4 Stabilizer Make-Up Tank	400 Gallons	1994
		C3L-F-5040	CP3/CP4 Stabilizer Make-Up Tank	486 Gallons	1994
		C3H-F-3010	CP3 Slurry Mix Tank	607 ft^3	2001
		C3H-F-4010	CP3 Slurry Feed Tank	1,319 ft^3	2001
		C31-E-1020	CP3 R/1 System	2,970 Gallons	1994
		C32-E-1050	CP3 R/2 System	2,970 Gallons	1994
		C33-F-2250	CP3 R/3 System	2,517 Gallons	1994
		C33-F-5010	CP3 R/3 Bis System	2,970 Gallons	2001
		C34-F-3280	CP3 R/4A System	1,700 pph	1994
		C31-F-1220	CP3 R/1 & R/2 Condensate Tank	7,383 pph	1994
		C33-F-2260	CP3 R/3 Condensate Tank	679 gpm	1994
		C34-F-2290	CP3 R/4A Condensate Tank	459 gpm	1994
		C34-F-8290	CP3 R/4B Condensate Tank	744 gpm	2007

In 2015/16 Application:

Attachment E:

Correct control device, emission unit. Descrip and capacity data	C3S-M-3120 Bin vent	C3S-F-3080	North Recycle Silo	2154 ft^3 - Tank 179 Ft^2 Bin Vent	2004
no changes	None	C3L-F-3190	CP3 DEG Charge Tank	275 Gallons	1994
In CP4 - doesn't need to be here.	C4T-B-1600	C4V-F-1010	CP3/CP4 MACT Tank	10,000 Gallons	2001
no changes	None	C3L-F-1070	CP3 Recupic Tank	12,700 Gallons	1994
no changes	None	C3L-F-1071	CP3 Recupic Tank	12,700 Gallons	1994
no changes	None	C3L-F-1072	CP3 Recupic Tank	12,700 Gallons	1994
change to description	None	C3L-F-3180	CP3 additive Make-up Tank	1,730 Gallons	1994
no changes		C3L-F-3140	CP3 R/1 EG Charge Tank	1,730 Gallons	1994
no changes		C3L-F-3150	CP3 R/2 EG Charge Tank	275 Gallons	1994
missing from current permit	C3S-M-2100 Binvent	C3H-F-2010	IPA Storage Bin Silo	530 ft^3 -Silo 66 Ft^2 Bin Vent	2001
change to description	C3L-F-7020 Seal Pot	C3L-F-6010	CP3 Catalyst makeup Tank	455 ft^3	2001
Never existed - delete					2001
corrected description		C3L-F-7010	CP3/CP4 Catalyst Charge Tank	455 ft^3	2001
no changes		C3L-F-8010	CP3/CP4 Toner Make-up Tank	277 ft^3	2001
no changes		C3L-F-9010	CP3/CP4 Toner Charge Tank	277 ft^3	2001
doesn't exist - delete					
doesn't exist - delete					
change to description and size	None	UTG-F-3020	CP3 EG #1 Storage Tank	648,699 Gallons	1966
change to description and size	None	UTG-F-3010	CP3 EG #2 Storage Tank	648,699 Gallons	1966
no changes	None	C3L-F-1120	CP3/CP4 Recupic EG Dump Tank	5,000 Gallons	1994
correction to capacity	None	C38-E-1210	CP3 Pellet Dryer	20,000 pph	1994
no changes	None	C38-E-3210	CP3 Pellet Dryer	20,000 pph	1994
correction to capacity	None	C38-E-5210	CP3 Pellet Dryer	20,000 pph	1994
correction to capacity	None	C38-E-7210	CP3 Pellet Dryer	20,000 pph	2007
corrected capacity, description	L4A-M-0200 Bin Vent	L4A-F-0200	CP3 Melt Off Spec Silo	1740 ft^3 - Tank 106 Ft^2 Bin Vent	1994
no changes	None	C3T-F-0650	CP3 Exhaust Gas Condensate Hold Tank	58 ft^3	1994
no changes	None	C3U-F-1730	CP3 R/3 TEG Bath	8"X30" t/t	1994
no changes	None	C3T-F-190	CP3 Refrigeration Surge Tank	955 Gallons	1994
no changes	None	C3T-F-4620	CP3 Condensed Dowtherm Receiver	116 Gallons	1994
binvent, not baghouse	C3S-M-5010 Bin Vent	C3S-F-5010	Master Recycle Silo	4000 Ft^2 Silo 315 Ft^2 Bin Vent	1974/2010
no changes	None	C3T-F-7260	CP3 Hot Oil Storage Tank	17,700 Gallons	1994
correct emission ID	C3T-B-1600 Hot Oil Heater	C3L-F-2200	CP3 Colorant Make-up	400 Gallons	1994
correct emission ID		C3L-F-2201	CP3 Colorant Charge Tank	400 Gallons	1994
no changes		C3L-F-3160	CP3 Stabilizer Charge Tank	275 Gallons	1994
no changes		C3L-F-4211	CP3/CP4 Stabilizer Make-up Tank	400 Gallons	1994
no changes		C3L-F-4100	CP3/CP4 Stabilizer Surge Tank	516 Gallons	1994
no changes		C3L-F-4210	CP3/CP4 Stabilizer Make-up Tank	400 Gallons	1994
no changes		C3L-F-5040	CP3/CP4 Stabilizer Surge Tank	486 Gallons	1994
wrong ID		C3H-F-1020	CP3 Slurry Mix Tank	607 Ft^3	2001
wrong ID		C3H-F-3010	CP3 Slurry Feed Tank	1319 Ft^3	2001
corrected to reflect what is reality		C31-E-1020/1020A/1021	CP3 R/1 System	2970 Gallons	1994
corrected to reflect what is reality		C32-E-1050/1051	CP3 R/2 System	2970 Gallons	1994
no changes		C33-F-2250	CP3 R/3 System	2517 Gallons	1994
wrong ID, corrected other info		C33-F-6010	CP3 R/3 Bis Condensate Tank	1660 Gallons	2001
wrong ID, corrected other info		C34-F-5020	CP3 R4A/B System	1700 pph	1994
no changes		C31-F-1220	CP3 R/1 & R/2 Condensate Tank	7383 pph	1994
added detail to capacity		C33-F-2260	CP3 R/3 Condensate Tank	679 gpm/897 Gallons	1994
added detail to capacity		C34-F-2290	CP3 R4A Condensate Tank	459 gpm/897 Gallons	1994
added detail to capacity		C34-F-8290	CP4 R4B Condensate Tank	744 gpm/897 Gallons	2007

C34-F-9280	CP3 R/4B System	7,502 pph	2007
C3T-F-0600	Knock Out Pot	N/A	1994
C3H-F-4020	Seal Pot	5.6 pph	1994

added - see next columns

added - see next columns

added - see next columns

delete - actually part of C34-F-5020 (in current permit as C34-F-3280)

no changes

no changes

missing from current permit AND current application

missing from previous permits

missing from previous permits

C3T-F-0600	Knock Out Pot	N/A	1994
C3H-F-4020	Seal Pot	5.6 pph	1994
C3T-F-2670	CP3 RP Lites tank	6000 Gallons	1994
C3L-F-3170	CP3 R2 **Catalyst** Tank	275 Gallons	1994
C3L-F-5990	CP4 Additive Charge Tank	275 Gallons	1996

CP4

4P-1020	C4S-M-1040 Baghouse	C4S-F-1020	CP4 TPA Surge Silo	178 ft³	1996	only change: binvent not baghouse	C4S-M-1040 Bin vent	C4S-F-1020	CP4 TPA Surge Silo	198 Ft³	1996
4P-1101	C3S-M-1101 Baghouse	F-8100	Silo	8,000 ft³	1976	moved to CSS10					
4P-2100	C4S-M-2100 Baghouse	C4S-F-2050	CP4 IPA Surge Silo	8' x 18' t/s	1996	corrected capacity	C4S-M-2100 Baghouse	C4S-F-2050	CP4 IPA Surge Silo	1100 Ft³ 66 Ft²	1996
4P-3130	C4S-M-3140 Baghouse	C4S-F-3080	CP4 Recycle Surge Bin	1,170 ft³	1999	correct control device #, description, capacities	C4S-M-3130 Bin vent	C4S-F-3080	South Recycle Silo	1170 Ft³ - Tank 235 Ft² Bin Vent	1993
4P-3190	None	C4L-F-3190	CP4 DEG Charge Tank	275 Gallons	1996	no changes	None	C4L-F-3190	CP4 DEG Charge Tank	275 Gallons	1996
4P-1070	None	C4L-A-1070	CP4 Recupic EG Tank	12,700 Gallons	1996	corrected emission ID	None	C4L-F-1070	CP4 Recupic EG Tank	12,700 Gallons	1996
4P-1071	None	C4L-A-1071	CP4 Recupic EG Tank	12,700 Gallons	1996	corrected emission ID	None	C4L-F-1071	CP4 Recupic EG Tank	12,700 Gallons	1996
4P-1072	None	C4L-A-1072	CP4 Recupic EG Tank	12,700 Gallons	1996	corrected emission ID	None	C4L-F-1072	CP4 Recupic EG Tank	12,700 Gallons	1996
4P-1800	None	C4L-F-1800	CP4 EG Storage Tank	675,000 Gallons	1996	corrected ID and description	None	C4Y-F-1800	#3 CP4 EG Storage Tank	675,000 Gallons	1996
4P-0430	None	C4L-F-0430	CP4 EG Feed Tank	275 Gallons	1996	corrected ID and description	None	C44-F-0430	CP4 EG Vaporizer Feed Tank	275 Gallons	1996
4P-1032	None	C4L-F-3140	CP4 R/1 EG Charge Tank	1,742 Gallons	1996	no changes	None	C4L-F-3140	CP4 R/1 EG Charge Tank	1,742 Gallons	1996
		C4L-F-3180	CP4 R/1 Recupic EG Charge Tank	1,742 Gallons	1996	no changes		C4L-F-3180	CP4 R/1 Recupic EG Charge Tank	1,742 Gallons	1996
4P-1900	None	C4R-F-1900	CP4 Refrigerant Surge Tank	955 Gallons	1996	no changes	None	C4R-F-1900	CP4 Refrigerant Surge Tank	955 Gallons	1996
4P-4620	None	C4T-F-4620	CP4 Condensed Dowtherm Receiver	125 Gallons	1996	no changes	None	C4T-F-4620	CP4 Condensed Dowtherm Receiver	125 Gallons	1996
4P-1210	None	C48-E-1210	CP4 Pellet Dryers	13,000 pph	1996	no changes	None	C48-E-1210	CP4 Pellet Dryer	13,000 pph	1996
4P-3210	None	C48-E-3210	CP4 Pellet Dryers	13,000 pph	1996	no changes	None	C48-E-3210	CP4 Pellet Dryer	13,000 pph	1996
4P-5210	None	C48-E-5210	CP4 Pellet Dryers	13,000 pph	1996	no changes	None	C48-E-5210	CP4 Pellet Dryer	13,000 pph	1996
4P-0340	C4A-M-0340 Baghouse	C4A-F-0410	CP4/CSS-12/CSS-13 Crystallizer Blending Silo	3,500 ft³	1994	move to CSS12					
		C4A-F-0411	CP4 Crystallizer Blending Silo	4,000 ft³	2013	move to CSS12					
4P-0200	L4B-M-0200 Baghouse	L4B-F-0200	CP4 Off Spec Silo	8' x 32' s/s	1996						
4P-4120	None	L24-M-4120	CP4 Pellet Filter Receiver	318 ft²	1993	no changes	None	L24-M-4120	CP4 Peller Filter Receiver	318 ft²	1993
4P-1730	None	C4U-F-1710	CP4 R/4 TEG Bath	32" x 60" t/t	1996	no changes	None	C4U-F-1710	CP4 R4 TEG Bath	32"X60" t/t	
4P-1296	None	C4Q-A-1296	CP4 Extruder	4,760 pph	2004	corrected description	None	C4Q-A-1296	CP4 Extruder MCU	4,760 pph	2004
4P-4220	C4Q-M-4140/ C4Q-M-4220 Baghouses	C4Q-F-1290	CP4 Feed Hopper System	0.75 m³	2004	change to control device descrip.	C4Q-M-4140 (glovebox) & C4Q-M-4220 HEPA Filter	C4Q-F-1290	CP4 Feed Hopper System	0.75 M³	2004
4P-4180	C4Q-M-4190 Baghouse	C4Q-F-2290	CP4 Feed Hopper System	0.75 m³	2004	change to control device descrip.	C4Q-M-4190 HEPA Filter	C4Q-F-2290	CP4 Feed Hopper System	0.75 M³	
4P-4160	C4Q-M-4160 Baghouse	C4Q-F-3290	CP4 Feed Hopper System	0.75 m³	2004	change to control device descrip.	C4Q-M-4160 HEPA Filter	C4Q-F-3290	CP4 Feed Hopper System	0.75 M³	
4P-1600	C4T-B-1600 Hot Oil Heater	D-155	CP3/CP4 MACT Tank	10,000 Gallons	2001	corrected emission ID	C4T-B-1600 Hot Oil Heater	C4V-F-1010	CP3/CP4 MACT Tank	10,000 Gallons	2001
		C4L-F-3160	CP4 Stabilizer Charge Tank	275 Gallons	1996	no changes		C4L-F-3160	CP4 Stabilizer Charge Tank	275 Gallons	1996
		C4L-F-2120	CP4 Catalyst Charge Tank	275 Gallons	1996	no changes		C4L-F-2120	CP4 Catalyst Charge Tank	275 Gallons	1996
		C4L-F-3170	CP4 Catalyst Charge Tank	830 Gallons	1996	change to control device descrip.		C4L-F-3170	CP4 R2 Catalyst Charge Tank	830 Gallons	1996
						missing from previous permits		CP4-F-0510	CP4 EG Vaporizer Knockout Tank	1100 Gallons	1996
		C41-E-3020	CP4 R/1 System	2,970 Gallons	1996	corrected to reflect what is reality		C41-E-3020/3021	CP4 R/1 System	2,970 Gallons	1996
		C42-E-2050	CP4 R/2 System	2,970 Gallons	1996	corrected to reflect what is reality		C42-E-2050/2060	CP4 R/2 System	2,970 Gallons	1996
		C43-E-3250	CP4 R/3 System	2,970 Gallons	1996	correct emission ID, etc		C43-F-3250	CP4 R/3 Flash Tank	120 Gallons	1996
		C44-E-3280	CP4 R/4 System	26,000 Gallons	1996	correct emission ID, etc		C44-F-9280	CP4 R/4 System	140 Gallons	1996
		C41-F-3220	CP4 R/1 & R/2 Separator	90 Gallons	1996	no changes		C41-E-3220	CP4 R/1 & R/2 Separator	90 Gallons	1996
		C43-F-2260	CP4 R/3 Condensate Tank	1,660 Gallons	1996	no changes		C43-F-2260	CP4 R/3 Condensate Tank	1,660 Gallons	1996
		C44-F-2290	CP4 R/4 Condensate Tank	1,660 Gallons	1996	no changes		C44-F-2290	CP4 R/4 Condensate Tank	1,660 Gallons	1996
		C4L-F-2200	Catalyst Make-Up Tank	400 Gallons	1994	Delete - in CP3 as C3L-F-2200					
						missing from previous permits		C44-F-3300	CP4 R/4 Hot well Tank	935 gallons	1996
		C4L-F-5980	Make-Up Tank	533 Gallons	1994	correct emission ID		C3L-F-5980	Make-Up Tank	533 Gallons	1994
		C4T-F-2670	Dowtherm Lights Tank	6,000 Gallons	1988	correct emission ID		C4T-F-8670	Dowtherm Lights Tank	6,000 Gallons	1988
		C4Q-A-1297	CP4 Extruder	2,800 pph	2007	corrected description		C4Q-A-1297	CP4 Bico Extruder Vent	2,800 pph	2007
		C4H-F-3010	CP4 Slurry Mix/Feed Tank	1,319 ft³	2011	no changes		C4H-F-3010	CP4 Slurry Mix Feed Tank	1,319 Ft³	2011
		C4T-F-0600	Knock Out Pot	N/A	N/A	no changes		C4T-F-0600	Knock Out Pot	N/A	N/A
P-7640	None	F-7640	CP4 Hot Oil Storage Tank	16,725 Gallons	1996	correct emission ID		C4T-F-7640	CP4 Hot Oil Storage Tank	16,725 Gallons	1996
4P-2002	C4Q-M-2002 Baghouse	C4Q-F-5000	CP4 Feed Hopper System	0.75 m³	2007	Control device: C4Q-M-5300 - corrected	C4Q-M-5300 Baghouse	C4Q-F-5000	CP4 Feed Hopper System	830 ft³	2007
4P-0001	C4Q-M-0001/ C4A-F-0001 Baghouses	C4Q-F-5010	CP4 Feed Bin	530 ft³	2007	correct capacity	C4Q-M-0001/ C4Q-F-0001 Baghouse	C4Q-F-5010	CP4 Feed Bin	0.75 M³	2007
NA	None	C4Q-F-5330	CP4 Box/Bag Loader	NA	2007	no changes	None	C4Q-F-5330	CP4 Box/Bag Loader	N/A	2007

CSS-7

7P-2601	C2A-M-2601 Baghouse	C2A-F-5410	CSS-7 Crystallizer Surge Bin	3,500 ft^3	1988	deleted
7P-2609	C2A-M-5350 Baghouse	C2A-E-5240/ C2A-B-5010	CSS-7 Crystallizer and Heater	9,000 pph/ 1.4 MMBTU/hr	1988	deleted
		C2B-B-7020/ C2B-E-5250	CSS-7 Preheater and Heater	9,000 pph/ 1.48 MMBTU/hr	1988	deleted
7P-0520	C2D-M-0520 Baghouse	C2D-E-5280	CSS-7 Product Cooler	14,156 acfm	1988	deleted
7P-0607	L36-M-0607 Baghouse	L36-F-6040	CSS-7 Box & Bagging Blender	85 ft^2	1988	Move to WH
7EC-15	L21-M-1050 Baghouse	L21-F-1020	CSS-7 Off-Spec Silo A	4,000 ft^3	1988	Move to WH
7P-1510	L22-M-2120 Baghouse	L22-F-2040	CSS-7 Off-Spec Silo B	85 ft^2	1987	Move to WH
7P-4227A	L14-M-4070 Baghouse	L14-F-4070	CSS-7 Product Storage Silo	4,000 ft^3	1987	Move to CSS8
7P-4227B	L14-M-4080 Baghouse	L14-F-4080	CSS-7 Product Storage Silo	4,000 ft^3	1987	Move to CSS8
7P-0430	None	L14-U-4030	CSS-7 Fines Elutriator	150 ft^2	1990	Move to CSS8
7P-2660	None	L14-F-2660	CSS-7/CSS-8 T-66 Dump Tank	116 Gallons	1994	Delete - already in CSS8
7P-9002	None	L14-F-9001	CSS-7/CSS-8 Hot Oil Storage Tank	17,700 Gallons	1988	Delete - already in CSS8
2P-9001	M-2603 Baghouse C2T-B-9001 Hot Oil Heater	C2B-F-5420	CSS-7 Preheater Surge Bin	943 ft^3	1988	deleted
		C2B-M-5040	CSS-7 Surge Bin Filter	1,200 acfm	1988	deleted
		C2C-R-5060	CSS-7 R/6 Reactor	1,958 ft^3	1988	deleted

			CSS-8		
8E - 1340					
8E - 02	S8A-M-2390 Baghouse	S8A-F-2430	CSS-8 Crystallizer Surge Bin	1,244 ft^3	1991
8E - 03	S8A-M-3350 Baghouse	S8A-E-3240/ S8A-B-3010	CSS-8 Crystallizer and Heater	68.4 ft^2/ 2.15 MMBtu/hr	1991
8E - 04	S8B-M-2420 Baghouse	S8B-E-2250/ S8B-B-2020	CSS-8 Preheater and Heater	27.7 ft^2/ 0.98 MMBtu/hr	1991
8E - 05	S8D-M-1520 Baghouse	S8D-E-1280	CSS-8 Product Cooler	18,000 pph	1991
8E - 06	S8A-M-1590	S8A-M-1610	CSS-8 Refeed Cyclone	1,000 ft^3	1991
8E - 06	S8A-M-1590 Baghouse	S8E-F-1440	CSS-8 Verification Bin	18,000 pph	1991
None	None	S8E-F-1450	CSS-8 Product Dense Phase Tank	50 ft^3	1988
8E - 08	L37-M-7130 Baghouse	L37-F-7050	CSS-8 Boxing Silo	1,200 ft^3	1991
8E - 09	None	L37-P-7130	CSS-8 Storage Air Classifier	55 lb/ft^3	1991
8E - 09	None	L37-M-7150	CSS-8 Fines Elutriator	700 acfm	1991
8E - 12	None	L13-M-3020	CSS-8 Pellet Filter Receiver	25,500 acfm	1991
8EP-204A	L12-M-2030 Baghouse	L12-F-2030	CSS-8 Product Silo	85ft^2	1987
8EP-204B	L12-M-2040 Baghouse	L12-F-2040	CSS-8 Product Silo	85 ft^2	1987
8P-4127A	L13-M-3050 Baghouse	L13-F-3050	CSS-8 Product Silo	4,000ft^3	1987
8P-4127B	L13-M-3060 Baghouse	L13-F-3060	CSS-8 Product Silo	4,000 ft^3	1987
7P-4227A	L14-M-4070 Binvent	L14-F-4070	CSS-7 Product Storage Silo	4,000 ft^3	1987
7P-4227B	L14-M-4080 Binvent	L14-F-4080	CSS-7 Product Storage Silo	4,000 ft^3	1987
8ECS4	L11-M-1010 Baghouse	L11-F-1010	CSS-8/CSS-9 Salvage Silo	4,000 ft^3	1977
8P-1030	None	L11-U-1030	CSS-8 Fines Elutriator	150 ft^2	1991
8P-1050	None	L13-U-3030	CSS-8 Fines Elutriator	150 ft^2	1991
8EP-208	None	L12-M-4030	CSS-8 Fines Elutriator	150 ft^2	1991
7P-0430	None	L14-U-4030	CSS-7 Fines Elutriator	150 ft^2	1990
7P-2660	N/A	L14-F-2660	T-66 Dump Tank	116 Gallons	1988
7P-9002	N/A	L14-F-9001	Hot Oil Storage	17,700 Gallons	1991
2P-9001	C2T-B-9001 Hot Oil Heater	S8A-E-1420	CSS-8 Preheater Surge Bin	930 ft^3	1991
		S8C-R-1060/ S8C-R-3070	CSS-8 Reactor	2,404 ft^3	1991
		C2T-F-2670	T-66 Lites Tank	6,400 Gallons	1994
		C2T-F-5660	Knockout Drum	55 Gallons	1994
		F-5001	T-66 Tank	NA	1976

Not in previous permits control device S8A-M-1340	S8A-M-1340 Bin vent	S8A-F-1410	Crystallizer Blend feed silo	3500 Ft^3 Blender Silo 424 ft2 Bin Vent	1991
correct capacity	S8A-M-2390 baghouse	S8A-F-2430	CSS-8 Crystallizer Surge Bin	1,244 ft^3 Silo 106 ft^2 Dust Collector	1991
correct description, capacity, control device	S8A-M-3360 Baghouse	S8A-F-3240/ S8A-B-3010	CSS-8 Crystallizer CSS-8 Crystallizer Furnace	68.4 ft^2/2.8 MMBtu/hr 2121 FT^2 Dust Collector	1991
correct description, capacity	S8B-M-2420 Baghouse	S8B-F-2250/ S8B-B-2020	CSS-8 Preheater CSS-8 Preheater Furnace	27.7 ft^2/ 1.2MMBtu/hr 1178 FT^2 Dust Collector	1991
correct capacity	S8D-M-1520 Baghouse	S8D-E-1280	CSS -8 Product Cooler	22.75 ft2 954 Ft2 Dust Collector	1991
delete					
no changes	S8A-M-1590 Baghouse	S8E-F-1440	CSS-8 Verification Bin	1000 ft^3	1991
delete					
delete					
delete					
move to West silo in WH, given new number					
delete					
correct ID, capacities	L12-M-2030 Binvent	L12-F-2030	CSS-8 Product Storage Silo 4	4000 Ft^3 Sil0 84 ft^2 Bin Vent	1987
correct ID, capacities	L12-M-2040 Binvent	L12-F-2040	CSS-8 Product Storage Silo 3	4000 Ft^3 Sil0 84 ft^2 Bin Vent	1987
correct ID, capacities	L13-M-3050 Binvent	L13-F-3050	CSS-8 Product Storage Silo 6	4000 Ft^3 Silo 84 ft^2 Bin Vent	1987
correct ID, capacities	L13-M-3060 Binvent	L13-F-3060	CSS-8 Product Storage Silo 5	4000 Ft^3 Silo 84 ft^2 Bin Vent	1987
Moved from CSS7 - corrected control device	L14-M-4070 Bin vent	L14-F-4070	~~CSS-7~~ Product Storage Silo 8	4000 Ft^3 Silo 85 ft^2 Bin Vent	1987
Moved from CSS7 - corrected control device	L14-M-4080 Bin vent	L14-F-4080	~~CSS-7~~ Product Storage Silo 7	4000 Ft^3 Silo 85 ft^2 Bin Vent	1987
correct ID, capacities	L11-M-1010 Binvent	L11-F-1010	CSS-8/CSS-9 Salvage Silo 2	4000 Ft^3 Silo 84 ft^2 Bin Vent	1987
correct emission and control unit IDs to reflect actual configuration	L11-U-1030	L11-U-1040	CSS-8 Fines Elutriator Silo 2	85 ft^2	1991
correct emission and control unit IDs to reflect actual configuration	L13-M-3110	L13-P-3100	CSS-8 Fines Elutriator Silo 5&6	4500 ACFM Cyclone	1991
correct emission and control unit IDs to reflect actual configuration	L12-M-2050	L12-P-2050	CSS-8 Fines Elutriator Silo 3&4	641 ft^2	1991
Moved from CSS7 - corrected control device	L14-M-4030 Baghouse	L14-U-4040 L14-U-4050	Silo 7/8 Fines Elutriator	85 ft^2	1990
correct emission ID	N/A	C2T-F-2260	T-66 Dump Tank	116 Gallons	1988
correct emission ID	N/A	C2T-F-7640	Hot Oil Storage	17,700 Gallons	1988
correct emission ID	C2T-B-9001 Hot Oil Heater	S8B-F-1420	CSS-8 Preheater Surge Bin	930 ft^3	1991
no changes		S8C-R-1060	CSS-8 CSS Reactor 1	2,404 ft^3 EA	1991
		S8C-R-3070	CSS8 Reactor 2		1994
no changes		C2T-F-2670	T-66 Lites Tank	6,400 Gallons	1994
correct emission ID		C1T-F-5660	Knockout Pot	55 Gallons	1976
correct emission ID, etc		C1T-F-5001	T-66 Tank	17,500 Gallons	1976

			CSS-9		
9P-7040					
9P-1701A	L15-M-1701A Baghouse	L15-F-1701A	CSS-9 Verification Bin	920 ft^3	1988
9P-1701B	L15-M-1701B Baghouse	L15-F-1701B	CSS-9 Verification Bin	920 ft^3	1988
9P-5091	None	L15-U-5090	CSS-9 Fines Elutriator	150 ft^2	1991
9P-2701A	L15-M-2701A Baghouse	L15-F-2701A	CSS-9 Product Silo	4,000 ft^3	1988
9P-2701B	L15-M-2701B Baghouse	L15-F-2701B	CSS-9 Product Silo	4,000 ft^3	1988
9P-6110	None	L15-U-6110	CSS-9 Fines Elutriator	150 ft^2	1991
9E - 10	L17-M-7230 Baghouse	L17-F-7130	CSS-9 Product Silo	4,000 ft^3	1991
		L17-F-7140	CSS-9 Product Silo	4,000 ft^3	1991
9E - 11	None	L17-M-7240	CSS-9 Fines Elutriator	700 acfm	1991
9ECS5	L15-M-1020 Baghouse	L15-F-1020	CSS-9 Salvage Silo	4,000 ft^3	1977
9P-1030	None	L15-U-1030	CSS-9 Fines Elutriator	150 ft^2	1991
9P-1010					
9P-2030					
9P-1030					

Not in previous permits for some reason	C29-M-7040	C29-F-7010	CSS-9 ACS North Silo	16,950 ft^3 silos	2002
		C29-F-7020	CSS-9 ACS South Silo	276 ft^2 Dust Collector	2002
Correct control device, emission ID, etc	L15-M-5140 Binvent	L15-F-5100	CSS-9 Verification Bin Silo 9	4000 Ft^3	1988
Correct control device, emission ID, etc	L15-M-5130 Binvent	L15-F-5090	CSS-9 Verification Bin Silo 10	4000 Ft^3	1988
deleted - never existed					
Correct control device, emission ID, etc	L16-M-6170 Binvent	L16-F-6120	CSS-9 Product Silo Silo 11	4000 ft^2	1988
Correct control device, emission ID, etc	L16-M-6160 Binvent	L16-F-6110	CSS-9 Product Silo Silo 12	4000 ft^2	1988
correct emission and control unit IDs to reflect actual configuration	L16-M-6130	L16-P-6120	CSS 9 Fines Elutriator Silo 11&12	4500 ACFM Cyclone	1991
correct description, capacity	L17-M-7230 Baghouse	L17-F-7130	CSS-9 Product Silo Silo 14	4000 Ft^3 Silo	1991
correct description, capacity		L17-F-7140	CSS-9 Product Silo Silo 13		1991
correct emission and control unit IDs to reflect actual configuration	L17-M-7190	LI7-P-7010	CSS-9 Fines Elutriator Silo 13&14	4500 ACFM Cyclone	1991
deleted - removed on last Reg 13					
deleted - removed on last Reg 13					
Not in previous permits for some reason	L18-M-1010 Baghouse	L18-F-2010	CSS-9 Product Silo 15	8000 Ft^3 silos / 343ft^2 Dust Collector	2002
Not in previous permits for some reason		L18-F-1010	CSS-9 Product Silo 16		2002
Not in previous permits for some reason	L18-M-2030	L18-P-2040	CSS-9 Fines Elutriator Silo 15	1620 ft^2 Dust Collector	2002
Not in previous permits for some reason	L18-M-1030	L18-P-1040	CSS-9 Fines Elutriator Silo 16		2002

CSS-10

10P-1340	C3A-M-1340 Baghouse	C3A-F-1410	CSS-10 Crystallizer Blending Silo	3,500 ft^3	1994
10P-2390	C3A-M-2390 Baghouse	C3A-F-2460	CSS-10 Crystallizer Surge Bin	1,570 ft^3	1994
10P-3350	C3A-M-3350 Baghouse	C3A-E-3240	CSS-10 Crystallizer and Heater	93.5 ft^2/ 3.04 MMBTU/hr	1994
10P-1130	L1A-M-1130 Baghouse	L1A-F-1090	CSS-10 Product Silo	4,000 ft^3	1994
		L1A-F-1100	CSS-10 Product Silo	4,000 ft^3	1994
10P-0520	C3D-M-0520	C3D-E-1280	CSS-10 Product Cooler	9,000 pph	1994
		C3D-E-5280	CSS-11 Product Cooler	27.7 ft^2	1994
10P-2420	C3B-M-2420 Baghouse	C3B-E-2250	CSS-10 Preheater and Heater	27.7 ft^2/ 0.977 MMBTU/hr	1994
10P-1590	C3E-M-1590 Baghouse	C3E-F-1440	CSS-10 Verification Bin	1,450 ft^3	1994
10P-1050	L3A-M-1050 Baghouse	L3A-F-1030	CSS-10/CSS-11 Box & Bagging Blender	1,200 ft^3	1994
10P-1100	None	L3A-M-1070	CSS-10 Fines Elutriator	150 ft^2	1994
10P-1140	None	L1A-M-1140	CSS-10 Fines Elutriator	150 ft^2	1994
3P-1600	C3B-M-1430 Baghouse C3T-B-1600 Hot Oil Heater	C3B-F-1420	CSS-10 Preheater Surge Bin	785 ft^3	1994
	C3T-B-1600 Hot Oil Heater	C3C-R-1060	CSS-10 R/6 Reactors & Heater	2,404 ft^3	1994

CSS10 and 11 are all mixed up in current permit - see next page for those corrections and explanations

CSS-11

11P-6340	C3A-M-6340 Baghouse	C3A-F-5410	CSS-11 Crystallizer Blending Silo	3,500 ft^3	1994
11P-6390	C3A-M-6390 Baghouse	C3A-F-5460	CSS-11 Crystallizer Surge Bin	1,244 ft^3	1994
11P-7350	C3A-M-7350 Baghouse	C3A-E-7240	CSS-11 Crystallizer and Heater	93.5 ft^2/ 3 MMBTU/hr	1994
11P-6420	C3B-M-6420 Baghouse	C3B-E-6250	CSS-11 Preheater and Heater	27.7 ft^2/ 0.977 MMBTU/hr	1994
11P-5590	C3E-M-5590 Baghouse	C3E-F-5440	CSS-11 Verification Bin	1,450 ft^3	1994
11P-1090	L3B-M-2060 Baghouse	L3B-F-2040	CSS-11 Box and Bagging Blender	1,200 ft^3	1994
11P-1080	None	L3B-M-2080	CSS-11 Fines Elutriator	150 ft^2	1994
11P-1160	L1B-M-1160 Baghouse	L1B-F-2115	CSS-11 Product Silo	4,000 ft^3	1994
		L1B-F-2160	CSS-11 Product Silo	4,000 ft^3	1994
11P-2170	None	L1B-M-2170	CSS-11 Fines Elutriator	150 ft^2	1994
3P-1600	C3B-M-5430 Baghouse C3T-B-1600 Hot Oil Heater	C3B-F-5420	CSS-11 Preheater Surge Bin	785 ft^3	1994
	C3T-B-1600 Hot Oil Heater	C3C-R-5060	CSS-11 R/6 Reactors & Heater	2,404 ft^3	1994

CSS10 and 11 are all mixed up in current permit - see next page for those corrections and explanations

CSS-12

4P-0340					
12P-2390	C4A-M-2390 Baghouse	C4A-F-2460	CSS-12 Crystallizer Surge Bin	1,570 ft^3	1996
12P-3350	C4A-M-3350 Baghouse	C4A-E-3240	CSS-12 Crystallizer & Heater	93.5 ft^2/	1996
12P-2420	C4B-M-2420 Baghouse	C4B-E-2250	CSS-12 Preheater and Heater	43 ft^2/	1996
12P-0520	C4D-M-0520 Baghouse	C4D-E-1280	CSS-12 Product Cooler	42.6 ft^2	1996
		C4D-E-5280	CSS-13 Product Cooler	42.6 ft^2	1996
12P-1590	C4E-M-1590 Baghouse	C4E-F-1440	CSS-12 Verification Bin	1,450 ft^3	1996
12P-1130	L1C-M-1130 Baghouse	L1C-F-1090	CSS-12 Product Silo	4,000 ft^3	1996
		L1C-F-1110	CSS-12 Product Silo	4,000 ft^3	1996
12P-1140	None	L1C-M-1140	CSS-12 Fines Elutriator	150 ft^2	1996
12P-0390	L4C-M-0390 Baghouse	L4C-F-0210	CSS-12/CSS-13 Salvage Silo	1,500 ft^2	1996
12P-2060	L3B-M-2060 Baghouse	L3B-F-2040	CSS-12/CSS-13 Boxing & Bagging Blender	1,200 ft^2	1996
12P-2080	None	L3B-M-2080	CSS-12 Fines Elutriator	150 ft^2	1996
4P-1600	C4B-M-1430 Baghouse C4T-B-1600 Hot Oil Heater	C4B-F-1420 C4C-R-3070	CSS-12 Preheater Surge Bin	785 ft^2	1996
			CSS-12 Reactor	2,110 ft^3	1996
	C4T-B-1600 Hot Oil Heater	C4C-R-1060 C4C-E-2320	CSS-12 Reactor & Reheater	1,958 ft^3	1996

CSS-13

13P-6390	C4A-M-6390 Baghouse	C4A-F-6460	CSS-13 Crystallizer Surge Bin	1,570 ft^3	1996
13P-7350	C4A-M-7350 Baghouse	C4A-E-7240	CSS-13 Crystallizer & Heater	93.5 ft^2/ 3MMBTU/hr	1996
12P-6420	C4B-M-6420 Baghouse	C4B-E-6250	CSS-13 Preheater & Heater	43 ft^2/ 0.97 MMBTU/hr	1996
13P-5590	C4E-M-5590 Baghouse	C4E-F-5440	CSS-13 Verification Bin	1,450 ft^3	1996
13P-2080	None	C4E-M-2080	CSS-13 Fines Elutriator	150 ft^2	1996
13P-1130	L1C-M-1130 Baghouse	L1D-F-1110	CSS-13 Product Storage	4,000 ft^3	1996
		L1D-F-1120	CSS-13 Product Storage	4,000 ft^3	1996
13P-1170	None	L1D-M-1130	CSS-13 Fines Elutriator	150 ft^2	1996
4P-1600	C4B-M-5430 Baghouse	C4B-F-5420	CSS-13 Preheater Surge Bin	1,390 ft^3	1996
	C4T-B-1600 Hot Oil Heater	E-7070	CSS-13 Reactor	2,110 ft^3	1996
	C4T-B-1600 Hot Oil Heater	C4C-R-5060 C4C-E-6320	CSS-13 Reactor & Reheater	1,958 ft^3	1996

moved from CP4	C4A-M-0340 Baghouse	C4A-F-0410	West CSS-12/13 Crystallizer Blend Silo	3,500 ft^3	1994
moved from CP4		C4A-F-0411	East CSS-12/13 Crystallizer Blend Silo	4,000 ft^3	2013
correct capacity	C4A-M-2390 Baghouse	C4A-F-2460	CSS-12 Crystallizer Surge Bin	1,100 ft^3 339 FT^2 Dust Collector	1996
add furnace ID for accuracy, correct capacities	C4A-M-3350 Baghouse	C4A-E-3240 C4A-B-3010	CSS-12 Crystallizer CSS-12 Crystallizer Furnace	93.5 ft^2/ 3.04 MMBtu/hr/ 3699 ft^2 Dust Collector	1996
add furnace ID for accuracy, correct capacities	C4B-M-2420 Baghouse	C4B-E-2250 C4B-B-2020	CSS-12 Preheater CSS-12 Preheater Furnace	43 ft^2/ 1.6 MMBtu/hr 1790 Ft^2 Dust Collector	1996
correct capacity	C4D-M-0520 Baghouse	C4D-E-1280	CSS -12 Product Cooler	46.6 ft^2 Coolers	1996
		C4D-E-5280	CSS -13 Product Cooler	2922 Ft^2 Dust Collector	1996
correct capacity, control device	C4E-M-1590 Baghouse	C4E-F-1440	CSS-12 Verification Bin	1,450 ft^3 236 Ft^2 Dust Collector	1996
correct capacity	L1C-M-1130 Baghouse	L1C-F-1090	CSS-12 Product Silo 21	4000 ft^3 silos	1996
		L1C-F-1110	CSS-12 Product Silo 22	320 Ft^2 Dust Collector	1996
correct emission and control unit IDs to reflect actual configuration	L1C-M-2030 Baghouse	L1C-P-2040	CSS-12 Fines Elutriator Silo 21&22	378 Ft^2 Dust Collector	1996
no changes	L4C-M-0390 Baghouse	L4C-F-0210	CSS-12/CSS-13 Salvage Silo	1,500 ft^3	
delete - never existed					
delete - never existed					
add existing control devices, correct capacities	C4B-M-1430/1431 Filter C4T-B-1600 Hot Oil Heater	C4B-F-1420	CSS-12 Preheater Surge Bin	785 ft3 Silo Cartridge Filter 650 SCFM @ 2 microns and 99% eff.	1996
add existing control device	C4B-M-3700/3701 Filter C4T-B-1600 Hot Oil Heater	C4C-R-3070	CSS-12 2nd Reactor	2,110 ft3	1996
reheaters removed, add existing control devices	C4C-M-4070/4071 C4T-B-1600 Hot Oil Heater	C4C-R-1060 ~~C4C-E-2320~~	CSS-12 1st Reactor ~~& Reheater~~	1,958 ft3	1996

correct capacity	C4A-M-6390 Baghouse	C4A-F-6460	CSS-13 Crystallizer Surge Bin	1,100 ft^3 339 FT^2 Dust Collector	1996
add furnace ID for accuracy, correct capacities	C4A-M-7350 Baghouse	C4A-E-7240 C4A-B-7010	CSS-13 Crystallizer CSS-13 Crystallizer Furnace	93.5 ft^2/ 3.04 MMBtu/hr/ 3699 ft^2 Dust Collector	1996
add furnace ID for accuracy, correct capacities	C4B-M-6420 Baghouse	C4B-E-6250 C4B-B-6020	CSS-13 Preheater CSS-13 Preheater Furnace	43 ft^2/ ~~1.6~~ MMBtu/hr 1790 Dust Collector	1996
correct capacity	C4E-M-5590	C4E-F-5440	CSS-13 Verification Bin	1,450 ft^3 236 Ft^2 Dust Collector	1996
Doesn't exist - delete					
correct capacity / ID	L1C-M-1130 Baghouse	L1D-F-1110	CSS-13 Product Silo 23	4000 ft^3 silos	1996
correct capacity / ID		L1D-F-1120	CSS-13 Product Silo 24	320 Ft^2 Dust Collector	1996
correct emission and control unit IDs to reflect actual configuration	L1D-M-2030 Baghouse	L1D-P-2040	CSS-13 Fines Elutriator Silo 23&4	378 Ft2 Dust Collector	
	C4B-M-5430 Filter C4T-B-1600 Hot Oil Heater	C4B-F-5420	CSS-13 Preheater Surge Bin	1390 ft3 Silo Cartridge Filter 650 SCFM @ 2 microns and 99% eff.	1996
	C4C-M-7700 Filter C4T-B-1600 Hot Oil Heater	C4C-R-7070	CSS-13 2nd Reactor	2,110 ft3	1996
Reheater removed, add existing control device	C4C-M-5470 Filter C4T-B-1600 Hot Oil Heater	C4C-R-5060 ~~C4C-E-6320~~	CSS-13 1st Reactor ~~& Reheater~~	1,958 ft3	1996

			Hot Oil Heaters		
3P-1600	None	C3T-B-1600	Hot Oil Heater	53.1 MMBtu/hr	1994
4P-1600	None	C4T-B-1600	Hot Oil Heater	53.1 MMBtu/hr	1996
2P-9001	None	C2T-B-9001	Hot Oil Heater	24 MMBtu/hr	1988
3P-1700	None	C3T-F-1700	Hot Oil Heater	23.0 MMBtu/hr	2007
			Boilers and Heaters		
U-B-2010	None	UGS-B-2010	WWTP Portable Boiler	14.2 MMBtu/hr	2010
U-B-3010	None	UGS-B-3010	Front Office Hot Water Boiler	0.9 MMBtu/hr	2009
U-B-3011	None	UGS-B-3011	Front Office Hot Water Boiler	0.9 MMBtu/hr	2009
U-B-4010	None	UGS-B-4010	CP-2 Ops Center Hot Water Boiler	1.6 MMBtu/hr	2009
U-B-4011	None	UGS-B-4011	CP-2 Ops Center Hot Water Boiler	1.6 MMBtu/hr	2009
U-B-1050	None	UGS-B-1050	D-155 Space Heater	0.26 MMBtu/hr	2009
U-B-1060	None	UGS-B-1060	D-155 Space Heater	0.26 MMBtu/hr	2009
U-B-1004	None	UGS-B-1004	Utility Space Heater	0.26 MMBtu/hr	2009
U-B-1005	None	UGS-B-1005	Utility Space Heater	0.26 MMBtu/hr	2009
U-B-1006	None	UGS-B-1006	Utility Space Heater	0.26 MMBtu/hr	2009
U-B-1007	None	UGS-B-1007	Utility Space Heater	0.26 MMBtu/hr	2009
U-B-4001	None	UGS-B-4001	CP-2 A/C Room Space Heater	0.26 MMBtu/hr	2009
U-B-4002	None	UGS-B-4002	CP-2 A/C Room Space Heater	0.26 MMBtu/hr	2009
U-B-4003	None	UGS-B-4003	Utility Space Heater	0.26 MMBtu/hr	2009
U-B-4004	None	UGS-B-4004	Utility Space Heater	0.26 MMBtu/hr	2009

			Warehouse		
WF-6010	MWB-F-1080 Baghouse	L26-F-6010	Warehouse – West Silo	750 ft^3	1959
D56	None	MW11717	Warehouse Railcar Unloading System	NA	1976
4P-1010					
4P-1060					
7P-0607	L36-M-0607 Baghouse	L36-F-6040	CSS-7 Box & Bagging Blender	85 ft^2	1988
10P-1050	L3A-M-1050 Baghouse	L3A-F-1030	CSS-10/CSS-11 Box & Bagging Blender	1,200 ft^3	1994
10P-1100	None	L3A-M-1070	CSS-10 Fines Elutriator	150 ft^2	1994
11P-1090	L3B-M-2060 Baghouse	L3B-F-2040	CSS-11 Box and Bagging Blender	1,200 ft^3	1994
11P-1080	None	L3B-M-2080	CSS-11 Fines Elutriator	150 ft^2	1994
7EC-15	L21-M-1050 Baghouse	L21-F-1020	CSS-7 Off-Spec Silo A	4,000 ft^3	1988
7P-1510	L22-M-2120 Baghouse	L22-F-2040	CSS-7 Off-Spec Silo B	85 ft^2	1987
			Generators		
P-66	None	P-66	Diesel Generator	235 hp	1959
U3F-G-171	None	U3F-G-171	Diesel Generator	235 hp	1993
DGM-U-1010	None	DGM-U-1010	Emergency Electrical Generator	250 hp	2005

no changes
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control device correction, capacity correction

no change

Not in permit for some reason

Not in permit for some reason

Moved from CSS7 - 6060 not 0660 on control device

Moved from CSS10

Moved from CSS10, corrections

Moved from CSS11

Moved from CSS11, corrections

Moved from CSS7

Moved from CSS7

L26-M-6010 Baghouse	L26-F-6010	Warehouse - West Silo	750 ft^3 236 Ft^2 Dust Collector	1959/2015
None	MS11717	Warehouse Railcar Unloading system	NA	1976
L31-M-1010 Bin vent	L31-F-1010	Box & Bag 4	1500 Ft^3 Silo 85Ft2 Bin Vent	1986
L31-M-1060 Baghouse	L37-P-1060	Box & Bag 4 Fines Elutriator	396 Ft2 Dust Collector	1996
L36-M-6060 Binvent	L36-F-6040	Box/Bag 7	1500 Ft^3 Surge Bin 85 ft^2 Bin Vent	1988
L3A-M-1050 Binvent	L3A-F-1030	Box/Bag 10	1200 ft3 Silo 150 Ft2 Bin Vent	1994
L3A-M-1070 Baghouse	P-1310	Box/Bag 10 Fines Elutriator	150 Ft^2 xxx Dust collector	1994
L3B-M-2060 Binvent	L3B-F-2040	Box/Bag 11	1200 ft3 Silo 85 Ft2 Bin Vent	1994
L3B-M-2080 Baghouse	P-2350	Box/Bag 11 Fines Elutriator	150 Ft^2 150 Ft^2 Dust collector	1994
L21-M-1050 Binvent	L21-F-1020	~~CSS-7~~ Off-Spec Silo A	4000 Ft^2 Silo 315 Ft^2 Bin Vent	1988
L22-M-2120 Binvent	L22-F-2040	~~CSS-7~~ Off-Spec Silo B	4000 Ft^2 Silo 315 Ft^2 Bin Vent	1987

correct emission ID, description

correct emission ID, description

no changes

None	~~P-66~~ UTF-G-1020A	#1 Diesel Fire Pump	235 HP	1959
None	U3F-G-1710	#2 Diesel Fire Pump	235 HP	1976
None	DGM-U-1010	Emergency Electrical Generator	250 HP	2005

CSS10/11
In Current Permit:

CSS-10

10P-1340	C3A-M-1340 Baghouse	C3A-F-1410	CSS-10 Crystallizer Blending Silo	3,500 ft^3	1994
10P-2390	C3A-M-2390 Baghouse	C3A-F-2460	CSS-10 Crystallizer Surge Bin	1,570 ft^3	1994
10P-3350	C3A-M-3350 Baghouse	C3A-E-3240	CSS-10 Crystallizer and Heater	93.5 ft^2/	1994
10P-1130	L1A-M-1130 Baghouse	L1A-F-1090	CSS-10 Product Silo	4,000 ft^3	1994
		L1A-F-1100	CSS-10 Product Silo	4,000 ft^3	1994
10P-0520	C3D-M-0520 Baghouse	C3D-E-1280	CSS-10 Product Cooler	9,000 pph	1994
		C3D-E-5280	CSS-11 Product Cooler	27.7 ft^2	1994
10P-2420	C3B-M-2420 Baghouse	C3B-E-2250	CSS-10 Preheater and Heater	27.7 ft^2/	1994
10P-1590	C3E-M-1590 Baghouse	C3E-F-1440	CSS-10 Verification Bin	1,450 ft^3	1994
10P-1050	L3A-M-1050 Baghouse	L3A-F-1030	CSS-10/CSS-11 Box & Bagging Blender	1,200 ft^3	1994
10P-1100	None	L3A-M-1070	CSS-10 Fines Elutriator	150 ft^2	1994
10P-1140	None	L1A-M-1140	CSS-10 Fines Elutriator	150 ft^2	1994
3P-1600	C3B-M-1430 Baghouse C3T-B-1600 Hot Oil Heater	C3B-F-1420	CSS-10 Preheater Surge Bin	785 ft^3	1994
	C3T-B-1600 Hot Oil Heater	C3C-R-1060	CSS-10 R/6 Reactors & Heater	2,404 ft^3	1994

CSS-11

11P-6340	C3A-M-6340 Baghouse	C3A-F-5410	CSS-11 Crystallizer Blending Silo	3,500 ft^3	1994
11P-6390	C3A-M-6390 Baghouse	C3A-F-5460	CSS-11 Crystallizer Surge Bin	1,244 ft^3	1994
11P-7350	C3A-M-7350 Baghouse	C3A-E-7240	CSS-11 Crystallizer and Heater	93.5 ft^2/ 3 MMBTU/hr	1994
11P-6420	C3B-M-6420 Baghouse	C3B-E-6250	CSS-11 Preheater and Heater	27.7 ft^2/ 0.977 MMBTU/hr	1994
11P-5590	C3E-M-5590 Baghouse	C3E-F-5440	CSS-11 Verification Bin	1,450 ft^3	1994
11P-1090	L3B-M-2060 Baghouse	L3B-F-2040	CSS-11 Box and Bagging Blender	1,200 ft^3	1994
11P-1080	None	L3B-M-2080	CSS-11 Fines Elutriator	150 ft^2	1994
11P-1160	L1B-M-1160	L1B-F-2115	CSS-11 Product Silo	4,000 ft^3	1994

CSS10/11
In Application:

CSS10

correct capacity, desription	10P-6340	C3A-M-6340 Baghouse	C3A-F-5410	CSS-10 Crystallizer Blend Silo	3,500 ft^3 Silo 424 ft^2	1994
correct emission ID, info	10P-6390	C3A-M-6390 Bin Vent	C3A-F-6460	CSS-10 Crystallizer Surge Silo	1,570 ft^2 106 ft^3 Bin Vent	1994
add furnace ID for accuracy. Correct capacities, info	10P-7350	C3A-M-7350 Baghouse	C3A-E-7240 C3A-B-7010	CSS-10 Crystallizer CSS-10 Crystallizer furnace	93.5 ft^2/ 3.04 MMBtu/hr/ 2121 ft^2 Dust Collector	1994
clarify description, capacities	10P-1130	L1A-M-1130 Bin Vent	L1A-F-1090	CSS-10 Product Silo 17	4,000 ft^3 Silos	1994
			L1A-F-1100	CSS-10 Product Silo 18	235 ft^2 Bin Vent	1994
correct IDs to be with proper unit, update capacities	11P-0520	C3D-M-0520 Baghouse	C3D-E-1280	CSS-11 Product Cooler	9000 pph 2120 FT^2 Baghouse	1994
			C3D-E-5280	CSS-10 Product Cooler	27.7 ft^2	1994
add furnace ID for accuracy. Correct capacities, info	10P-6420	C3B-M-6420 Baghouse	C3B-E-6250 C3B-B-6020	CSS-10 Preheater CSS-10 Preheater Furnace	27.75 ft^2/ 1.6 MMBtu/hr 1178 ft^2 Dust Collector	1994
correct IDs, etc.	10P-5590	C3E-M-5590 Baghouse	C3E-F-5440	CSS-10 Verification Bin	1450 ft^3 Silo 235 Ft^2 Dust Collector	1994
move to Warehouse						
move to Warehouse						
correct emission and control unit IDs to reflect actual configuration	10P-1140	L1A-M-1030	L1A-P-1040	CSS-10 Fines Elutriator Silo 17&18	4500 ACFM Cyclone	1994
correct control unit ID, minor issues	3P-1600	C3B-M-5430 Filter C3T-B-1600 Hot Oil Heater	C3B-F-5420	CSS-10 Preheater Surge Bin	785 ft3 Silo Cartridge Filter 650 SCFM @ 2 microns and 99% eff.	1994
No heater, add control devices that always existed		C3C-M-5470 Filter C3T-B-1600	C3C-R-5060	CSS-10 CSS Reactor ~~& Heater~~	2404 ft^3	1994
moved from CP4 - correct IDs and other info	4P-1101	**L4C-M-0220** Binvent	**L4C-F-0200**	8100 Silo	4000 Ft3 315 Ft2 Bin Vent	1976 / 2011

CSS11

correct capacity, desription	11P-1340	C3A-M-1340 Baghouse	C3A-F-1410	CSS-11 Crystallizer Blend Silo	3,500 ft^3 Silo 424 ft^2	1994
correct emission ID, info	11P-2390	C3A-M-2390 Bin Vent	C3A-F-2460	CSS-11 Crystallizer Surge Silo	1,570 ft^2 Silo 106 ft^3 Bin Vent	1994
add furnace ID for accuracy. Correct capacities, info	11P-3350	C3A-M-3350 Baghouse	C3A-E-3240 C3A-B-3010	CSS-11 Crystallizer CSS-11 Crystallizer furnace	93.5 ft^2/ 3.04 MMBtu/hr/ 2121 ft^2 Dust Collector	1994
add furnace ID for accuracy. Correct capacities, info	11P-2420	C3B-M-2420 Baghouse	C3B-E-2250 C3B-B-2020	CSS-11 Preheater CSS-11 Preheater Furnace	27.75 ft^2/ 1.6 MMBtu/hr 1178 ft^2 Dust Collector	1994
correct capacity, desription	11P-1590	C3E-M-1590 Baghouse	C3E-F-1440	CSS-11 Verification Bin	1450 ft^3 Silo 235 Ft^2 Dust Collector	1994
move to WH						
move to WH						
	11P-1160	L1B-M-2160	L1B-F-2110	CSS-11 Product Silo 19	4,000 ft^3 Silos	1994

[illegible]	Baghouse	L1B-F-2160	CSS-11 Product Silo	4,000 ft^3	1994
11P-2170	None	L1B-M-2170	CSS-11 Fines Elutriator	150 ft^2	1994
3P-1600	C3B-M-5430 Baghouse C3T-B-1600 Hot Oil Heater	C3B-F-5420	CSS-11 Preheater Surge Bin	785 ft^3	1994
	C3T-B-1600 Hot Oil Heater	C3C-R-5060	CSS-11 R/6 Reactors & Heater	2,404 ft^3	1994

correct emission and control unit IDs to reflect actual configuration

correct IDs, etc

No heater, add control devices that always existed

[illegible]	Bin Vent	L1B-F-2120	CSS 11 Product Silo 20	235 ft^2 Bin Vent	1994
11P-2170	L1B-M-2030	L1B-P-2050	CSS-11 Fines Elutriator 19&20	4500 ACFM Cyclone	1994
3P-1600	C3B-M-1430/1431 Filter C3T-B-1600 Hot Oil Heater	C3B-F-1420	CSS-11 Preheater Surge Bin	785 ft3 Silo Cartridge Filter 650 SCFM @ 2 microns and 99% eff.	1994
	C3C-M-1470/1471 Filters C3T-B-1600 Hot Oil Heater	C3C-R-1060	CSS-11 CSS Reactor ~~& Heater~~	2404 ft^3	1994