FILE INDEX

Applicant : Procter & Gamble Manufacturing Company **Plant ID No.:** 003-00154 **Region** 10
Facility : Tabler Station **R13-** 3316

Chronological Order - Add Index Pages As Necessary

Date	To	From	Subject
04-26-16	Beverly McKeone	J. Andrew Hadley	Permit Application and Cover Letter
05-06-16	fikes.em@pg.com	Sandra Adkins	Application Status
05-16-16	file	*The Journal*	Affidavit of Publication
06-07-16	fikes.em@pg.com	Steve Pursley	Application Status: Incomplete
06-15-16	Steve Pursley	Drew Hadley	Response to Incompleteness Email
06-15-16	Steve Pursley	Allison Cole	Response to Incompleteness Email
07-27-16	Steve Pursley	Allison Cole	Amendment to Application
08-01-16	fikes.em@pg.com	Steve Pursley	Application Status: Complete
08-17-16	Steve Pursley	Allison Cole	Updated Application Tables
10-13-16	Beverly McKeone	J. Andrew Hadley	Permit Application Resubmittal and Cover Letter
11-02-16	Drew Hadley	Steve Pursley	PREDRAFT Permit
11-03-16	Steve Pursley	Beverly McKeone	Go To Notice
11-09-16	Steve Pursley	Allison Cole	Comments on PREDRAFT Permit
11-10-16	*The Journal*	Sandra Adkins	Publication of Class I Legal Ad
11-14-16	Paul Wentworth	Sandra Adkins	EPA Notification Letter

SRP
11/14/2016

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Permit / Application Information Sheet
Division of Environmental Protection
West Virginia Office of Air Quality

Company:	THE PROCTER AND GAMBLE MANUFACTURING COMPANY	**Facility:**	Tabler Station
Region:	**Plant ID:** 003-00154	**Application #:**	13-3316
Engineer:	Pursley, Steve	**Category:**	
Physical Address:	396 Development Drive Inwood WV 25428	**SIC:** [2842] CHEMICALS AND ALLIED PRODUCTS - POLISHES AND SANITATION GOODS **NAICS:** [325612] Polish and Other Sanitation Good Manufacturing **SIC:** [2843] CHEMICALS AND ALLIED PRODUCTS - SURFACE ACTIVE AGENTS **NAICS:** [325613] Surface Active Agent Manufacturing **SIC:** [2844] CHEMICALS AND ALLIED PRODUCTS - TOILET PREPARATIONS **NAICS:** [325620] Toilet Preparation Manufacturing	
County:			
Other Parties:	DIRECTOR - Fikes, Elizabeth 513-668-7954 ENV_MGR - Hadley, Drew 513-765-0497		

Information Needed for Database and AIRS
1. Need valid physical West Virginia address with zip
2. Air Program
3. Inspection result
4. Pollutant and class

Regulated Pollutants

Summary from this Permit 13-3316

Air Programs		Applicable Regulations
Fee Program	**Fee**	**Application Type**
	$2,000.00	CONSTRUCTION

Notes from Database

Activity Dates

APPLICATION RECIEVED	05/06/2016
APPLICATION FEE PAID	05/06/2016
ASSIGNED DATE	05/06/2016

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Please note, this information sheet is not a substitute for file research and is limited to data entered into the AIRTRAX database.

Company ID: 003-00154
Company: THE PROCTER AND GAMBLE MANUFAC
Printed: 05/06/2016
Engineer: Pursley, Steve

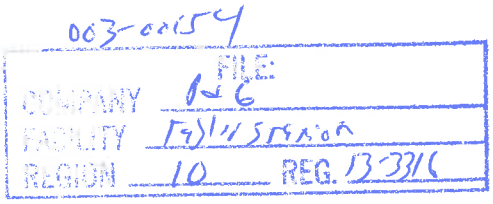
Pursley, Steven R

From: Adkins, Sandra K
Sent: Monday, November 14, 2016 9:22 AM
To: 'wentworth.paul@epa.gov'; 'bradley.megan@epa.gov'; handley.ja@pg.com; acole@trinityconsultants.com
Cc: Durham, William F; McKeone, Beverly D; McCumbers, Carrie; Hammonds, Stephanie E; Pursley, Steven R; Taylor, Danielle R; Rice, Jennifer L; Tephabock, Brian S; Scanlan, Christopher P; Kreger, Joseph A
Subject: WV Draft Permit R13-3316 for The Procter and Gamble Manufacturing Company; Tabler Station
Attachments: 3316.pdf; Eval3316.pdf; notice.pdf

Please find attached the Draft Permit R13-3316, Engineering Evaluation, and Public Notice for The Procter and Gamble Manufacturing Company's Tabler Station to be located in Berkeley County.

The notice will be published in *The Journal* on Tuesday, November 15, 2016, and the thirty day comment period will end on Thursday, December 15, 2016.

Should you have any questions or comments, please contact the permit writer, Steve Pursley, at 304 926-0499 x1218.



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Pursley, Steven R

From:	Adkins, Sandra K
Sent:	Thursday, November 10, 2016 9:19 AM
To:	'sphillips@journal-news.net'
Cc:	Pursley, Steven R
Subject:	Publication of Class I Legal Ad for the WV Division of Air Quality

Please publish the information below as a Class I legal advertisement (one time only) in the Tuesday, November 15, 2016, issue of *The Journal*. Please let me know that this has been received and will be published as requested. Thank you.

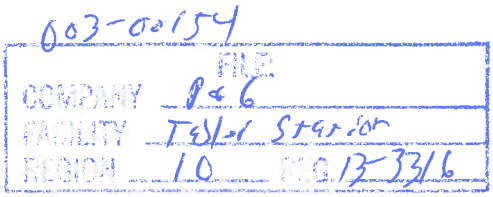
Send the invoice for payment and affidavit of publication to:

Sandra Adkins

WV Department of Environmental Protection
DIVISION OF AIR QUALITY

601- 57th Street

Charleston, WV 25304



AIR QUALITY PERMIT NOTICE

Notice of Intent to Approve

On May 6, 2016, Procter and Gamble Manufacturing Company applied to the WV Department of Environmental Protection, Division of Air Quality (DAQ) for a permit to construct a consumer products production facility located on Development Drive between Martinsburg and Inwood, Berkeley County, WV at latitude 39.4127 and longitude -78.0070. A preliminary evaluation has determined that all State and Federal air quality requirements will be met by the proposed facility. The DAQ is providing notice to the public of its preliminary determination to issue the permit as R13-3316.

The following potential emissions will be authorized by this permit action: Particulate Matter less than 10 microns, 79.78 tons per year (TPY); Particulate Matter, 84.86 TPY; Sulfur Dioxide, 2.20 TPY; Oxides of Nitrogen, 66.40 TPY; Carbon Monoxide, 44.73 TPY; Volatile Organic Compounds, 85.09 TPY; Hazardous Air Pollutants (HAPs), 1.86 TPY.

Written comments or requests for a public meeting must be received by the DAQ before 5:00 p.m. on Thursday, December 15, 2016. A public meeting may be held if the Director of the DAQ determines that significant public interest has been expressed, in writing, or when the Director deems it appropriate.

The purpose of the DAQ's permitting process is to make a preliminary determination if the proposed construction will meet all State and Federal air quality requirements. The purpose of the public review process is to accept public comments on air quality issues relevant to this determination. Only written comments received at the address noted below within the specified time frame, or comments presented orally at a scheduled public meeting, will be considered prior to final action on the permit. All such comments will become part of the public record.

Steven R. Pursley, PE

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WV Department of Environmental Protection
Division of Air Quality
601 57th Street, SE
Charleston, WV 25304
Telephone: 304/926-0499, ext. 1218
FAX: 304/926-0478

Additional information, including copies of the draft permit, application and all other supporting materials relevant to the permit decision may be obtained by contacting the engineer listed above. The draft permit and engineering evaluation can be downloaded at:
www.dep.wv.gov/daq/Pages/NSRPermitsforReview.aspx

Pursley, Steven R

From: Allison Cole <acole@trinityconsultants.com>
Sent: Wednesday, November 9, 2016 3:50 PM
To: Pursley, Steven R
Cc: Russell Bailey; Hadley, Drew (hadley.ja@pg.com)
Subject: Tablers Station - Revised Permit Language
Attachments: Draft Permit Review with Comments (2016-11-09 1545 ac).docx

Steve:

Please find attached a draft permit with our final updates. We will follow-up later this week or next week with revised application pages (for completeness).

We have revised the cooling tower TDS to 6,000 ppm and the drift to 0.002%. The new values in the emissions table reflect this change. Thank you for your attentiveness and assistance today. Enjoy your extra-long weekend.

Allison Cole
Consultant

Trinity Consultants
15 E Salem Avenue, Suite 201| Roanoke, Virginia 24011
Office: 540-342-5945 x3
Email: acole@trinityconsultants.com

603-00154
FILE:
COMPANY P & G
FACILITY Tablers Station
REGION 10 REG. 13316

Entire Document
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West Virginia Department of Environmental Protection
Division of Air Quality

Earl Ray Tomblin
Governor

Randy C. Huffman
Cabinet Secretary

Permit to Construct

R13-3316

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45 C.S.R. 13 — Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation. The permittee identified at the facility listed below is authorized to construct the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Issued to:
Procter and Gamble Manufacturing Company
Tabler Station Facility
003-00154

William F. Durham
Director

Issued: DRAFT

Facility Location:	Inwood, Berkeley County, West Virginia
Mailing Address:	Sharon Woods Innovation Center A2M11-3 11510 Reed Hartman Highway Cincinnati, OH 45241
Facility Description:	Consumer products manufacturing facility
NAICS Codes:	325612, 325613, 325620
UTM Coordinates:	757.0 km Easting • 4,366.0 km Northing • Zone 17
Permit Type:	Construction

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.

As a result of the granting of this permit, the source is a nonmajor source subject to 45CSR30. The permittee shall apply for a Title V (45CSR30) permit in accordance with the requirements of 45CSR30 unless granted a deferral or exemption by the Director from such filing deadline pursuant to a request from the permittee.

Commented [AC1]: Please insert revised text.

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1.0 Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
1S	1E	Surfactant Making Process	2017	3,000 gal/hr	1C
2S	2E	Surfactant Making Process	2017	3,000 gal/hr	2C
3S	3E	Surfactant Tank	2017	120,762 gal	NA
4S	4E	Surfactant Tank	2017	48,345 gal	NA
5S	5E	Surfactant Tank	2017	40,-109 gal	NA
6S	6E	Surfactant Tank	2017	40,-109 gal	NA
7S	7E	Surfactant Tank	2017	15,125 gal	NA
8S	8E	Surfactant Tank	2017	15,125 gal	NA
9S	9E	Surfactant Tank	2017	15,125 gal	NA
10S	10E	Surfactant Tank	2017	72,475 gal	NA
11S	11E	Surfactant Tank	2017	72,475 gal	NA
12S	12E	Surfactant Tank	2017	72,475 gal	NA
13S	13E	Surfactant Tank	2017	72,475 gal	NA
14S	14E	Surfactant Tank	2017	72,475 gal	NA
15S	15E	Surfactant Tank	2017	72,475 gal	NA
16S	16E	Surfactant Tank	2017	26,083 gal	NA
17S	17E	Surfactant Tank	2017	15,125 gal	NA
18S	18E	Surfactant Tank	2017	15,125 gal	NA
19S	19E	Surfactant Bulk Liquid Transfer	2017	17,150,000 gal/yr	NA
20S	20E	Liquid Soap A & B Tank	2017	39,626 gal	NA
21S	21E	Liquid Soap A & B Tank	2017	39,626 gal	NA
22S	22E	Liquid Soap A & B Tank	2017	39,626 gal	NA
23S	23E	Liquid Soap A & B Tank	2017	7,925 gal	NA
24S	24E	Liquid Soap A & B Tank	2017	7,925 gal	NA
25S	25E	Liquid Soap A & B Tank	2017	39,626 gal	NA
26S	26E	Liquid Soap A & B Tank	2017	15,850 gal	NA
27S	27E	Liquid Soap A & B Tank	2017	39,626 gal	NA
28S	28E	Liquid Soap A & B Tank	2017	26,417 gal	NA
29S	29E	Liquid Soap A & B Tank	2017	15,850 gal	NA
30S	30E	Liquid Soap A & B Tank	2017	26,417 gal	NA
31S	31E	Liquid Soap A & B Tank	2017	15,850 gal	NA

1.0 Emission Units

32S	32E	Liquid Soap A & B Tank	2017	15,850 gal	NA
33S	33E	Liquid Soap A & B Tank	2017	7,925 gal	NA
34S	34E	Liquid Soap A & B Tank	2017	7,925 gal	NA
35S	35E	Liquid Soap A & B Tank	2017	7,925 gal	NA
36S	36E	Liquid Soap A & B Tank	2017	7,925 gal	NA
37S	37E	Liquid Soap A & B Tank	2017	7,925~~396~~ gal	NA
38S	38E	Liquid Soap A & B Tank	2017	396 gal	NA
~~39S~~	~~39E~~	~~Liquid Soap A & B Tank~~	~~2017~~	~~396 gal~~	~~N~~
40S	40E	Liquid Soap A & B Tank	2017	396 gal	NA
41S	41E	Liquid Soap A & B Tank	2017	396 gal	NA
42S	42E	Liquid Soap A & B Tank	2017	396 gal	NA
43S	43E	Liquid Soap A & B Tank	2017	396 gal	NA
44S	44E	Liquid Soap A & B Tank	2017	396 gal	NA
45S	45E	Liquid Soap A & B Tank	2017	396 gal	NA
46S	46E	Liquid Soap A & B Tank	2017	396 gal	NA
47S	47E	Liquid Soap A & B Tank	2017	396 gal	NA
~~48S~~	~~48E~~	~~Liquid Soap A & B Tank~~	~~2017~~	~~396 gal~~	~~N~~
~~49S~~	~~49E~~	~~Liquid Soap A & B Tank~~	~~2017~~	~~132 gal~~	~~N~~
50S	50E	Liquid Soap A & B Tank	2017	7,9~~3~~25 gal	NA
51S	51E	Liquid Soap A & B Tank	2017	396 gal	NA
52S	52E	Liquid Soap A & B Tank	2017	396 gal	NA
53S	53E	Liquid Soap A & B Tank	2017	7,925~~396~~ gal	NA
54S	54E	Liquid Soap A & B Tank	2017	660 gal	NA
55S	55E	Liquid Soap A & B Tank	2017	396 gal	NA
56S	56E	Liquid Soap A & B Tank	2017	7,275~~1,057~~ gal	NA
57S	57E	Liquid Soap A & B Tank	2017	1,057 gal	NA
~~58S~~	~~58E~~	~~Liquid Soap A & B Tank~~	~~2017~~	~~793 gal~~	~~N~~
59S	59E	Liquid Soap A & B Tank	2017	396 gal	NA
60S	60E	Liquid Soap A & B Tank	2017	132 gal	NA
61S	61E	Liquid Soap A & B Tank	2017	396 gal	NA
~~62S~~	~~62E~~	~~Liquid Soap A & B Tank~~	~~2017~~	~~396 gal~~	~~N~~
63S	63E	Liquid Soap A & B Tank	2017	396 gal	NA
64S	64E	Liquid Soap A & B Tank	2017	396 gal	NA

1.0 Emission Units

65S	65E	Liquid Soap A & B Tank	2017	396 gal	NA
66S	66E	Liquid Soap A & B Tank	2017	396 gal	NA
67S	67E	Liquid Soap A & B Tank	2017	396 gal	NA
68S	68E	Liquid Soap A & B Tank	2017	396 gal	NA
69S	69E	Liquid Soap A & B Tank	2017	396 gal	NA
70S	70E	Liquid Soap A & B Tank	2017	396 gal	NA
71S	71E	Liquid Soap A & B Tank	2017	396 gal	NA
72S	72E	Liquid Soap A & B Tank	2017	396 gal	NA
73S	73E	Liquid Soap A & B Tank	2017	396 gal	NA
74S	74E	Liquid Soap A & B Tank	2017	396 gal	NA
75S	75E	Liquid Soap A & B Tank	2017	396 gal	NA
76S	76E	Liquid Soap A & B Tank	2017	396 gal	NA
77S	77E	Liquid Soap A & B Tank	2017	396 gal	NA
~~78S~~	~~78E~~	~~Liquid Soap A & B Tank~~	~~2017~~	~~396 gal~~	~~N~~
~~79S~~	~~79E~~	~~Liquid Soap A & B Tank~~	~~2017~~	~~396 gal~~	~~N~~
~~80S~~	~~80E~~	~~Liquid Soap A & B Tank~~	~~2017~~	~~396 gal~~	~~N~~
~~81S~~	~~81E~~	~~Liquid Soap A & B Tank~~	~~2017~~	~~396 gal~~	~~N~~
~~82S~~	~~82E~~	~~Liquid Soap A & B Tank~~	~~2017~~	~~396 gal~~	~~N~~
~~83S~~	~~83E~~	~~Liquid Soap A & B Tank~~	~~2017~~	~~396 gal~~	~~N~~
~~84S~~	~~84E~~	~~Liquid Soap A & B Tank~~	~~2017~~	~~396 gal~~	~~N~~
~~85S~~	~~85E~~	~~Liquid Soap A & B Tank~~	~~2017~~	~~396 gal~~	~~N~~
~~86S~~	~~86E~~	~~Liquid Soap A & B Tank~~	~~2017~~	~~396 gal~~	~~N~~
87S	87E	Liquid Soap A & B Tank	2017	1,585 gal	NA
88S	88E	Liquid Soap A & B Tank	2017	1,585 gal	NA
89S	89E	Liquid Soap A & B Tank	2017	1,585 gal	NA
90S	90E	Liquid Soap A & B Tank	2017	1,585 gal	NA
91S	91E	Liquid Soap A & B Tank	2017	1,585 gal	NA
92S	92E	Liquid Soap A & B Tank	2017	1,585 gal	NA
93S	93E	Liquid Soap A & B Tank	2017	1,585 gal	NA
94S	94E	Liquid Soap A & B Tank	2017	1,585 gal	NA
94bS	94bE	Liquid Soap A & B Tank	2017	1,585 gal	NA
94cS	94cE	Liquid Soap A & B Tank	2017	1,585 gal	NA
94dS	94dE	Liquid Soap A & B Tank	2017	1,585 gal	NA

1.0 Emission Units

94eS	94eE	Liquid Soap A & B Tank	2017	1,585 gal	NA
95S	95E	Liquid Soap A & B Tank	2017	1,585 gal	NA
96S	96E	Liquid Soap A & B Tank	2017	1,585 gal	NA
97S	97E	Liquid Soap A & B Tank	2017	1,585 gal	NA
98S	98E	Liquid Soap A & B Tank	2017	1,585 gal	NA
99S	99E	Liquid Soap A & B Tank	2017	1,585 gal	NA
100S	100E	Liquid Soap A & B Tank	2017	1,585 gal	NA
101S	101E	Liquid Soap A & B Tank	2017	1,585 gal	NA
102S	102E	Liquid Soap A & B Tank	2017	1,585 gal	NA
103S	103E	Liquid Soap A & B Tank	2017	1,585 gal	NA
104S	104E	Liquid Soap A & B Tank	2017	1,585 gal	NA
105S	105E	Liquid Soap A & B Tank	2017	1,585 gal	NA
106S	106E	Liquid Soap A & B Tank	2017	1,585 gal	NA
107S	107E	Liquid Soap A & B Tank	2017	1,585 gal	NA
108S	108E	Liquid Soap A & B Tank	2017	1,585 gal	NA
109S	109E	Liquid Soap A & B Tank	2017	1,585 gal	NA
110S	110E	Liquid Soap A & B Tank	2017	1,585 gal	NA
111S	111E	Liquid Soap A & B Tank	2017	1,585 gal	NA
112S	112E	Liquid Soap A & B Tank	2017	1,585 gal	NA
113S	113E	Liquid Soap A & B Tank	2017	1,585 gal	NA
114S	114E	Liquid Soap A & B Tank	2017	1,585 gal	NA
115S	115E	Liquid Soap A & B Tank	2017	1,585 gal	NA
116S	116E	Liquid Soap A & B Tank	2017	1,585 gal	NA
117S	117E	Liquid Soap A & B Tank	2017	1,585 gal	NA
118S	118E	Liquid Soap A & B Tank	2017	1,585 gal	NA
119S	119E	Liquid Soap A & B Packing/Filling	2017	139,798,617~~82,847,333~~ gal/yr	NA
120S	120E	Mixer	2017	1,182.6 mmscf/yr~~1,537.38 mmcf/yr~~	3C
121S		Mixer	2017		
122S		Premix Tank	2017		
123S		Premix Tank	2017		
124S	121E	Mixer	2017	2,496.6 mmscf/yr~~1,537.38~~	4C
125S		Process Tank	2017		
126S		Process Tank	2017		

127S		Process Tank	2017	~~mmcf/yr~~	

1.0 Emission Units

128S	122E	Mixer	2017	2,496.6 mmscf/yr ~~1,879.02 mmcf/yr~~	5C
129S		Process Tank	2017		
130S		Process Tank	2017		
131S		Process Tank	2017		
132S	123E	Mixer	2017	1,655.64 mmscf/yr ~~1,537.38 mmcf/yr~~	6C
133S		Process Tank	2017		
134S		Process Tank	2017		
135S		Process Tank	2017		
136S	124E	Preweigh Station	2017	525.6 mmscf/yr ~~751.608 mmcf/yr~~	7C
137S		Preweigh Station	2017		
138S		Preweigh Station	2017		
139S		Preweigh Station	2017		
140S	125E	Preweigh Station	2017	525.6 mmscf/yr ~~939.51 mmscf/yr~~	8C
141S		Preweigh Station	2017		
142S		Preweigh Station	2017		
143S		Preweigh Station	2017		
144S		Sampling Station	2017		
145S	126E	Hot Mix Tank	2017	20,611.765 mscf/yr	14C
146S	127E	Mixer	2017	919.8 mmscf/yr ~~1,537.38 mmcf/yr~~	9C
147S		Process Tank	2017		
148S		Process Tank	2017		
149S	126E	Hot Mix Tank	2017	20,611.765 mscf/yr	14C
150S	128E	Mixer	2017	919.8 mmscf/yr ~~1,537.38 mmcf/yr~~	10C
151S		Process Tank	2017		
152S		Process Tank	2017		
153S	126E	Hot Mix Tank	2017	20,611.765 mscf/yr	14C
154S	129E	Mixer	2017	919.8 mmscf/yr ~~1,537.38 mmcf/yr~~	11C
155S		Process Tank	2017		
156S		Process Tank	2017		
157S	126E	Hot Mix Tank	2017	20,611.765 mscf/yr	14C
158S	130E	Mixer	2017	1,603.08 mmscf/yr ~~20,611.765 mscf/yr~~	12C
159S		Process Tank	2017		
160S		Process Tank	2017		

1.0 Emission Units

161S	131E	Process Tank	2017	735.84 mmscf/yr~~683.28~~	13C
162S		Process Tank	2017		
163S	132E	Dry Consumer Product Tank	2017	42,879 gal	NA
164S	133E	Dry Consumer Product Tank	2017	37,641 gal	NA
165S	134E	Dry Consumer Product Tank	2017	6,809 gal	NA
166S	135E	Dry Consumer Product Tank	2017	396 gal	NA
167S	136E	Dry Consumer Product Tank	2017	396 gal	NA
168S	137E	Dry Consumer Product Tank	2017	396 gal	NA
169S	138E	Dry Consumer Product Tank	2017	181 gal	NA
170S	139E	Dry Consumer Product Tank	2017	181 gal	NA
171S	140E	Dry Consumer Product Tank	2017	181 gal	NA
172S	141E	Dry Consumer Product Tank	2017	181 gal	NA
173S	142E	Dry Consumer Product Tank	2017	181 gal	NA
174S	143E	Dry Consumer Product Tank	2017	181 gal	NA
175S	144E	Dry Consumer Product Tank	2017	181 gal	NA
176S	145E	Dry Consumer Product Tank	2017	181 gal	NA
177S	146E	Dry Consumer Product Tank	2017	181 gal	NA
178S	147E	Dry Consumer Product Tank	2017	181 gal	NA
179S	148E	Dry Consumer Product Tank	2017	181 gal	NA
180S	149E	Dry Consumer Product Tank	2017	181 gal	NA
181S	150E	Dry Consumer Product Tank	2017	181 gal	NA
182S	151E	Dry Consumer Product Tank	2017	181 gal	NA
183S	152E	Dry Consumer Product Tank	2017	181 gal	NA
184S	153E	Dry Consumer Product Tank	2017	181 gal	NA
185S	154E	Dry Consumer Product Tank	2017	181 gal	NA
186S	155E	Dry Consumer Product Tank	2017	181 gal	NA
187S	156E	Dry Consumer Product Tank	2017	181 gal	NA
188S	157E	Dry Consumer Product Tank	2017	181 gal	NA
189S	158E	Dry Consumer Product PM Control	2017	17, 450 scfm	15C
190S	159E	Dry Consumer Product PM Control	2017	17, 450 scfm	16C
191S	160E	Dry Consumer Product PM Control	2017	17, 450 scfm	17C
192S	161E	Dry Consumer Product PM Control	2017	17, 450 scfm	18C
193S	162E	Dry Consumer Product PM Control	2017	17, 450 scfm	19C
194S	163E	Dry Consumer Product PM Control	2017	8,000 scfm	20C

1.0 Emission Units

195S	164E	Dry Consumer Product Additive	2017	109 ft/s	NA
196S	165E	Boiler 1	2017	62 mmbtu/hr	NA
197S	166E	Boiler 2	2017	62 mmbtu/hr	NA
198S	167E	Boiler 3	2017	31 mmbtu/hr	NA
199S	168E	Temporary Boiler	2017	11 mmbtu/hr	NA
200S	169E	Cooling Tower	2017	3310~~7~~ mgal/hr	NA
201S	170E	Cooling Tower	2017	792~~939~~ mgal/hr	NA
202S	171E	Cooling Tower	2017	212~~451~~ mgal/hr	NA
203S	172E	Fire Pump Engine	2017	311 hp	NA
204S	173E	Fire Pump Engine	2017	311 hp	NA
205S	174E	Emergency Generator	2017	350 kw	NA
206S	175E	Emergency Generator	2017	350 kw	NA
207S	176E	Emergency Generator	2017	350 kw	NA
208S	177E	Fuel Tank	2017	5,162 gal	NA
210S	179E	Warehouse Heaters	2017	18.3~~3.05~~ mmbtu/hr total	NA
~~211S~~	~~180E~~	~~Warehouse Heater~~	~~2017~~	~~3.05 mmbtu/hr~~	~~N~~
~~212S~~	~~181E~~	~~Warehouse Heater~~	~~2017~~	~~3.05 mmbtu/hr~~	~~N~~
~~213S~~	~~182E~~	~~Warehouse Heater~~	~~2017~~	~~3.05 mmbtu/hr~~	~~N~~
~~214S~~	~~183E~~	~~Warehouse Heater~~	~~2017~~	~~3.05 mmbtu/hr~~	~~N~~
~~215S~~	~~184E~~	~~Warehouse Heater~~	~~2017~~	~~3.05 mmbtu/hr~~	~~N~~
216S	185E	VOC-Containing Water/Waste~~W~~water Pretreatment Chemicals	2017	174,928 kg/yr	NA
217S	186E	Plastic Pellet ~~Railcar~~ Unloading	2017	100,000 tons/yr	21C
218S	187E	Plastic Pellet~~Railcar~~ Unloading	2017		22C
219S	188E	Plastic Pellet~~Railcar~~ Unloading	2017		23C
220S	189E	Plastic Pellet~~Railcar~~ Unloading	2017		24C
221S	190E	Plastic Pellet~~Railcar~~ Unloading	2017		25C

1.0 Emission Units

222S	191E	Plastic Resin Storage Silo	2017		NA
223S	192E	Plastic Resin Storage Silo	2017		NA
224S	193E	Plastic Resin Storage Silo	2017		NA
225S	194E	Plastic Resin Storage Silo	2017		NA
226S	195E	Plastic Resin Storage Silo	2017		NA
227S	196E	Plastic Resin Storage Silo	2017		NA
228S	197E	Plastic Resin Storage Silo	2017		NA
229S~~S~~	198E	Plastic Resin Storage Silo	2017		NA
230S	199E	Plastic Resin Storage Silo	2017		NA
231S	200E	Plastic Resin Storage Silo	2017		NA
232S	201E	Plastic Resin Storage Silo	2017		NA
233S	202E	Plastic Resin Storage Silo	2017	100,000 tons/yr	NA
234S	203E	Plastic Resin Storage Silo	2017		NA
235S	204E	Plastic Resin Storage Silo	2017		NA
236S	205E	Plastic Resin Storage Silo	2017		NA
237S	206E	Plastic Resin Storage Silo	2017		NA
238S	207E	Plastic Resin Storage Silo	2017		NA
239S	208E	Plastic Resin Storage Silo	2017		NA
240S	209E	Plastic Resin Storage Silo	2017		NA
241S	210E	Plastic Resin Storage Silo	2017		NA
242S	211E	Plastic Resin Storage Silo	2017		NA
243S	212E	Plastic Resin Storage Silo	2017		NA
244S	213E	Plastic Resin Storage Silo	2017		NA
245S	214E	Plastic Resin Storage Silo	2017		NA
246S	215E	Plastic Regrind	2017	32,000 tons/yr	26C
247S	216E	Plastic Forming	2017	100,000 tons/yr	NA
248S	217E	Plastics Molding Cleaning Fugitives ~~arts Washing~~	2017	6 tons/yr	NA
249S	218E	Plastics Molding Space Heaters	2017	175 mmbtu/hr, total	NA
255S~~250S~~	224E~~219~~	Plastics Molding Cooling	2017~~201~~	7,000 gpm~~5~~	NA~~N~~
~~251S~~	~~220E~~	~~Space Heater~~	~~2017~~	~~2.5 mmbtu/hr~~	~~N~~
~~252S~~	~~221E~~	~~Space Heater~~	~~2017~~	~~2.5 mmbtu/hr~~	~~N~~
~~253S~~	~~222E~~	~~Space Heater~~	~~2017~~	~~1 mmbtu/hr~~	~~N~~
~~254S~~	~~223E~~	~~Space Heater~~	~~2017~~	~~1 mmbtu/hr~~	~~N~~

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~~255S~~	~~224E~~	~~Cooling Tower~~	~~2017~~	~~7,000 gpm~~	~~N~~

1.0 Emission Units

256S	225E	Plastics Molding Emergency	2017	70 kw	NA
257S	226E	Case Printing Ink	2017	3,430 lb/yr	NA
258S	227E	Case Packing Glue	2017	690,080 lb/yr	NA

2.1. General Conditions

2.2. Definitions

2.2.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.

2.2.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.

2.2.3. "Secretary" means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45 CSR § 30-2.12.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.

2.3. Acronyms

CAAA	Clean Air Act Amendments	**ppmv**	volume
CBI	Confidential Business Information	**PSD**	Prevention of Significant Deterioration
CEM	Continuous Emission Monitor	**psi**	Pounds per Square Inch
CES	Certified Emission Statement	**SIC**	Standard Industrial Classification
C.F.R. *or* CFR	Code of Federal Regulations	**SIP**	State Implementation Plan
CO	Carbon Monoxide	**SO_2**	Sulfur Dioxide
C.S.R. *or* CSR	Codes of State Rules	**TAP**	Toxic Air Pollutant
DAQ	Division of Air Quality	**TPY**	Tons per Year
DEP	Department of Environmental Protection	**TRS**	Total Reduced Sulfur
dscm	Dry Standard Cubic Meter	**TSP**	Total Suspended Particulate
FOIA	Freedom of Information Act	**USEPA**	United States Environmental Protection Agency
HAP	Hazardous Air Pollutant	**UTM**	Universal Transverse Mercator
HON	Hazardous Organic NESHAP	**VEE**	Visual Emissions Evaluation
HP	Horsepower	**VOC**	Volatile Organic Compounds
lbs/hr	Pounds per Hour	**VOL**	Volatile Organic Liquids
LDAR	Leak Detection and Repair		
M	Thousand		
MACT	Maximum Achievable Control Technology		
MDHI	Maximum Design Heat Input		
MM	Million		
MMBtu/hr *or* mmbtu/hr	Million British Thermal Units per Hour		
MMCF/hr *or* mmcf/hr	Million Cubic Feet per Hour		
NA	Not Applicable		
NAAQS	National Ambient Air Quality Standards		
NESHAPS	National Emissions Standards for Hazardous Air Pollutants		
NO_x	Nitrogen Oxides		
NSPS	New Source Performance Standards		
PM	Particulate Matter		
$PM_{2.5}$	Particulate Matter less than 2.5µm in diameter		
PM_{10}	Particulate Matter less than 10µm in diameter		
Ppb	Pounds per Batch		
pph	Pounds per Hour		
ppm	Parts per Million		
Ppmv or	Parts per million by		

2.4. Authority

This permit is issued in accordance with West Virginia Air Pollution Control Law W.Va. Code §§22-5-1 et seq. and the following Legislative Rules promulgated thereunder:

2.4.1. 45CSR13 – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation;*

2.5. Term and Renewal

2.5.1. This permit shall remain valid, continuous and in effect unless it is revised, suspended, revoked or otherwise changed under an applicable provision of 45CSR13 or any applicable legislative rule.

2.6. Duty to Comply

2.6.1. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Application R13-3316 and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to;
[45CSR§§13-5.11 and 13-10.3]

2.6.2. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA;

2.6.3. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7;

2.6.4. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses and/or approvals from other agencies; i.e., local, state and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.

2.7. Duty to Provide Information

The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for administratively updating, modifying, revoking or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.

2.8. Duty to Supplement and Correct Information

Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.

2.9. Administrative Update

The permittee may request an administrative update to this permit as defined in and according to the procedures specified in 45CSR13.
[45CSR§13-4]

2.10. Permit Modification

The permittee may request a minor modification to this permit as defined in and according to the procedures specified in 45CSR13.
[45CSR§13-5.4.]

2.11. Major Permit Modification

The permittee may request a major modification as defined in and according to the procedures specified in 45CSR14 or 45CSR19, as appropriate.
[45CSR§13-5.1]

2.12. Inspection and Entry

The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;

d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

2.13. Emergency

2.13.1. An "emergency" means any situation arising from sudden and reasonable unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

2.13.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of Section 2.12.3 are met.

2.13.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;

b. The permitted facility was at the time being properly operated;

c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and,

d. The permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice must contain a detailed description of the emergency, any steps taken to mitigate emission, and corrective actions taken.

2.13.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has

the burden of proof.

2.13.5. The provisions of this section are in addition to any emergency or upset provision contained in any applicable requirement.

2.14. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it should have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.

2.15. Suspension of Activities

In the event the permittee should deem it necessary to suspend, for a period in excess of sixty (60) consecutive calendar days, the operations authorized by this permit, the permittee shall notify the Secretary, in writing, within two (2) calendar weeks of the passing of the sixtieth (60) day of the suspension period.

2.16. Property Rights

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

2.17. Severability

The provisions of this permit are severable and should any provision(s) be declared by a court of competent jurisdiction to be invalid or unenforceable, all other provisions shall remain in full force and effect.

2.18. Transferability

This permit is transferable in accordance with the requirements outlined in Section 10.1 of 45CSR13. **[45CSR§13-10.1]**

2.19. Notification Requirements

The permittee shall notify the Secretary, in writing, no later than thirty (30) calendar days after the actual startup of the operations authorized under this permit.

2.20. Credible Evidence

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defense otherwise available to the permittee including, but not limited to, any challenge to the credible evidence rule in the context of any future proceeding.

3.0. Facility-Wide Requirements

3.1. Limitations and Standards

3.1.1. **Open burning.** The open burning of refuse by any person, firm, corporation, association or public agency is prohibited except as noted in 45CSR§6-3.1.
[45CSR§6-3.1.]

3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause, suffer, allow or permit any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.
[45CSR§6-3.2.]

3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them.
[40CFR§61.145(b) and 45CSR§34]

3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.
[45CSR§4-3.1 State-Enforceable only.]

3.1.5. **Permanent shutdown.** A source which has not operated at least 500 hours in one 12-month period within the previous five (5) year time period may be considered permanently shutdown, unless such source can provide to the Secretary, with reasonable specificity, information to the contrary. All permits may be modified or revoked and/or reapplication or application for new permits may be required for any source determined to be permanently shutdown.
[45CSR§13-10.5.]

3.1.6. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45 C.S.R. 11.
[45CSR§11-5.2.]

3.2. Monitoring Requirements

[Reserved]

3.3. Testing Requirements

3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63 in accordance with the Secretary's delegated authority and

any established equivalency determination methods which are applicable. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4 or 45CSR§13-5.4 as applicable.

b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4 or 45CSR§13-5.4 as applicable.

c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.

d. The permittee shall submit a report of the results of the stack test within sixty (60) days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1.; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:

1. The permit or rule evaluated, with the citation number and language;
2. The result of the test for each permit or rule condition; and,
3. A statement of compliance or noncompliance with each permit or rule condition.

[WV Code § 22-5-4(a)(14-15) and 45CSR13]

3.4. Recordkeeping Requirements

3.4.1. **Retention of records.** The permittee shall maintain records of all information (including monitoring data, support information, reports and notifications) required by this permit recorded in a form suitable and readily available for expeditious inspection and review. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation. The files shall be maintained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. Where appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.

3.4.2. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.
[45CSR§4. *State-Enforceable only.*]

3.5. Reporting Requirements

3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and

information in the document are true, accurate and complete.

3.5.2. **Confidential information.** A permittee may request confidential treatment for the submission of reporting required by this permit pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.

3.5.3. **Correspondence.** All notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class with postage prepaid to the address(es) set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

If to the DAQ:

Director
WVDEP
Division of Air Quality
601 57th Street, SE
Charleston, WV 25304-2345

If to the USEPA:

Associate Director
Office of Air Enforcement and Compliance Assistance
(3AP20)
U. S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

3.5.4. **Operating Fee.**

3.5.4.1. In accordance with 45CSR30 – Operating Permit Program, the permittee shall submit a Certified Emissions Statement (CES) and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality. A receipt for the appropriate fee shall be maintained on the premises for which the receipt has been issued, and shall be made immediately available for inspection by the Secretary or his/her duly authorized representative.

3.5.4.2. In accordance with 45CSR30 – Operating Permit Program, enclosed with this permit is a Certified Emissions Statement (CES) Invoice, from the date of initial startup through the following June 30. Said invoice and the appropriate fee shall be submitted to this office no later than 30 days prior to the date of initial startup. For any startup date other than July 1, the permittee shall pay a fee or prorated fee in accordance with the Section 4.5 of 45CSR22. A copy of this schedule may be found attached to the Certified Emissions Statement (CES) Invoice.

3.5.5. **Emission inventory.** At such time(s) as the Secretary may designate, the permittee herein shall prepare and submit an emission inventory for the previous year, addressing the emissions from the facility and/or process(es) authorized herein, in accordance with the emission inventory submittal requirements of the Division of Air Quality. After the initial submittal, the Secretary may, based upon the type and quantity of the pollutants emitted, establish a frequency other than on an annual basis.

4.1. Source-Specific Requirements

Commented [AC2]: General comment – Need to check all permit condition references, if conditions are removed or added.

4.2. Limitations and Standards

4.1.1 The Procter & Gamble Manufacturing Company, Tabler Station Facility shall consist of only the pollutant-emitting equipment and processes identified under Section 1.0 of this permit and any other processes/units defined as De Minimis per 45CSR13. In accordance with the information filed in Permit Application R13-3316, the equipment shall be installed, maintained, and operated so as to minimize any fugitive escape of pollutants and the equipment/processes shall use the specified control devices.

4.1.2. Emissions from the facility shall not exceed the following:

Emission Unit Group Name	NO_x		SO_2		VOC		PM		CO	
	lb/hr	tpy	lb/hr	tpy	lb~~n~~/hr	tpy	lb/hr	tpy	lb/hr	tpy
Scrubber Stacks	1.06	4.60~~9~~ 6	~~4.22.~~ 10	1.65 4	~~1.83.6~~ 0	4.24	6.9~~13.8~~ ~~0~~	23.70	0.06 ~~05~~	0.22~~4~~ ~~0~~
Surfactant Startup~~erubber~~ Preheaters[1]	0.78	0.03	0.01	0.01	0.09	0.01	0.12	0.01	1.30	0.05
Surfactant Manufact. Tanks	--	--	--	--	0.28	1.20	--	--	--	--
Truck and Rail Loading	--	--	--	--	0.02	0.06	--	--	--	--
Liq. Soap Outdoor Tanks	--	--	--	--	0.24	1.80	--	--	--	--
Liq. Soap Indoor Tanks	--	--	--	--	0.20	0.80	--	--	--	--
Liq Soap Packing & Capping	--	--	--	--	0.01	0.01	--	--	--	--
Rotoclones and Liquid Soap Fugitives	--	--	--	--	33.23~~7~~	33.42	4.57	20.06	--	--
Liq. Soap RTO[2]	0.24	1.10	0.01	0.01	213.56	8.00	0.02	0.07	1.30	5.80
Dry Consumer Prod Manuf. Out. Tanks	--	--	--	--	0.07	0.31	--	--	--	--
Dry Consumer Prod Manuf. In. Tanks	--	--	--	--	0.09	0.36	--	--	--	--
Dry Consumer Prod Baghouses/Fabric Filters	--	--	--	--	--	--	3.81	16.71	--	--
Dry Consumer Prod Manufact. Fugitives	--	--	--	--	2.0	8.70	--	--	--	--
Main Facility Boilers	11.30	49.50	0.10	0.41	0.55	2.49	1.17	5.00	5.70	25.00
Main Facility Cooling Towers	--	--	--	--	--	--	1.35~~0.~~	~~3~~5.90	--	--
Main Facility Engines	14.10	3.51	0.05	0.02	0.29	0.07	0.29	0.07	2.75	0.70
Main Facility Process Heaters	0.90	3.90	0.02	0.05	0.10	0.44	0.14	0.60	1.51	6.60
Water/waste water Treatment	--	--	--	--	2.99	13.04	--	--	--	--
Case Printing Ink & Case Packing Glue Usage	--	--	--	--	0.14	0.59	--	--	--	--
Plastics Molding Cyclones	--	--	--	--	--	--	0.08	0.35	--	--
Plastics Moldings Silos	--	--	--	--	--	--	0.80	3.50	--	--
Plastic Regrind	--	--	--	--	--	--	0.04	0.17	--	--
Plastic Molding Fugitives	--	--	--	--	2.07	9.07	--	--	--	--

[1] Surfactant startup preheaters vent to scrubber stacks. Emissions are additive to surfactant scrubber emissions.
[2] Maximum hourly VOC emissions of 213.5 lb/hr (less than 24 hours per year). Maximum hourly VOC controlled emissions of 6.4 lb/hr.

Plastic Molding Space Heat	0.83	3.65	0.01	0.01	0.10	0.41	0.13	0.56	1.40	6.13
Plastic Molding Cool. Tower	--	--	--	--	--	--	0.428	1.238	--	--
Plastic Molding Engines	0.42	0.11	0.01	0.01	0.21	0.06	26.140.	75.930	0.831	44.480
Total	**29.63**	**66.40**	**4.41**	**2.16**	**27.122**	**85.08**	**52.281**	**78.511**	**28.02**	**88.964**

4.1.3 The permittee shall maintain the pH of the scrubbing liquor to a level at least as alkaline as it was during the most recent test which showed compliance with the emission levels of 4.1.1.

4.1.4 Each surfactant startup~~scrubber~~ preheater shall not operate more than 72 hours per year.

4.1.5 All process tanks for Liquid Soap A and B manufacturing which incorporate dust control systems shall be equipped with rotoclones for ~~dust control~~emissions control. Said roto~~l~~clones shall be designed, installed, operated and maintained so as to achieve emissions limitations outlined in 4.1.2.~~a minimum collection efficiency of at least 96%.~~

4.1.6 All ~~hot~~mixing process ~~vessels~~~~process tanks~~ for Liquid Soap A shall be equipped with an RTO to be operated anytime the mixing process uses the heated volatile processing aid~~hot Isopropyl Alcohol~~. Said RTO shall be designed, installed, operated and maintained so as to achieve a minimum destruction efficiency of at least 97%. Operation of the hot mixing process vessels using the heated volatile processing aid without RTO shall be maintained at less than 24 hours per year.

~~4.1.6~~

4.1.7 The Dry Consumer Laundry and Cleaning Products area shall be equipped with fabric filters to control particulate emissions.

~~4.1.8 When adding liquid raw materials to Dry Consumer Products A, the area of coated substate (as measured from the point of application until the substrate is wound for storage) shall not exceed 1,050 feet.~~

~~4.1.9~~4.1.8 Boiler Nos. 1 and 2 shall not exceed a heat input of 62 mmbtu/hr each. Boiler No. 3 shall not exceed a heat input of 31 mmbtu/hr. All boilers shall be fired exclusively with pipeline quality natural gas.

~~4.1.10~~4.1.9 Boiler Nos. 1 and 2 shall not consume more than 543 mmscf of fuel per year each. Boiler No.3 shall not consume more than 272 mmscf of fuel per year.

~~4.1.11~~4.1.10 Visible emissions from any boiler shall not exceed 10% opacity based on a six minute block average.
[45CSR§2-3.1.]

~~4.1.12~~4.1.11 The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction and actual startup of the natural gas boilers, as provided by §60.7 of this part.
[40 CFR §60.48c(a)]

~~4.1.13~~4.1.12 The cooling towers shall be operated with a drift rate of no more than 0.005%. Additionally, the total dissolved solids (TDS) content of the cooling tower water shall not exceed ~~61,600~~000 ppm.

~~4.1.14~~4.1.13 The three emergency generators (205S, 206S and 207S) and two fire water pump engines (203S and 204S) shall fire only ultra low sulfur diesel fuel with a sulfur content of no greater than 0.0015% by weight.

~~4.1.15~~4.1.14 Each of the three Caterpillar C15 emergency generators (205S, 206S and 207S) shall not consume more than 28.6 gallons of fuel oil per hour.

~~4.1.16~~4.1.15 Each of the two Clark fire pump engines (203S and 204S) shall not consume more than 16.13 gallons per hour.

~~4.1.17~~4.1.16 The 4 stroke rich burn emergency generator (256S) shall fire only pipeline quality natural gas. Said engine shall not consume more than 196 scf per hour of natural gas.

4.1.18. Emissions from the emergency generators and fire water pump engines shall not exceed the following (all limits in g/kW-hr, unless otherwise noted):
[40 CFR §60.4205]

Engine	NMHC + NO_x	CO	PM
Fire Water Pump Engine (203)	4.0	--	0.20
Fire Water Pump Engine (204)	4.0	--	0.20
Emergency Generator (205)	4.0	3.5	0.20
Emergency Generator (206)	4.0	3.5	0.20
Emergency Generator (207)	4.0	3.5	0.20
Emergency Generator (256)	10 g/hp-hr	387 g/hp-hr	--

4.1.18.1 Compliance with the above limits shall be determined by purchasing certified engines. **[40 CFR §60.4211(c)]**

4.1.19 The emergency generators (205S, 206S and 207S) and fire pump engines (203S and 204S) shall fire only nonroad diesel fuel that meets the requirements of 40 CFR 80.510(b). **[40 CFR §60.4207(b)]**

4.1.20 The emergency generators (205S, 206S and 207S) and fire pump engines (203S and 204S) must meet all applicable requirements of 40 CFR 60 Subpart IIII. **[40 CFR §63.6590(c)(1)]**

4.1.21 The emergency generator (256S) and must meet all applicable requirements of 40 CFR 60 Subpart JJJJ. **[40 CFR §63.6590(c)(1)]**

~~4.1.21 The permittee shall use only the following types and amounts of water and wastewater pretreatment chemicals:~~

~~Material~~	~~Usage Limit (kg/yr)~~
~~Nalco 3DT 265~~	~~No limit~~
~~Nalco 7320~~	~~112,347~~
~~Nalco 7330~~	~~57,921~~
~~Nalco Stabrex ST70~~	~~No limit~~
~~Nalco Nexguard 22310~~	~~No limit~~
~~Nalco 1720~~	~~No limit~~
~~Nalco 1820~~	~~280~~
~~Sodium Hypochlorite~~	~~4,380~~

4.1.22 Cyclones shall be used to control PM emissions from rail car unloading of pellets to rail car unloading feeder. Said cyclones shall be designed, installed, operated and maintained so as to achieve the emission limits of 4.1.2~~a minimum control efficiency of at least 90%~~.

4.1.23 The total amount of pellets unloaded into the 24 plastics molding silos combined shall not exceed 100,000 tons per year.

4.1.24 PM emissions from the plastic regrind process shall be controlled with a bin vent filter. Said filter shall be designed, installed, operated and maintained so as to achieve the emission limits of 4.1.2~~a minimum control efficiency of at least 95%~~.

4.1.25 The total amount of pellets reground shall not exceed 32,000 tons per year.

~~4.1.26 No more than 6 tons per year of isopropyl alcohol and parts washing solvent combined shall be used for parts washing/process cleaning purposes.~~

4.1.27. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.
[45CSR§13-5.11.]

4.2. Testing Requirements

Commented [AC3]: General comment – Need to check all permit condition references, if conditions are removed or added.

4.2.1. In order to determine compliance with the SO_2, VOC and PM scrubber stack emission limitations of 4.1.2 of this permit, the permittee shall perform EPA approved ~~stacktestingstack testing~~ on each scrubber stack within 180 days of startup. Said testing shall utilize EPA approved methods unless otherwise approved by the Director.

4.2.2 In order to determine compliance with the VOC rotoclone emission limitations of 4.1.2 of this permit, the permittee shall perform EPA approved ~~stacktestingstack testing~~ on at least one Liquid Soap A and Liquid Soap B rotoclone within 180 days of startup. Said testing shall utilize EPA approved methods unless otherwise approved by the Director.

4.2.3 In order to determine compliance with the VOC RTO emission limitations of 4.1.2 of this permit, the permittee shall perform EPA approved ~~stacktestingstack testing~~ on the RTO stack within 180 days of startup. Said testing shall utilize EPA approved methods unless otherwise approved by the Director.

4.2.4 The testing required under conditions 4.2.1 through 4.2.3 of this permit shall be repeated at least once every 5 years.

4.2.5 In order to determine compliance with the opacity limits of 4.1.11of this permit, the permittee shall conduct visible emission checks and / or opacity monitoring and recordkeeping for each boiler stack.

a. The visible emission check shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40CFR Part 60, Appendix A, Method 22 or from the lecture portion of the 40CFR Part 60, Appendix A, Method 9 certification course.

b. Visible emission checks shall be conducted at least once per calendar month with a maximum of forty-five (45) days between consecutive readings. These checks shall be performed for a sufficient time interval, but no less than one (1) minute, to determine if any visible emissions are present. Each observation must be recorded as either visible emissions observed or no visible emissions observed. Visible emission checks shall be performed during periods of normal facility operation and appropriate weather conditions.

c. If visible emissions are present at a source(s) the permittee shall perform Method 9 readings to confirm that visible emissions are within the limits of 4.1.12 of this permit. Said Method 9 readings shall be taken as soon as practicable, but within seventy-two (72) hours of the Method 22 emission check.

~~c.~~d. If, one year of monthly Method 22 readings show that there are no visible emissions, then the frequency of observations can be reduced to quarterly. If, during quarterly sampling, visible emissions are observed, then the frequency of observations shall be increased to monthly.

~~4.2.6~~ At least once a month, the permittee shall take a grab sample of the cooling tower circulating water from each cooling tower and verify the total dissolved solids content as limited under 4.1.13 ~~and 4.3.14~~ of this permit. If one year of monitoring indicates less than 80% of the levels of 4.1.13 are maintained, then the frequency of sampling of cooling tower circulating water can be reduced to quarterly. If, during quarterly sampling, greater than 80% of the levels of 4.1.13 are measured, the frequency of sampling shall be increased to monthly.

4.3. Monitoring and Recordkeeping Requirements

Commented [AC4]: General comment – Need to check all permit condition references, if conditions are removed or added.

4.3.1. **Record of Monitoring.** The permittee shall keep records of monitoring information that include the following:

a. The date, place as defined in this permit and time of sampling or measurements;

b. The date(s) analyses were performed;

c. The company or entity that performed the analyses;

d. The analytical techniques or methods used;

e. The results of the analyses; and

f. The operating conditions existing at the time of sampling or measurement.

4.3.2. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.

4.3.3. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:

a. The equipment involved.

b. Steps taken to minimize emissions during the event.

c. The duration of the event.

d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

e. The cause of the malfunction.

f. Steps taken to correct the malfunction.

g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

4.3.4. In order to determine compliance with 4.1.3 of this permit, Procter and Gamble shall monitor and record the pH of the scrubber liquor on at least an hourly basis.

4.3.5 In order to determine compliance with 4.1.4 of this permit, Procter and Gamble shall monitor and record the annual hours~~daily hours~~ of operation of each surfactant startup~~rubber~~ preheater.

4.3.6 In order to determine compliance with the tank VOC emission limits of 4.1.2, Procter and Gamble shall monitor and record the substance (and its associated vapor pressure) stored in each storage tank.

~~4.3.7 In order to determine compliance with the truck loading emission limits of 4.1.2, Procter and Gamble shall monitor and record the total amount of precipitated acid mix (PAM) and surfactant loaded out into trucks, on at least a monthly basis.~~

~~4.3.8~~4.3.7 ~~In order to determine compliance with the liquid soap packing and capping emission limits of 4.1.2, Procter and Gamble shall monitor and record the total amount of Soap A and B packaged on at least a monthly basis.~~

4.3.94.3.8 In order to determine compliance 4.1.5 and with the rotoclone emission limits of 4.1.2, Procter and Gamble shall monitor and record the pressure drop across each rotoclone on at least a monthly~~weekly~~ basis. ~~Additionally, Procter and Gamble shall monitor and record the amount of liquid soap processed through equipment serviced by each rotoclone.~~

4.3.9 In order to determine compliance with the rotoclone and fugitive emissions limits of 4.1.2, the throughput of volatile processing aid shall be monitored and recorded on at least a monthly basis.

4.3.10 In order to determine compliance with the RTO emission limits of 4.1.2 and the control efficiency requirement of 4.1.6, Procter and Gamble shall monitor and record the internal temperature of the RTO when the RTO is in use on at least an hourly basis and shall track all hours of operation with volatile processing aid when RTO is not in use.

4.3.11 In order to determine compliance with the Dry Consumer Products baghouse emission limits of 4.1.2, Procter and Gamble shall monitor and record the pressure drop across each baghouse on at least a weekly basis.

4.3.12 In order to determine compliance with the dry consumer products A fugitive emission limits of 4.1.2, ~~and the operational limit of 4.1.8,~~ Procter and Gamble shall monitor and record the vapor pressure of ~~any~~ additive ~~or perfume~~ used and the area of the coated substrate (as measured from the point of application until the substrate is wound for storage). Procter and Gamble shall calculate the emissions using the methodology outlined in EPA's 2007 Emission Inventory Improvement Program's Technical Report Series Volume II Section 16, equations 3-24 and 3-27.

4.3.13 In order to determine compliance with the boiler emission limits of 4.1.2 and the operational limits of 4.1.9 and 4.1.10, Procter and Gamble shall monitor and record the amount and type of fuel consumed by each boiler on at least a monthly basis.

4.3.14 In order to determine compliance with the cooling tower emission limits of 4.1.2 and the operational limits of 4.1.13, Procter and Gamble shall monitor and record the TDS content of the cooling tower water (via either conductivity or lab testing) on at least a monthly basis. If one year of monitoring indicates less than 80% of the levels of 4.1.13 are maintained, then the frequency of sampling of cooling tower circulating water can be reduced to quarterly. If, during quarterly sampling, greater than 80% of the levels of 4.1.13 are measured, the frequency of sampling shall be increased to monthly.

4.3.15 In order to determine compliance with all Reciprocating Internal Combustion Engine (RICE) emission limits of 4.1.2 and the operational limits of 4.1.14, 4.1.15, 4.1.16, ~~and~~ 4.1.17, 4.1.18, 4.1.19, 4.1.20, Procter and Gamble shall monitor and record the number of hours of operation of each RICE on at least a monthly basis, the type and amount of fuel consumed by each RICE on at least a monthly basis, and the sulfur content of any fuel oil consumed by any RICE.

4.3.16 In order to determine compliance with the water/waste water treatment emission limits of 4.1.2 ~~and the operational limits of 4.1.21 of this permit~~, Procter and Gamble shall monitor and record the type, amount, VOC and HAP content of any water/waste water pretreatment chemicals used.

4.3.17 In order to determine compliance with the case packer ~~I~~ink and case packer glue emission limits of 4.1.2, Procter and Gamble shall monitor and record the amount of ink and glue used at the facility that contains VOC or HAP on at least a monthly basis.

4.3.18 In order to determine compliance with the plastic molding cyclone emission limits of 4.1.2, ~~and the control efficiency requirement of 4.1.22,~~ Procter and Gamble shall monitor and record the pressure drop across each cyclone on at least a monthly ~~weekly~~ basis.

4.3.19 In order to determine compliance with the plastic molding silo emission limits of 4.1.2 and the operational limits of 4.1.23, Procter and Gamble shall monitor and record the amount of plastic pellets transferred to the storage silo on at least a monthly basis.

4.3.20 In order to determine compliance with the plastic regrind process emission limits of 4.1.2 ~~and the control efficiency requirement of 4.1.24,~~ Procter and Gamble shall monitor and record the pressure drop across the bin vent filter on at least a monthly ~~weekly~~ basis. Additionally, Procter and Gamble

shall monitor and record the total amount of pellets reground on at ~~leat~~least a monthly basis.

4.3.21 In order to determine compliance with the plastic molding fugitive emission limits of 4.1.2 and the ~~operational limit of 4.1.26,~~ Procter and Gamble shall monitor and record the amount of ~~isopropyl alcohol and parts washing~~ volatile solvents used for plastics molding ~~parts washing~~/process cleaning purposes on at least a monthly basis.

4.4. Reporting Requirements

Commented [AC5]: General comment – Need to check all permit condition references, if conditions are removed or added.

4.4.1. The permittee shall submit any and all applicable notifications and reports required under 40 CFR 60 Subpart IIII.
[40CFR §60.4214]

4.4.2 The permittee shall submit any and all applicable notifications and reports required under 40 CFR 60 Subpart JJJJ.
[40CFR §60.4245]

4.4.3 The permittee shall submit any and all applicable notifications and reports required under 40 CFR 60 Subpart Dc.
[40 CFR §60.48c]

CERTIFICATION OF DATA ACCURACY

I, the undersigned, hereby certify that, based on information and belief formed after reasonable inquiry, all information contained in the attached_____, representing the period beginning_____and ending_____, and any supporting documents appended hereto, is true, accurate, and complete.

Signature[1] _____ _____
(please use blue ink) Responsible Official or Authorized Representative Date

Name and Title _____ _____
(please print or type) Name Title

Telephone No._____ Fax No. _____

---

[1] This form shall be signed by a "Responsible Official." "Responsible Official" means one of the following:

a. For a corporation: The president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:

(I) the facilities employ more than 250 persons or have a gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars), or

(ii) the delegation of authority to such representative is approved in advance by the Director;

b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;

c. For a municipality, State, Federal, or other public entity: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of USEPA); or

d. The designated representative delegated with such authority and approved in advance by the Director.

INTERNAL PERMITTING DOCUMENT TRACKING MANIFEST

Company Name Procter & Gamble

Permitting Action Number 13-3316 Total Days 20 DAQ Days 20

Permitting Action:

- ○ Permit Determination
- ○ General Permit
- ○ Administrative Update
- ○ Temporary
- ○ Relocation
- ◉ Construction
- ○ Modification
- ○ PSD (Rule 14)
- ○ NNSR (Rule 19)

Documents Attached:

- ◉ Engineering Evaluation/Memo
- ◉ Draft Permit
- ◉ Notice
- ○ Denial
- ○ Final Permit/General Permit Registration
- ○ Completed Database Sheet
- ○ Withdrawal
- ○ Letter
- ○ Other *(specify)* _____

Date	From	To	Action Requested
11-2-16	Steven Pursley	Bud	Please Review
11/3	Bud	Steve	See comments - Address - CAO to Notice

Entire Document
NON-CONFIDENTIAL

NOTE: Retain a copy of this manifest for your records when transmitting your document(s).

West Virginia Department of Environmental Protection
Division of Air Quality

Earl Ray Tomblin
Governor

Randy C. Huffman
Cabinet Secretary

Permit to Construct

R13-3316

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45 C.S.R. 13 — Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation. The permittee identified at the facility listed below is authorized to construct the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Issued to:
Procter and Gamble Manufacturing Company
Tabler Station Facility
003-00154

William F. Durham
Director

Issued: DRAFT

Facility Location:	Inwood, Berkeley County, West Virginia
Mailing Address:	Sharon Woods Innovation Center A2M11-3 11510 Reed Hartman Highway Cincinnati, OH 45241
Facility Description:	Consumer products manufacturing facility
NAICS Codes:	325612, 325613, 325620
UTM Coordinates:	757.0 km Easting • 4,366.0 km Northing • Zone 17
Permit Type:	Construction

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.

As a result of this permit, the source is a nonmajor or area source subject to 45CSR30. Therefore, the facility is not subject to the permitting requirements of 45CSR30 and is classified as a deferred source.

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1.0 Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
1S	1E	Surfactant Making Process	2017	3,000 gal/hr	1C
2S	2E	Surfactant Making Process	2017	3,000 gal/hr	2C
3S	3E	Surfactant Tank	2017	120,762 gal	N
4S	4E	Surfactant Tank	2017	48,345 gal	N
5S	5E	Surfactant Tank	2017	40, 109 gal	N
6S	6E	Surfactant Tank	2017	40, 109 gal	N
7S	7E	Surfactant Tank	2017	15,125 gal	N
8S	8E	Surfactant Tank	2017	15,125 gal	N
9S	9E	Surfactant Tank	2017	15,125 gal	N
10S	10E	Surfactant Tank	2017	72,475 gal	N
11S	11E	Surfactant Tank	2017	72,475 gal	N
12S	12E	Surfactant Tank	2017	72,475 gal	N
13S	13E	Surfactant Tank	2017	72,475 gal	N
14S	14E	Surfactant Tank	2017	72,475 gal	N
15S	15E	Surfactant Tank	2017	72,475 gal	N
16S	16E	Surfactant Tank	2017	26,083 gal	N
17S	17E	Surfactant Tank	2017	15,125 gal	N
18S	18E	Surfactant Tank	2017	15,125 gal	N
19S	19E	Surfactant Bulk Liquid Transfer	2017	17,150,000 gal/yr	N
20S	20E	Liquid Soap A & B Tank	2017	39,626 gal	N
21S	21E	Liquid Soap A & B Tank	2017	39,626 gal	N
22S	22E	Liquid Soap A & B Tank	2017	39,626 gal	N
23S	23E	Liquid Soap A & B Tank	2017	7,925 gal	N
24S	24E	Liquid Soap A & B Tank	2017	7,925 gal	N
25S	25E	Liquid Soap A & B Tank	2017	39,626 gal	N
26S	26E	Liquid Soap A & B Tank	2017	15,850 gal	N
27S	27E	Liquid Soap A & B Tank	2017	39,626 gal	N
28S	28E	Liquid Soap A & B Tank	2017	26,417 gal	N
29S	29E	Liquid Soap A & B Tank	2017	15,850 gal	N
30S	30E	Liquid Soap A & B Tank	2017	26,417 gal	N
31S	31E	Liquid Soap A & B Tank	2017	15,850 gal	N

1.0 Emission Units

32S	32E	Liquid Soap A & B Tank	2017	15,850 gal	N
33S	33E	Liquid Soap A & B Tank	2017	7,925 gal	N
34S	34E	Liquid Soap A & B Tank	2017	7,925 gal	N
35S	35E	Liquid Soap A & B Tank	2017	7,925 gal	N
36S	36E	Liquid Soap A & B Tank	2017	7,925 gal	N
37S	37E	Liquid Soap A & B Tank	2017	7,925 gal	N
38S	38E	Liquid Soap A & B Tank	2017	396 gal	N
40S	40E	Liquid Soap A & B Tank	2017	396 gal	N
41S	41E	Liquid Soap A & B Tank	2017	396 gal	N
42S	42E	Liquid Soap A & B Tank	2017	396 gal	N
43S	43E	Liquid Soap A & B Tank	2017	396 gal	N
44S	44E	Liquid Soap A & B Tank	2017	396 gal	N
45S	45E	Liquid Soap A & B Tank	2017	396 gal	N
46S	46E	Liquid Soap A & B Tank	2017	396 gal	N
47S	47E	Liquid Soap A & B Tank	2017	396 gal	N
50S	50E	Liquid Soap A & B Tank	2017	7,925 gal	N
51S	51E	Liquid Soap A & B Tank	2017	396 gal	N
52S	52E	Liquid Soap A & B Tank	2017	396 gal	N
53S	53E	Liquid Soap A & B Tank	2017	7,925 gal	N
54S	54E	Liquid Soap A & B Tank	2017	660 gal	N
55S	55E	Liquid Soap A & B Tank	2017	396 gal	N
56S	56E	Liquid Soap A & B Tank	2017	7,275 gal	N
57S	57E	Liquid Soap A & B Tank	2017	1,057 gal	N
59S	59E	Liquid Soap A & B Tank	2017	396 gal	N
60S	60E	Liquid Soap A & B Tank	2017	132 gal	N
61S	61E	Liquid Soap A & B Tank	2017	396 gal	N
63S	63E	Liquid Soap A & B Tank	2017	396 gal	N
64S	64E	Liquid Soap A & B Tank	2017	396 gal	N
65S	65E	Liquid Soap A & B Tank	2017	396 gal	N
66S	66E	Liquid Soap A & B Tank	2017	396 gal	N
67S	67E	Liquid Soap A & B Tank	2017	396 gal	N
68S	68E	Liquid Soap A & B Tank	2017	396 gal	N
69S	69E	Liquid Soap A & B Tank	2017	396 gal	N

1.0 Emission Units

70S	70E	Liquid Soap A & B Tank	2017	396 gal	N
71S	71E	Liquid Soap A & B Tank	2017	396 gal	N
72S	72E	Liquid Soap A & B Tank	2017	396 gal	N
73S	73E	Liquid Soap A & B Tank	2017	396 gal	N
74S	74E	Liquid Soap A & B Tank	2017	396 gal	N
75S	75E	Liquid Soap A & B Tank	2017	396 gal	N
76S	76E	Liquid Soap A & B Tank	2017	396 gal	N
77S	77E	Liquid Soap A & B Tank	2017	396 gal	N
87S	87E	Liquid Soap A & B Tank	2017	1,585 gal	N
88S	88E	Liquid Soap A & B Tank	2017	1,585 gal	N
89S	89E	Liquid Soap A & B Tank	2017	1,585 gal	N
90S	90E	Liquid Soap A & B Tank	2017	1,585 gal	N
91S	91E	Liquid Soap A & B Tank	2017	1,585 gal	N
92S	92E	Liquid Soap A & B Tank	2017	1,585 gal	N
93S	93E	Liquid Soap A & B Tank	2017	1,585 gal	N
94S	94E	Liquid Soap A & B Tank	2017	1,585 gal	N
94bS	94bE	Liquid Soap A & B Tank	2017	1,585 gal	N
94cS	94cE	Liquid Soap A & B Tank	2017	1,585 gal	N
94dS	94dE	Liquid Soap A & B Tank	2017	1,585 gal	N
94eS	94eE	Liquid Soap A & B Tank	2017	1,585 gal	N
95S	95E	Liquid Soap A & B Tank	2017	1,585 gal	N
96S	96E	Liquid Soap A & B Tank	2017	1,585 gal	N
97S	97E	Liquid Soap A & B Tank	2017	1,585 gal	N
98S	98E	Liquid Soap A & B Tank	2017	1,585 gal	N
99S	99E	Liquid Soap A & B Tank	2017	1,585 gal	N
100S	100E	Liquid Soap A & B Tank	2017	1,585 gal	N
101S	101E	Liquid Soap A & B Tank	2017	1,585 gal	N
102S	102E	Liquid Soap A & B Tank	2017	1,585 gal	N
103S	103E	Liquid Soap A & B Tank	2017	1,585 gal	N
104S	104E	Liquid Soap A & B Tank	2017	1,585 gal	N
105S	105E	Liquid Soap A & B Tank	2017	1,585 gal	N
106S	106E	Liquid Soap A & B Tank	2017	1,585 gal	N
107S	107E	Liquid Soap A & B Tank	2017	1,585 gal	N

1.0 Emission Units

108S	108E	Liquid Soap A & B Tank	2017	1,585 gal	N
109S	109E	Liquid Soap A & B Tank	2017	1,585 gal	N
110S	110E	Liquid Soap A & B Tank	2017	1,585 gal	N
111S	111E	Liquid Soap A & B Tank	2017	1,585 gal	N
112S	112E	Liquid Soap A & B Tank	2017	1,585 gal	N
113S	113E	Liquid Soap A & B Tank	2017	1,585 gal	N
114S	114E	Liquid Soap A & B Tank	2017	1,585 gal	N
115S	115E	Liquid Soap A & B Tank	2017	1,585 gal	N
116S	116E	Liquid Soap A & B Tank	2017	1,585 gal	N
117S	117E	Liquid Soap A & B Tank	2017	1,585 gal	N
118S	118E	Liquid Soap A & B Tank	2017	1,585 gal	N
119S	119E	Liquid Soap A & B Packing/Filling	2017	139,798,617 gal/yr	N
120S	120E	Mixer	2017	1,182.6 mmscf/yr	3C
121S		Mixer	2017		
122S		Premix Tank	2017		
123S		Premix Tank	2017		
124S	121E	Mixer	2017	2,496.6 mmscf/yr	4C
125S		Process Tank	2017		
126S		Process Tank	2017		
127S		Process Tank	2017		
128S	122E	Mixer	2017	2,496.6 mmscf/yr	5C
129S		Process Tank	2017		
130S		Process Tank	2017		
131S		Process Tank	2017		
132S	123E	Mixer	2017	1,655.64 mmscf/yr	6C
133S		Process Tank	2017		
134S		Process Tank	2017		
135S		Process Tank	2017		
136S	124E	Preweigh Station	2017	525.6 mmscf/yr	7C
137S		Preweigh Station	2017		
138S		Preweigh Station	2017		
139S		Preweigh Station	2017		

1.0 Emission Units

140S	125E	Preweigh Station	2017	525.6 mmscf/yr	8C
141S		Preweigh Station	2017		
142S		Preweigh Station	2017		
143S		Preweigh Station	2017		
144S		Sampling Station	2017		
145S	126E	Hot Mix Tank	2017	20,611.765 mscf/yr	14C
146S	127E	Mixer	2017	918.8 mmscf/yr	9C
147S		Process Tank	2017		
148S		Process Tank	2017		
149S	126E	Hot Mix Tank	2017	20,611.765 mscf/yr	14C
150S	128E	Mixer	2017	918.8 mmscf/yr	10C
151S		Process Tank	2017		
152S		Process Tank	2017		
153S	126E	Hot Mix Tank	2017	20,611.765 mscf/yr	14C
154S	129E	Mixer	2017	918.8 mmscf/yr	11C
155S		Process Tank	2017		
156S		Process Tank	2017		
157S	126E	Hot Mix Tank	2017	20,611.765 mscf/yr	14C
158S	130E	Mixer	2017	1603.08 mmscf/yr	12C
159S		Process Tank	2017		
160S		Process Tank	2017		
161S	131E	Process Tank	2017	735.84 mmscf/yr	13C
162S		Process Tank	2017		
163S	132E	Dry Consumer Product Tank	2017	42,879 gal	N
164S	133E	Dry Consumer Product Tank	2017	37,641 gal	N
165S	134E	Dry Consumer Product Tank	2017	6,809 gal	N
166S	135E	Dry Consumer Product Tank	2017	396 gal	N
167S	136E	Dry Consumer Product Tank	2017	396 gal	N
168S	137E	Dry Consumer Product Tank	2017	396 gal	N
169S	138E	Dry Consumer Product Tank	2017	181 gal	N
170S	139E	Dry Consumer Product Tank	2017	181 gal	N
171S	140E	Dry Consumer Product Tank	2017	181 gal	N
172S	141E	Dry Consumer Product Tank	2017	181 gal	N
173S	142E	Dry Consumer Product Tank	2017	181 gal	N

1.0 Emission Units

174S	143E	Dry Consumer Product Tank	2017	181 gal	N
175S	144E	Dry Consumer Product Tank	2017	181 gal	N
176S	145E	Dry Consumer Product Tank	2017	181 gal	N
177S	146E	Dry Consumer Product Tank	2017	181 gal	N
178S	147E	Dry Consumer Product Tank	2017	181 gal	N
179S	148E	Dry Consumer Product Tank	2017	181 gal	N
180S	149E	Dry Consumer Product Tank	2017	181 gal	N
181S	150E	Dry Consumer Product Tank	2017	181 gal	N
182S	151E	Dry Consumer Product Tank	2017	181 gal	N
183S	152E	Dry Consumer Product Tank	2017	181 gal	N
184S	153E	Dry Consumer Product Tank	2017	181 gal	N
185S	154E	Dry Consumer Product Tank	2017	181 gal	N
186S	155E	Dry Consumer Product Tank	2017	181 gal	N
187S	156E	Dry Consumer Product Tank	2017	181 gal	N
188S	157E	Dry Consumer Product Tank	2017	181 gal	N
189S	158E	Dry Consumer Product PM Control	2017	17, 450 scfm	15C
190S	159E	Dry Consumer Product PM Control	2017	17, 450 scfm	16C
191S	160E	Dry Consumer Product PM Control	2017	17, 450 scfm	17C
192S	161E	Dry Consumer Product PM Control	2017	17, 450 scfm	18C
193S	162E	Dry Consumer Product PM Control	2017	17, 450 scfm	19C
194S	163E	Dry Consumer Product PM Control	2017	8,000 scfm	20C
195S	164E	Dry Consumer Product Additive	2017	109 ft/s	N
196S	165E	Boiler 1	2017	62 mmbtu/hr	N
197S	166E	Boiler 2	2017	62 mmbtu/hr	N
198S	167E	Boiler 3	2017	31 mmbtu/hr	N
199S	168E	Temporary Boiler	2017	11 mmbtu/hr	N
200S	169E	Cooling Tower	2017	331 mgal/hr	N
201S	170E	Cooling Tower	2017	792 mgal/hr	N
202S	171E	Cooling Tower	2017	212 mgal/hr	N
203S	172E	Fire Pump Engine	2017	311 hp	N
204S	173E	Fire Pump Engine	2017	311 hp	N
205S	174E	Emergency Generator	2017	350 kw	N
206S	175E	Emergency Generator	2017	350 kw	N
207S	176E	Emergency Generator	2017	350 kw	N

1.0 Emission Units

208S	177E	Fuel Tank	2017	5,162 gal	N
210S	179E	Warehouse Heaters	2017	18.3 mmbtu/hr (total)	N
216S	185E	VOC containing Water/waste-water Pretreatment Chemicals	2017	174,928 kg/yr	N
217S	186E	Plastic Pellet Unloading	2017	100,000 tons/yr	21C
218S	187E	Plastic Pellet Unloading	2017		22C
219S	188E	Plastic Pellet Unloading	2017		23C
220S	189E	Plastic Pellet Unloading	2017		24C
221S	190E	Plastic Pellet Unloading	2017		25C
222S	191E	Plastic Resin Storage Silo	2017	100,000 tons/yr	N
223S	192E	Plastic Resin Storage Silo	2017		N
224S	193E	Plastic Resin Storage Silo	2017		N
225S	194E	Plastic Resin Storage Silo	2017		N
226S	195E	Plastic Resin Storage Silo	2017		N
227S	196E	Plastic Resin Storage Silo	2017		N
228S	197E	Plastic Resin Storage Silo	2017		N
229SS	198E	Plastic Resin Storage Silo	2017		N
230S	199E	Plastic Resin Storage Silo	2017		N
231S	200E	Plastic Resin Storage Silo	2017		N
232S	201E	Plastic Resin Storage Silo	2017		N
233S	202E	Plastic Resin Storage Silo	2017		N
234S	203E	Plastic Resin Storage Silo	2017		N
235S	204E	Plastic Resin Storage Silo	2017		N
236S	205E	Plastic Resin Storage Silo	2017		N
237S	206E	Plastic Resin Storage Silo	2017		N
238S	207E	Plastic Resin Storage Silo	2017		N
239S	208E	Plastic Resin Storage Silo	2017		N
240S	209E	Plastic Resin Storage Silo	2017		N
241S	210E	Plastic Resin Storage Silo	2017		N
242S	211E	Plastic Resin Storage Silo	2017		N
243S	212E	Plastic Resin Storage Silo	2017		N
244S	213E	Plastic Resin Storage Silo	2017		N
245S	214E	Plastic Resin Storage Silo	2017		N
246S	215E	Plastic Regrind	2017	32,000 tons/yr	26C

1.0 Emission Units

247S	216E	Plastic Forming	2017	100,000 tons/yr	N
248S	217E	Plastics Molding, Cleaning Fugitives	2017	6 tons/yr	N
249S	218E	Plastics Molding Space Heaters	2017	17 mmbtu/hr total	N
255S	224E	Plastics Molding Cooling Tower	2017	7,000 gpm	N
256S	225E	Plastics Mold. Emergency Gen.	2017	70 kw	N
257S	226E	Case Printing Ink	2017	3,430 lb/yr	N
258S	227E	Case Packing Glue	2017	690,080 lb/yr	N

2.0. General Conditions

2.1. Definitions

2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.

2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.

2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45 CSR § 30-2.12.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.

2.2. Acronyms

CAAA	Clean Air Act Amendments	**ppmv**	volume
CBI	Confidential Business Information	**PSD**	Prevention of Significant Deterioration
CEM	Continuous Emission Monitor	**psi**	Pounds per Square Inch
CES	Certified Emission Statement	**SIC**	Standard Industrial Classification
C.F.R. *or* CFR	Code of Federal Regulations	**SIP**	State Implementation Plan
CO	Carbon Monoxide	**SO_2**	Sulfur Dioxide
C.S.R. *or* CSR	Codes of State Rules	**TAP**	Toxic Air Pollutant
DAQ	Division of Air Quality	**TPY**	Tons per Year
DEP	Department of Environmental Protection	**TRS**	Total Reduced Sulfur
dscm	Dry Standard Cubic Meter	**TSP**	Total Suspended Particulate
FOIA	Freedom of Information Act	**USEPA**	United States Environmental Protection Agency
HAP	Hazardous Air Pollutant	**UTM**	Universal Transverse Mercator
HON	Hazardous Organic NESHAP	**VEE**	Visual Emissions Evaluation
HP	Horsepower	**VOC**	Volatile Organic Compounds
lbs/hr	Pounds per Hour	**VOL**	Volatile Organic Liquids
LDAR	Leak Detection and Repair		
M	Thousand		
MACT	Maximum Achievable Control Technology		
MDHI	Maximum Design Heat Input		
MM	Million		
MMBtu/hr *or* mmbtu/hr	Million British Thermal Units per Hour		
MMCF/hr *or* mmcf/hr	Million Cubic Feet per Hour		
NA	Not Applicable		
NAAQS	National Ambient Air Quality Standards		
NESHAPS	National Emissions Standards for Hazardous Air Pollutants		
NO_x	Nitrogen Oxides		
NSPS	New Source Performance Standards		
PM	Particulate Matter		
$PM_{2.5}$	Particulate Matter less than 2.5μm in diameter		
PM_{10}	Particulate Matter less than 10μm in diameter		
Ppb	Pounds per Batch		
pph	Pounds per Hour		
ppm	Parts per Million		
Ppmv or	Parts per million by		

2.3. Authority

This permit is issued in accordance with West Virginia Air Pollution Control Law W.Va. Code §§22-5-1 et seq. and the following Legislative Rules promulgated thereunder:

2.3.1. 45CSR13 – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation;*

2.4. Term and Renewal

2.4.1. This permit shall remain valid, continuous and in effect unless it is revised, suspended, revoked or otherwise changed under an applicable provision of 45CSR13 or any applicable legislative rule.

2.5. Duty to Comply

2.5.1. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Application R13-3316 and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to;
[45CSR§§13-5.11 and 13-10.3]

2.5.2. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA;

2.5.3. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7;

2.5.4. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses and/or approvals from other agencies; i.e., local, state and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.

2.6. Duty to Provide Information

The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for administratively updating, modifying, revoking or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.

2.7. Duty to Supplement and Correct Information

Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.

2.8. Administrative Update

The permittee may request an administrative update to this permit as defined in and according to the procedures specified in 45CSR13.
[45CSR§13-4]

2.9. Permit Modification

The permittee may request a minor modification to this permit as defined in and according to the procedures specified in 45CSR13.
[45CSR§13-5.4.]

2.10. Major Permit Modification

The permittee may request a major modification as defined in and according to the procedures specified in 45CSR14 or 45CSR19, as appropriate.
[45CSR§13-5.1]

2.11. Inspection and Entry

The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;

d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

2.12. Emergency

2.12.1. An "emergency" means any situation arising from sudden and reasonable unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

2.12.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of Section 2.12.3 are met.

2.12.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;

b. The permitted facility was at the time being properly operated;

c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and,

d. The permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice must contain a detailed description of the emergency, any steps taken to mitigate emission, and corrective actions taken.

2.12.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has

the burden of proof.

2.12.5. The provisions of this section are in addition to any emergency or upset provision contained in any applicable requirement.

2.13. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it should have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.

2.14. Suspension of Activities

In the event the permittee should deem it necessary to suspend, for a period in excess of sixty (60) consecutive calendar days, the operations authorized by this permit, the permittee shall notify the Secretary, in writing, within two (2) calendar weeks of the passing of the sixtieth (60) day of the suspension period.

2.15. Property Rights

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

2.16. Severability

The provisions of this permit are severable and should any provision(s) be declared by a court of competent jurisdiction to be invalid or unenforceable, all other provisions shall remain in full force and effect.

2.17. Transferability

This permit is transferable in accordance with the requirements outlined in Section 10.1 of 45CSR13. **[45CSR§13-10.1]**

2.18. Notification Requirements

The permittee shall notify the Secretary, in writing, no later than thirty (30) calendar days after the actual startup of the operations authorized under this permit.

2.19. Credible Evidence

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defense otherwise available to the permittee including, but not limited to, any challenge to the credible evidence rule in the context of any future proceeding.

3.0. Facility-Wide Requirements

3.1. Limitations and Standards

3.1.1. **Open burning.** The open burning of refuse by any person, firm, corporation, association or public agency is prohibited except as noted in 45CSR§6-3.1.
[45CSR§6-3.1.]

3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause, suffer, allow or permit any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.
[45CSR§6-3.2.]

3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them.
[40CFR§61.145(b) and 45CSR§34]

3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.
[45CSR§4-3.1 State-Enforceable only.]

3.1.5. **Permanent shutdown.** A source which has not operated at least 500 hours in one 12-month period within the previous five (5) year time period may be considered permanently shutdown, unless such source can provide to the Secretary, with reasonable specificity, information to the contrary. All permits may be modified or revoked and/or reapplication or application for new permits may be required for any source determined to be permanently shutdown.
[45CSR§13-10.5.]

3.1.6. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45 C.S.R. 11.
[45CSR§11-5.2.]

3.2. Monitoring Requirements

[Reserved]

3.3. Testing Requirements

3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63 in accordance with the Secretary's delegated authority and

any established equivalency determination methods which are applicable. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4 or 45CSR§13-5.4 as applicable.

b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4 or 45CSR§13-5.4 as applicable.

c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.

d. The permittee shall submit a report of the results of the stack test within sixty (60) days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1.; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:

1. The permit or rule evaluated, with the citation number and language;
2. The result of the test for each permit or rule condition; and,
3. A statement of compliance or noncompliance with each permit or rule condition.

[WV Code § 22-5-4(a)(14-15) and 45CSR13]

3.4. Recordkeeping Requirements

3.4.1. **Retention of records.** The permittee shall maintain records of all information (including monitoring data, support information, reports and notifications) required by this permit recorded in a form suitable and readily available for expeditious inspection and review. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation. The files shall be maintained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. Where appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.

3.4.2. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.
[45CSR§4. *State-Enforceable only.*]

3.5. Reporting Requirements

3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and

information in the document are true, accurate and complete.

3.5.2. **Confidential information.** A permittee may request confidential treatment for the submission of reporting required by this permit pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.

3.5.3. **Correspondence.** All notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class with postage prepaid to the address(es) set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

If to the DAQ:

Director
WVDEP
Division of Air Quality
601 57th Street, SE
Charleston, WV 25304-2345

If to the USEPA:

Associate Director
Office of Air Enforcement and Compliance Assistance
(3AP20)
U. S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

3.5.4. **Operating Fee.**

3.5.4.1. In accordance with 45CSR30 – Operating Permit Program, the permittee shall submit a Certified Emissions Statement (CES) and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality. A receipt for the appropriate fee shall be maintained on the premises for which the receipt has been issued, and shall be made immediately available for inspection by the Secretary or his/her duly authorized representative.

3.5.4.2. In accordance with 45CSR30 – Operating Permit Program, enclosed with this permit is a Certified Emissions Statement (CES) Invoice, from the date of initial startup through the following June 30. Said invoice and the appropriate fee shall be submitted to this office no later than 30 days prior to the date of initial startup. For any startup date other than July 1, the permittee shall pay a fee or prorated fee in accordance with the Section 4.5 of 45CSR22. A copy of this schedule may be found attached to the Certified Emissions Statement (CES) Invoice.

3.5.5. **Emission inventory.** At such time(s) as the Secretary may designate, the permittee herein shall prepare and submit an emission inventory for the previous year, addressing the emissions from the facility and/or process(es) authorized herein, in accordance with the emission inventory submittal requirements of the Division of Air Quality. After the initial submittal, the Secretary may, based upon the type and quantity of the pollutants emitted, establish a frequency other than on an annual basis.

4.0. Source-Specific Requirements

4.1. Limitations and Standards

4.1.1 The Procter & Gamble Manufacturing Company, Tabler Station Facility shall consist of only the pollutant-emitting equipment and processes identified under Section 1.0 of this permit and any other processes/units defined as De Minimis per 45CSR13. In accordance with the information filed in Permit Application R13-3316, the equipment shall be installed, maintained, and operated so as to minimize any fugitive escape of pollutants and the equipment/processes shall use the specified control devices.

4.1.2. Emissions from the facility shall not exceed the following:

	NO_x		SO_2		VOC		PM		CO	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Scrubber Stacks[1]	1.06	4.66	2.10	1.65	1.80	4.24	6.9	23.70	0.06	0.24
Surfactant Startup Preheater	0.78	0.03	0.01	0.01	0.09	0.01	0.12	0.01	1.30	0.05
Surfactant Manufact. Tanks	--	--	--	--	0.28	1.20	--	--	--	--
Truck and Rail Loading	--	--	--	--	0.02	0.06	--	--	--	--
Liq. Soap Outdoor Tanks	--	--	--	--	0.24	1.80	--	--	--	--
Liq. Soap Indoor Tanks	--	--	--	--	0.20	0.80	--	--	--	--
Liq Soap Packing & Capping	--	--	--	--	0.01	0.01	--	--	--	--
Rotoclones & Liq. Soap Fug.	--	--	--	--	33.23	33.42	4.57	20.06	--	--
Liquid Soap RTO[2]	0.24	1.10	0.01	0.01	213.50	8.00	0.02	0.07	1.30	5.80
Dry Cons. Prod Manuf. Out. Tanks	--	--	--	--	0.07	0.31	--	--	--	--
Dry Cons. Prod Manuf. In. Tanks	--	--	--	--	0.09	0.36	--	--	--	--
Dry Cons. Prod. Baghouses/Fab. Filters	--	--	--	--	--	--	3.81	16.71	--	--
Dry Cons. Prod Manufact. Fugitives	--	--	--	--	2.0	8.70	--	--	--	--
Main Facility Boilers	11.30	49.50	0.10	0.41	0.55	2.49	1.17	5.00	5.70	25.00
Main Facility Cooling Towers	--	--	--	--	--	--	1.35	5.90	--	--
Main Facility Engines	14.10	3.51	0.05	0.02	0.29	0.07	0.29	0.07	2.75	0.70
Main Facility Process Heaters	0.90	3.90	0.02	0.05	0.10	0.44	0.14	0.60	1.51	6.60
Water/Waste water Treatment	--	--	--	--	2.99	13.04	--	--	--	--
Case Print. Ink & Case Pack. Glue Use	--	--	--	--	0.14	0.59	--	--	--	--
Plastics Molding Cyclones	--	--	--	--	--	--	0.08	0.35	--	--
Plastics Moldings Silos	--	--	--	--	--	--	0.80	3.50	--	--
Plastic Regrind	--	--	--	--	--	--	0.04	0.17	--	--
Plastic Molding Fugitives	--	--	--	--	2.07	9.07	--	--	--	--
Plastic Molding Space Heat.	0.83	3.65	0.01	0.04	0.10	0.41	0.13	0.56	1.40	6.13
Plastic Molding Cool. Tower	--	--	--	--	--	--	0.40	1.8	--	--
Plastic Molding Engines	0.42	0.11	0.01	0.01	0.21	0.06	0.01	0.01	0.83	0.21
Total	**29.63**	**66.46**	**2.31**	**2.20**	**257.98**	**85.08**	**19.83**	**78.51**	**14.85**	**44.73**

[1]Surfactant startup preheaters vent to scrubber stacks. Emissions are additive to surfactant scrubber emissions.
[2]Maximum hourly VOC emissions of 213.5 lb/hr (less than 24 hours per year). Maximum hourly VOC controlled emissions of 6.4 lb/hr.

4.1.3 The permittee shall maintain the pH of the scrubbing liquor to a level at least as alkaline as it was during the most recent test which showed compliance with the emission levels of 4.1.1.

4.1.4 Each surfactant startup preheater shall not operate more than 72 hours per year.

4.1.5 All process tanks for Liquid Soap A and B manufacturing which incorporate dust control systems shall be equipped with rotoclones for emission control. Said rotolclones shall be designed, installed, operated and maintained so as to achieve emissions outlined in 4.1.2.

4.1.6 All hot mixing vessels for Liquid Soap A shall be equipped with an RTO to be operated anytime the mixing process uses the heated volatile processing aid. Said RTO shall be designed, installed, operated and maintained so as to achieve a minimum destruction efficiency of at least 97%. Operation of the hot mixing process vessels using the heated volatile processing aid without RTO shall be maintained at less than 24 hours per year.

4.1.7 The Dry Consumer Laundry and Cleaning Products area shall be equipped with fabric filters to control particulate emissions.

4.1.8 Boiler Nos. 1 and 2 shall not exceed a heat input of 62 mmbtu/hr each. Boiler No. 3 shall not exceed a heat input of 31 mmbtu/hr. All boilers shall be fired exclusively with pipeline quality natural gas.

4.1.9 Boiler Nos. 1 and 2 shall not consume more than 543 mmscf of fuel per year each. Boiler No.3 shall not consume more than 272 mmscf of fuel per year.

4.1.10 Visible emissions from any boiler shall not exceed 10% opacity based on a six minute block average. **[45CSR§2-3.1.]**

4.1.11 The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction and actual startup of the natural gas fired boilers, as provided by §60.7 of this part. **[40 CFR §60.48c(a)]**

4.1.12 The cooling towers shall be operated with a drift rate of no more than 0.005%. Additionally, the total dissolved solids (TDS) content of the cooling tower water shall not exceed 6,000 ppm.

4.1.13 The three emergency generators (205S, 206S and 207S) and two fire water pump engines (203S and 204S) shall fire only ultra low sulfur diesel fuel with a sulfur content of no greater than 0.0015% by weight.

4.1.14 Each of the three Caterpillar C15 emergency generators (205S, 206S and 207S) shall not consume more than 28.6 gallons of fuel oil per hour.

4.1.15 Each of the two Clark fire pump engines (203S and 204S) shall not consume more than 16.13 gallons per hour.

4.1.16 The 4 stroke rich burn emergency generator (256S) shall fire only pipeline quality natural gas. Said engine shall not consume more than 196 scf per hour of natural gas.

4.1.17. Emissions from the emergency generators and fire water pump engines shall not exceed the following (all limits in g/kW-hr, unless otherwise noted):
[40 CFR §60.4205]

Engine	NMHC + NO_x	CO	PM
Fire Water Pump Engine (203)	4.0	--	0.20
Fire Water Pump Engine (204)	4.0	--	0.20
Emergency Generator (205)	4.0	3.5	0.20

Emergency Generator (206)	4.0	3.5	0.20
Emergency Generator (207)	4.0	3.5	0.20
Emergency Generator (256)	10 g/hp-hr	387 g/hp-hr	--

4.1.18.1 Compliance with the above limits shall be determined by purchasing certified engines. **[40 CFR §60.4211(c)]**

4.1.19 The emergency generators (205S, 206S and 207S) and fire pump engines (203S and 204S) shall fire only nonroad diesel fuel that meets the requirements of 40 CFR 80.510(b). **[40 CFR §60.4207(b)]**

4.1.20 The emergency generators (205S, 206S and 207S) and fire pump engines (203S and 204S) must meet all applicable requirements of 40 CFR 60 Subpart IIII. **[40 CFR §63.6590(c)(1)]**

4.1.21 The emergency generator (256S) must meet all applicable requirements of 40 CFR 60 Subpart JJJJ. **[40 CFR §63.6590(c)(1)]**

4.1.22 Cyclones shall be used to control PM emissions from rail car unloading of pellets to the rail car unloading feeder. Said cyclones shall be designed, installed, operated and maintained so as to achieve the Plastics Molding Cyclone emission rate of 4.1.2.

4.1.23 The total amount of pellets unloaded into the 24 plastics molding silos combined shall not exceed 100,000 tons per year.

4.1.24 PM emissions from the plastic regrind process shall be controlled with a bin vent filter. Said filter shall be designed, installed, operated and maintained so as to achieve the plastic regrind emission rate of 4.1.2.

4.1.25 The total amount of pellets reground shall not exceed 32,000 tons per year.

4.1.26. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary. **[45CSR§13-5.11.]**

4.2. Testing Requirements

4.2.1. In order to determine compliance with the SO_2, VOC and PM scrubber stack emission limitations of 4.1.2 of this permit, the permittee shall perform EPA approved stack testing on each scrubber stack within 180 days of startup. Said testing shall utilize EPA approved methods unless otherwise approved by the Director.

4.2.2 In order to determine compliance with the VOC rotoclone emission limitations of 4.1.2 of this permit, the permittee shall perform EPA approved stack testing on at least one Liquid Soap A and Liquid Soap B rotoclone within 180 days of startup. Said testing shall utilize EPA approved methods unless otherwise approved by the Director.

4.2.3 In order to determine compliance with the VOC RTO emission limitations of 4.1.2 of this permit, the permittee shall perform EPA approved stack testing on the RTO stack within 180 days of startup. Said testing shall utilize EPA approved methods unless otherwise approved by the Director.

4.2.4 The testing required under conditions 4.2.1 through 4.2.3 of this permit shall be repeated at least once every 5 years.

4.2.5 In order to determine compliance with the opacity limits of 4.1.11of this permit, the permittee shall conduct visible emission checks and / or opacity monitoring and recordkeeping for each boiler stack.

a. The visible emission check shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40CFR Part 60, Appendix A, Method 22 or from the lecture portion of the 40CFR Part 60, Appendix A, Method 9 certification course.

b. Visible emission checks shall be conducted at least once per calendar month with a maximum of forty-five (45) days between consecutive readings. These checks shall be performed for a sufficient time interval, but no less than one (1) minute, to determine if any visible emissions are present. Each observation must be recorded as either visible emissions observed or no visible emissions observed. Visible emission checks shall be performed during periods of normal facility operation and appropriate weather conditions.

c. If visible emissions are present at a source(s) the permittee shall perform Method 9 readings to confirm that visible emissions are within the limits of 4.1.12 of this permit. Said Method 9 readings shall be taken as soon as practicable, but within seventy-two (72) hours of the Method 22 emission check.

d. If, one year of monthly Method 22 readings show that there are no visible emissions, then the frequency of observations can be reduced to quarterly. If, during quarterly checks, visible emissions are observed, then the frequency of observations shall be returned to monthly.

4.2.6 At least once a month, the permittee shall take a grab sample of the cooling tower circulating water from each cooling tower and verify the total dissolved solids content as limited under 4.1.13of this permit. If one year of monitoring indicates less than 80% of the levels of 4.1.13 are maintained, then the frequency of sampling of cooling tower circulating water can be reduced to quarterly. If, during quarterly sampling, greater than 80% of the levels of 4.1.13 are measured, the frequency of sampling shall be returned to monthly.

4.3. Monitoring and Recordkeeping Requirements

4.3.1. **Record of Monitoring.** The permittee shall keep records of monitoring information that include the following:

a. The date, place as defined in this permit and time of sampling or measurements;

b. The date(s) analyses were performed;

c. The company or entity that performed the analyses;

d. The analytical techniques or methods used;

e. The results of the analyses; and

f. The operating conditions existing at the time of sampling or measurement.

4.3.2. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.

4.3.3. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:

a. The equipment involved.

b. Steps taken to minimize emissions during the event.

c. The duration of the event.

d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

e. The cause of the malfunction.

f. Steps taken to correct the malfunction.

g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

4.3.4. In order to determine compliance with 4.1.3 of this permit, Procter and Gamble shall monitor and record the pH of the scrubber liquor on at least an hourly basis.

4.3.5 In order to determine compliance with 4.1.4 of this permit, Procter and Gamble shall monitor and record the daily hours of operation of each surfactant startup preheater.

4.3.6 In order to determine compliance with the tank VOC emission limits of 4.1.2, Procter and Gamble shall monitor and record the substance (and its associated vapor pressure) stored in each storage tank.

4.3.7 In order to determine compliance 4.1.5 and with the rotoclone emission limits of 4.1.2, Procter and Gamble shall monitor and record the pressure drop across each rotoclone on at least a monthly basis.

4.3.8 In order to determine compliance with the rotoclone and fugitive emissions limit of 4.1.2, the throughput of volatile processing aid shall be monitored and recorded on at least a monthly basis.

4.3.9 In order to determine compliance with the RTO emission limits of 4.1.2 and the control efficiency requirement of 4.1.6, Procter and Gamble shall monitor and record the internal temperature of the RTO (when the RTO is in use) on at least an hourly basis and shall track all hours of operation with volatile processing aid when the RTO is not in use.

4.3.10 In order to determine compliance with the dry consumer product baghouse emission limits of 4.1.2, Procter and Gamble shall monitor and record the pressure drop across each baghouse on at least a weekly basis.

4.3.11 In order to determine compliance with the dry consumer products A fugitive emission limits of 4.1.2, Procter and Gamble shall monitor and record the vapor pressure of any additive used and the area of the coated substrate (as measured from the point of application until the substrate is wound for storage).

4.3.12 In order to determine compliance with the boiler emission limits of 4.1.2 and the operational limits of 4.1.9 and 4.1.10, Procter and Gamble shall monitor and record the amount and type of fuel consumed by each boiler on at least a monthly basis.

4.3.13 In order to determine compliance with the cooling tower emission limits of 4.1.2 and the operational limits of 4.1.13, Procter and Gamble shall monitor and record the TDS content of the cooling tower water (via either conductivity or lab testing) on at least a monthly basis. If one year of monitoring indicates less than 80% of the levels of 4.1.13 are maintained, then the frequency of sampling of the cooling tower circulating water can be reduced to quarterly. If, during quarterly sampling, greater than 80% of the levels of 4.1.13 are measured, the frequency of sampling shall be returned to monthly.

4.3.14 In order to determine compliance with all Reciprocating Internal Combustion Engine (RICE) emission limits of 4.1.2 and the operational limits of 4.1.14, 4.1.15, 4.1.16, 4.1.17. 4.1.18, 4.1.19 and 4.1.20,

Procter and Gamble shall monitor and record the number of hours of operation of each RICE on at least a monthly basis, the type and amount of fuel consumed by each RICE on at least a monthly basis, and the sulfur content of any fuel oil consumed by any RICE.

4.3.15 In order to determine compliance with the water/waste water treatment emission limits of 4.1.2 Procter and Gamble shall monitor and record the type, amount, VOC and HAP content of any water/ waste water pretreatment chemicals used.

4.3.16 In order to determine compliance with the case packer Ink and case packer glue emission limits of 4.1.2, Procter and Gamble shall monitor and record the amount of ink and glue used that contains any VOC or HAP at the facility on at least a monthly basis.

4.3.17 In order to determine compliance with the plastic molding cyclone emission limits of 4.1.2, Procter and Gamble shall monitor and record the pressure drop across each cyclone on at least a monthly basis.

4.3.18 In order to determine compliance with the plastic molding silo emission limits of 4.1.2 and the operational limits of 4.1.23, Procter and Gamble shall monitor and record the amount of plastic pellets transferred to the storage silo on at least a monthly basis.

4.3.19 In order to determine compliance with the plastic regrind process emission limits of 4.1.2, Procter and Gamble shall monitor and record the pressure drop across the bin vent filter on at least a monthly basis. Additionally, Procter and Gamble shall monitor and record the total amount of pellets reground on at least a monthly basis.

4.3.20 In order to determine compliance with the plastic molding fugitive emission limits of 4.1.2, Procter and Gamble shall monitor and record the amount of volatile solvents used for plastics molding process cleaning purposes on at least a monthly basis.

4.4. Reporting Requirements

4.4.1. The permittee shall submit any and all applicable notifications and reports required under 40 CFR 60 Subpart IIII.
[40CFR §60.4214]

4.4.2 The permittee shall submit any and all applicable notifications and reports required under 40 CFR 60 Subpart JJJJ.
[40CFR §60.4245]

4.4.3 The permittee shall submit any and all applicable notifications and reports required under 40 CFR 60 Subpart Dc.
[40 CFR §60.48c]

CERTIFICATION OF DATA ACCURACY

I, the undersigned, hereby certify that, based on information and belief formed after reasonable inquiry, all information contained in the attached _____, representing the period beginning _____ and ending _____, and any supporting documents appended hereto, is true, accurate, and complete.

Signature[1] (please use blue ink) _____ Responsible Official or Authorized Representative _____ Date

Name and Title (please print or type) _____ Name _____ Title

Telephone No. _____ Fax No. _____

---

[1] This form shall be signed by a "Responsible Official." "Responsible Official" means one of the following:

a. For a corporation: The president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:

(I) the facilities employ more than 250 persons or have a gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars), or

(ii) the delegation of authority to such representative is approved in advance by the Director;

b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;

c. For a municipality, State, Federal, or other public entity: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of USEPA); or

d. The designated representative delegated with such authority and approved in advance by the Director.

west virginia department of environmental protection

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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.:	R13-3316
Plant ID No.:	003-00154
Applicant:	Procter and Gamble Manufacturing Company
Facility Name:	Tabler Station Facility
Location:	Berkeley County
NAICS Code:	325612, 325613, 325620
Application Type:	Construction
Received Date:	May 6, 2016
Engineer Assigned:	Steven R. Pursley, PE
Fee Amount:	$2,000.00
Date Received:	May 6, 2016, resubmitted October 13, 2016
Complete Date:	October 13,2016
Due Date:	January 11, 2017
Applicant Ad Date:	May 10, 2016
Newspaper:	*The Journal*
UTM's:	Easting: 757.0 Northing: 4,366.0 Zone: 17
Description:	Consumer products production facility.

DESCRIPTION OF PROCESS

Procter and Gamble (P&G) is submitting this Rule-13 (R13) permit application to the West Virginia Department of Environmental Protection (WVDEP) for the proposed construction of a greenfield facility to be located in Berkley County, West Virginia in the unincorporated community of Tabler Station (Tabler Station facility).

The Tabler Station facility will produce liquid soap and dry consumer laundry and cleaning products, including dryer applied fabric softener, shampoo, and body wash. The facility will produce surfactant paste and raw materials which will be used in liquid soap making processes. The facility will also have utilities to support the heating, cooling, ventilation, and steam needs of the manufacturing processes.

The equipment and operations at the facility will be installed and started up in multiple phases. The business operations contained in this permit application are those expected to be installed in the first phase of the project. Additional phases are still in detailed design and will be permitted at a later date. It is anticipated that all phases of this project will be permitted, installed, and operational within 5 years of beginning construction. P&G

anticipates that the eventual entire facility and planned operations together will not trigger major new source review (major NSR) permitting, also called prevention of significant deterioration (PSD) permitting.

As part of the first phase of the project, P&G proposes to install equipment in several distinct manufacturing areas:

* Surfactant Manufacturing;
* Liquid Soap Making A and B;
* Dry Consumer Products A;
* Site Supporting Utilities;
* Plastics Molding; and
* Plastics Molding Utilities

Surfactant Manufacturing

P&G proposes to install equipment to manufacture surfactants. The purpose of the surfactant making operation is primarily to manufacture surfactant pastes used in the liquid soap manufacturing process which is also included in this application. A secondary byproduct produced by the surfactant process is a precipitated acid mix (PAM). Similarly, a number of variations to the surfactant paste product are intended, based on the end use. These variations are achieved through the use of varying raw materials in different quantities in the surfactant manufacturing process.

With the startup of the surfactant process, it is necessary to preheat the sulfur reactors, which is accomplished with the use of four (4) natural gas preheaters; Startup is intended to occur approximately four (4) times per year per reactor. Gasses from the preheaters (only used during startup) are vented to the common stack. During startup, any SO_3 produced will be vented to the SO_3 absorber and then through the SO_2 scrubber. Raw sulfur is stored in sulfur tanks. Gases from the combustion of sulfur (normal operation) are vented through a SO_2 packed bed scrubber. During changeover, the SO_3 is vented to the SO_3 absorber, and exhaust gas is vented through the SO_2 scrubber. A byproduct produced during changeover periods is sulfuric acid (H_2SO_4).

Proposed emission sources in the surfactant processes include the following:

* Raw material, intermediate, and product tanks;
* Natural gas preheaters and sulfur reactors;
* In-line mixing and/or mixing tanks; and
* Product truck loading.

The proposed surfactant process will be controlled with a packed bed scrubber to control SO_2 and PM emissions.

Liquid Soap Making

P&G also proposes to install Liquid Soap A and B manufacturing processes. Both Soap A and Soap B manufacturing processes involve primarily mixing operations with no chemical transformations. The raw materials primarily consist of but are not limited to dyes, perfumes, surfactants essential for soap manufacturing, and minor component additives intended to deliver product performance attributes. Liquid raw materials will

either be piped from elsewhere on-site or be transported to the site in totes/drums which will be unloaded into the building for placement in to the mixing tanks. Dry raw materials will be weighed on a scale before being manually added to the mixing tanks.

Liquid Soap A is a variation of the product that contains a higher volatility processing aid. When Liquid Soap A is being manufactured, emission from the mixing tanks will be routed through a regenerative thermal oxidizer (RTO). Liquid Soap B does not contain the higher volatility processing aid and will not have emissions routed through the RTO.

The resultant mixture represents the final product. Variations of the mixture are dependent upon the soap product to be manufactured. The product, once made, is piped into a packing line for filling containers. After filling, the product will proceed to final packaging for off-site transport.

As part of quality assurance, process tanks and liquid filling equipment is periodically cleaned and sanitized using hot water. Residual raw material related emissions that may occur during cleaning and sanitization are accounted for in storage and process tank emissions calculations.

The emission sources for the liquid soap manufacturing process includes:

* Storing raw materials in tanks, totes, or drums
* Weighing and mixing raw materials
* Product packaging

The proposed liquid soap processes will be controlled with the following equipment to control VOC and PM emissions:

* Regenerative Thermal Oxidizer (RTO) (Liquid Soap A only); and
* Rotoclones, liquid (water) scrubbers.

Additionally, perfume may be used in the process. Emission points that have the potential to emit odor are controlled with activated carbon. The activated carbon serves as a control for employee comfort and nuisance odor prevention, rather than for criteria pollutants, such as VOC. As such, it was not considered a control device in this application.

Dry Consumer Laundry and Cleaning Products

Additionally, P&G proposes to install manufacturing lines to manufacture Dry Consumer Laundry and Cleaning Products. The process includes delivery of raw materials and transfer of material to day and mixing tanks. The mixture is then applied onto a substrate to produce the final product. The final product is trimmed to size, packaged, and sent to a warehouse for distribution.

The Dry Consumer Laundry and Cleaning Products A process produces a variety of consumer goods, all of which begin with a substrate. This substrate may receive a variety of liquid raw materials intended to enhance the performance and functionality of the consumer product. The raw materials typically consist of low-volatile, high molecular weight organic materials paired with a small amount of perfume. After the raw materials are applied, the substrate is cut to size, and packaged.

Various processing lines are involved with manufacturing cleaning articles into the different consumer cleaning products. The sources of emissions include the following equipment:

* Raw material tanks
* Intermediate mixing
* Addition of liquid raw materials
* Finished product packaging

The proposed Dry Consumer Laundry and Cleaning Products process will be controlled with baghouses and bin vent filters to control particulate emissions.

As with the liquid soap making, perfume may be used in the process. Emission points that have the potential to emit odor are controlled with activated carbon. The activated carbon serves as a control for employee comfort and nuisance odor prevention, rather than for criteria pollutants, such as VOC. As such, it was not considered a control device in this application.

Utilities

To support the heating, cooling, ventilation, and steam needs for the processes that are being proposed with this project, P&G is proposing to install the following equipment:

* Two (2) 75,000 pound per hour (pph) steam boilers
* One (1) 26,755 pound per hour (pph) steam boiler
* One (1) 11,605 pound per hour (pph) steam temporary boiler
* Six (6) natural gas fired building heaters
* Three (3) cooling towers

The boilers will be fueled primarily by natural gas. One 75,000 pph boiler will have a back-up fuel of ultra-low sulfur diesel (ULSD). The purpose of the boilers is to supply heat or steam. The temporary boiler will be a mobile unit that will provide support to plant processes as the main facility boilers are installed. The temporary boiler will not be run at the same time as the main facility boilers.

The purpose of the building heaters is to provide comfort heating for the warehouse and other buildings. The cooling towers are for both comfort and process cooling water supply to buildings and manufacturing equipment associated with the various processes.

To be prepared for power outages and to be equipped to quickly respond to fires, the following equipment is also proposed be installed:

* Three (3) 350 KW standby/backup electric generators with diesel engines
* Two (2) 311 horsepower (HP) fire pumps with diesel engines
* The standby/backup generator and fire pump engines will be fueled with ULSD and meet U.S. EPA fs Tier 3 specifications.

Additionally, the plant intends to install five diesel tanks, less than 500 gallons, to supply the standby/backup generators and fire pump engines. Also, a diesel refueling station to supply on-site mobile equipment is proposed to be installed. The following fuel tanks will be installed at the site:

* 5,000 gallon ULSD tank for vehicle refueling
* 35,000 gallon ULSD tank for back up fuel for the boilers

The Tabler Station facility intends to install a water pretreatment system as well as a wastewater pretreatment system. The water pretreatment system will purify and soften the water before use to maintain product quality. The wastewater system will use chlorination and other process to clean the wastewater before discharge to the sanitary sewer.

Plastics Molding

The Tablers Station facility will incorporate third party suppliers who will provide a plastics molding process for the manufacture of bottles, caps, and other formed plastic parts.

The plastic bottle and cap making process involves injection molding, blow molding, and extrusion blow molding. The process starts with the unloading of plastic pellets from railcars into storage silos. From the silos, the pellets are ground and piped to presses and molding machines which make bottles, caps and other formed plastic parts depending on product needs. The presses and molding machines heat the plastic with electrical heaters and via friction heating. Scrap plastic is reground and reused directly in the making process.

Plastics Molding Utilities

To support the heating, cooling, and ventilation needs of the Plastics Molding processes that are being proposed with this project, P&G is proposing to install the following equipment:

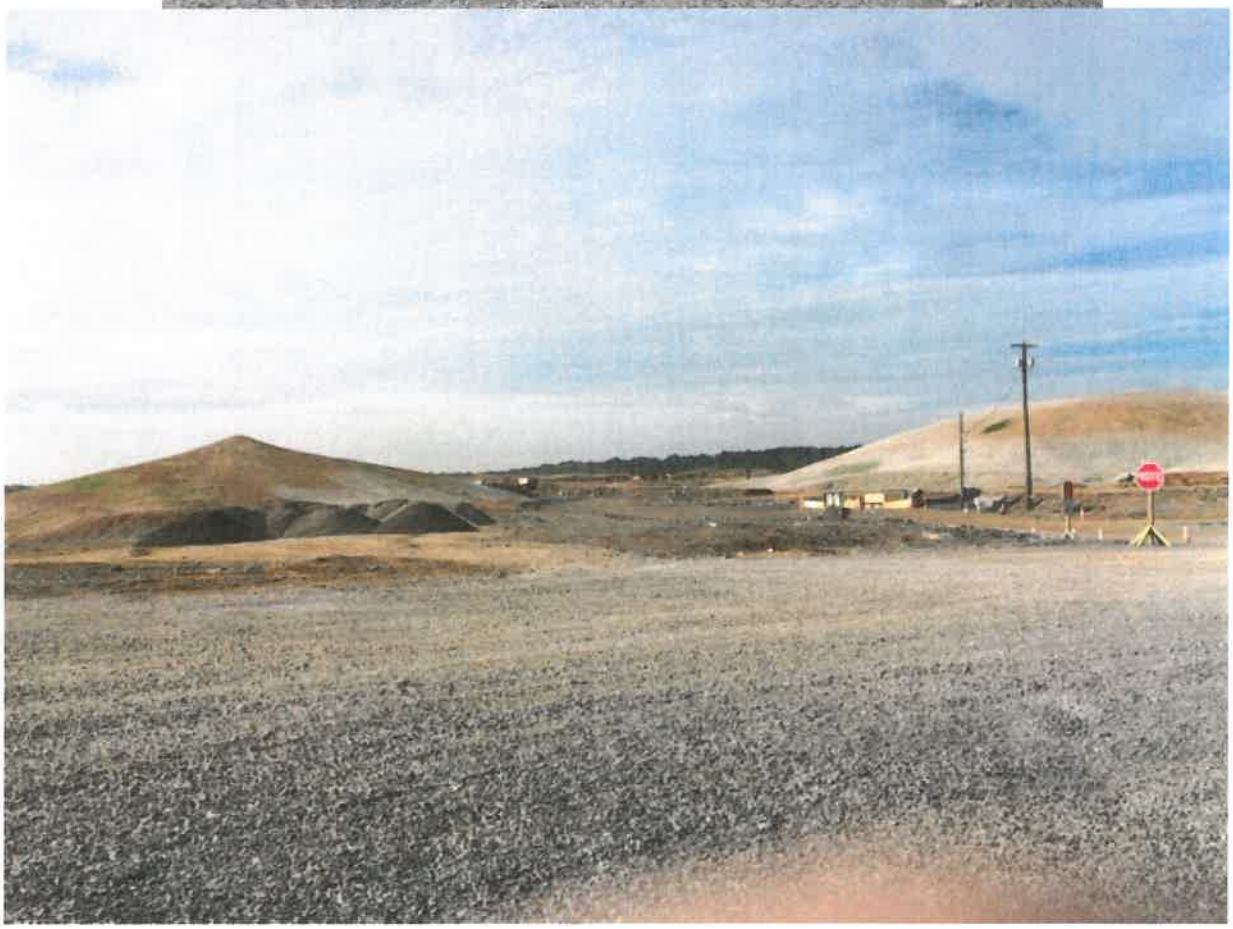
* Six (6) natural gas fired building heaters;
* One (1) cooling tower; and
* One (1) 70kW standby/backup electric generator with natural gas engine.

The purpose of the building heaters is to provide comfort heating for the warehouse and other buildings. The cooling tower is for both comfort and process cooling water supply to buildings and manufacturing equipment associated with the various processes. The backup electric generator is to be prepared for power outages.

SITE INSPECTION

A site inspection of the proposed site was performed by Joseph Kreger of WVDAQs Eastern Panhandle Regional Office on August 10, 2016. He reported that site preparation activities (as authorized under general permit G40-C074) were taking place. To get to the facility take exit 8 of I-70 and proceed east on Tabler Station Road for approximately 0.9 miles. Then turn left on Development Drive and proceed approximately 0.2 miles to the site entrance.

Mr. Kreger took the following photographs on the day of his site inspection.



ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

The emission calculation methodologies for each of the six manufacturing areas are discussed below.

Surfactant Manufacturing

Scrubber Emissions

The Tabler Station facility will emit NO_x, SO_2, VOC, H_2SO_4, and PM through a packed bed SO_2 scrubber as a result of surfactant manufacturing. The potential to emit for VOCs is derived from the stack test data recorded by similar P&G sites. The NO_x, SO_2, PM_{10}, and $PM_{2.5}$ emission rates are calculated using emission factors supplied by the manufacturer. During limited startup periods, natural gas preheaters are run to preheat the process from a cold start; emissions are calculated using AP-42 emission factors. Annual preheater emissions are based on 72 hours of operation per year for each of the four, 4 mmbtu/hr preheaters.

A majority of the sulfur burned is transformed into SO_3, absorbed and converted into finished product in the surfactant making process. However, a fraction of the SO_2 is not converted to SO_3 and not all of the SO_3 is consumed in the reaction. The excess SO_2 is not emitted; it is controlled by the SO_2 scrubbers. In the presence of water vapor, SO_3 becomes droplets of H_2SO_4 (i.e. sulfuric acid mist). H_2SO_4 droplets contribute to the condensable fraction of PM_{10} and $PM_{2.5}$ emissions. For purposes of this application it was assumed that the PM_{10} and $PM_{2.5}$ emissions from the scrubber during normal operations were equal to the residual SO_3 from the scrubber (which, in the presence of water vapor is H_2SO_4).

Scrubber Stack Emissions:

Unit	NO_x		SO_2		VOC		$PM/PM_{2.5}$		CO		H_2SO_4	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
1	0.53	2.3	2.10	0.82	1.80	2.17	6.90	13.82	0.03	0.10	5.10	11.66
2	0.53	2.3	2.10	0.82	1.80	2.07	6.90	9.84	0.03	0.10	5.10	7.77
Total	**1.06**	**4.6**	**2.1**	**1.65**	**1.80**	**4.24**	**6.9**	**23.7**	**0.06**	**0.20**	**10.2**	**19.4**

Note that annual emissions do not necessarily reflect the hourly emissions extrapolated over the course of a full year. This is because the maximum hourly emissions include emissions from start ups and changeovers which are periodic and short term in nature.

Scrubber Preheater Emissions (all four units combined):

NO_x		SO_2		VOC		$PM/PM_{2.5}$		CO		HAPs	
lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
0.78	0.03	0.01	0.01	0.09	0.01	0.12	0.01	1.3	0.05	0.03	0.01

Tank Emissions (Vertical Fixed Roof)

The proposed Tabler Station project includes tanks in each of the proposed process areas. Monthly VOC emissions from fixed roof tanks are calculated using procedures in AP-42 Section 7.1. Fixed roof tanks typically have two major types of emissions: working losses and breathing losses. Working losses occur during the day to day operations of the tank from the release of the vapor space as the tank is filled and emptied. Breathing losses occur at outdoor ambient tanks that are subject to daily temperature changes with the weather. A majority of the tanks at the Tabler Station facility are temperature controlled and, as such, have negligible breathing losses. Breathing losses were calculated for ambient outdoor tanks.

The tanks at the Tabler Station facility contain a variety of organic materials used in the manufacture of surfactants, liquid soap, and dry consumer laundry and cleaning products. Emissions from tanks containing raw materials were calculated using the specific properties of that material. Emissions from tanks containing intermediate materials or perfumes were calculated using vapor pressure groups. Groups were assigned using the metric found in the following table.

Group Number	Vapor Pressure Range (psi)	Vapor Pressure Used in Calculations (psi)
1	0-0.0015	0.0015
2	0.0015-0.1	0.1
3	0.1-0.5	0.5
4	0.5-0.86	0.86

The vapor pressure ranges for the groups were selected based on the expected spectrum of organic chemical tanks at the Tabler Station facility. Intermediate material and perfume tanks were classified by process area, and then sorted by vapor pressure and assigned a group. Next, the stored chemicals in each group were assigned the chemical properties (e.g. density, vapor pressure, and molecular weight) representing either an average value of that group (density and molecular weight) or the maximum value of that group (vapor pressure).

Minor components of raw material HAP have been included in individual material usage tank calculations, as applicable. HAP amounts in raw materials based on review of Material Safety Data Sheets.

Tank	VOCs		H_2SO_4		HAPs	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
3	0.02	0.06	--	--	--	--
4	0.01	0.03	--	--	0.01	0.03
5	0.01	0.03	--	--	0.01	0.03
6	0.20	0.86	--	--	--	--

7	0.01	0.01	--	--	0.01	0.01
8	0.01	0.01	--	--	0.01	0.01
9	0.01	0.01	--	--	--	--
10	0.01	0.05	--	--	0.01	0.01
11	0.01	0.05	--	--	0.01	0.01
12	0.01	0.04	--	--	0.01	0.01
13	0.01	0.04	--	--	0.01	0.01
14	0.01	0.04	--	--	--	--
15	0.01	0.04	--	--	--	--
16	0.01	0.01	--	--	--	--
17	--	--	0.01	0.01	--	--
18	0.01	0.01	--	--	--	--
Total[1]	**0.28**	**1.20**	**0.01**	**0.01**	**0.03**	**0.10**

[1]Total may not reflect the sum of the column above it due to rounding. ALL emissions are rounded **up** to the 1/100th in this table. e.g. 0.011 is rounded to 0.02. However, the "Total" row reflects the actual numbers and not a sum of the rounded numbers.

Truck Loading and Unloading

The transfer of organic chemicals into and out of trucks will occur as a part of the operations at the Tabler Station facility. Intermediates and final products that are loaded into trucks produce vapors containing VOC, HAP and H_2SO_4. The emissions from unloading of trucks is accounted for in the working losses of the tanks. The emissions from the loading of trucks are calculated using Equation 1 in AP-42 Section 5.2.

A saturation factor of 0.6 is selected based on Table 5.2-1 of AP-42 Section 5.1 for bottom/submerged loading of a truck during normal loadout. VOC concentration is assumed to be 100% whereas HAP and H_2SO_4 vary by stream.

Truck Loading Emissions:

Truck	VOCs		H_2SO_4	
	lb/hr	tpy	lb/hr	tpy
PAM Truck Loadout	0.01	0.01	0.01	0.01
Surfactant Truck Loadout	0.02	0.06	--	--
Sulfuric Acid Truck Loadout	--	--	0.01	0.01
Total[1]	**0.02**	**0.06**	**0.01**	**0.01**

[1]Total may not reflect the sum of the column above it due to rounding. ALL emissions are rounded **up** to the 1/100th in this table. e.g. 0.011 is rounded to 0.02. However, the "Total" row reflects the actual numbers and not a sum of the rounded numbers.

Liquid Soap A & B Making

Tank Emissions

Tank Emissions were calculated in the same manner as discussed above regarding surfactant manufacturing.

Outdoor Tank Emissions:

Tank	VOCs		HAPs	
	lb/hr	tpy	lb/hr	tpy
20	0.01	0.02	0.01	0.01
21	0.01	0.03	0.01	0.01
22	0.01	0.03	--	--
23	0.01	0.01	0.01	0.01
24	--	--	--	--
25	0.01	0.01	--	--
26	--	--	--	--
27	0.01	0.02	--	--
28	0.01	0.01	--	--
29	0.01	0.01	--	--
30	0.01	0.01	--	--
31	0.04	0.15	--	--
32	0.24	1.00	--	--
33	0.01	0.01	--	--
34	0.05	0.20	0.01	0.01
35	0.05	0.20	0.01	0.01
36	0.05	0.20	0.01	0.01
37	0.05	0.20	0.01	0.01
50	0.01	0.01	--	--
56	0.01	0.01	--	--
53	0.01	0.01	--	--
Total[1]	**0.24**	**1.80**	**0.02**	**0.05**

[1]Total may not reflect the sum of the column above it due to rounding. ALL emissions are rounded **up** to the 1/100th in this table. e.g. 0.011 is rounded to 0.02. However, the "Total" row reflects the actual numbers and not a sum of the rounded numbers.

Indoor Tank Emissions

Tank	VOCs		HAPs	
	lb/hr	tpy	lb/hr	tpy
38	0.03	0.11	--	--
40	0.01	0.01	--	--
41	0.01	0.01	--	--
42	0.01	0.02	--	--
43	0.05	0.20	--	--
44	0.02	0.06	--	--
45	0.01	0.01	--	--
46	0.01	0.04	--	--
47	0.01	0.04	--	--
51	--	--	--	--
52	0.01	0.01	--	--
54	0.01	0.01	--	--
55	0.01	0.01	--	--
57	0.01	0.01	--	--
59	0.01	0.01	--	--
60	0.01	0.01	0.01	0.01
61	0.05	0.22	--	--
63	0.01	0.05	--	--
64	0.01	0.01	0.01	0.01
65	0.01	0.01	0.01	0.01
66	0.01	0.01	0.01	0.01
67	0.01	0.01	0.01	0.01
68	0.01	0.01	0.01	0.01
69	0.01	0.01	0.01	0.01
70	0.01	0.01	0.01	0.01
71	0.01	0.01	0.01	0.01

72	0.01	0.01	0.01	0.01
73	0.01	0.01	0.01	0.01
74	0.01	0.01	0.01	0.01
75	0.01	0.01	0.01	0.01
76	0.01	0.01	0.01	0.01
77	0.01	0.01	0.01	0.01
87	0.01	0.01	--	--
88	0.01	0.01	---	--
89	0.01	0.01	--	--
90	0.01	0.01	--	--
91	0.01	0.01	--	--
92	0.01	0.01	--	--
93	0.01	0.01	--	--
94	0.01	0.01	--	--
94b	0.01	0.01	--	--
94c	0.01	0.01	--	--
94d	0.01	0.01	--	--
94e	0.01	0.01	--	--
95	0.01	0.01	--	--
96	0.01	0.01	--	--
97	0.01	0.01	--	--
98	0.01	0.01	--	--
99	0.01	0.01	--	--
100	0.01	0.01	--	--
101	0.01	0.01	--	--
102	0.01	0.01	--	--
103	0.01	0.01	--	--
104	0.01	0.01	--	--
105	0.01	0.01	--	--

106	0.01	0.01	--	--
107	0.01	0.01	--	--
108	0.01	0.01	--	--
109	0.01	0.01	--	--
110	0.01	0.01	--	--
111	0.01	0.01	--	--
112	0.01	0.01	--	--
113	0.01	0.01	--	--
114	0.01	0.01	--	--
115	0.01	0.01	--	--
116	0.01	0.01	--	--
117	0.01	0.01	--	--
118	0.01	0.01	--	--
Total[1]	**0.20**	**0.80**	**0.01**	**0.01**

[1]Total may not reflect the sum of the column above it due to rounding. ALL emissions are rounded **up** to the 1/100th in this table. e.g. 0.011 is rounded to 0.02. However, the "Total" row reflects the actual numbers and not a sum of the rounded numbers.

Process Operations

The process tanks for Liquid Soap A and B manufacturing are equipped with rotoclones for dust control. In addition, the process tanks for Liquid Soap A are equipped with an RTO. PM, PM_{10}, and $PM_{2.5}$ emissions from the rotoclones are calculated based on grain loading based on P&G process knowledge. It is conservatively assumed that PM_{10} and $PM_{2.5}$ emissions are equal to PM emissions. The VOC emissions from the process tanks for Liquid Soap B are calculated based on P&G process knowledge. The RTO emission factors are based on a mass balance of VOC, vendor guarantees (NO_x, CO), and AP-42 factors (PM_{10}, $PM_{2.5}$, SO_2).

Finished Product Packing and Capping Emissions are based on AP-42 Chapter 7.1, Equation 1-29.

Finished Product Packing and Capping Emissons:

EU ID	Description	VOCs	
		lb/hr	tpy
119	Packing and Capping Line	0.01	0.01

Rotoclone Emissions

Rotoclone Number	Process Unit Numbers	VOCs		$PM/PM_{2.5}$	
		lb/hr	tpy	lb/hr	tpy
3C	120S-123S	0.20	0.86	0.39	1.69
4C	124S-127S	0.37	1.59	0.81	3.6
5C	128S-131S	0.44	1.93	0.81	3.6
6C	132S-135S	0.37	1.59	0.54	2.4
7C	136S-139S	--	--	0.17	0.76
8C	140S-144S	--	--	0.17	0.76
9C	146S-148S	1.57	6.85	0.36	1.3
10C	150S-152S	1.57	6.85	0.36	1.3
11C	154S-156S	1.57	6.85	0.36	1.3
12C	158S-160S	1.57	6.85	0.36	2.3
13C	161S-162S	0.01	0.05	0.24	1.05
Fugitive		25.56 [1]	--	--	--
Total[1]		**7.67**	**33.42**	**4.57**	**20.06**

[1]Breakdown between fugitive and point sources are estimated.

RTO Emissions (RTO controls Emission Units 145S, 149S, 153S and 157S):

Control Device Number	NO_x		SO_2		VOC		$PM/PM_{2.5}$		CO	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
14C	0.24	1.10	0.01	0.01	6.40	5.40	0.02	0.07	1.30	5.80
RTO inoperable[1]	--	--	--	--	213.5	2.60	--	--	--	--
Total	0.24	1.10	0.01	0.01	213.5	8.00	0.02	0.07	1.30	5.80

[1]Assumes RTO is down 24 hours per year.

Dry Consumer Products Manufacturing

Tank Emissions

Tank Emissions were calculated in the same manner as discussed above regarding surfactant manufacturing.

Outdoor Tanks

Tank	VOCs	
	lb/hr	tpy
163	0.01	0.01
164	0.01	0.01
165	0.07	0.31
Total[1]	**0.07**	**0.31**

[1]Total may not reflect the sum of the column above it due to rounding. ALL emissions are rounded **up** to the 1/100th in this table. e.g. 0.011 is rounded to 0.02. However, the "Total" row reflects the actual numbers and not a sum of the rounded numbers.

Indoor Tanks

Tank	VOCs	
	lb/hr	tpy
166	0.01	0.03
167	0.01	0.03
168	0.01	0.03
169	0.01	0.02
170	0.01	0.02
171	0.01	0.02
172	0.01	0.02
173	0.01	0.02
174	0.01	0.02
175	0.01	0.02
176	0.01	0.02
177	0.01	0.02
178	0.01	0.02
179	0.01	0.02
180	0.01	0.02
181	0.01	0.02
182	0.01	0.02
183	0.01	0.02

184	0.01	0.02
185	0.01	0.02
186	0.01	0.02
187	0.01	0.02
188	0.01	0.02
Total[1]	**0.09**	**0.36**

Baghouses and fabric filters are proposed to control particulate emissions for Tabler Station in the Dry Consumer Laundry and Cleaning Products. PM, PM_{10}, and $PM_{2.5}$ emissions from the baghouses are calculated based on fabric filter grain loading and baghouse flow rates based on P&G process knowledge. It is conservatively assumed that PM_{10} and $PM_{2.5}$ emissions are equal to PM emissions.

EU ID	Control Device ID	PM/$PM_{2.5}$	
		lb/hr	tpy
189	15C	0.07	0.3
190	16C	0.05	0.21
191	17C	0.05	0.2
192	18C	1.54	6.8
193	19C	1.54	6.8
194	20C	0.56	2.4
Total		**3.81**	**16.71**

The Dry Consumer Laundry and Cleaning Products process produces a variety of consumer goods, all of which begin with a substrate. This substrate may receive a variety of liquid raw materials intended to enhance the performance and functionality of the consumer product. The raw materials typically consist of low-volatile, high molecular weight organic materials paired with a small amount of perfume. After the raw materials are applied, the substrate is cut to size, and packaged. A small amount of VOC emissions will result from the application process and subsequent exposed substrate surface. Regardless of the type of material applied or substrate used, emissions evaporating from the substrate will disperse similar to emissions evaporating from a residual "puddle", which provides a conservative estimate of potential emissions. The area over which emissions could potentially discharge into the atmosphere is the same as the area over which raw materials would be applied and therefore varies based on the application process. The evaporation and emissions of VOC can be estimated using the equation found in EPA's 2007 Emission Inventory Improvement Program's Technical Report Series Volume II Section 16, pages 49-50.

Emission Unit	VOCs	
	lb/hr	tpy
195	2.0	8.70

Utilities (Except Supplier Plastics Molding Utilities)

Boilers

CO, VOC, PM_{10}, $PM_{2.5}$, SO_2 and lead emissions from the proposed boilers are calculated using the emission factors found in AP-42 Section 1.4 (natural gas) except where a manufacturer's guarantee applies. The H_2SO_4 emission factor was calculated by assuming one percent of the sulfur contained within the natural gas is emitted as sulfuric acid.

Boiler Criteria Emissions

Boiler	NO_x		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$		CO	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
1	4.5	19.8	0.04	0.16	0.22	1.00	0.47	2.0	0.47	2.0	0.47	2.0	2.30	10.0
2	4.5	19.8	0.04	0.16	0.22	1.00	0.47	2.0	0.47	2.0	0.47	2.0	2.30	10.0
3	2.3	9.9	0.02	0.09	0.11	0.49	0.23	1.0	0.23	1.0	0.23	1.0	1.10	5.0
Total	**11.30**	**49.50**	**0.10**	**0.41**	**0.55**	**2.49**	**1.17**	**5.00**	**1.17**	**5.00**	**1.17**	**5.00**	**5.70**	**25.00**

Boiler HAP Emissions

Boiler	Formaldehyde		Hexane		Total HAPs	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
1	0.01	0.02	0.11	0.48	0.12	0.5
2	0.01	0.02	0.11	0.48	0.12	0.5
3	0.01	0.01	0.06	0.24	0.06	0.25
Total	**0.03**	**0.05**	**0.28**	**1.20**	**0.30**	**1.25**

Cooling Towers

The Tabler Station facility includes three cooling towers. The anticipated pollutants are PM, PM_{10}, and $PM_{2.5}$. Potential hourly emissions from the cooling tower are calculated using the methodology in AP-42 Section 13.4-1 and assumes a drift of 0.005%. $PM_{2.5}$ is conservatively assumed to equal PM.

Cooling Tower	$PM/PM_{10}/PM_{2.5}$	
	lb/hr	tpy
Unit 1	0.33	1.52
Unit 2	0.81	3.48
Unit 3	0.21	0.90
Total	**1.35**	**5.90**

Reciprocating Internal Combustion Engines

The Tabler Station facility will utilize three generator engines and two fire pump engines that will be subject to the emission limitations in NSPS Subpart IIII. Emissions from the engines are calculated based on emissions factors provided by the manufacturers. Since this equipment will only operate during emergency situations and routine maintenance and testing, annual emissions are calculated based on 500 hours of operations.

Engine	NO_x		SO_2		VOC		$PM/PM_{2.5}$		CO		HAPs	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
203	1.80	0.45	0.01	0.01	0.07	0.02	0.07	0.02	0.55	0.14	0.02	0.01
204	1.80	0.45	0.01	0.01	0.07	0.02	0.07	0.02	0.55	0.14	0.02	0.01
205	3.5	0.87	0.01	0.01	0.05	0.02	0.05	0.02	0.55	0.14	0.03	0.01
206	3.5	0.87	0.01	0.01	0.05	0.02	0.05	0.02	0.55	0.14	0.03	0.01
207	3.5	0.87	0.01	0.01	0.05	0.02	0.05	0.02	0.55	0.14	0.03	0.01
Total[1]	**14.10**	**3.51**	**0.05**	**0.02**	**0.29**	**0.07**	**0.29**	**0.07**	**2.75**	**0.70**	**0.10**	**0.03**

[1]Total may not reflect the sum of the column above it due to rounding. ALL emissions are rounded **up** to the 1/100th in this table. e.g. 0.011 is rounded to 0.02. However, the "Total" row reflects the actual numbers and not a sum of the rounded numbers.

Diesel Tanks

Diesel tank emissions were calculated per Section 7.1 of AP-42. Specifically equations in section 7.1.3.1.

Tank	VOCs	
	lb/hr	tpy
208	0.01	0.01

[1]Total may not reflect the sum of the column above it due to rounding. ALL emissions are rounded **up** to the 1/100th in this table. e.g. 0.011 is rounded to 0.02. However, the "Total" row reflects the actual numbers and not a sum of the rounded numbers.

Heaters

The proposed process heaters will be fired on natural gas. Emission factors for NO_x, CO, PM, $PM_{2.5}$, PM_{10}, SO_2, and VOC from AP-42 Section 1.4 were used.

Heater	NO_x		SO_2		VOC		CO		$PM/PM_{2.5}$		Hexane		Tot. HAPs	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
210	0.15	0.65	0.01	0.01	0.02	0.08	0.26	1.10	0.03	0.10	0.01	0.03	0.01	0.03
211	0.15	0.65	0.01	0.01	0.02	0.08	0.26	1.10	0.03	0.10	0.01	0.03	0.01	0.03
212	0.15	0.65	0.01	0.01	0.02	0.08	0.26	1.10	0.03	0.10	0.01	0.03	0.01	0.03
213	0.15	0.65	0.01	0.01	0.02	0.08	0.26	1.10	0.03	0.10	0.01	0.03	0.01	0.03
214	0.15	0.65	0.01	0.01	0.02	0.08	0.26	1.10	0.03	0.10	0.01	0.03	0.01	0.03
215	0.15	0.65	0.01	0.01	0.02	0.08	0.26	1.10	0.03	0.10	0.01	0.03	0.01	0.03
Total[1]	**0.90**	**3.90**	**0.02**	**0.05**	**0.10**	**0.44**	**1.51**	**6.60**	**0.14**	**0.60**	**0.04**	**0.15**	**0.04**	**0.15**

[1]Total may not reflect the sum of the column above it due to rounding. ALL emissions are rounded **up** to the 1/100th in this table. e.g. 0.011 is rounded to 0.02. However, the "Total" row reflects the **actual numbers and not a sum of the rounded numbers.**

Water and Wastewater Pretreatment

The Tabler Station facility will have water pretreatment onsite to maintain the quality of the cooling tower and boiler feed water. In addition, the facility will have pretreatment processes for the wastewater. The equipment in these areas may include tanks for wastewater collection and treatment and totes of treatment chemicals. Processes may include a dissolved air flotation unit, physical and chemical pretreatment, biological treatment, and settling tanks. Emissions were calculated using an engineering estimate of the amount of each treatment chemical used and its volatile and/or hazardous content.

Material	Process	VOCs		HAPs	
		lb/hr	tpy	lb/hr	tpy
Nalco 3DT 265	Cooling Tower Water	--	--	--	--
Nalco 7320	Cooling Tower Water	2.83	12.40	--	--
Nalco 7330	Cooling Tower Water	0.12	0.51	--	--
Nalco Stabrex ST70	Cooling Tower Water	--	--	--	--
Nalco Nexguard 22310	Boiler Feedwater	--	--	--	--
Nalco 1720	Boiler Feedwater	--	--	--	--
Nalco 1820	Boiler Feedwater	0.03	0.12	--	--
Sodium Hypochlorite	Recycle Water Disinfection	0.01	0.01	0.01	0.01
Total		**2.99**	**13.04**	**0.01**	**0.01**

Ink Usage and Holt Melt Glue

Emissions from ink and glue usage were calculated by multiplying the percentage of each ink that is a VOC (by weight) and assuming all of those VOCS are lost to the atmosphere.

Ink Usage

Business Unit	VOCs		HAPs	
	lb/hr	tpy	lb/hr	tpy
Soap Making	0.02	0.08	0.02	0.08
Dry Consumer Products	0.06	0.27	0.02	0.08
Customization	0.01	0.03	--	--
Total	**0.09**	**0.38**	**0.04**	**0.16**

Glue Usage

Business Unit	VOCs		HAPs	
	lb/hr	tpy	lb/hr	tpy
Soap Making	0.03	0.13	0.01	0.01
Dry Consumer Products	0.02	0.08	0.01	0.01
Customization	0.01	0.01	0.01	0.01
Total	**0.05**	**0.21**	**0.01**	**0.01**

Haul Roads

Paved haul road emissions calculations submitted by the applicant seemed unreasonably low. Therefore, the writer re-calculated them by using AP-42 Section 13.2.1. Said calculations will be included in the file.

Vehicles	PM		PM_{10}		$PM_{2.5}$	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Delivery Trucks	1.45	6.35	0.29	1.27	0.08	0.32

Plastics Molding

Rail Car Unloading

Rail car unloading emissions were estimated using the average dusting factor for all types of pellet storage identified by EPA. Five different unloading points can feed any of 24 storage

silos. A 90% control efficiency was taken to account for the use of cyclones to control PM emissions from the process.

Cyclone	PM		PM_{10}		$PM_{2.5}$	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
21C	0.08	0.35	0.08	0.35	0.08	0.35
22C	0.08		0.08		0.08	
23C	0.08		0.08		0.08	
24C	0.08		0.08		0.08	
25C	0.08		0.08		0.08	

Silo Storage

Silo storage emissions were estimated using the average dusting factor for all types of pellet storage identified by EPA.

Silos	PM		PM_{10}		$PM_{2.5}$	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
222S-245S (combined)	0.80	3.50	0.80	3.50	0.80	3.50

Plastic Regrind

Plastic regrind emissions were estimated using the average dusting factor for all types of pellet storage identified by EPA. The resulting factor was then multiplied by 3 to account for the regrind process. A control efficiency of 95% was then taken to account for the bin vent filter.

Emission Unit	PM		PM_{10}		$PM_{2.5}$	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
246	0.04	0.17	0.04	0.17	0.04	0.17

Fugitive Emission Losses

When the plastic pellets are heated to be pressed or molded they emit a small quantity of VOC. The VOC emitted is calculated using a factor from the Michigan DEQ document "Plastics Production and Products Manufacutring".

The other fugitive VOCs are from cleaning products and are calculated assuming 100% loss rate of volatile components of cleaning products.

Emission Unit	VOCs	
	lb/hr	tpy
247S (Forming)	0.70	3.07
248S (Cleaning)	1.37	6.00
Total	**2.07**	**9.07**

Plastics Molding Utilities

Space Heaters

The proposed space heaters will be fired on natural gas. Emission factors for NO_x, CO, PM, $PM_{2.5}$, PM_{10}, SO_2, and VOC from AP-42 Section 1.4 were used.

Heater	NO_x		SO_2		VOC		CO		$PM/PM_{2.5}$		Hexane		Tot. HAPs	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
249S	0.25	1.08	0.01	0.01	0.03	0.12	0.42	1.81	0.04	0.17	0.01	0.04	0.01	0.04
250S	0.25	1.08	0.01	0.01	0.03	0.12	0.42	1.81	0.04	0.17	0.01	0.04	0.01	0.04
251S	0.13	0.54	0.01	0.01	0.02	0.06	0.21	0.91	0.02	0.09	0.01	0.02	0.01	0.02
252S	0.13	0.54	0.01	0.01	0.02	0.06	0.21	0.91	0.02	0.09	0.01	0.02	0.01	0.02
253S	0.05	0.22	0.01	0.01	0.01	0.03	0.09	0.37	0.01	0.04	0.01	0.01	0.01	0.01
254S	0.05	0.22	0.01	0.01	0.01	0.03	0.09	0.37	0.01	0.04	0.01	0.01	0.01	0.01
Total[1]	**0.83**	**3.65**	**0.01**	**0.01**	**0.10**	**0.41**	**1.40**	**6.13**	**0.13**	**0.56**	**0.03**	**0.13**	**0.03**	**0.13**

[1]Total may not reflect the sum of the column above it due to rounding. ALL emissions are rounded **up** to the 1/100th in this table. e.g. 0.011 is rounded to 0.02. However, the "Total" row reflects the actual numbers and not a sum of the rounded numbers.

Cooling Tower

The plastics molding area will be supported by a cooling tower. The anticipated pollutants are PM, PM_{10}, and $PM_{2.5}$. Potential hourly emissions from the cooling towers are calculated using the methodology in AP-42 Section 13.4-1 and assumes a drift of 0.005%. $PM_{2.5}$ is conservatively assumed to equal PM.

Cooling Tower	$PM/PM_{10}/PM_{2.5}$	
	lb/hr	tpy
255S	0.40	1.80

Reciprocating Internal Combustion Engines

The Plastics Molding facility will utilize one generator engine that will be subject to the emission limitations in NSPS Subpart JJJJ. Emissions from the engine are calculated based on emissions factors provided by the manufacturer for NO_x, CO and VOCs. Emissions of SO_2 and PM are based on AP-42. Since this equipment will only operate during emergency situations and routine maintenance and testing, annual emissions are calculated based on 500 hours of operations.

Engine	NO_x		SO_2		VOC		$PM/PM_{2.5}$		CO		HAPs	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
256S	0.42	0.11	0.01	0.01	0.21	0.06	0.01	0.01	0.84	0.21	0.01	0.01

Based on the above tables, facility wide criteria emissions will be as follows:

	NO_x		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$		CO	
	lb/hr	tpy	lb/hr	tpy	lbn/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Scrubber Stack	1.06	4.60	2.1	1.65	1.80	4.24	6.90	23.70	6.90	23.70	6.90	23.70	0.06	0.24
Scrubber Preheater	0.78	0.03	0.01	0.01	0.09	0.01	0.12	0.01	0.12	0.01	0.12	0.01	1.30	0.05
Surfactant Manufact. Tanks	--	--	--	--	0.28	1.20	--	--	--	--	--	--	--	--
Truck Loading	--	--	--	--	0.02	0.06	--	--	--	--	--	--	--	--
Liq. Soap Outdoor Tanks	--	--	--	--	0.24	1.80	--	--	--	--	--	--	--	--
Liq. Soap Indoor Tanks	--	--	--	--	0.20	0.80	--	--	--	--	--	--	--	--
Liq Soap Packing & Capping	--	--	--	--	0.01	0.01	--	--	--	--	--	--	--	--
Rotoclones	--	--	--	--	33.23	33.42	4.57	20.06	4.57	20.06	4.57	20.06	--	--
RTO	0.24	1.10	0.01	0.01	213.5	8.00	0.02	0.07	0.02	0.07	0.02	0.07	1.30	5.80
Dry Prod Manuf. Out. Tanks	--	--	--	--	0.07	0.31	--	--	--	--	--	--	--	--
Dry Prod Manuf. In. Tanks	--	--	--	--	0.09	0.36	--	--	--	--	--	--	--	--
Baghouses/Fabric Filters	--	--	--	--	--	--	3.81	16.71	3.81	16.71	3.81	16.71	--	--
Dry Prod Manufact. Fugitives	--	--	--	--	2.0	8.70	--	--	--	--	--	--	--	--
Main Facility Boilers	11.30	49.50	0.10	0.41	0.55	2.49	1.17	5.00	1.17	5.00	1.17	5.00	5.70	25.00
Main Facility Cooling Towers	--	--	--	--	--	--	1.35	5.90	1.35	5.90	1.35	5.90	--	--
Main Facility Engines	14.10	3.51	0.05	0.02	0.29	0.07	0.29	0.07	0.29	0.07	0.29	0.07	2.75	0.70
Diesel Tanks	--	--	--	--	0.01	0.01	--	--	--	--	--	--	--	--
Process Heaters	0.90	3.90	0.02	0.05	0.10	0.44	0.14	0.60	0.14	0.60	0.14	0.60	1.51	6.60
Water Treatment	--	--	--	--	2.99	13.04	--	--	--	--	--	--	--	--
Ink & Glue Usage	--	--	--	--	0.14	0.59	--	--	--	--	--	--	--	--
Haul Roads	--	--	--	--	--	--	1.45	6.35	0.29	1.27	0.08	0.32	--	--
Plastics Molding Cyclones	--	--	--	--	--	--	0.08	0.35	0.08	0.35	0.08	0.35	--	--
Plastics Moldings Silos	--	--	--	--	--	--	0.80	3.50	0.80	3.50	0.80	3.50	--	--
Plastic Regrind	--	--	--	--	--	--	0.04	0.17	0.04	0.17	0.04	0.17	--	--
Plastic Molding Fugitives	--	--	--	--	2.07	9.07	--	--	--	--	--	--	--	--
Plastic Molding Space Heat.	0.83	3.65	0.01	0.04	0.10	0.41	0.13	0.56	0.13	0.56	0.13	0.56	1.40	6.13
Plastic Molding Cool. Tower	--	--	--	--	--	--	0.40	1.80	0.40	1.80	0.40	1.80	--	--
Plastic Molding Engines	0.42	0.11	0.01	0.01	0.21	0.06	0.01	0.01	0.01	0.01	0.01	0.01	0.84	0.21
Total	**29.63**	**66.40**	**2.31**	**2.20**	**257.99**	**85.09**	**21.28**	**84.86**	**20.12**	**79.78**	**19.91**	**78.83**	**14.86**	**44.73**

Facility Wide HAP emissions from the facility should be as follows:

HAP	tpy
Hexane	1.46
Ethylene Oxide	0.05
Formaldehyde	0.06
Vinyl Acetate	0.01
1,4 Dioxane	0.06
Hydrogen Chloride	0.02
Glycol Ether	0.17
Other Combustion HAPs	0.03
Total HAPs	1.86

REGULATORY APPLICABILITY

The following state and federal rules apply to the proposed facility.

STATE RULES

45CSR2 To Prevent and Control Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchangers.

The boilers at the Tabler Station facility meet the definition of fuel burning units in 45CSR2. Therefore they are subject to the PM limits of 45CSR§2-4.1.b.

Boiler	Size (mmbtu/hr)	Rule 2 Limit (lb/hr)	Emission Rate (lb/hr)
1	93	8.37	2.31
2	93	8.37	0.70
3	33	2.97	0.25

As can be seen from the above table, the boilers will meet the 45CSR2 limits.

45CSR6 Control of Air Pollution from Combustion of Refuse

The main requirement of 45CSR6 applicable to the Tabler Station facility is the PM emission limit from the RTO. 45CSR§6-4.1. limits PM from the RTO to 0.43 pounds per hour (based on the maximum flow rate to the RTO of 158.6 pounds per hour reported in the application). Actual PM emissions from the RTO should not exceed 0.02 pounds per hour. Therefore, the RTO will meet the requirements of 45CSR6.

45CSR7 To Prevent and Control Particulate Matter Air Pollution From Manufacturing Processes and Associated Operations

45CSR7 regulates PM emissions from manufacturing processes and associated operations. 45CSR§7-3, contains a 20% opacity limit from all process source operations. Section 45CSR7-4 and Table 45-7A set particulate emissions limits based on the total weight of all materials used by the facility, also known as the process weight rate. The different process areas at the Tabler Station facility qualify under different classifications as part of the rule. The surfactants area is a mineral acid producing area, subject to limits in Table 45-7B. The liquid soap and dry consumer laundry and cleaning products areas qualify as Type a facilities. The utilities area is covered under 45CSR2, and is exempt from this rule, according to 45CSR§10-10.1. The maximum allowable total stack emission rate for each area are shown in the following table.

Process Area	Process Weight Rate	Stack Emission Rate
Surfactants	NA	35 mg/m^3
Liquid Soap	> 600,000 lb/hr	50 lb/hr
Dry Consumer Products	> 600,000 lb/hr	50lb/hr

45CSR10: To Prevent and Control Air Pollution from the Emission of Sulfur Oxides

45CSR10 has requirements limiting SO emissions from "fuel burning units". The Tabler Station boilers are defined as a "fuel burning units". The applicable requirements are discussed below:

45CSR10 Fuel Burning Units - Section 3

The allowable combined sulfur dioxide (SO_2) emission rate for the three boilers, identified as a Type "b" fuel burning unit, per 45CSR10, Section 3.3.f (note that Berkeley county is in a Priority III region), is the product of 3.2 and the total design heat input of the three boilers in million Btu per hour. The maximum design heat input of the three boilers will be 219 mmBtu/Hr. Using the above equation, the 45CSR10 SO_2 emission limit of the three boilers will be 700.8 lb/hr.

The maximum potential combined hourly SO_2 emissions from the three boilers is estimated to be 0.6 lb/hr. This emission rate is far less than 1% of the 45CSR10 limit.

45CSR13 Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, and Procedures for Evaluation

The proposed construction of the Tabler Station facility has a potential to emit in excess of six (6) lbs/hour and ten (10) TPY of a regulated pollutant and, therefore, pursuant to §45-13-2.24, the facility is defined as a "stationary source" under 45CSR13. Pursuant to §45-13-5.1, "[n]o person shall cause, suffer, allow or permit the construction . . . and operation of any stationary source to be commenced without . . . obtaining a permit to construct." Therefore, Procter & Gamble is required to obtain a permit under 45CSR13 for the construction and operation of the facility.

As required under §45-13-8.3 ("Notice Level A"), Procter & Gamble placed a Class I legal advertisement in a "newspaper of general circulation in the area where the source is . . . located." The ad ran on May 10, 2016 in *The Journal* and the affidavit of publication for this legal advertisement was submitted to the WVDAQ on May 19, 2016.

45CSR16: Standards of Performance for New Stationary Sources

45CSR16 incorporates by reference applicable requirements under 40 CFR 60. 40 CFR 60 Subpart Dc and Subpart IIII apply to the facility (see below under Federal Regulations).

45CSR30: Requirements for Operating Permits

45CSR30 provides for the establishment of a comprehensive air quality permitting system consistent with the requirements of Title V of the Clean Air Act. Because the facility is subject to 40CFR60 Subpart Dc, it is subject to 45CSR30. However, since the facility is taking limits to keep emissions of all pollutants below major source thresholds, it will be a minor (deferred) source under the rule.

45CSR34: Emission Standards for Hazardous Air Pollutants

45CSR34 incorporates by reference applicable requirements under 40 CFR 61, 40 CFR 63 and Section 112 of the Clean Air Act. 40 CFR 63 Subpart ZZZZ applies to the facility (see below under Federal Regulations).

FEDERAL RULES

40 CFR 60 Subpart Dc: Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

Subpart Dc has requirements relating to limiting the emissions of Particulate Matter, and SO_2 from electric steam generating units. However, natural gas fired boilers are exempt from the emission standards. The following discusses the substantive applicable requirements of Subpart Dc relating to the three Tabler Statioin boilers.

Subpart Dc Applicability - Section §60.40c

Pursuant to §60.40c(a), the affected facility to which Subpart Dc applies is each steam generating unit that is capable of combusting 29 megawatts (100 million Btu/hour) heat input or less but greater than or equal to 2.9 megawatts (10 million Btu/hr) for which construction, reconstruction or modification is commenced after June 9, 1989. The proposed Procter & Gamble auxiliary boilers meet these requirements and are subject to the applicable requirements of Subpart Dc.

Subpart Dc Pollutant Emission Standards - Section §60.42c and §60.43c

Per §60.42c(a) and §60.43c(a), the emission standards only apply to steam generating units that burn coal or coal in combination with other fuels. Since the Tabler Station boilers will burn only natural gas , they are exempt from these emission standards.

Subpart Dc Notification Requirements - Section §60.48c(a)

Section §60.48c outlines the notification of construction and actual startup requirements to be followed to be in compliance with Subpart Dc. Procter & Gamble is subject to these requirements.

Subpart Dc Record-Keeping Requirements - Section §60.48c(f) and Section §60.48c(g)

Sections §60.48c(f) and (g) outline the fuel record-keeping requirements required to be followed to be in compliance with Subpart Dc. Procter & Gamble is subject to these requirements.

40 CFR 60, Subpart IIII Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Subpart IIII contains requirements relating to the performance of compression ignition engines. Procter & Gamble proposes to use two fire water pumps and four emergency generators that will be subject to Subpart IIII. Three of the generators will be used in the main facility and one will be used in the Suppliers Village area (Plastics Molding area). The following discusses the substantive applicable requirements of Subpart IIII relating to the Tabler Station facility.

Subpart IIII Applicability - Section §60.4200

Pursuant to §60.4200, compression ignition engines manufactured after July 11, 2005 are subject to the subpart. Therefore, Subpart IIII will be applicable to all six engines at the proposed Procter and Gamble Facility.

Subpart IIII Emission Standards - Section §60.4204 and §60.4205

§60.4205 sets the following standards for the engines (all standards in g/kW-hr):

Engine	NMHC + NO_x	CO	PM
Fire Water Pump Engine (203)	4.0	--	0.20
Fire Water Pump Engine (204)	4.0	--	0.20
Emergency Generator (205)	4.0	3.5	0.20
Emergency Generator (206)	4.0	3.5	0.20
Emergency Generator (207)	4.0	3.5	0.20
Emergency Generator (256)	4.7	5.0	0.40

§60.4211(c) requires engines like those above to be certified by the manufacturer to meet the applicable standards.

Subpart IIII Fuel Requirements - Section §60.4207

Since all six engines have a displacement of less than 30 liters per cylinder, per §60.4207 (b), they must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel.

40 CFR 63 Subpart ZZZZ: National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Subpart ZZZZ Applicability - §63.6585

Pursuant to §63.6585, stationary reciprocating internal combustion engines that are not being tested at a stationary RICE test cell/stand are subject to Subpart ZZZZ. Therefore, Subpart ZZZZ will be applicable to the fire water pump engines and the emergency generators at the proposed Procter & Gamble Plant.

Subpart ZZZZ Requirements - §63.6590

Pursuant to §63.6590(c)(1) new stationary RICEs at area sources of HAPs must meet the requirements of 40 CFR 60 Subpart IIII (see previous discussion). No other requirements apply to such engines.

NONAPPLICABILITY DETERMINATIONS

40 CFR 60 Subpart H: Standards of Performance for Sulfuric Acid Plants

Subpart H applies to "Sulfuric acid production units" and defines such units as "any facility producing sulfuric acid by the contact process by burning elemental sulfur, alkylation acid, hydrogen sulfide, organic sulfides and mercaptans, or acid sludge, **but does not include facilities where conversion to sulfuric acid is utilized primarily as a means of preventing emissions to the atmosphere of sulfur dioxide or other sulfur compounds**" (emphasis added).

In their application, P&G states "The sulfuric acid making is used primarily as a means of preventing sulfur dioxide emissions from entering the atmosphere..."

40 CFR 60 Subpart Kb: Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984

Subpart Kb regulates storage vessels with a design capacity greater than or equal to 75 cubic meters (m^3) that store volatile organic liquids. Storage vessels with a capacity greater than or equal to 151 cubic meters (m^3) storing a liquid with a maximum true vapor pressure, excluding water, less than 3.5 kilopascals (kPa) or with a capacity greater than or equal to 75 m^3 but less than 151 m^3 storing a liquid with a maximum true vapor pressure less than 15.0 kPa are exempt from the requirements of this rule.

The tanks at the Tabler Station facility meet the exemption requirements of this rule. Therefore, the Tabler Station facility is exempt from NSPS Kb.

40 CFR 60 Subpart Vva: Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006

Per §60.480a(b), Subpart VVa applies to any affected facility that commences construction, reconstruction, or modification after November 7, 2006, where an affected facility is the group of all equipment within a process. The definition of "process unit" and "equipment" are as follows per §60.480a(f)(2):

"Process unit means components assembled to produce, as intermediate or final products, one or more of the chemicals listed in § 60.489 of this part. A process unit can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the product.

Equipment means each pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, valve, and flange or other connector in VOC service and any devices or systems required by this subpart."

The only chemical produced either as a final product or as an intermediate from the list given in §60.489 of this part at the Tabler Station facility is dioxane, an unintended byproduct produced during the surfactant making process at a very low concentration. Therefore, P&G has a potential "process unit" as defined under NSPS Vva. For purposes of compliance with NSPS VVa, the "affected facility" is the group of all equipment within the surfactants process unit. This process unit will be constructed after November 7, 2006. As such, the group of all equipment in the surfactants process unit is subject to the requirements codified in Subpart VVa. However, per 40 CFR 60.480a(d), "Any affected facility that has the design capacity to produce less than 1,000 Mg/yr (1,102 ton/yr) of a chemical listed in §60.489 is exempt from §§60.482–1a through §60.482–11a."

The P&G surfactant making process produces dioxane in extremely small quantities as an unintended byproduct. Less than 1,000 Mg/year of dioxane is produced; therefore the Tabler Station facility qualifies for the first exemption. As such, P&G does not operate an "affected facility" under Subpart VVa and, as such, P&G is not subject to the requirements listed in §§60.482-1a through 60.482–11a. However, P&G is required to keep records onsite to document the exemption.

40 CFR 63 Subpart JJJJJJ: National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

Natural gas fired boilers are exempt from the requirements of Subpart JJJJJJ per §63.11195(e).

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

This section provides general toxicity information for those pollutants not classified as "criteria pollutants." Criteria pollutants are defined as Carbon Monoxide (CO), Lead (Pb), Oxides of Nitrogen (NO_x), Ozone, Particulate Matter (PM), and Sulfur Dioxide (SO_2). These pollutants have National Ambient Air Quality Standards (NAAQS) set for each that are designed to protect the public health and welfare. Other pollutants of concern, although designated as non-criteria and without national concentration standards, are regulated through various federal and state programs designed to limit their emissions and public exposure. These programs include federal source-specific HAP limits promulgated under 40 CFR 61 (NESHAPS) and 40 CFR 63 (MACT). Potential applicability to these programs were discussed above under REGULATORY APPLICABILITY.

The majority of non-criteria regulated pollutants fall under the definition of Hazardous Air Pollutants (HAPs). All non-criteria regulated pollutants proposed to be emitted by the facility with the exception of sulfuric acid mist (H_2SO_4) are defined as Hazardous Air Pollutants (HAPs). HAPS and H_2SO_4 will be discussed separately below.

HAPs

Section 112(b) of the Clean Air Act (CAA) identifies 188 compounds as pollutants or groups of pollutants that EPA knows or suspects may cause cancer or other serious human health effects. The combustion of both natural gas and fuel oil has the potential to produce HAPs. However, the potential HAP emissions from the facility are below the levels that define a major HAP source. Therefore, the facility is considered a minor (or area) HAP source, and no source-specific major source NESHAP or MACT standards apply. The following table lists each HAP potentially emitted by the facility in excess of 20 pounds/year (0.01 tons/year) and the carcinogenic risk associated thereto (as based on analysis provided in the Integrated Risk Information System (IRIS)):

HAP	Type	Known/Suspected Carcinogen	Classification
Formaldehyde	VOC	Yes	B1 - Probable Human Carcinogen
Hexane	VOC	No	D-Not Classifiable
Etylene Oxide	VOC	Yes	B1 - Probable Human Carcinogen
Vinyl Acetate	VOC	No	Not Classified
1,4 Dioxane	VOC	Yes	B2 - Probable Human Carcinogen
Glycol Ethers	VOC	No	Not Classified

All HAPs have other non-carcinogenic chronic and acute effects. These adverse health affects may be associated with a wide range of ambient concentrations and exposure times and are influenced by source-specific characteristics such as emission rates and local meteorological conditions. Health impacts are also dependent on multiple factors that affect variability in humans such as genetics, age, health status (e.g., the presence of pre-existing disease) and lifestyle. As stated previously, there are no federal or state ambient air quality standards for these specific chemicals. The regulatory applicability of any potential NESHAP or MACT to the Tabler Station Facility was discussed above. For a complete discussion of the known health effects refer to the IRIS database located at www.epa.gov/iris.

Sulfuric Acid Mist (H_2SO_4)

The compound of H_2SO_4 is regulated under 45CSR14 with a significance level that can trigger BACT for each source that contributes H_2SO_4 emissions. However, since the Tabler Station Facility will not be a major source as defined in 45CSR14 no BACT analysis was triggered. H_2SO_4 is not represented in the IRIS database and is not listed as a HAP. Concerning the carcinogenity of sulfuric acid, the Agency for Toxic Substances and Disease Registry (ATSDR) states that "the ability of sulfuric acid to cause cancer in laboratory animals has not been studied. The International Agency for Research on Cancer (IARC) has determined that occupational exposure to strong inorganic acid mists containing sulfuric acid is carcinogenic to humans. IARC has not classified pure sulfuric acid for its carcinogenic effects."

AIR QUALITY IMPACT ANALYSIS

Because this application addresses the construction of a facility which is not defined as major, per 45CSR14, no modeling was performed.

MONITORING OF OPERATIONS

The following monitoring, recordkeeping and testing will be required by the permit:

Scrubber Stacks

* The applicant shall monitor and record pH of the scrubber liquor on an hourly basis.

* The applicant shall perform an initial stack test to determine compliance with SO_2, VOC and PM emissions.

All Tanks

* The applicant shall monitor and record the substance (and it's associated vapor pressure) stored in each tank.

Truck Loading and Unloading

* The applicant shall monitor and record the total amount of precipitated acid mix (PAM) and surfactant loaded out into trucks, on at least a monthly basis.

Finished Product Packing and Capping

* The applicant shall monitor and record the total amount of Soap A and B packaged, on at least a monthly basis.

Rotoclones

* The applicant shall monitor and record the pressure drop across each rotoclone on at least a weekly basis.

* The applicant shall perform initial stack tests on at least one Liquid Soap A and one Liquid Soap B rotoclone to determine compliance with the VOC emission limit.

* The applicant shall monitor and record the amount of liquid soap processed through equipment serviced by each rotoclone.

Regenerative Thermal Oxidizer

* The applicant shall perform an initial stack test on the RTO to determine compliance with VOC emissions.

* The applicant shall monitor and record the internal temperature of the RTO on at least an hourly basis.

All Baghouses/Fabric Filters

* The applicant shall monitor and record the pressure drop across each baghouse on at least a weekly basis.

Dry Consumer Products A Additive Fugitives

* The applicant shall monitor and record the maximum vapor pressure of any additive or perfume used.

All Boilers

* The applicant shall monitor and record the amount and type of fuel consumed by each boiler on at least a monthly basis.

* The applicant shall perform monthly visible emissions checks.

All Cooling Towers

* The applicant shall monitor and record the total dissolved solids (via conductivity or lab testing) on at least a monthly basis.

All Engines

* The applicant shall monitor and record the number of hours of operation of each Reciprocating Internal Combustion Engine (RICE) on at least a monthly basis.

* The applicant shall monitor and record the amount of fuel used by each RICE on at least a monthly basis.

* The applicant shall monitor and record the sulfur content in the fuel oil consumed by each RICE.

Cooling Tower/Boiler Feedwater/Wastewater Pretreatment Chemicals

* The applicant shall monitor and record the amount of any water pretreatment chemicals used.

* The applicant shall monitor and record the VOC and HAP content of any water pretreatment chemicals used.

Ink and glue Usage

* The applicant shall monitor and record the amount of ink and glue used at the facility on at least a monthly basis.

Plastics Molding Cyclones

* The applicant shall monitor and record the pressure drop across each cyclone on at least a weekly basis.

Plastics Molding Silos

* The applicant shall monitor and record the amount of plastic pellets transferred to the storage silos on at least a monthly basis.

Plastic Molding Regrind

* The applicant shall monitor and record the amount of plastic reground on at least a monthly basis.

Plastic Molding Fugitives

* The applicant shall monitor and record the amount of isopropyl alcohol and parts washing cleaning solvent used.

RECOMMENDATION TO DIRECTOR

Information supplied in the application indicates that compliance with all applicable regulations will be achieved. Therefore it is the recommendation of the writer that permit R13-3316 for the construction of a consumer products production facility near Martinsburg, in Berkeley County, be granted to Procter and Gamble Manufacturing Company.

Steven R. Pursley, PE
Engineer

11-2-16

November 2, 2016

OIC Defaulted Accounts Search Results

FEIN: 31-0411982

Business:

Doing Business As/Trading As:

Results Found: 0

$$E = \left[k(SL)^{0.91} \cdot (W)^{1.02} \right] \left(1 - \frac{1.2P}{N}\right)$$

$k = .011$ PM

$= .0022$ PM_{10}

$= .00054$ $PM_{2.5}$

$SL = 7.4$

$W = \frac{35{,}000 + 80{,}000}{2} = 28.75$ tons

$N = 8760$

$P = 140.24 = 3360$

$$E = \left[.011 (7.4)^{0.91} \cdot (28.75)^{1.02} \right] \left(1 - \frac{1.2 \cdot 3360}{8760}\right)$$

$= (0.06798 \cdot 30.7476)(1 - .46027) = 1.128 \frac{lb}{VMT}$

$= (2.0902)(1 - .46027) = 1.45 \frac{lb}{hr}$

$1.128 \frac{lb}{VMT} \cdot \frac{.0417 VMT}{trip} \cdot \frac{30.8 trips}{hour} = 1.45 \frac{lb}{hr}$

$1.45 \frac{lb}{hr} \cdot \frac{8760 hr}{yr} \cdot \frac{1 ton}{2000 lb} = 6.35$ tpy

$PM_{10} = 1.45 \frac{lb}{hr} \cdot \frac{.0022}{.011} = 0.29 \frac{lb}{hr}$

$0.29 \frac{lb}{hr} \cdot \frac{8760 hr}{yr} \cdot \frac{1 ton}{2000 lb} = 1.27$

$PM_{2.5} = 1.45 \frac{lb}{hr} \cdot \frac{.00054}{0.011} = 0.08 \frac{lb}{hr}$

$0.08 \frac{lb}{hr} \cdot \frac{8760}{2000} = 0.32$

AIR QUALITY PERMIT NOTICE

Notice of Intent to Approve

On May 6, 2016, Procter and Gamble Manufacturing Company applied to the WV Department of Environmental Protection, Division of Air Quality (DAQ) for a permit to construct a consumer products production facility located on Development Drive between Martinsburg and Inwood, Berkeley County, WV at latitude 39.4127 and longitude -78.0070. A preliminary evaluation has determined that all State and Federal air quality requirements will be met by the proposed facility. The DAQ is providing notice to the public of its preliminary determination to issue the permit as R13-3316.

The following potential emissions will be authorized by this permit action: Particulate Matter less than 10 microns, 79.78 tons per year (TPY); Particulate Matter, 84.86 TPY; Sulfur Dioxide, 2.20 TPY; Oxides of Nitrogen, 66.40 TPY; Carbon Monoxide, 44.73 TPY; Volatile Organic Compounds, 85.09 TPY; Hazardous Air Pollutants (HAPs), 1.86 TPY.

Written comments or requests for a public meeting must be received by the DAQ before 5:00 p.m. on DRAFT. A public meeting may be held if the Director of the DAQ determines that significant public interest has been expressed, in writing, or when the Director deems it appropriate.

The purpose of the DAQ's permitting process is to make a preliminary determination if the proposed construction will meet all State and Federal air quality requirements. The purpose of the public review process is to accept public comments on air quality issues relevant to this determination. Only written comments received at the address noted below within the specified time frame, or comments presented orally at a scheduled public meeting, will be considered prior to final action on the permit. All such comments will become part of the public record.

Steven R. Pursley, PE
WV Department of Environmental Protection
Division of Air Quality
601 57th Street, SE
Charleston, WV 25304
Telephone: 304/926-0499, ext. 1218
FAX: 304/926-0478

Additional information, including copies of the draft permit, application and all other supporting materials relevant to the permit decision may be obtained by contacting the engineer listed above. The draft permit and engineering evaluation can be downloaded at:

www.dep.wv.gov/daq/Pages/NSRPermitsforReview.aspx

Pursley, Steven R

From: Pursley, Steven R
Sent: Wednesday, November 2, 2016 11:54 AM
To: Hadley, Drew (hadley.ja@pg.com) (hadley.ja@pg.com)
Cc: Allison Cole (acole@trinityconsultants.com); Russell Bailey (RBailey@trinityconsultants.com)
Subject: Procter and Gamble PREDRAFT Permit
Attachments: dper1.pdf

Attached is the PREDRAFT version of the P&G permit. Please remember that it has not been reviewed internally by DAQ yet (I will turn it in to my supervisor for her review this afternoon). Therefore, there could be significant changes before we go to notice with an actual draft version.

Please let me know if you have any questions or comments.

Thanks

Steve

Pursley, Steven R

From: Allison Cole <acole@trinityconsultants.com>
Sent: Wednesday, August 17, 2016 1:12 PM
To: Pursley, Steven R
Cc: Hadley, Drew (hadley.ja@pg.com); Russell Bailey
Subject: PG - Tablers Station - Response to Comments
Attachments: Attachment N and J and L (2016-08-17) - Followup Questions.pdf

603-00154

FILE:
COMPANY P&G
FACILITY Tablers Station
REGION 10 REG. 13-3316

Steve,

Thanks for your continued assistance with review of the Procter & Gamble – Tabler Station air emissions permit application. Attached are several tables from Attachment N (Emissions Calculations), Attachment L (General Emission Units), and Attachment J (Emission Points) that we have revised in response to your questions. Generally the revisions are a clarification of the specific emissions levels, including the speciation of the HAPs.

1. 8/2/2016 – request to speciate HAPs in Table N-1 and N-5, and provide a total HAP table
   a. HAPs have been speciated in Table N-1 and N-5.
      i. Footnote in tables N-6, N-12, N-13 have been edited to match N-5
   b. A Total HAP table has been added (N-0b).
2. 8/8/2106 – request to check logic on summation of VOC in Table N-10
   a. Footnote has been edited to match equation.
   b. The total VOC emissions have changed slightly with the updated calculation approach, and updated N-0a and Attachment J (pg. 1) tables are attached for reference.
3. 8/15/2016 – request to clarify CO emissions from sulfur combustion / surfactant making.
   As you are aware, the "fuel" for sulfate production as part of the surfactant manufacturing process is elemental sulfur, and is not a hydrocarbon. Thus, there is not really production of CO or CO2 such as from a hydrocarbon fuel. We did review our material specifications and determined that the elemental sulfur could have ppm levels of hydrocarbon as an impurity. AP-42 assumes roughly 1% CO to 99% CO2. If we conservatively increase that to 5% CO as a hypothetical example, that would equate to less than 0.25 tpy potential emissions. Given the trace hydrocarbon levels it is likely that virtually all hydrocarbon would convert to CO2 and very little would convert to CO. We have included the conservative projection of emissions based on the potential hydrocarbon level and 5% carbon conversion to CO.
   Please note that this minor CO contribution is additive to the CO emissions resulting from natural gas firing of the surfactant start-up burners.
      i. Table N-3 and Attachment L (general) have been updated with the new calculations.

Thanks again for your support of the project, and please feel free to contact me or Drew Hadley at P&G with any questions on the information.

Best Regards,

Allison Cole
Consultant

Trinity Consultants
15 E Salem Avenue, Suite 201| Roanoke, Virginia 24011
Office: **540-342-5945 x3**

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Email: acole@trinityconsultants.com

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Trinity Consultants

Pursley, Steven R

From: Pursley, Steven R
Sent: Monday, August 01, 2016 3:26 PM
To: 'fikes.em@pg.com'
Cc: McKeone, Beverly D; Allison Cole (acole@trinityconsultants.com); Hadley, Drew (hadley.ja@pg.com) (hadley.ja@pg.com); Russell Bailey (RBailey@trinityconsultants.com)
Subject: WV DAQ NSR Permit Application Complete for Procter & Gable, Tabler Station

RE: Application Status: Complete
Procter & Gamble, Tabler Station Facility
Permit Application R13-3316
Plant ID No. 003-00154

Ms. Fikes

Your application for a construction permit for a consumer products production facility was received by this Division on May 6, 2016 and assigned to the writer for review. Upon review of said application, it was initially determined that the application was incomplete as submitted. However, with the submittal of additional information on June 15, 2016 and July 27, 2016, the application has now been deemed complete and, therefore, the statutory review period commenced on August 1, 2016.

This determination of completeness shall not relieve the permit applicant of the requirement to subsequently submit, in a timely manner, any additional or corrected information deemed necessary for a final permit determination.

Should you have any questions, please contact Steven R. Pursley, PE at (304) 926-0499 ext. 1218 or reply to this email.

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Pursley, Steven R

From: Allison Cole <acole@trinityconsultants.com>
Sent: Wednesday, July 27, 2016 2:01 PM
To: Pursley, Steven R
Cc: Russell Bailey; Hadley, Drew (hadley.ja@pg.com)
Subject: PG - Tablers Station - Application Amendment
Attachments: Amendment - FINAL (2016-07-27).pdf

Steve:

Attached is an amendment to the application for Procter and Gamble's Tablers Station facility (submitted: May 2016). The amended application pages describe processes and equipment for the plastics molding area and supporting utilities. Thank you for your expeditious review. Please let us know of any questions as they arise.

Allison Cole
Consultant

Trinity Consultants
15 E Salem Avenue, Suite 201| Roanoke, Virginia 24011

Office: **540-342-5945 x3**
Email: acole@trinityconsultants.com

2.6 PLASTICS MOLDING

2.6.1 Process Description

The Tablers Station facility will incorporate third party suppliers who will provide a plastics molding process for the manufacture of bottles, caps, and other formed plastic parts.

The plastic bottle and cap making process involves injection molding, blow molding, and extrusion blow molding. The process starts with the unloading of plastic pellets from railcars into storage silos. From the silos, the pellets are piped to presses and molding machines which make bottles, caps and other formed plastic parts depending on product needs. The presses and molding machines heat the plastic with electrical heaters and via friction heating. Scrap plastic is reground and reused directly in the making process.

Emissions calculations for the above listed equipment are enclosed in Attachment N of the application. Emissions have been estimated using either vendor supplied specifications or applicable AP-42 factors.

2.6.2 Emissions Calculations for Plastics Molding

2.6.2.1 Dry Material Handling

Plastic pellets are stored, conveyed and ground. Particulate emissions for these areas are estimated by the supplier based on the average of published factors available for other types of pellet storage, including grain and wood pellets.

2.6.2.2 Fugitive VOC

When the plastic pellets are heated to be pressed or molded they emit a small quantity of VOC. The VOC emitted is calculated using a factor from the EPA's WebFIRE database, source classification code 30101817 for plastics production.

The other fugitive VOCs are from cleaning products and are calculated assuming 100% loss rate of volatile components of cleaning products.

2.7 PLASTICS MOLDING UTILITIES

2.7.1 Process Description

To support the heating, cooling, and ventilation needs for the processes that are being proposed with this project, P&G is proposing to install the following equipment:[1]

- Six (6) natural gas fired building heaters;
- One (1) cooling tower; and
- One (1) 70kW standby/backup electric generator with natural gas engine.

[1] Final sizes and numbers of equipment in the utilities area subject to change.

The purpose of the building heaters is to provide comfort heating for the warehouse and other buildings. The cooling tower is for both comfort and process cooling water supply to buildings and manufacturing equipment associated with the various processes. The backup electric generator is to be prepared for power outages.

Emissions calculations for the above listed equipment are enclosed in Attachment N of the application. Emissions have been estimated using either vendor supplied specifications, applicable AP-42 factors, and/or mass balance equations associated to the type of emissions source listed above.

2.7.2 Emissions Calculations

2.7.2.1 Standby/Backup Generators and Fire Pump

The generator engine proposed for the Tabler Station facility will be subject to the emission limitations in NSPS Subpart JJJJ. To verify compliance with these standards, emissions from the engines are calculated based on emissions factors provided by the manufacturers. Since this equipment will only operate during emergency situations and routine maintenance and testing, annual emissions are calculated based on 500 hours of operations.

2.7.2.2 Heater Emissions

The proposed space heaters will be fired on natural gas. Emission factors for NO_x, CO, PM, $PM_{2.5}$, PM_{10}, SO_2, lead, and VOC from AP-42 Section 1.4 were used.

The H_2SO_4 emission factor was calculated by assuming one percent of the sulfur contained within the natural gas is emitted as sulfuric acid in the same manner as for the boilers.

2.7.2.3 Cooling Towers

The plastics molding area will be supported by cooling towers. The anticipated pollutants are PM, PM_{10}, and $PM_{2.5}$. Potential hourly emissions from the cooling towers are calculated using the methodology in AP-42 Section 13.4-1.

2.8 SOURCES OF MINOR SIGNIFICANCE

The plastics molding area contains emissions units that Procter and Gamble defines as "sources of minor significance." Some of these sources are already defined as de minimis sources by DEP in 45 CSR 13, Table 45-13b, such as haul road emissions, lab vents, and welding. Additional sources, with emissions less than 0.5 tpy of any pollutant, such as minor indoor particulate sources, have been added to a list of "sources of minor significance." A list of these sources can be found in page 2 of Attachment I.

ATTACHMENT C

Startup and Installation Schedule

NEW

Attachment C		
Schedule of Planned Installation and Start-Up		
Unit	**Installation Schedule**	**Startup Schedule**
Plastics Molding Area	November 2016	**August 2017**

ATTACHMENT D

Regulatory Applicability Discussion

ATTACHMENT D - REGULATORY APPLICABILITY

This section documents the applicability determinations made for Federal and State air quality regulations. As the applicability to the following programs does not change as a result of this amendment, they will not be discussed: Prevention of Significant Deterioration (PSD) permitting; Minor New Source Review, and Title V of the 1990 Clean Air Act Amendments.

New Source Performance Standards

New Source Performance Standards (NSPS) require new, reconfigured, or reconstructed sources to control emissions to the level achievable by the best demonstrated technology as specified in the applicable provisions. Moreover, any source subject to an NSPS is also subject to the general provisions of NSPS Subpart A, unless specifically excluded. Following is a discussion of potentially applicable subparts for the proposed emission sources at the Tabler Station facility.

NSPS Subpart A - General Provisions

Any source subject to an NSPS is also subject to the general provisions of NSPS Subpart A, unless specifically excluded.

NSPS JJJJ - Stationary Spark Ignition Internal Combustion Engines

This subpart is applicable to owners and operators of stationary spark ignition internal combustion engines (SI ICE). There will be one SI ICE onsite for backup/standby use only which powers a 70 kilowatt [kW] generator. The backup/standby generator engine is subject to the emission standards in 40 CFR 1054. The backup/standby generator engine will only be used under maintenance conditions or during a loss of power to the site; it will have a limit of 100 hours per year for operation in non-emergency situations. The hours the backup/standby generator engine is operated will be tracked with a non-resettable hour meter. Recordkeeping and monitoring requirements may apply to the backup/standby generator engine.

Non-Applicability of All Other NSPS

NSPS are developed for particular industrial source categories. All other NSPS are categorically not applicable to the proposed change.

National Emission Standards for Hazardous Air Pollutants (NEHSAP)

National Emissions Standards for Hazardous Air Pollutants (NESHAP), federal regulations found in Title 40 Part 61 and 63 of the CFR, are emission standards for HAP. NESHAP are applicable to both major sources of HAP (facilities that exceed the major source thresholds of 10 tpy of a single HAP or 25 tpy of any combination of HAP from stationary sources) as well as non-major sources (termed "area sources"). NESHAP apply to sources in specifically regulated industrial source classifications (Clean Air Act Section 112(d)) or on a case-by-case basis (Clean Air Act Section 112(g)) for facilities not regulated as a specific industrial source type. The Tabler Station facility is an area source of HAP. As such, this document only addresses regulatory applicability for area sources and does not include MACT standards for major sources (e.g., 40 CFR Part 63 Subpart FFFF, or the MON).

NESHAP ZZZZ - Reciprocating Internal Combustion Engines

NESHAP ZZZZ establishes emission limitations and operating limitations for HAP emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP.

Per 40 CFR 6590 (c)(1), new stationary RICE located at an area source may show compliance with NESHAP ZZZZ by being in compliance with NSPS JJJJ. The standby/backup engine driven generator is new and located at an area source of HAP emissions. Therefore, by maintaining compliance with NSPS JJJJ, P&G can demonstrate compliance with NESHAP ZZZZ.

Non-Applicability of All Other NESHAP

Similar to NSPS, NESHAP are developed for particular industrial source categories. All other NESHAP are categorically not applicable to the proposed change.

West Virginia SIP Regulations

The proposed project at the Tabler Station facility is potentially subject to regulations contained in the West Virginia Code of State Regulations, Chapter 45 (Code of State Regulations). West Virginia regulations potentially applicable to the proposed project are discussed below.

45 CSR 7: To Prevent and Control Particulate Matter from Manufacturing Processes

45 CSR 7 regulates PM emissions from manufacturing processes and associated operations. 45 CSR 7-3, requires a 20% opacity limit from all process source operations. Section 45 CSR 7-4 and Table 45-7A set particulate emissions limits based on the total weight of all materials used by the facility, also known as the process weight. The different process areas at the Tabler Station facility qualify under different classifications as part of the rule. The plastics molding area qualifies as a Type 'a' facility.[1] The utilities area is covered under 45 CSR 2, and is exempt from this rule, according to 45 CSR 5-10.1. The maximum allowable total stack emission rate for each area are shown in Table D-1.

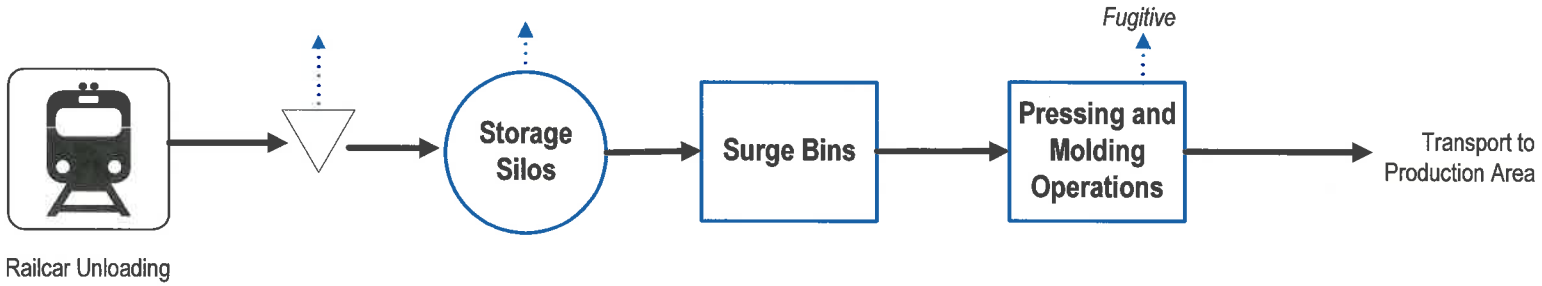
Table D-1. Process Weight Rule Limits

Process Area	Process Weight Rate	Max Stack Emission Rate
Plastics Making	>20,000 lb/hr	16 mg/m^3
Utilities	Exempt - Covered Under 45 CSR 2	

[1] Per 45 CSR 7-2.39(a), "Type 'a' means any manufacturing process source operation involving glass melting, calcination, or **physical change** except as noted in type 'c' below." (**emphasis** added)

ATTACHMENT F

Detailed Process Flow Diagram



Parts Washing

Plastic Regrind

General Process Cleaning

Backup/ Standby Generator

Cooling Tower

Space Heating

Legend

Process Flow

Emissions

Cyclone

P&G – WV Tabler Station

Process Flow Diagram

F-6: Plastics Molding Supplier

Trinity Consultants

July 2016

141801.0078

ATTACHMENT H

Materials Safety Data Sheets

Tabler Station Site Material Listing

Material Name
Plastics Molding
Betzdearborn IEC2
Corrshield MD4103
Cutting Oil Thread Cutting Lubricant
Ejector Pin
Flogard POT6183
Food Grade Silicone
Formolene HB5502F
Formolene High Density Polyethylene-Hexane Copolymer
Gengard GN7112
HydroForce Foaming Citrus All Purpose Cleaner
IMS Paintable Mist
Inhibitor AZ8101
Marlex KN226 Polyethylene
Marlex KN226 Polyethylene
Polyethylene Resin
Polypropylene Homopolymer
Simple Green All-Purpose Cleaner
Slide Mold Cleaner Plus Degreaser 4
Slide Mold Shield Cylinder
Slide Resin Remover Aerosol
Slide Super Grease
Spectrus NX 1100
Step Two Rust Stopper
Super Grease Aerosol
Ultimate UV 390-1
White Silver-3

ATTACHMENT I

Emission Units Table

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 permitting 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]
217S	186E	Railcar Unloading 1	2017	100,000 tons/year	New	21C
218S	187E	Railcar Unloading 2	2017		New	22C
219S	188E	Railcar Unloading 3	2017		New	23C
220S	189E	Railcar Unloading 4	2017		New	24C
221S	190E	Railcar Unloading 5	2017		New	25C
222S	191E	Storage Silo 1	2017	100,000 tons/year	New	--
223S	192E	Storage Silo 2	2017		New	--
224S	193E	Storage Silo 3	2017		New	--
225S	194E	Storage Silo 4	2017		New	--
226S	195E	Storage Silo 5	2017		New	--
227S	196E	Storage Silo 6	2017		New	--
228S	197E	Storage Silo 7	2017		New	--
229S	198E	Storage Silo 8	2017		New	--
230S	199E	Storage Silo 9	2017		New	--
231S	200E	Storage Silo 10	2017		New	--
232S	201E	Storage Silo 11	2017		New	--
233S	202E	Storage Silo 12	2017		New	--
234S	203E	Storage Silo 13	2017		New	--
235S	204E	Storage Silo 14	2017		New	--
236S	205E	Storage Silo 15	2017		New	--
237S	206E	Storage Silo 16	2017		New	--
238S	207E	Storage Silo 17	2017		New	--
239S	208E	Storage Silo 18	2017		New	--
240S	209E	Storage Silo 19	2017		New	--
241S	210E	Storage Silo 20	2017		New	--
242S	211E	Storage Silo 21	2017		New	--
243S	212E	Storage Silo 22	2017		New	--
244S	213E	Storage Silo 23	2017		New	--
245S	214E	Storage Silo 24	2017		New	--
246S	215E	Plastic Regrind	2017	32,000 tons/year	New	26C
247S	216E	Forming VOC	2017	100,000 tons/year	New	--
248S	217E	Parts Washing/Process Cleaning	2017	6 tons/year	New	--
249S	218E	Space Heater 1	2017	5 MMBtu/hr	New	--
250S	219E	Space Heater 2	2017	5 MMBtu/hr	New	--
251S	220E	Space Heater 3	2017	2.5 MMBtu/hr	New	--
252S	221E	Space Heater 4	2017	2.5 MMBtu/hr	New	--
253S	222E	Space Heater 5	2017	1 MMBtu/hr	New	--
254S	223E	Space Heater 6	2017	1 MMBtu/hr	New	--
255S	224E	Cooling Tower	2017	7,000 gpm	New	--
256S	225E	Backup Generator	2017	0.2 MMBtu/hr	New	--

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

NEW

Attachment I Sources of Minor Significance Emission Units Table (<0.5 tpy)		
Emission Unit ID[1]	Emission Point ID[2]	Emission Unit Description
n/a	n/a	PM emissions from forming operations - occur inside building, no access to open air (45 CSR 7)
n/a	n/a	PM emissions from transportation operations - occur inside building, no access to open air (45 CSR 7)
n/a	n/a	Additional de minimis sources from 45 CSR 13, Table 45-13b

ATTACHMENT J

Emission Points Data Summary Sheet

Attachment J

EMISSION POINTS 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/CAS3 (Speciate VOCs and 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			
186E-190E	Upward Vertical Stack	21C-25C	Railcar Unloading	N/A	N/A	N/A	N/A	PM	7.99E-01	3.50	7.99E-02	3.50E-01	Gas	O - Vendor	
								PM_{10}	7.99E-01	3.50	7.99E-02	3.50E-01			
								$PM_{2.5}$	7.99E-01	3.50	7.99E-02	3.50E-01			
191E-214E	Upward Vertical Stack	N/A	Storage Silo	N/A	N/A	N/A	N/A	PM	7.99E-01	3.50	7.99E-01	3.5	Gas	O - Vendor	
								PM_{10}	7.99E-01	3.50	7.99E-01	3.5			
								$PM_{2.5}$	7.99E-01	3.50	7.99E-01	3.5			
215E	Upward Vertical Stack	N/A	Plastic Regrind	N/A	N/A	N/A	N/A	PM	7.67E-01	3.36	3.84E-02	1.68E-01	Gas	O - Vendor	
								PM_{10}	7.67E-01	3.36	3.84E-02	1.68E-01			
								$PM_{2.5}$	7.67E-01	3.36	3.84E-02	1.68E-01			
216E	Upward Vertical Stack	N/A	Forming VOC	N/A	N/A	N/A	N/A	VOC	1.14	5.00	1.1	5.0	Gas	O - Vendor	
217E	Upward Vertical Stack	N/A	Parts Washing/Process Cleaning	N/A	N/A	N/A	N/A	VOC	1.4E+00	6.00	1.4	6.0	Gas	O - Vendor	
218E-223E	Upward Vertical Stack	N/A	Space Heater	N/A	N/A	N/A	N/A	NO_X	8.33E-01	3.7	8.33E-01	3.7	Gas	O - AP-42	
								CO	1.4	6.1	1.4	6.1			
								SO_2	1.0E-02	4.4E-02	1.00E-02	4.38E-02			
								VOC	9.2E-02	4.0E-01	9.17E-02	4.02E-01			
								PM	1.3E-01	5.5E-01	1.27E-01	5.55E-01			
								PM_{10}	1.3E-01	5.5E-01	1.27E-01	5.55E-01			
								$PM_{2.5}$	1.3E-01	5.5E-01	1.27E-01	5.55E-01			
								H_2SO_4	1.1E-04	4.7E-04	1.08E-04	4.75E-04			
								HAP	3.1E-02	1.3E-01	3.15E-02	1.30E-01			
224E	Upward Vertical Stack	N/A	Cooling Tower	N/A	N/A	N/A	N/A	PM	2.8E-01	1.2	2.80E-01	1.2	Gas	O-AP-42	
								PM_{10}	2.8E-01	1.2	2.80E-01	1.2			
								$PM_{2.5}$	2.8E-01	1.2	2.80E-01	1.2			
225E	Upward Vertical Stack	N/A	Backup Generator	N/A	N/A	N/A	N/A	NO_X	4.17E-01	1.04E-01	4.17E-01	1.04E-01	Gas	O - AP-42	
								CO	8.33E-01	2.08E-01	8.33E-01	2.08E-01			
								SO_2	1.18E-04	2.94E-05	1.18E-04	2.94E-05			
								VOC	2.01E-01	5.02E-02	2.01E-01	5.02E-02			
								PM	1.90E-03	4.75E-04	1.90E-03	4.75E-04			
								PM_{10}	3.88E-03	9.71E-04	3.88E-03	9.71E-04			
								$PM_{2.5}$	3.88E-03	9.71E-04	3.88E-03	9.71E-04			
								HAP	6.48E-03	1.62E-03	6.48E-03	1.62E-03			

NEW

Attachment J								
EMISSION POINTS 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. (°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
186E-190E	TBD	TBD	TBD	TBD	TBD	TBD	4,366	757
191E-214E	TBD	TBD	TBD	TBD	TBD	TBD	4,366	757
215E	TBD	TBD	TBD	TBD	TBD	TBD	4,366	757
216E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
217E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
218E-223E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
224E	TBD	TBD	TBD	TBD	TBD	TBD	4,366	757
225E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

ATTACHMENT K

Fugitive Emissions Data Summary Sheet

NEW

Attachment K			
FUGITIVE EMISSIONS DATA SUMMARY SHEET			
Question		**YES/NO**	**if YES:**
1	Will there be haul road activities?	No	Complete **haul road emissions unit data sheet**
2	Will there be storage piles?	No	Complete **Table 1 of nonmetallic minerals processing emissions unit data sheet**
3	Will there be liquid loading/unloading operations?	No	Complete **bulk liquid transfer operations emissions unit data sheet**
4	Will there be emissions of air pollutants from wastewater treatment evaporation?	No	Complete **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.)?	No	Complete **leak source data sheet** section of the **chemical processes emissions unit data sheet**
6	Will there be General Clean-up VOC Operations?	Yes	Complete the **general emissions unit data sheet**
7	Will there be any other activities that generate fugitive emissions?	No	Complete the **general emissions unit data sheet** or most appropriate form

NEW

Attachment K						
FUGITIVE EMISSIONS DATA SUMMARY SHEET						
FUGITIVE EMISSIONS SUMMARY	All Regulated Pollutants - Chemical Name/CAS	Maximum Potential Uncontrolled Emissions		Maximum Potential Controlled Emissions		Est. Method Used
		lb/hr	ton/yr	lb/hr	ton/yr	
Haul Road/Road Dust Emissions	NA	NA	NA	NA	NA	NA
Paved Haul Roads	NA	NA	NA	NA	NA	NA
Unpaved Haul Roads	NA	NA	NA	NA	NA	NA
Storage Pile Emissions	NA	NA	NA	NA	NA	NA
Loading/Unloading Operations	NA	NA	NA	NA	NA	NA
Wastewater Treatment Evaporation & Operations	NA	NA	NA	NA	NA	NA
	NA	NA	NA	NA	NA	NA
Equipment Leaks	NA	NA	NA	NA	NA	NA
General Clean-up VOC Emissions	67-63-0, and others	1.37	6.00	1.37	6.00	EE

ATTACHMENT L

Emission Unit Data Sheet

Attachment L			
EMISSIONS UNIT DATA SHEET - GENERAL			
Number:	**Question:**	**Response:**	**Notes:**
	Sheet version:	General	
0	Identification Number	247S	as assigned on Equipment List Form
1	Name or type and model of proposed affected source	Forming	
4	Names and maximum amount of proposed process materials produced per hour	100,000	tons/year
5	Give chemical reactions, if applicable, that will be involved in the generation of air pollutants	N/A	
7	Projected operating schedule	24/7/365	
8	Pollutant	VOC	
	Emission Rate (lb/hr)	1.1E+00	

Attachment L			
EMISSIONS UNIT DATA SHEET - GENERAL			
Number:	**Question:**	**Response:**	**Notes:**
	Sheet version:	General	
0	Identification Number	248S	as assigned on Equipment List Form
1	Name or type and model of proposed affected source	Parts Washing/Process Cleaning	
4	Names and maximum amount of proposed process materials produced per hour	6	tons/year
5	Give chemical reactions, if applicable, that will be involved in the generation of air pollutants	N/A	
7	Projected operating schedule	24/7/365	
8	Pollutant	VOC	
	Emission Rate (lb/hr)	1.4	

ATTACHMENT M

Air Pollution Control Device Sheet

Attachment M	
AIR POLLUTION CONTROL DEVICE SHEET	

Number:	Question:	Response:	Notes:
	Sheet version:	Mechanical Collector-Cyclone	
	Equipment Description	Cyclone	
0	Control Device ID No.:	21C	Must match Emission Units Table
2	Method:	Dry	Choices: *Wet, Single-stage, dry, multiple (number?), in series (number)*
9	Guaranteed collection efficiency:	90%	Also include minimum %
13	Total flow rate	~1298 cfm	

Number:	Question:	Response:	Notes:
	Sheet version:	Mechanical Collector-Cyclone	
	Equipment Description	Cyclone	
0	Control Device ID No.:	22C	Must match Emission Units Table
2	Method:	Dry	Choices: *Wet, Single-stage, dry, multiple (number?), in series (number)*
9	Guaranteed collection efficiency:	90%	Also include minimum %
13	Total flow rate	~1298 cfm	

Number:	Question:	Response:	Notes:
	Sheet version:	Mechanical Collector-Cyclone	
	Equipment Description	Cyclone	
0	Control Device ID No.:	23C	Must match Emission Units Table
2	Method:	Dry	Choices: *Wet, Single-stage, dry, multiple (number?), in series (number)*
9	Guaranteed collection efficiency:	90%	Also include minimum %
13	Total flow rate	~1298 cfm	

Number:	Question:	Response:	Notes:
	Sheet version:	Mechanical Collector-Cyclone	
	Equipment Description	Cyclone	
0	Control Device ID No.:	24C	Must match Emission Units Table
2	Method:	Dry	Choices: *Wet, Single-stage, dry, multiple (number?), in series (number)*
9	Guaranteed collection efficiency:	90%	Also include minimum %
13	Total flow rate	~1298 cfm	

Number:	Question:	Response:	Notes:
	Sheet version:	Mechanical Collector-Cyclone	
	Equipment Description	Cyclone	
0	Control Device ID No.:	25C	Must match Emission Units Table
2	Method:	Dry	Choices: *Wet, Single-stage, dry, multiple (number?), in series (number)*
9	Guaranteed collection efficiency:	90%	Also include minimum %
13	Total flow rate	~1298 cfm	

Number:	Question:	Response:	Notes:
	Sheet version:	Baghouse	
	Equipment Description	Bin Vent Filter	
0	Control device ID No.:	26C	Must match Emission Units Table
16	Gas flow rate into collector:	TBD	ACFM
21	Particulate Loading (outlet):	TBD	grain/scf

ATTACHMENT N

Supporting Emission Calculations

Table N-0. Emissions Summary

Business Unit/Process	Potential to Emit (tpy)								
	PM	PM_{10}	$PM_{2.5}$	VOC	HAPs	NO_x	CO	SO_2	H_2SO_4
Chemicals	**23.6**	**23.6**	**23.6**	**5.5**	**4.5E-01**	**4.7**	**4.7E-02**	**1.6**	**19.4**
Tanks	--	--	--	1.2	4.5E-01	--	--	--	1.5E-03
Truck Loading	--	--	--	5.2E-02	--	--	--	--	2.4E-03
SO_2 Scrubber	23.6	23.6	23.6	4.2	1.1E-03	4.7	4.7E-02	1.6	19.4
Soap Making A & B	**33.7**	**33.7**	**33.7**	**90.3**	**1.1E-01**	**1.1**	**5.8**	**6.2E-03**	**0.0**
Tanks	--	--	--	10.4	5.3E-02	--	--	--	--
RTO	6.5E-02	6.5E-02	6.5E-02	22.4	5.2E-06	1.1	5.8	6.2E-03	0.0
Dust Control	33.6	33.6	33.6	57.2	--	--	--	--	--
Packing/Filling	--	--	--	0.4	5.9E-02	--	--	--	--
Dry Consumer Products A	**16.7**	**16.7**	**16.7**	**14.5**	**3.3E-03**	**0.0**	**0.0**	**0.0**	**0.0**
Tanks	--	--	--	0.7	3.3E-03	--	--	--	--
Converting	16.7	16.7	16.7	--	--	--	--	--	--
Additive	--	--	--	13.8	--	--	--	--	--
Utilities	**13.1**	**13.1**	**13.0**	**18.6**	**2.0**	**78.7**	**43.4**	**6.4E-01**	**7.2E-03**
Boilers	7.4	7.5	7.3	5.3	1.8E+00	71.3	36.1	6.0E-01	6.7E-03
Engines	7.0E-02	6.9E-02	6.9E-02	6.7E-02	2.3E-02	3.5	0.7	1.6E-03	--
Cooling Towers	5.0	5.0	5.0	--	--	--	--	--	--
Heaters	6.0E-01	6.0E-01	6.0E-01	4.3E-01	1.5E-01	3.9	6.6	4.7E-02	5.1E-04
Fuel Tanks	--	--	--	1.3E-02	--	--	--	--	--
Water Treatment Chemicals	--	--	--	12.8	4.0E-03	--	--	--	--
Auxillary Activities	**2.2E-03**	**0.0**	**0.0**	**0.5**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Printing	--	--	--	0.5	--	--	--	--	--
Paved Roads	2.2E-03	--	--	--	--	--	--	--	--
Supplier Village	**5.80**	**5.80**	**5.80**	**11.45**	**1.3E-01**	**3.75**	**6.34**	**4.4E-02**	**4.7E-04**
Plastics Molding	5.80	5.80	5.80	11.45	1.3E-01	3.75	6.34	4.4E-02	4.7E-04
Total	**92.8**	**92.9**	**92.8**	**140.9**	**2.7**	**88.2**	**55.6**	**2.3**	**19.4**

NEW

Table N-33. Plastics Molding Supplier - Emissions Summary

Activity	Annual Emissions (tpy)								
	PM	PM_{10}	$PM_{2.5}$	VOC	HAPs	NO_X	CO	SO_2	H_2SO_4
Rail Car Unloading	3.50E-01	3.50E-01	3.50E-01	--	--	--	--	--	--
Storage Silos	3.50	3.50	3.50	--	--	--	--	--	--
Plastic Regrind	1.68E-01	1.68E-01	1.68E-01	--	--	--	--	--	--
Fugitive VOC Emissions	--	--	--	11.00	--	--	--	--	--
Space Heaters	5.55E-01	5.55E-01	5.55E-01	4.02E-01	1.30E-01	3.65	6.13	4.38E-02	4.75E-04
Cooling Tower	1.23	1.23	1.23	--	--	--	--	--	--
Back-Up Generator	4.75E-04	9.71E-04	9.71E-04	5.02E-02	1.62E-03	1.04E-01	2.08E-01	2.94E-05	--
Process Total	***5.80***	***5.80***	***5.80***	***11.45***	***1.32E-01***	***3.75***	***6.34***	***4.38E-02***	***4.75E-04***

Table N-34. Plastics Molding Supplier - Railcar Unloading to Silo - Emission Factors

Emission Description	Emission Factors[1] (lb/ton material)
PM	7.00E-02
PM_{10}	7.00E-02
$PM_{2.5}$	7.00E-02

1. Estimated using average dusting factor for all types of pellet storage identified by EPA. Conservatively assumes PM = PM_{10} = $PM_{2.5}$.

Table N-35. Plastics Molding Supplier - Railcar Unloading to Silo - Emissions

Control Device Number	Operation	Unload Throughput[1] (ton/yr)	Control Efficiency %	Uncontrolled Emissions						Controlled Emissions					
				PM		PM_{10}		$PM_{2.5}$		PM		PM_{10}		$PM_{2.5}$	
				(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
21C	Railcar Unload 1	100,000	90%	0.80	3.50	0.80	3.50	0.80	3.50	7.99E-02	0.35	7.99E-02	0.35	7.99E-02	0.35
22C	Railcar Unload 2														
23C	Railcar Unload 3														
24C	Railcar Unload 4														
25C	Railcar Unload 5														
TOTAL					**3.50**		**3.50**		**3.50**		**0.35**		**0.35**		**0.35**

1. Conservative Procter and Gamble approximation. Accounts for five unloading points for rail cars which can feed any of 24 storage silos.

Table N-36. Plastics Molding Supplier - Silo Storage - Emission Factors

Emission Description	Emission Factors[1] (lb/ton material)
PM	7.00E-02
PM_{10}	7.00E-02
$PM_{2.5}$	7.00E-02

1. Estimated using average dusting factor for all types of pellet storage identified by EPA. Conservatively assumes $PM = PM_{10} = PM_{2.5}$.

Table N-37. Plastics Molding Supplier - Silo Storage - Emissions

Emission Unit	Operation	Unload Throughput[1] (ton/yr)	Control Efficiency %	Uncontrolled Emissions					
				PM		PM_{10}		$PM_{2.5}$	
				(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
222S	Pellet Storage 1	100,000	0%	7.99E-01	3.50	7.99E-01	3.50	7.99E-01	3.50
223S	Pellet Storage 2								
224S	Pellet Storage 3								
225S	Pellet Storage 4								
226S	Pellet Storage 5								
227S	Pellet Storage 6								
228S	Pellet Storage 7								
229S	Pellet Storage 8								
230S	Pellet Storage 9								
231S	Pellet Storage 10								
232S	Pellet Storage 11								
233S	Pellet Storage 12								
234S	Pellet Storage 13								
235S	Pellet Storage 14								
236S	Pellet Storage 15								
237S	Pellet Storage 16								
238S	Pellet Storage 17								
239S	Pellet Storage 18								
240S	Pellet Storage 19								
241S	Pellet Storage 20								
242S	Pellet Storage 21								
243S	Pellet Storage 22								
244S	Pellet Storage 23								
245S	Pellet Storage 24								
TOTAL					**3.5**		**3.5**		**3.5**

1. Conservative Procter and Gamble approximation. Storage silos may be fed from any of five railcar unloading points.

Table N-38. Plastics Molding Supplier - Plastic Regrind - Emission Factors

Emission Description	Emission Factors[1] (lb/ton material)
PM	2.10E-01
PM_{10}	2.10E-01
$PM_{2.5}$	2.10E-01

1. Estimated using average dusting factor for all types of pellet storage identified by EPA, multiplied by 3x to account for regrind process. Conservatively assumes PM = PM_{10} = $PM_{2.5}$.

Table N-39. Plastics Molding Supplier - Plastic Regrind - Emissions

Emission Unit	Operation	Throughput[1] (ton/yr)	Control Efficiency %	Uncontrolled Emissions						Controlled Emissions					
				PM		PM_{10}		$PM_{2.5}$		PM		PM_{10}		$PM_{2.5}$	
				(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
246	Plastic Regrind	32,000	95%	0.77	3.36	0.77	3.36	0.77	3.36	3.84E-02	1.68E-01	3.84E-02	1.68E-01	3.84E-02	1.68E-01
TOTAL					**3.36**		**3.36**		**3.36**		**1.68E-01**		**1.68E-01**		**1.68E-01**

1. Conservative Procter and Gamble approximation of 32% of total plastic throughput.

Table N-40. Plastics Molding Supplier - Cleaning - Emission Factors

Emission Description	VOC Emission Factors (lb/ton material)
Forming[1]	0.1
Isopropyl Alcohol[2]	2000
Parts Washing Cleaning Solvent[2]	2000

1. EPA's WebFIRE database, SCC 30101817, for plastics production.

2. Assumes 100% loss rate.

Table N-41. Plastics Molding Supplier - Cleaning - Emissions

Emission Unit	Operation	Unload Throughput[1] (ton/yr)	Uncontrolled Emissions	
			VOC	
			(lb/hr)	(tpy)
247S	Forming	100,000	1.14	5.00
248S	Parts Washing/Process Cleaning	6	1.37	6.00
TOTAL			**2.51**	**11.00**

1. Conservative Procter and Gamble approximation.

Table N-42. Utilities - PMS Heaters - Parameters

Parameter		Value	Unit
249S	Space Heater 1	5	MMBtu/hr
250S	Space Heater 2	5	MMBtu/hr
251S	Space Heater 3	2.5	MMBtu/hr
252S	Space Heater 4	2.5	MMBtu/hr
253S	Space Heater 5	1	MMBtu/hr
254S	Space Heater 6	1	MMBtu/hr
Total Heat Input:		**17**	**MMBtu/hr**
Annual Gas Usage:		146	MMscf/yr
Equivalent Gas Hours:		8,760	Hours at 100% Load
Natural Gas Heating Value (HHV):		1,020	Btu/scf

Table N-43. Utilities - PMS Heaters - Criteria Emissions

Pollutant	Natural Gas Emission Factor	Units	Reference	Natural Gas Hourly Emissions (lb/hr)	Natural Gas Annual Emissions (tpy)
NO_X	50	lb/MMscf	1	0.83	3.65
CO	84.00	lb/MMscf	1	1.40	6.13
PM	7.60	lb/MMscf	1	1.27E-01	5.55E-01
PM_{10}	7.60	lb/MMscf	1	1.27E-01	5.55E-01
$PM_{2.5}$	7.60	lb/MMscf	1	1.27E-01	5.55E-01
SO_2	0.60	lb/MMscf	1	1.00E-02	4.38E-02
VOC	5.50	lb/MMscf	1	9.17E-02	4.02E-01
H_2SO_4	6.50E-03	lb/MMscf	2	1.08E-04	4.75E-04

1. Natural gas emission factors from AP-42 Section 1.4. PM assumed to equal PM_{10}.

2. Natural gas factor calculated assuming 1% of sulfur becomes H_2SO_4. Fuel oil emission factor from Emergency Planning and Community Right-To-Know Act,
EPCRA - Section 313: Guidance for Reporting Sulfuric Acid (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size). (March 1998)
EPA-745-R-97-007.

Table N-44. Utilities - PMS Heaters - Parameters

Parameter	Value	Unit
Heat Input:	17	MMBtu/hr
Hours of Operation on Natural Gas:	8,260	hr/yr
Natural Gas Heating Value (HHV):	1,020	Btu/scf

Table N-45. Utilities - PMS Heaters - HAP Emissions

Pollutant	Natural Gas Emission Factor[1]	Units	Emissions per Heater	
			lb/hr	tpy
2-Methylnaphthalene	2.4E-05	lb/MMscf	4.00E-07	1.65E-06
3-Methylchloranthrene	1.8E-06	lb/MMscf	3.00E-08	1.24E-07
7,12-Dimethylbenz(a)anthracene	1.6E-05	lb/MMscf	2.67E-07	1.10E-06
Acenaphthene	1.8E-06	lb/MMscf	3.00E-08	1.24E-07
Acenaphthylene	1.8E-06	lb/MMscf	3.00E-08	1.24E-07
Anthracene	2.4E-06	lb/MMscf	4.00E-08	1.65E-07
Benz(a)anthracene	1.8E-06	lb/MMscf	3.00E-08	1.24E-07
Benzene	2.1E-03	lb/MMscf	3.50E-05	1.45E-04
Benzo(a)pyrene	1.2E-06	lb/MMscf	2.00E-08	8.26E-08
Benzo(b)fluoranthene	1.8E-06	lb/MMscf	3.00E-08	1.24E-07
Benzo(g,h,i)perylene	1.2E-06	lb/MMscf	2.00E-08	8.26E-08
Benzo(k)fluoranthene	1.8E-06	lb/MMscf	3.00E-08	1.24E-07
Chrysene	1.8E-06	lb/MMscf	3.00E-08	1.24E-07
Dibenzo(a,h)anthracene	1.2E-06	lb/MMscf	2.00E-08	8.26E-08
Dichlorobenzene	1.2E-03	lb/MMscf	2.00E-05	8.26E-05
Fluoranthene	3.0E-06	lb/MMscf	5.00E-08	2.07E-07
Fluorene	2.8E-06	lb/MMscf	4.67E-08	1.93E-07
Formaldehyde	7.5E-02	lb/MMscf	1.25E-03	5.16E-03
Hexane	1.8E+00	lb/MMscf	3.00E-02	1.24E-01
Indeno(1,2,3-cd)pyrene	1.8E-06	lb/MMscf	3.00E-08	1.24E-07
Naphthalene	6.1E-04	lb/MMscf	1.02E-05	4.20E-05
Phenanathrene	1.7E-05	lb/MMscf	2.83E-07	1.17E-06
Pyrene	5.0E-06	lb/MMscf	8.33E-08	3.44E-07
Toulene	3.4E-03	lb/MMscf	5.67E-05	2.34E-04
Arsenic	2.0E-04	lb/MMscf	3.33E-06	1.38E-05
Beryllium	1.2E-05	lb/MMscf	2.00E-07	8.26E-07
Cadmium	1.1E-03	lb/MMscf	1.83E-05	7.57E-05
Chromium	1.4E-03	lb/MMscf	2.33E-05	9.64E-05
Cobalt	8.4E-05	lb/MMscf	1.40E-06	5.78E-06
Lead	5.0E-04	lb/MMscf	8.33E-06	3.44E-05
Manganese	3.8E-04	lb/MMscf	6.33E-06	2.62E-05
Mercury	2.6E-04	lb/MMscf	4.33E-06	1.79E-05
Nickel	2.1E-03	lb/MMscf	3.50E-05	1.45E-04
Selenium	2.40E-05	lb/MMscf	4.00E-07	1.65E-06
Total HAP			3.15E-02	1.30E-01

1. Natural gas emission factors from AP-42, Tables 1.4-3 and 1.4-4

Table N-46. Utilities - PMS Cooling Tower - Emissions

Parameter	Value
Emission Unit	255S
Location[1]	BBS
Flow Rate (gpm)	7,000
Operating Hours (hr/yr)	8,760
Density of Water (lb/gal)	8.35
Total Dissolved Solids, TDS (ppm)	1,600
Drift (%)[2]	5.00E-03
Drift (gpm)	0.35
$PM/PM_{10}/PM_{2.5}$ (lb/gal)[3]	6.68E-07
$PM/PM_{10}/PM_{2.5}$ (lb/hr)	2.80E-01
$PM/PM_{10}/PM_{2.5}$ (tpy)	1.23

1. Client specification.

2. Drift Percentage for Induced Draft Cooler specified in email from Brian Mensinger (Trinity Consultants) to Allison Cole (Trinity Consultants) on July 22, 2015.

3. PM_{10} are conservatively overestimated by (TDS, ppm) x (Total Drift Rate, lb/gal) / 10^6, based on AP-42 Section 13.4-3.

Table N-47. Plastics Molding - Back-Up Generator

Source Designation:	Engine	Generator
Emission Unit:	256S	--
Manufacturer:[1]	--	Generac
Stroke Cycle:	4-stroke	--
Type of Burn:[1]	Rich	--
Fuel Used:	Natural Gas	--
Higher Heating Value (HHV) (Btu/scf):	1,020	--
Power Generated @2,300 rpm (KW)	--	70
Maximum Fuel Consumption at 100% Load (scf/hr):[1]	196	--
Heat Input (HHV) (MMBtu/hr):[1]	0.20	--
Emission Controls:	None	--

Operational Detail	Value
Potential Annual Hours of Operation (hr/yr):	500
Potential Fuel Consumption (MMscf/yr):	0.10

Pollutant	Emission Factors	Units
NO_X[1]	2.70	g/kw-hr
CO[1]	5.40	g/kw-hr
SO_2[2]	5.88E-04	lb/MMBtu
PM (filterable only)[2]	9.50E-03	lb/MMBtu
PM_{10} (filterable + condensable)[2]	1.94E-02	lb/MMBtu
$PM_{2.5}$ (filterable + condensable)[2]	1.94E-02	lb/MMBtu
VOC[1]	1.30	g/kw-hr

Pollutant	Potential Emissions	
	(lb/hr)[3]	(tpy)[4]
NO_x	4.17E-01	1.04E-01
CO	8.33E-01	2.08E-01
SO_2	1.18E-04	2.94E-05
PM	1.90E-03	4.75E-04
PM_{10}	3.88E-03	9.71E-04
$PM_{2.5}$	3.88E-03	9.71E-04
VOC	2.01E-01	5.02E-02

Table N-47. Plastics Molding - Back-Up Generator

Pollutant	Emission Factor (lb/MMBtu)[2]	Potential Emissions	
		(lb/hr)[3]	(tpy)[4]
Acetaldehyde	2.79E-03	5.58E-04	1.40E-04
Acrolein	2.63E-03	5.26E-04	1.32E-04
Benzene	1.58E-03	3.16E-04	7.90E-05
1,3-Butadiene	6.63E-04	1.33E-04	3.32E-05
Carbon Tetrachloride	1.77E-05	3.54E-06	8.85E-07
Chlorobenzene	1.29E-05	2.58E-06	6.45E-07
Chloroform	1.37E-05	2.74E-06	6.85E-07
1,3-Dichloropropene	1.27E-05	2.54E-06	6.35E-07
Ethylbenzene	2.48E-05	4.96E-06	1.24E-06
Ethylene Dibromide	2.13E-05	4.26E-06	1.07E-06
Formaldehyde	2.05E-02	4.10E-03	1.03E-03
Methanol	3.06E-03	6.12E-04	1.53E-04
Methylene Chloride	4.12E-05	8.24E-06	2.06E-06
Naphthalene	9.71E-05	1.94E-05	4.86E-06
PAH	1.41E-04	2.82E-05	7.05E-06
Styrene	1.19E-05	2.38E-06	5.95E-07
Toluene	5.58E-04	1.12E-04	2.79E-05
1,1,2,2-Tetrachloroethane	2.53E-05	5.06E-06	1.27E-06
1,1,2-Trichloroethane	1.53E-05	3.06E-06	7.65E-07
Vinyl Chloride	7.18E-06	1.44E-06	3.59E-07
Xylenes	1.95E-04	3.90E-05	9.75E-06
Total HAP		**6.48E-03**	**1.62E-03**

[1] Emission factors from Certificate of Conformity GGNXB06.82C1-043. Factors from 40 CFR 60, Subpart JJJJ, Table 1.

[2] Emission factors from AP-42 Section 3.2, Table 3.2-3 "Uncontrolled Emission Factors for 4-stroke, Rich-burn Engines," Supplement F, August 2000.

[3] Emission Rate (lb/hr) = Rated Capacity (MMBtu/hr) × Emission Factor (lb/MMBtu)
Emission Rate (lb/hr) = Emission Factor (g/kw-hr) * Capacity (KW) * Conversion Factor (lb/g)

4 Annual Emissions (tons/yr) = Emission Rate (lb/hr) × (Maximum Allowable Operating Hours, 500 hr/yr) × (1 ton/2000 lb).

ATTACHMENT O

Monitoring/Recordkeeping/Reporting/Testing Plans

Attachment O						
MONITORING, RECORDKEEPING, REPORTING, AND TESTING PLANS						
Plan Type	Emission unit	Pollutant	Requirements	Frequency	Method of Measurement	Regulatory Reference
TBD	21C	$PM/PM_{10}/PM_{2.5}$	Monitor pressure drop	Weekly	TBD	TBD
TBD	22C	$PM/PM_{10}/PM_{2.5}$	Monitor pressure drop	Weekly	TBD	TBD
TBD	23C	$PM/PM_{10}/PM_{2.5}$	Monitor pressure drop	Weekly	TBD	TBD
TBD	24C	$PM/PM_{10}/PM_{2.5}$	Monitor pressure drop	Weekly	TBD	TBD
TBD	25C	$PM/PM_{10}/PM_{2.5}$	Monitor pressure drop	Weekly	TBD	TBD
TBD	26C	$PM/PM_{10}/PM_{2.5}$	Monitor pressure drop	Weekly	TBD	TBD
TBD	256S	All Pollutants	Non-Resettable Hour Meter	Monthly	TBD	NSPS JJJJ
TBD	249S-254S	All Pollutants	Fuel Usage	Monthly	TBD	TBD

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.

Pursley, Steven R

From: Allison Cole <acole@trinityconsultants.com>
Sent: Wednesday, June 15, 2016 8:42 AM
To: Pursley, Steven R
Cc: Hadley, Drew (hadley.ja@pg.com); Russell Bailey
Subject: PG - Incompleteness Determination Follow-up
Attachments: Application Followup (2016-06-14).pdf

Categories: Red Category

603-00154
FILE
COMPANY P+G
FACILITY Tyler Station
REGION 6 REG. 13-3316

Steven:

Please find attached a packet of updated pages for the permit application. In matching up the emission units with appropriate emission points, we realized a couple of things:

1. The description/characterization of the emission units that feed the Liquid Soap A/B rotoclones and RTO was unclear. Description has been clarified in the narrative, Tables N-9 through N-11 have been edited to make clear which emission units are associated with which control device.
2. As requested, Attachment I has been edited to make clear which emission units are associated with each emission point.
3. The design for the Liquid Soap A/B now includes an additional rotoclone. (Original design had large rotoclone for scale and lab area – now will have two, smaller rotoclones). Facility-wide emissions have decreased slightly.
4. Steam sanitization vents for the liquid soap A/B area are now included in the insignificant emissions unit page.

As these changes ultimately resulted in the change of emission unit/emission point numbers, I have also attached all forms where emissions unit/emission point numbers were referenced.

Drew and I would like to walk through these changes with you at your convenience. Please let us know when you are available.

Drew is planning on sending a separate email with information regarding the confidentiality question.

Please let either Drew or myself know if you have any questions. Thank you!

Allison Cole
Consultant

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Liquid Soap A is a variation of the product that contains a higher volatility processing aid. When Liquid Soap A is being manufactured, emission from the mixing tanks will be routed through a regenerative thermal oxidizer (RTO). Liquid Soap B does not contain the higher volatility processing aid and will not have emissions routed through the RTO.

The resultant mixture represents the final product. Variations of the mixture are dependent upon the soap product to be manufactured. The product, once made, is piped into a packing line for filling containers. After filling, the product will proceed to final packaging for off-site transport.

As part of quality assurance, process tanks and liquid filling equipment is periodically cleaned and sanitized using hot water. Residual raw material related emissions that may occur during cleaning and sanitization are accounted for in storage and process tank emissions calculations.

The emission sources for the liquid soap manufacturing process includes:

- Storing raw materials in tanks, totes, or drums
- Weighing and mixing raw materials
- Product packaging

Emission calculations for Liquid Soap A and B manufacturing can be found in Attachment N.

The proposed liquid soap processes will be controlled with the following equipment to control VOC and PM emissions:

- Regenerative Thermal Oxidizer (RTO) (Liquid Soap A only); and
- Rotoclones, liquid (water) scrubbers.

Additional information related to these control devices can be found in Attachment M.

As discussed in the next section, perfume may be used in the process. Emission points that have the potential to emit odor are controlled with activated carbon. The activated carbon serves as a control for employee comfort and nuisance odor prevention, rather than for criteria pollutants, such as VOC. As such, it will not be considered a control device in this application.

2.2.2. Emissions Calculations

Emissions calculation methodology for tanks and packaging has already been discussed in Sections 2.1.2.2 and 2.1.2.3, respectively. This section will discuss the emissions calculations for the process operations.

2.2.2.1. Process Operations

The process operations for Liquid Soap A and B manufacturing are equipped with rotoclones for dust control. In addition, four hot mix tanks for Liquid Soap A are equipped with an RTO. PM, PM_{10}, and $PM_{2.5}$ emissions from the rotoclones are calculated based on grain loading based on P&G process knowledge. It is conservatively assumed that PM_{10} and $PM_{2.5}$ emissions are equal to PM emissions. The VOC emissions from the process operations for Liquid Soap B are calculated based on P&G process knowledge. The RTO emission factors are based on a mass balance of VOC, vendor guarantees (NO_x, CO), and AP-42 factors (PM_{10}, $PM_{2.5}$, SO_2).

ATTACHMENT D

Regulatory Applicability Discussion

45 CSR 31 Confidential Information

45 CSR 31 describes the requirements for claiming confidential information, and the procedures for determinations of confidentiality. Confidentiality may be claimed if the Director determines that the facility meets the criteria detailed in 45 CSR 31-4.1 (a-e). P&G has determined that the Tabler Station R-13 application does not meet the criteria for confidential submittal.

45 CSR 34: Emission Standards for Hazardous Air Pollutants

This rule adopts the National Emissions Standards for Hazardous Air Pollutants (NESHAPs) by reference. Potentially applicable NESHAP are discussed above.

ATTACHMENT I

Emission Units Table

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 permitting 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]
1S	1E	Surfactant Making Process	2017	3,000 gal/hr	New	1C
2S	2E	Surfactant Making Process	2017	3,000 gal/hr	New	2C
3S	3E	Surfactant Tanks	2017	120,762 gal	New	--
4S	4E	Surfactant Tanks	2017	48,345 gal	New	--
5S	5E	Surfactant Tanks	2017	40,109 gal	New	--
6S	6E	Surfactant Tanks	2017	40,109 gal	New	--
7S	7E	Surfactant Tanks	2017	15,125 gal	New	--
8S	8E	Surfactant Tanks	2017	15,125 gal	New	--
9S	9E	Surfactant Tanks	2017	15,125 gal	New	--
10S	10E	Surfactant Tanks	2017	72,475 gal	New	--
11S	11E	Surfactant Tanks	2017	72,475 gal	New	--
12S	12E	Surfactant Tanks	2017	72,475 gal	New	--
13S	13E	Surfactant Tanks	2017	72,475 gal	New	--
14S	14E	Surfactant Tanks	2017	72,475 gal	New	--
15S	15E	Surfactant Tanks	2017	72,475 gal	New	--
16S	16E	Surfactant Tanks	2017	26,083 gal	New	--
17S	17E	Surfactant Tanks	2017	15,125 gal	New	--
18S	18E	Surfactant Tanks	2017	15,125 gal	New	--
19S	19E	Surfactant Bulk Liquid Transfer	2017	17,150,000 gal/yr	New	--
20S	20E	Liquid Soap A and B Tanks	2017	39,626 gal	New	--
21S	21E	Liquid Soap A and B Tanks	2017	39,626 gal	New	--
22S	22E	Liquid Soap A and B Tanks	2017	39,626 gal	New	--
23S	23E	Liquid Soap A and B Tanks	2017	7,925 gal	New	--
24S	24E	Liquid Soap A and B Tanks	2017	7,925 gal	New	--
25S	25E	Liquid Soap A and B Tanks	2017	39,626 gal	New	--
26S	26E	Liquid Soap A and B Tanks	2017	15,850 gal	New	--
27S	27E	Liquid Soap A and B Tanks	2017	39,626 gal	New	--
28S	28E	Liquid Soap A and B Tanks	2017	26,417 gal	New	--
29S	29E	Liquid Soap A and B Tanks	2017	15,850 gal	New	--
30S	30E	Liquid Soap A and B Tanks	2017	26,417 gal	New	--
31S	31E	Liquid Soap A and B Tanks	2017	15,850 gal	New	--
32S	32E	Liquid Soap A and B Tanks	2017	15,850 gal	New	--
33S	33E	Liquid Soap A and B Tanks	2017	7,925 gal	New	--
34S	34E	Liquid Soap A and B Tanks	2017	7,925 gal	New	--
35S	35E	Liquid Soap A and B Tanks	2017	7,925 gal	New	--
36S	36E	Liquid Soap A and B Tanks	2017	7,925 gal	New	--
37S	37E	Liquid Soap A and B Tanks	2017	7,925 gal	New	--
38S	38E	Liquid Soap A and B Tanks	2017	396 gal	New	--
39S	39E	Liquid Soap A and B Tanks	2017	396 gal	New	--
40S	40E	Liquid Soap A and B Tanks	2017	396 gal	New	--
41S	41E	Liquid Soap A and B Tanks	2017	396 gal	New	--
42S	42E	Liquid Soap A and B Tanks	2017	396 gal	New	--
43S	43E	Liquid Soap A and B Tanks	2017	396 gal	New	--
44S	44E	Liquid Soap A and B Tanks	2017	396 gal	New	--
45S	45E	Liquid Soap A and B Tanks	2017	396 gal	New	--
46S	46E	Liquid Soap A and B Tanks	2017	396 gal	New	--
47S	47E	Liquid Soap A and B Tanks	2017	396 gal	New	--
48S	48E	Liquid Soap A and B Tanks	2017	396 gal	New	--
49S	49E	Liquid Soap A and B Tanks	2017	132 gal	New	--
50S	50E	Liquid Soap A and B Tanks	2017	793 gal	New	--
51S	51E	Liquid Soap A and B Tanks	2017	396 gal	New	--
52S	52E	Liquid Soap A and B Tanks	2017	396 gal	New	--
53S	53E	Liquid Soap A and B Tanks	2017	396 gal	New	--
54S	54E	Liquid Soap A and B Tanks	2017	660 gal	New	--
55S	55E	Liquid Soap A and B Tanks	2017	396 gal	New	--
56S	56E	Liquid Soap A and B Tanks	2017	1,057 gal	New	--
57S	57E	Liquid Soap A and B Tanks	2017	1,057 gal	New	--
58S	58E	Liquid Soap A and B Tanks	2017	793 gal	New	--
59S	59E	Liquid Soap A and B Tanks	2017	396 gal	New	--
60S	60E	Liquid Soap A and B Tanks	2017	132 gal	New	--
61S	61E	Liquid Soap A and B Tanks	2017	396 gal	New	--
62S	62E	Liquid Soap A and B Tanks	2017	396 gal	New	--
63S	63E	Liquid Soap A and B Tanks	2017	396 gal	New	--
64S	64E	Liquid Soap A and B Tanks	2017	396 gal	New	--
65S	65E	Liquid Soap A and B Tanks	2017	396 gal	New	--
66S	66E	Liquid Soap A and B Tanks	2017	396 gal	New	--
67S	67E	Liquid Soap A and B Tanks	2017	396 gal	New	--
68S	68E	Liquid Soap A and B Tanks	2017	396 gal	New	--
69S	69E	Liquid Soap A and B Tanks	2017	396 gal	New	--
70S	70E	Liquid Soap A and B Tanks	2017	396 gal	New	--
71S	71E	Liquid Soap A and B Tanks	2017	396 gal	New	--
72S	72E	Liquid Soap A and B Tanks	2017	396 gal	New	--
73S	73E	Liquid Soap A and B Tanks	2017	396 gal	New	--
74S	74E	Liquid Soap A and B Tanks	2017	396 gal	New	--
75S	75E	Liquid Soap A and B Tanks	2017	396 gal	New	--
76S	76E	Liquid Soap A and B Tanks	2017	396 gal	New	--
77S	77E	Liquid Soap A and B Tanks	2017	396 gal	New	--
78S	78E	Liquid Soap A and B Tanks	2017	396 gal	New	--
79S	79E	Liquid Soap A and B Tanks	2017	396 gal	New	--
80S	80E	Liquid Soap A and B Tanks	2017	396 gal	New	--
81S	81E	Liquid Soap A and B Tanks	2017	396 gal	New	--
82S	82E	Liquid Soap A and B Tanks	2017	396 gal	New	--
83S	83E	Liquid Soap A and B Tanks	2017	396 gal	New	--
84S	84E	Liquid Soap A and B Tanks	2017	396 gal	New	--
85S	85E	Liquid Soap A and B Tanks	2017	396 gal	New	--
86S	86E	Liquid Soap A and B Tanks	2017	396 gal	New	--
87S	87E	Liquid Soap A and B Tanks	2017	1,585 gal	New	--
88S	88E	Liquid Soap A and B Tanks	2017	1,585 gal	New	--
89S	89E	Liquid Soap A and B Tanks	2017	1,585 gal	New	--
90S	90E	Liquid Soap A and B Tanks	2017	1,585 gal	New	--
91S	91E	Liquid Soap A and B Tanks	2017	1,585 gal	New	--
92S	92E	Liquid Soap A and B Tanks	2017	1,585 gal	New	--
93S	93E	Liquid Soap A and B Tanks	2017	1,585 gal	New	--
94S	94E	Liquid Soap A and B Tanks	2017	1,585 gal	New	--
95S	95E	Liquid Soap A and B Tanks	2017	1,585 gal	New	--
96S	96E	Liquid Soap A and B Tanks	2017	1,585 gal	New	--

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 permitting 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]
97S	97E	Liquid Soap A and B Tanks	2017	1,585 gal	New	--
98S	98E	Liquid Soap A and B Tanks	2017	1,585 gal	New	--
99S	99E	Liquid Soap A and B Tanks	2017	1,585 gal	New	--
100S	100E	Liquid Soap A and B Tanks	2017	1,585 gal	New	--
101S	101E	Liquid Soap A and B Tanks	2017	1,585 gal	New	--
102S	102E	Liquid Soap A and B Tanks	2017	1,585 gal	New	--
103S	103E	Liquid Soap A and B Tanks	2017	1,585 gal	New	--
104S	104E	Liquid Soap A and B Tanks	2017	1,585 gal	New	--
105S	105E	Liquid Soap A and B Tanks	2017	1,585 gal	New	--
106S	106E	Liquid Soap A and B Tanks	2017	1,585 gal	New	--
107S	107E	Liquid Soap A and B Tanks	2017	1,585 gal	New	--
108S	108E	Liquid Soap A and B Tanks	2017	1,585 gal	New	--
109S	109E	Liquid Soap A and B Tanks	2017	1,585 gal	New	--
110S	110E	Liquid Soap A and B Tanks	2017	1,585 gal	New	--
111S	111E	Liquid Soap A and B Tanks	2017	1,585 gal	New	--
112S	112E	Liquid Soap A and B Tanks	2017	1,585 gal	New	--
113S	113E	Liquid Soap A and B Tanks	2017	1,585 gal	New	--
114S	114E	Liquid Soap A and B Tanks	2017	1,585 gal	New	--
115S	115E	Liquid Soap A and B Tanks	2017	1,585 gal	New	--
116S	116E	Liquid Soap A and B Tanks	2017	1,585 gal	New	--
117S	117E	Liquid Soap A and B Tanks	2017	1,585 gal	New	--
118S	118E	Liquid Soap A and B Tanks	2017	1,585 gal	New	--
119S	119E	Liquid Soap A and B Packing/Filling	2017	82,847,333 gal/yr	New	--
120S	120E	Mixer 1 for Premix Process 1	2017	1,537,380,000 scf/yr	New	3C
121S		Mixer 2 for Premix Process 1	2017		New	
122S		Premix Tank 1 for Premix Process 1	2017		New	
123S		Premix Tank 2 for Premix Process 1	2017		New	
124S	121E	Mixer 1 for Liquid Soap B Process 1	2017	1,537,380,000 scf/yr	New	4C
125S		Process Tank 1 for Liquid Soap B Process 1	2017		New	
126S		Process Tank 2 for Liquid Soap B Process 1	2017		New	
127S		Process Tank 3 for Liquid Soap B Process 1	2017		New	
128S	122E	Mixer 1 for Liquid Soap B Process 2	2017	1,879,020,000 scf/yr	New	5C
129S		Process Tank 1 for Liquid Soap B Process 2	2017		New	
130S		Process Tank 2 for Liquid Soap B Process 2	2017		New	
131S		Process Tank 3 for Liquid Soap B Process 2	2017		New	
132S	123E	Mixer 1 for Liquid Soap B Process 3	2017	1,537,380,000 scf/yr	New	6C
133S		Process Tank 1 for Liquid Soap B Process 3	2017		New	
134S		Process Tank 2 for Liquid Soap B Process 3	2017		New	
135S		Process Tank 3 for Liquid Soap B Process 3	2017		New	
136S	124E	Preweigh Station 1	2017	751,608,000 scf/yr	New	7C
137S		Preweigh Station 2	2017		New	
138S		Preweigh Station 3	2017		New	
139S		Preweigh Station 4	2017		New	
140S	125E	Preweigh Station 5	2017	939,510,000 scf/yr	New	8C
141S		Preweigh Station 6	2017		New	
142S		Preweigh Station 7	2017		New	
143S		Preweigh Station 8	2017		New	
144S		Sampling Station	2017		New	
145S	126E	Hot Mix Tank for Liquid Soap A Process 1	2017	20,611,765 cf/year	New	14C
146S	127E	Mixer 1 for Liquid Soap A Process 1	2017	1,537,380,000 scf/yr	New	9C
147S		Process Tank 1 for Liquid Soap A Process 1	2017		New	
148S		Process Tank 2 for Liquid Soap A Process 1	2017		New	
149S	126E	Hot Mix Tank for Liquid Soap A Process 2	2017	20,611,765 cf/year	New	14C
150S	128E	Mixer 1 for Liquid Soap A Process 2	2017	1,537,380,000 scf/yr	New	10C
151S		Process Tank 1 for Liquid Soap A Process 2	2017		New	
152S		Process Tank 2 for Liquid Soap A Process 2	2017		New	
153S	126E	Hot Mix Tank for Liquid Soap A Process 3	2017	20,611,765 cf/year	New	14C
154S	129E	Mixer 1 for Liquid Soap A Process 3	2017	1,537,380,000 scf/yr	New	11C
155S		Process Tank 1 for Liquid Soap A Process 3	2017		New	
156S		Process Tank 2 for Liquid Soap A Process 3	2017		New	
157S	126E	Hot Mix Tank for Liquid Soap A Process 4	2017	20,611,765 cf/year	New	14C
158S	130E	Mixer 1 for Liquid Soap A Process 4	2017	2,220,660,000 scf/yr	New	12C
159S		Process Tank 1 for Liquid Soap A Process 4	2017		New	
160S		Process Tank 2 for Liquid Soap A Process 4	2017		New	
161S	131E	Process Tank 1 for Liquid Soap B Process 4	2017	683,280,000 scf/yr	New	13C
162S		Process Tank 2 for Liquid Soap B Process 4	2017		New	
163S	132E	Dry Consumer Laundry and Cleaning Products A Tanks	2017	42,879 gal	New	--
164S	133E	Dry Consumer Laundry and Cleaning Products A Tanks	2017	37,641 gal	New	--
165S	134E	Dry Consumer Laundry and Cleaning Products A Tanks	2017	6,809 gal	New	--
166S	135E	Dry Consumer Laundry and Cleaning Products A Tanks	2017	396 gal	New	--
167S	136E	Dry Consumer Laundry and Cleaning Products A Tanks	2017	396 gal	New	--
168S	137E	Dry Consumer Laundry and Cleaning Products A Tanks	2017	396 gal	New	--
169S	138E	Dry Consumer Laundry and Cleaning Products A Tanks	2017	181 gal	New	--
170S	139E	Dry Consumer Laundry and Cleaning Products A Tanks	2017	181 gal	New	--
171S	140E	Dry Consumer Laundry and Cleaning Products A Tanks	2017	181 gal	New	--
172S	141E	Dry Consumer Laundry and Cleaning Products A Tanks	2017	181 gal	New	--
173S	142E	Dry Consumer Laundry and Cleaning Products A Tanks	2017	181 gal	New	--
174S	143E	Dry Consumer Laundry and Cleaning Products A Tanks	2017	181 gal	New	--
175S	144E	Dry Consumer Laundry and Cleaning Products A Tanks	2017	181 gal	New	--
176S	145E	Dry Consumer Laundry and Cleaning Products A Tanks	2017	181 gal	New	--
177S	146E	Dry Consumer Laundry and Cleaning Products A Tanks	2017	181 gal	New	--
178S	147E	Dry Consumer Laundry and Cleaning Products A Tanks	2017	181 gal	New	--
179S	148E	Dry Consumer Laundry and Cleaning Products A Tanks	2017	181 gal	New	--
180S	149E	Dry Consumer Laundry and Cleaning Products A Tanks	2017	181 gal	New	--
181S	150E	Dry Consumer Laundry and Cleaning Products A Tanks	2017	181 gal	New	--
182S	151E	Dry Consumer Laundry and Cleaning Products A Tanks	2017	181 gal	New	--
183S	152E	Dry Consumer Laundry and Cleaning Products A Tanks	2017	181 gal	New	--
184S	153E	Dry Consumer Laundry and Cleaning Products A Tanks	2017	181 gal	New	--
185S	154E	Dry Consumer Laundry and Cleaning Products A Tanks	2017	181 gal	New	--
186S	155E	Dry Consumer Laundry and Cleaning Products A Tanks	2017	181 gal	New	--
187S	156E	Dry Consumer Laundry and Cleaning Products A Tanks	2017	181 gal	New	--
188S	157E	Dry Consumer Laundry and Cleaning Products A Tanks	2017	181 gal	New	--
189S	158E	Dry Consumer Laundry and Cleaning Products A Particulate Control 1	2017	17,450 scfm	New	15C
190S	159E	Dry Consumer Laundry and Cleaning Products A Particulate Control 2	2017	17,450 scfm	New	16C
191S	160E	Dry Consumer Laundry and Cleaning Products A Particulate Control 3	2017	17,450 scfm	New	17C
192S	161E	Dry Consumer Laundry and Cleaning Products A Particulate Control 4	2017	17,450 scfm	New	18C

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 permitting 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]
193S	162E	Dry Consumer Laundry and Cleaning Products A Particulate Control 5	2017	17,450 scfm	New	19C
194S	163E	Dry Consumer Laundry and Cleaning Products A Particulate Control 6	2017	8,000 scfm	New	20C
195S	164E	Dry Consumer Laundry and Cleaning Products A Additive 1	2017	109 ft/s	New	--
196S	165E	Boiler 1	2017	93 MMBtu/hr	New	--
197S	166E	Boiler 2	2017	93 MMBtu/hr	New	--
198S	167E	Boiler 3	2017	33 MMBtu/hr	New	--
199S	168E	Temporary Boiler	2017	14 MMBtu/hr	New	--
200S	169E	Cooling Tower	2017	307 Mgal/hr	New	--
201S	170E	Cooling Tower	2017	939 Mgal/hr	New	--
202S	171E	Cooling Tower	2017	451 Mgal/hr	New	--
203S	172E	Fire Pump Engine	2017	311 hp	New	--
204S	173E	Fire Pump Engine	2017	311 hp	New	--
205S	174E	Backup/Standby Power Generator	2017	350 kW	New	--
206S	175E	Backup/Standby Power Generator	2017	350 kW	New	--
207S	176E	Backup/Standby Power Generator	2017	350 kW	New	--
208S	177E	Fuel Tanks	2017	5,000 gal	New	--
209S	178E	Fuel Tanks	2017	35,000 gal	New	--
210S	179E	Warehouse Heater	2017	3.05 MMBtu/hr	New	--
211S	180E	Warehouse Heater	2017	3.05 MMBtu/hr	New	--
212S	181E	Warehouse Heater	2017	3.05 MMBtu/hr	New	--
213S	182E	Warehouse Heater	2017	3.05 MMBtu/hr	New	--
214S	183E	Warehouse Heater	2017	3.05 MMBtu/hr	New	--
215S	184E	Warehouse Heater	2017	3.05 MMBtu/hr	New	--
216S	185E	Water Preatreatment Chemicals	2017	174,928 kg/yr	New	--

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

Attachment I Sources of Minor Significance Emission Units Table (<0.5 tpy)		
Emission Unit ID[1]	Emission Point ID[2]	Emission Unit Description
3S-5S	3E-5E	Surfactant Tanks
7S-18S	7E-18E	Surfactant Tanks
19S	19E	Surfactant Bulk Liquid Transfer
20S-31S	20E-31E	Liquid Soap A and B Tanks
33S-37S	33E-37E	Liquid Soap A and B Tanks
38S-118S	38E-118E	Liquid Soap A and B Tanks
119S	119E	Liquid Soap A and B Packing/Filling
163S-188S	163E-188E	Dry Consumer Laundry and Cleaning Products A Tanks
189S	189E	Dry Consumer Laundry and Cleaning Products A Particulate Control 1
190S	190E	Dry Consumer Laundry and Cleaning Products A Particulate Control 2
191S	191E	Dry Consumer Laundry and Cleaning Products A Particulate Control 3
208S-209S	208E-209E	Fuel Tanks
n/a	n/a	Haul Roads
n/a	n/a	Steam Venting System for Sanitization of Equipment for Liquid Soap A and B
n/a	n/a	Additional de minimis sources from 45 CSR 13, Table 45-13b

ATTACHMENT J

Emission Points Data Summary Sheet

Attachment J

EMISSION POINTS 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/CAS3 (Speciate VOCs and 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			
1E	Upward Vertical Stack	1C	Surfactant Making Process	N/A	N/A	N/A	N/A	NO_X			1.6	2.3	Gas	O - Vendor and AP-42	
								CO			6.6E-01	2.4E-02			
								SO_2			2.1	8.2E-01			
								VOC			1.8	2.1			
								PM			5.2	1.4E+01			
								$PM_{10}/PM_{2.5}$			5.2	13.8			
								H_2SO_4			8.5	11.7			
								HAP			5.3E-04	5.3E-04			
2E	Upward Vertical Stack	2C	Surfactant Making Process	N/A	N/A	N/A	N/A	NO_X			1.6	2.3	Gas	O - Vendor and AP-42	
								CO			6.6E-01	2.4E-02			
								SO_2			2.1	8.2E-01			
								VOC			1.8	2.0			
								PM			5.2	9.8			
								$PM_{10}/PM_{2.5}$			5.2	9.8			
								H_2SO_4			8.5	7.8			
								HAP			5.3E-04	5.3E-04			
3E-18E	Upward Vertical Stack	N/A	Surfactant Tanks	N/A	N/A	N/A	N/A	VOC	2.8E-01	1.2	2.8E-01	1.2	Gas	O - EPA Tanks	
								H_2SO_4	3.5E-04	1.5E-03	3.5E-04	1.5E-03	Gas	O - EPA Tanks	
								HAP	1.0E-01	4.5E-01	1.0E-01	4.5E-01	Gas	EE	
19E	Upward Vertical Stack	N/A	Surfactant Bulk Liquid Transfer	N/A	N/A	N/A	N/A	VOC	1.2E-02	5.2E-02	1.2E-02	5.2E-02	Gas	O - AP-42	
								H_2SO_4	5.5E-04	2.4E-03	5.5E-04	2.4E-03	Gas	O - AP-42	
20E-118E	Upward Vertical Stack	N/A	Liquid Soap A and B Tanks	N/A	N/A	N/A	N/A	VOC	2.4	10.4	2.4	10.4	Gas	O - EPA Tanks	
119E	Upward Vertical Stack	N/A	Liquid Soap A and B Packing/Filling	N/A	N/A	N/A	N/A	VOC	8.2E-02	3.6E-01	8.2E-02	3.6E-01	Gas	O - AP-42	
								HAP	1.4E-02	5.9E-02	1.4E-02	5.9E-02	Gas	O - AP-42	
120E	Upward Vertical Stack	3C	Premix Process 1	N/A	N/A	N/A	N/A	$PM/PM_{10}/PM_{2.5}$			7.5E-01	3.3E+00	Gas	EE	
								VOC			1.1E+00	4.6	Gas	EE	
121E	Upward Vertical Stack	4C	Liquid Soap B Process 1	N/A	N/A	N/A	N/A	$PM/PM_{10}/PM_{2.5}$			7.5E-01	3.3	Gas	EE	
								VOC			2.0	8.6	Gas	EE	
122E	Upward Vertical Stack	5C	Liquid Soap B Process 2	N/A	N/A	N/A	N/A	$PM/PM_{10}/PM_{2.5}$			9.2E-01	4.0	Gas	EE	
								VOC			2.4	10.3	Gas	EE	
123E	Upward Vertical Stack	6C	Liquid Soap B Process 3	N/A	N/A	N/A	N/A	$PM/PM_{10}/PM_{2.5}$			7.5E-01	3.3	Gas	EE	
								VOC			2.2	9.8	Gas	EE	
124E	Upward Vertical Stack	7C	Preweigh Group 1	N/A	N/A	N/A	N/A	$PM/PM_{10}/PM_{2.5}$			3.7E-01	1.6	Gas	EE	
								VOC			--	--	Gas	EE	
125E	Upward Vertical Stack	8C	Preweigh Group 2	N/A	N/A	N/A	N/A	$PM/PM_{10}/PM_{2.5}$			4.6E-01	2.01	Gas	EE	
								VOC			--	--	Gas	EE	
127E	Upward Vertical Stack	9C	Liquid Soap A Process 1	N/A	N/A	N/A	N/A	$PM/PM_{10}/PM_{2.5}$			7.5E-01	3.3	Gas	EE	
								VOC			9.2E-01	4.0	Gas	EE	

Attachment J

EMISSION POINTS 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/CAS3 (Speciate VOCs and 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^3)
		ID No.	Source	ID No.	Device Type	Short Term[2]	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
128E	Upward Vertical Stack	10C	Liquid Soap A Process 2	N/A	N/A	N/A	N/A	$PM/PM_{10}/PM_{2.5}$			7.5E-01	3.3	Gas	EE	
								VOC			9.9E-01	4.3	Gas	EE	
129E	Upward Vertical Stack	11C	Liquid Soap A Process 3	N/A	N/A	N/A	N/A	$PM/PM_{10}/PM_{2.5}$			7.5E-01	3.3	Gas	EE	
								VOC			1.1E+00	5.0	Gas	EE	
130E	Upward Vertical Stack	12C	Liquid Soap A Process 4	N/A	N/A	N/A	N/A	$PM/PM_{10}/PM_{2.5}$			1.1	4.8	Gas	EE	
								VOC			1.1E+00	5.0	Gas	EE	
131E	Upward Vertical Stack	13C	Liquid Soap B Process 4	N/A	N/A	N/A	N/A	$PM/PM_{10}/PM_{2.5}$			3.3E-01	1.5E+00	Gas	EE	
								VOC			5.3E-02	2.3E-01	Gas	EE	
126E	Upward Vertical Stack	14C	Hot Mix Tanks for Liquid Soap A, Process 1-4	N/A	N/A	N/A	N/A	$PM_{10}/PM_{2.5}$			1.5E-02	6.5E-02	Gas	O - AP-42	
								SO_2			1.4E-03	6.2E-03	Gas	O - AP-42	
								NO_x			2.4E-01	1.1	Gas	O - Vendor	
								VOC			4.70	20.6	Gas	MB	
								CO			1.33	5.8	Gas	O - Vendor	
								Lead			1.2E-06	5.2E-06	Gas	O - AP-42	
132E-157E	Upward Vertical Stack	N/A	Dry Consumer Laundry and Cleaning Products A Tanks	N/A	N/A	N/A	N/A	VOC	0.15	0.66	1.5E-01	6.6E-01	Gas	EE	
158E	Upward Vertical Stack	15C	Dry Consumer Laundry and Cleaning Products A Particulate Control 1	N/A	N/A	N/A	N/A	$PM/PM_{10}/PM_{2.5}$			6.9E-02	3.0E-01	Gas	EE	
159E	Upward Vertical Stack	16C	Dry Consumer Laundry and Cleaning Products A Particulate Control 2	N/A	N/A	N/A	N/A	$PM/PM_{10}/PM_{2.5}$			4.7E-02	2.1E-01	Gas	EE	
160E	Upward Vertical Stack	17C	Dry Consumer Laundry and Cleaning Products A Particulate Control 3	N/A	N/A	N/A	N/A	$PM/PM_{10}/PM_{2.6}$			4.5E-02	2.0E-01	Gas	EE	
161E	Upward Vertical Stack	18C	Dry Consumer Laundry and Cleaning Products A Particulate Control 4	N/A	N/A	N/A	N/A	$PM/PM_{10}/PM_{2.7}$			1.5	6.8	Gas	EE	
162E	Upward Vertical Stack	19C	Dry Consumer Laundry and Cleaning Products A Particulate Control 5	N/A	N/A	N/A	N/A	$PM/PM_{10}/PM_{2.5}$			1.5	6.8	Gas	EE	
163E	Upward Vertical Stack	20C	Dry Consumer Laundry and Cleaning Products A Particulate Control 6	N/A	N/A	N/A	N/A	$PM/PM_{10}/PM_{2.5}$			0.6	2.4	Gas	EE	
164E	Upward Vertical Stack	N/A	Dry Consumer Laundry and Cleaning Products A Additive 1	N/A	N/A	N/A	N/A	VOC	3.6E-01	1.6	3.2	13.8	Gas	EE	

Attachment J

EMISSION POINTS 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/CAS3 (Speciate VOCs and 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^3)
		ID No.	Source	ID No.	Device Type	Short Term[2]	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
165E	Upward Vertical Stack	N/A	Boiler 1	N/A	N/A	N/A	N/A	NO_X	7.1	31.2	7.1	31.2	Gas	O - AP-42	
								CO	3.6	15.8	3.6	15.8			
								SO_2	6.1E-01	2.7E-01	6.1E-01	2.7E-01			
								VOC	5.2E-01	2.3	5.2E-01	2.3E+00			
								PM	7.4E-01	3.2	7.4E-01	3.2E+00			
								PM_{10}	7.5E-01	3.3	7.5E-01	3.3E+00			
								$PM_{2.5}$	7.2E-01	3.2	7.2E-01	3.2E+00			
								H_2SO_4	7.1E-04	3.1E-03	7.1E-04	3.1E-03			
								HAP	1.8E-01	8.0E-01	1.8E-01	8.0E-01			
166E	Upward Vertical Stack	N/A	Boiler 2	N/A	N/A	N/A	N/A	NO_X	6.7	29.5	6.7	29.5	Gas	O - AP-42	
								CO	3.4	15.0	3.4	15.0			
								SO_2	5.6E-02	2.4E-01	5.6E-02	2.4E-01			
								VOC	5.1E-01	2.2	5.1E-01	2.2			
								PM	7.0E-01	3.1	7.0E-01	3.1			
								PM_{10}	7.0E-01	3.1	7.0E-01	3.1			
								$PM_{2.5}$	7.0E-01	3.1	7.0E-01	3.1			
								H_2SO_4	6.0E-04	2.6E-03	6.0E-04	2.6E-03			
								HAP	1.7E-01	7.5E-01	1.7E-01	7.5E-01			
167E	Upward Vertical Stack	N/A	Boiler 3	N/A	N/A	N/A	N/A	NO_X	2.4	10.5	2.4	10.5	Gas	O - AP-42	
								CO	1.2	5.3	1.2	5.3			
								SO_2	2.0E-02	8.7E-02	2.0E-02	8.7E-02			
								VOC	1.8E-01	7.9E-01	1.8E-01	7.9E-01			
								PM	2.5E-01	1.1	2.5E-01	1.1			
								PM_{10}	2.5E-01	1.1	2.5E-01	1.1			
								$PM_{2.5}$	2.5E-01	1.1	2.5E-01	1.1			
								H_2SO_4	2.1E-04	9.4E-04	2.1E-04	9.4E-04			
								HAP	6.1E-02	2.7E-01	6.1E-02	2.7E-01			
168E	Upward Vertical Stack	N/A	Temporary Boiler	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Gas	N/A	
169E-171E	Upward Vertical Stack	N/A	Cooling Tower	N/A	N/A	N/A	N/A	$PM/PM_{10}/PM_{2.5}$	1.1	5.0	1.1	5.0	Gas	O - AP-42	
172E-173E	Upward Vertical Stack	N/A	Fire Pump Engine	N/A	N/A	N/A	N/A	NO_X	3.6	8.9E-01	3.6	8.9E-01	Gas	O - Vendor	
								CO	1.1	2.7E-01	1.1	2.7E-01			
								SO_2	1.9E-03	4.8E-04	1.9E-03	4.8E-04			
								VOC	1.4E-01	3.4E-02	1.4E-01	3.4E-02			
								PM	1.4E-01	3.4E-02	1.4E-01	3.4E-02			
								PM_{10}	1.4E-01	3.4E-02	1.4E-01	3.4E-02			
								$PM_{2.5}$	1.4E-01	3.4E-02	1.4E-01	3.4E-02			
								HAP	2.8E-02	7.0E-03	2.8E-02	7.0E-03			
174E-176E	Upward Vertical Stack	N/A	Backup/Standby Power Generator	N/A	N/A	N/A	N/A	NO_X	10.5	2.6	10.5	2.6	Gas	O - Vendor	
								CO	1.7	4.2E-01	1.7	4.2E-01			
								SO_2	4.4E-03	1.1E-03	4.37E-03	1.1E-03			
								VOC	1.3E-01	3.3E-02	1.31E-01	3.3E-02			
								PM	1.4E-01	3.6E-02	1.44E-01	3.6E-02			
								PM_{10}	1.4E-01	3.5E-02	1.38E-01	3.5E-02			
								$PM_{2.5}$	1.4E-01	3.5E-02	1.38E-01	3.5E-02			
								HAP	6.4E-02	1.6E-02	6.38E-02	1.6E-02			
177E-178E	Upward Vertical Stack	N/A	Fuel Tanks	N/A	N/A	N/A	N/A	VOC	2.9E-03	1.3E-02	2.9E-03	1.3E-02	Gas	O - EPA Tanks	
179E-184E	Upward Vertical Stack	N/A	Warehouse Heater	N/A	N/A	N/A	N/A	NO_X	9.0E-01	3.93	9.0E-01	3.9	Gas	O - AP-42	
								CO	1.51	6.60	1.51	6.60			
								SO_2	1.1E-02	4.7E-02	1.1E-02	4.7E-02			
								VOC	9.9E-02	4.3E-01	9.9E-02	4.3E-01			
								PM	1.4E-01	6.0E-01	1.4E-01	6.0E-01			
								PM_{10}	1.4E-01	6.0E-01	1.4E-01	6.0E-01			
								$PM_{2.5}$	1.4E-01	6.0E-01	1.4E-01	6.0E-01			
								H_2SO_4	1.2E-04	5.1E-04	1.2E-04	5.1E-04			
								HAP	3.4E-02	1.5E-01	3.4E-02	1.5E-01			
185E	Fugitive	N/A	Water Preatreatment Chemicals	N/A	N/A	N/A	N/A	VOC	2.9	12.8	2.9	12.8	Gas	EE	
								HAP	9.1E-04	4.0E-03	9.1E-04	4.0E-03			

Attachment J								
EMISSION POINTS SUMMARY SHEET								
Table 2: Release Parameter Data								
		Exit Gas			Emission Point Elevation (ft)		UTM Coordinates (km)	
Emission Point ID No. (Must match Emission Units Table)	Inner Diameter (ft.)	Temp. (°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
1E	TBD	TBD	TBD	TBD	TBD	TBD	4,366	757
2E	TBD	TBD	TBD	TBD	TBD	TBD	4,366	757
3E-18E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20E-118E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
119E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
120E	TBD	TBD	TBD	TBD	TBD	TBD	4,366	757
121E	TBD	TBD	TBD	TBD	TBD	TBD	4,366	757
122E	TBD	TBD	TBD	TBD	TBD	TBD	4,366	757
123E	TBD	TBD	TBD	TBD	TBD	TBD	4,366	757
124E	TBD	TBD	TBD	TBD	TBD	TBD	4,366	757
125E	TBD	TBD	TBD	TBD	TBD	TBD	4,366	757
127E	TBD	TBD	TBD	TBD	TBD	TBD	4,366	757
128E	TBD	TBD	TBD	TBD	TBD	TBD	4,366	757
129E	TBD	TBD	TBD	TBD	TBD	TBD	4,366	757
130E	TBD	TBD	TBD	TBD	TBD	TBD	4,366	757
131E	TBD	TBD	TBD	TBD	TBD	TBD	4,366	757
126E	TBD	TBD	TBD	TBD	TBD	TBD	4,366	757
132E-157E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
158E	TBD	TBD	TBD	TBD	TBD	TBD	4,366	757
159E	TBD	TBD	TBD	TBD	TBD	TBD	4,366	757
160E	TBD	TBD	TBD	TBD	TBD	TBD	4,366	757
161E	TBD	TBD	TBD	TBD	TBD	TBD	4,366	757
162E	TBD	TBD	TBD	TBD	TBD	TBD	4,366	757
163E	TBD	TBD	TBD	TBD	TBD	TBD	4,366	757
164E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
165E	TBD	TBD	TBD	TBD	TBD	TBD	4,366	757
166E	TBD	TBD	TBD	TBD	TBD	TBD	4,366	757
167E	TBD	TBD	TBD	TBD	TBD	TBD	4,366	757
168E	TBD	TBD	TBD	TBD	TBD	TBD	4,366	757
169E-171E	TBD	TBD	TBD	TBD	TBD	TBD	4,366	757
172E-173E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
174E-176E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
177E-178E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
179E-184E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
185E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

ATTACHMENT L

Emission Unit Data Sheet

Attachment L

EMISSIONS UNIT DATA SHEET - STORAGE TANKS

1	3	4	6	8	9A	9B	10A	13A	18	20	22A	22B	22C	27	38B	39A	39C	39D	40	41				
Bulk Storage Area Name	Tank Equipment Identification Number	Emission Point Identification Number	Type of Change	Capacity (gallons)	Internal Diameter (ft)	Internal Height (ft)	Max Liquid Height	Max Annual Throughput (gal/yr)	Type of Tank	Shell Color/Roof Color	Are the Tanks Heated?	Provide the operating temperature (F)	Describe how heat is provided to the tank	City/State for TANKS calculations	Max Vapor Pressure (psi)	Material Name	Liquid Density (lb/gal)	Liquid Molecular Weight (lb/lb-mol)	Emission Control Devices	Material Classification	Annual Loss (lb/year)	Material Classification	Annual Loss (lb/year)	Estimation Method
Surfactant Tanks	3S	3E	New Const.	120,762	21.3	45.5	41.6	20,327,735	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90.5	Steam or Hot Water	Dulles Airport, Washington DC	3.50E-03	vP Group n/a	6.84	197	Does not apply	VOC	109.6	HAP	n/a	EPA
Surfactant Tanks	4S	4E	New Const.	48,345	13.5	45.5	41.6	8,805,475	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	89.6	Steam or Hot Water	Dulles Airport, Washington DC	3.42E-03	vP Group n/a	7.18	197	Does not apply	VOC	44.6	HAP	379.2	EPA
Surfactant Tanks	5S	5E	New Const.	40,109	13.5	37.7	37.3	9,481,192	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	95	Steam or Hot Water	Dulles Airport, Washington DC	3.92E-03	vP Group n/a	7.68	197	Does not apply	VOC	48.3	HAP	436.8	EPA
Surfactant Tanks	6S	6E	New Const.	40,109	13.5	37.7	37.3	1,917,922	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	Ambient	Steam or Hot Water	Dulles Airport, Washington DC	8.62E-01	vP Group n/a	6.58	46.07	Does not apply	VOC	1722.7	HAP	n/a	EPA
Surfactant Tanks	7S	7E	New Const.	15,125	9.8	26.6	26.5	7,823,046	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	99.5	Steam or Hot Water	Dulles Airport, Washington DC	1.50E-03	vP Group 1	8.69	323	Does not apply	VOC	19.0	HAP	4.0	EPA
Surfactant Tanks	8S	8E	New Const.	15,125	9.8	26.6	26.5	7,823,046	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	95	Steam or Hot Water	Dulles Airport, Washington DC	1.50E-03	vP Group 1	8.69	323	Does not apply	VOC	19.1	HAP	4.0	EPA
Surfactant Tanks	9S	9E	New Const.	15,125	9.8	26.6	26.5	6,841,173	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	95	Steam or Hot Water	Dulles Airport, Washington DC	1.50E-03	vP Group 1	8.69	323	Does not apply	VOC	17.3	HAP	n/a	EPA
Surfactant Tanks	10S	10E	New Const.	72,475	16.5	45.5	41.6	39,115,231	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	99.5	Steam or Hot Water	Dulles Airport, Washington DC	1.32E-03	vP Group n/a	8.35	323	Does not apply	VOC	82.6	HAP	20.2	EPA
Surfactant Tanks	11S	11E	New Const.	72,475	16.5	45.5	41.6	39,115,231	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	99.5	Steam or Hot Water	Dulles Airport, Washington DC	1.32E-03	vP Group n/a	8.35	323	Does not apply	VOC	82.6	HAP	20.2	EPA
Surfactant Tanks	12S	12E	New Const.	72,475	16.5	45.5	41.6	39,115,231	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	95	Steam or Hot Water	Dulles Airport, Washington DC	1.24E-03	vP Group n/a	8.35	323	Does not apply	VOC	78.5	HAP	20.2	EPA
Surfactant Tanks	13S	13E	New Const.	72,475	16.5	45.5	41.6	39,115,231	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	95	Steam or Hot Water	Dulles Airport, Washington DC	1.24E-03	vP Group n/a	8.35	323	Does not apply	VOC	78.5	HAP	20.2	EPA
Surfactant Tanks	14S	14E	New Const.	72,475	16.5	45.5	41.6	34,205,863	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	95	Steam or Hot Water	Dulles Airport, Washington DC	1.24E-03	vP Group n/a	8.35	323	Does not apply	VOC	71.1	HAP	n/a	EPA
Surfactant Tanks	15S	15E	New Const.	72,475	16.5	45.5	41.6	34,205,863	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	95	Steam or Hot Water	Dulles Airport, Washington DC	1.24E-03	vP Group n/a	8.35	323	Does not apply	VOC	71.1	HAP	n/a	EPA
Surfactant Tanks	16S	16E	New Const.	26,083	11.8	31.8	30.6	115,491	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	95	Steam or Hot Water	Dulles Airport, Washington DC	1.50E-03	vP Group 1	8.69	323	Does not apply	VOC	1.3	HAP	n/a	EPA
Surfactant Tanks	17S	17E	New Const.	15,125	9.8	26.6	26.5	2,000,000	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	1.69E-03	vP Group n/a	15.36	98.09	Does not apply	H2SO4	3.0	HAP	n/a	EPA
Surfactant Tanks	18S	18E	New Const.	15,125	9.8	26.6	26.5	150,000	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	1.69E-03	vP Group n/a	15.36	98.09	Does not apply	VOC	0.6	HAP	n/a	EPA
Liquid Soap A and B Tanks	20S	20E	New Const.	39,626	13.5	36.1	23.8	17,908,909	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	113	Steam or Hot Water	Dulles Airport, Washington DC	1.32E-03	vP Group n/a	8.35	323	Does not apply	VOC	38.4	HAP	9.2	EPA
Liquid Soap A and B Tanks	21S	21E	New Const.	39,626	13.5	36.1	23.8	33,110,907	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	113	Steam or Hot Water	Dulles Airport, Washington DC	1.24E-03	vP Group n/a	8.35	323	Does not apply	VOC	58.3	HAP	17.1	EPA
Liquid Soap A and B Tanks	22S	22E	New Const.	39,626	13.5	36.1	23.8	24,252,405	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	113	Steam or Hot Water	Dulles Airport, Washington DC	1.24E-03	vP Group n/a	8.35	323	Does not apply	VOC	45.4	HAP	n/a	EPA

Attachment L

EMISSIONS UNIT DATA SHEET - STORAGE TANKS

1	3	4	6	8	9A	9B	10A	13A	18	20	22A	22B	22C	27	38B	39A	39C	39D	40	41				
Bulk Storage Area Name	Tank Equipment Identification Number	Emission Point Identification Number	Type of Change	Capacity (gallons)	Internal Diameter (ft)	Internal Height (ft)	Max Liquid Height	Max Annual Throughput (gal/yr)	Type of Tank	Shell Color/Roof Color	Are the Tanks Heated?	Provide the operating temperature (F)	Describe how heat is provided to the tank	City/State for TANKS calculations	Max Vapor Pressure (psi)	Material Name	Liquid Density (lb/gal)	Liquid Molecular Weight (lb/lb-mol)	Emission Control Devices	Material Classification	Annual Loss (lb/year)	Material Classification	Annual Loss (lb/year)	Estimation Method
Liquid Soap A and B Tanks	23S	23E	New Const.	7,925	7.9	21.0	13.9	388,078	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	113	Steam or Hot Water	Dulles Airport, Washington DC	1.24E-03	vP Group n/a	8.35	323	Does not apply	VOC	2.6	HAP	19.4	EPA
Liquid Soap A and B Tanks	24S	24E	New Const.	7,925	7.9	21.0	13.9	306,000	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	113	Steam or Hot Water	Dulles Airport, Washington DC	2.03E-01	vP Group n/a	9.16	36	Does not apply	VOC	0.0	HAP	45.4	EPA
Liquid Soap A and B Tanks	25S	25E	New Const.	39,626	13.5	36.1	23.8	61,401,201	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	113	Steam or Hot Water	Dulles Airport, Washington DC	9.28E-17	vP Group n/a	0.88	343	Does not apply	VOC	7.87E-12	HAP	n/a	EPA
Liquid Soap A and B Tanks	26S	26E	New Const.	15,850	9.8	26.6	17.5	914,258	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	113	Steam or Hot Water	Dulles Airport, Washington DC	n/a	vP Group n/a	7.51	503	Does not apply	VOC	n/a	HAP	n/a	EPA
Liquid Soap A and B Tanks	27S	27E	New Const.	39,626	13.5	36.1	23.8	3,089,634	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	113	Steam or Hot Water	Dulles Airport, Washington DC	1.60E-03	vP Group n/a	8.97	388	Does not apply	VOC	22.4	HAP	n/a	EPA
Liquid Soap A and B Tanks	28S	28E	New Const.	26,417	11.8	31.8	21.0	2,683,153	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	113	Steam or Hot Water	Dulles Airport, Washington DC	1.93E-04	vP Group n/a	6.78	270	Does not apply	VOC	1.4	HAP	n/a	EPA
Liquid Soap A and B Tanks	29S	29E	New Const.	15,850	9.8	26.6	17.5	1,386,258	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	113	Steam or Hot Water	Dulles Airport, Washington DC	1.16E-07	vP Group n/a	6.77	242	Does not apply	VOC	4.20E-04	HAP	n/a	EPA
Liquid Soap A and B Tanks	30S	30E	New Const.	26,417	11.8	31.8	21.0	2,194,780	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	113	Steam or Hot Water	Dulles Airport, Washington DC	7.25E-05	vP Group n/a	8.35	503	Does not apply	VOC	0.9	HAP	n/a	EPA
Liquid Soap A and B Tanks	31S	31E	New Const.	15,850	9.8	26.6	17.5	2,255,347	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	113	Steam or Hot Water	Dulles Airport, Washington DC	3.30E-02	vP Group n/a	8.35	503	Does not apply	VOC	299.6	HAP	n/a	EPA
Liquid Soap A and B Tanks	32S	32E	New Const.	15,850	9.8	26.6	17.5	320,288	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	113	Steam or Hot Water	Dulles Airport, Washington DC	8.13E-01	vP Group n/a	7.93	368	Does not apply	VOC	2085.2	HAP	n/a	EPA
Liquid Soap A and B Tanks	34S	33E	New Const.	7,925	9.0	23.4	15.4	41,527	Vertical Fixed Roof Aboveground	Grey/Grey	No	Ambient	N/A	Dulles Airport, Washington DC	5.00E-01	vP Group 3	8.71	200	Does not apply	VOC	406.7	HAP	n/a	EPA
Liquid Soap A and B Tanks	35S	34E	New Const.	7,925	9.0	23.4	15.4	41,527	Vertical Fixed Roof Aboveground	Grey/Grey	No	Ambient	N/A	Dulles Airport, Washington DC	5.00E-01	vP Group 3	8.71	200	Does not apply	VOC	406.7	HAP	2.0	EPA
Liquid Soap A and B Tanks	36S	35E	New Const.	7,925	9.0	23.4	15.4	41,527	Vertical Fixed Roof Aboveground	Grey/Grey	No	Ambient	N/A	Dulles Airport, Washington DC	5.00E-01	vP Group 3	8.71	200	Does not apply	VOC	406.7	HAP	2.0	EPA
Liquid Soap A and B Tanks	37S	36E	New Const.	7,925	9.0	23.4	15.4	41,527	Vertical Fixed Roof Aboveground	Grey/Grey	No	Ambient	N/A	Dulles Airport, Washington DC	5.00E-01	vP Group 3	8.71	200	Does not apply	VOC	406.7	HAP	2.0	EPA
Liquid Soap A and B Tanks	38S	37E	New Const.	396	3.3	8.58	5.6628	50,410	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	8.13E-01	vP Group n/a	8.50	503	Does not apply	VOC	236.2	HAP	2.0	EPA
Liquid Soap A and B Tanks	39S	38E	New Const.	396	3.3	8.58	5.6628	70	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	8.13E-01	vP Group n/a	8.50	503	Does not apply	VOC	0.7	HAP	n/a	EPA
Liquid Soap A and B Tanks	40S	39E	New Const.	396	3.3	8.58	5.6628	22,498	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	5.61E-02	vP Group n/a	12.02	292	Does not apply	VOC	7.7	HAP	n/a	EPA
Liquid Soap A and B Tanks	41S	40E	New Const.	396	3.3	8.58	5.6628	17,177	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	2.90E-10	vP Group n/a	10.01	205	Does not apply	VOC	0.0	HAP	n/a	EPA
Liquid Soap A and B Tanks	42S	41E	New Const.	396	3.3	8.58	5.6628	10,676	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	8.13E-01	vP Group n/a	8.96	233	Does not apply	VOC	47.0	HAP	n/a	EPA

Attachment L

EMISSIONS UNIT DATA SHEET - STORAGE TANKS

1	3	4	6	8	9A	9B	10A	13A	18	20	22A	22B	22C	27	38B	39A	39C	39D	40	41				
Bulk Storage Area Name	Tank Equipment Identification Number	Emission Point Identification Number	Type of Change	Capacity (gallons)	Internal Diameter (ft)	Internal Height (ft)	Max Liquid Height	Max Annual Throughput (gal/yr)	Type of Tank	Shell Color/Roof Color	Are the Tanks Heated?	Provide the operating temperature (F)	Describe how heat is provided to the tank	City/State for TANKS calculations	Max Vapor Pressure (psi)	Material Name	Liquid Density (lb/gal)	Liquid Molecular Weight (lb/lb-mol)	Emission Control Devices	Material Classification	Annual Loss (lb/year)	Material Classification	Annual Loss (lb/year)	Estimation Method
Liquid Soap A and B Tanks	43S	42E	New Const.	396	3.3	8.58	5.6628	197,326	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	8.13E-01	vP Group n/a	7.93	503	Does not apply	VOC	468.7	HAP	n/a	EPA
Liquid Soap A and B Tanks	44S	43E	New Const.	396	3.3	8.58	5.6628	15,978	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	8.13E-01	vP Group n/a	8.68	503	Does not apply	VOC	151.7	HAP	n/a	EPA
Liquid Soap A and B Tanks	45S	44E	New Const.	396	3.3	8.58	5.6628	162,092	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	1.82E-03	vP Group n/a	8.71	108	Does not apply	VOC	0.2	HAP	n/a	EPA
Liquid Soap A and B Tanks	46S	45E	New Const.	396	3.3	8.58	5.6628	43,950	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	4.50E-01	vP Group n/a	8.31	503	Does not apply	VOC	125.0	HAP	n/a	EPA
Liquid Soap A and B Tanks	47S	46E	New Const.	396	3.3	8.58	5.6628	11,225	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	8.13E-01	vP Group n/a	8.35	503	Does not apply	VOC	106.6	HAP	n/a	EPA
Liquid Soap A and B Tanks	48S	47E	New Const.	396	3.3	8.58	5.6628	11,225	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	8.13E-01	vP Group n/a	8.35	503	Does not apply	VOC	106.6	HAP	n/a	EPA
Liquid Soap A and B Tanks	49S	48E	New Const.	132	2.3	5.98	3.9468	49,355	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	6.82E-07	vP Group n/a	8.22	162	Does not apply	VOC	3.53E-05	HAP	n/a	EPA
Liquid Soap A and B Tanks	50S	49E	New Const.	793	4.3	11.18	7.3788	928,413	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	1.24E-03	vP Group n/a	8.35	323	Does not apply	VOC	1.8	HAP	n/a	EPA
Liquid Soap A and B Tanks	51S	50E	New Const.	396	3.3	8.58	5.6628	229,138	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	n/a	vP Group n/a	n/a	n/a	Does not apply	VOC	n/a	HAP	n/a	EPA
Liquid Soap A and B Tanks	52S	51E	New Const.	396	3.3	8.58	5.6628	1,320	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	1.24E-03	vP Group n/a	8.35	323	Does not apply	VOC	1.23E-02	HAP	n/a	EPA
Liquid Soap A and B Tanks	53S	52E	New Const.	396	3.3	8.58	5.6628	96,325	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	1.24E-03	vP Group n/a	8.35	323	Does not apply	VOC	0.3	HAP	n/a	EPA
Liquid Soap A and B Tanks	54S	53E	New Const.	660	4	10.4	6.864	356,289	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	1.24E-03	vP Group n/a	8.35	323	Does not apply	VOC	0.8	HAP	n/a	EPA
Liquid Soap A and B Tanks	55S	54E	New Const.	396	3.3	8.58	5.6628	100	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	8.13E-01	vP Group n/a	8.50	503	Does not apply	VOC	0.9	HAP	n/a	EPA
Liquid Soap A and B Tanks	56S	55E	New Const.	1,057	4.6	11.96	7.8936	383,271	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	1.59E-03	vP Group n/a	9.09	76	Does not apply	VOC	0.3	HAP	n/a	EPA
Liquid Soap A and B Tanks	57S	56E	New Const.	1,057	4.6	11.96	7.8936	32,788	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	1.59E-03	vP Group n/a	9.09	76	Does not apply	VOC	0.1	HAP	n/a	EPA
Liquid Soap A and B Tanks	58S	57E	New Const.	793	4.3	11.18	7.3788	62,603	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	1.59E-03	vP Group n/a	9.09	76	Does not apply	VOC	0.1	HAP	n/a	EPA
Liquid Soap A and B Tanks	59S	58E	New Const.	396	3.3	8.58	5.6628	3,013	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	1.59E-03	vP Group n/a	9.09	76	Does not apply	VOC	0.0	HAP	n/a	EPA
Liquid Soap A and B Tanks	60S	59E	New Const.	132	2.3	5.98	3.9468	2,605	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	5.80E-04	vP Group n/a	8.41	138	Does not apply	VOC	0.0	HAP	n/a	EPA
Liquid Soap A and B Tanks	61S	60E	New Const.	396	3.3	8.58	5.6628	2,075	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	8.13E-01	vP Group n/a	8.31	503	Does not apply	VOC	19.7	HAP	0.0	EPA

Attachment L

EMISSIONS UNIT DATA SHEET - STORAGE TANKS

1	3	4	6	8	9A	9B	10A	13A	18	20	22A	22B	22C	27	38B	39A	39C	39D	40	41				
Bulk Storage Area Name	Tank Equipment Identification Number	Emission Point Identification Number	Type of Change	Capacity (gallons)	Internal Diameter (ft)	Internal Height (ft)	Max Liquid Height	Max Annual Throughput (gal/yr)	Type of Tank	Shell Color/Roof Color	Are the Tanks Heated?	Provide the operating temperature (F)	Describe how heat is provided to the tank	City/State for TANKS calculations	Max Vapor Pressure (psi)	Material Name	Liquid Density (lb/gal)	Liquid Molecular Weight (lb/lb-mol)	Emission Control Devices	Material Classification	Annual Loss (lb/year)	Material Classification	Annual Loss (lb/year)	Estimation Method
Liquid Soap A and B Tanks	62S	61E	New Const.	396	3.3	8.58	5.662B	76,385	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	8.13E-01	vP Group n/a	12.19	147	Does not apply	VOC	81.1	HAP	n/a	EPA
Liquid Soap A and B Tanks	63S	62E	New Const.	396	3.3	8.58	5.662B	51,239	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	3.40E-01	vP Group n/a	7.59	503	Does not apply	VOC	99.3	HAP	n/a	EPA
Liquid Soap A and B Tanks	64S	63E	New Const.	396	3.3	8.58	5.662B	65,079	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	74	Steam or Hot Water	Dulles Airport, Washington DC	5.00E-01	vP Group 3	8.71	200	Does not apply	VOC	63.8	HAP	n/a	EPA
Liquid Soap A and B Tanks	65S	64E	New Const.	396	3.3	8.58	5.662B	65,079	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	74	Steam or Hot Water	Dulles Airport, Washington DC	5.00E-01	vP Group 3	8.71	200	Does not apply	VOC	63.8	HAP	0.3	EPA
Liquid Soap A and B Tanks	66S	65E	New Const.	396	3.3	8.58	5.662B	65,079	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	74	Steam or Hot Water	Dulles Airport, Washington DC	5.00E-01	vP Group 3	8.71	200	Does not apply	VOC	63.8	HAP	0.3	EPA
Liquid Soap A and B Tanks	67S	66E	New Const.	396	3.3	8.58	5.662B	65,079	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	74	Steam or Hot Water	Dulles Airport, Washington DC	5.00E-01	vP Group 3	8.71	200	Does not apply	VOC	63.8	HAP	0.3	EPA
Liquid Soap A and B Tanks	68S	67E	New Const.	396	3.3	8.58	5.662B	65,079	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	74	Steam or Hot Water	Dulles Airport, Washington DC	5.00E-01	vP Group 3	8.71	200	Does not apply	VOC	63.8	HAP	0.3	EPA
Liquid Soap A and B Tanks	69S	68E	New Const.	396	3.3	8.58	5.662B	65,079	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	74	Steam or Hot Water	Dulles Airport, Washington DC	5.00E-01	vP Group 3	8.71	200	Does not apply	VOC	63.8	HAP	0.3	EPA
Liquid Soap A and B Tanks	70S	69E	New Const.	396	3.3	8.58	5.662B	65,079	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	74	Steam or Hot Water	Dulles Airport, Washington DC	5.00E-01	vP Group 3	8.71	200	Does not apply	VOC	63.8	HAP	0.3	EPA
Liquid Soap A and B Tanks	71S	70E	New Const.	396	3.3	8.58	5.662B	65,079	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	74	Steam or Hot Water	Dulles Airport, Washington DC	5.00E-01	vP Group 3	8.71	200	Does not apply	VOC	63.8	HAP	0.3	EPA
Liquid Soap A and B Tanks	72S	71E	New Const.	396	3.3	8.58	5.662B	65,079	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	74	Steam or Hot Water	Dulles Airport, Washington DC	5.00E-01	vP Group 3	8.71	200	Does not apply	VOC	63.8	HAP	0.3	EPA
Liquid Soap A and B Tanks	73S	72E	New Const.	396	3.3	8.58	5.662B	65,079	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	74	Steam or Hot Water	Dulles Airport, Washington DC	5.00E-01	vP Group 3	8.71	200	Does not apply	VOC	63.8	HAP	0.3	EPA
Liquid Soap A and B Tanks	74S	73E	New Const.	396	3.3	8.58	5.662B	65,079	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	74	Steam or Hot Water	Dulles Airport, Washington DC	5.00E-01	vP Group 3	8.71	200	Does not apply	VOC	63.8	HAP	0.3	EPA
Liquid Soap A and B Tanks	75S	74E	New Const.	396	3.3	8.58	5.662B	65,079	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	74	Steam or Hot Water	Dulles Airport, Washington DC	5.00E-01	vP Group 3	8.71	200	Does not apply	VOC	63.8	HAP	0.3	EPA
Liquid Soap A and B Tanks	76S	75E	New Const.	396	3.3	8.58	5.662B	65,079	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	74	Steam or Hot Water	Dulles Airport, Washington DC	5.00E-01	vP Group 3	8.71	200	Does not apply	VOC	63.8	HAP	0.3	EPA
Liquid Soap A and B Tanks	77S	76E	New Const.	396	3.3	8.58	5.662B	65,079	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	74	Steam or Hot Water	Dulles Airport, Washington DC	5.00E-01	vP Group 3	8.71	200	Does not apply	VOC	63.8	HAP	0.3	EPA
Liquid Soap A and B Tanks	78S	77E	New Const.	396	3.3	8.58	5.662B	65,079	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	74	Steam or Hot Water	Dulles Airport, Washington DC	5.00E-01	vP Group 3	8.71	200	Does not apply	VOC	63.8	HAP	0.3	EPA
Liquid Soap A and B Tanks	79S	78E	New Const.	396	3.3	8.58	5.662B	65,079	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	74	Steam or Hot Water	Dulles Airport, Washington DC	5.00E-01	vP Group 3	8.71	200	Does not apply	VOC	63.8	HAP	0.3	EPA
Liquid Soap A and B Tanks	80S	79E	New Const.	396	3.3	8.58	5.662B	65,079	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	74	Steam or Hot Water	Dulles Airport, Washington DC	5.00E-01	vP Group 3	8.71	200	Does not apply	VOC	63.8	HAP	0.3	EPA

Attachment L

EMISSIONS UNIT DATA SHEET - STORAGE TANKS

1	3	4	6	8	9A	9B	10A	13A	18	20	22A	22B	22C	27	38B	39A	39C	39D	40	41				
Bulk Storage Area Name	Tank Equipment Identification Number	Emission Point Identification Number	Type of Change	Capacity (gallons)	Internal Diameter (ft)	Internal Height (ft)	Max Liquid Height	Max Annual Throughput (gal/yr)	Type of Tank	Shell Color/Roof Color	Are the Tanks Heated?	Provide the operating temperature (F)	Describe how heat is provided to the tank	City/State for TANKS calculations	Max Vapor Pressure (psi)	Material Name	Liquid Density (lb/gal)	Liquid Molecular Weight (lb/lb-mol)	Emission Control Devices	Material Classification	Annual Loss (lb/year)	Material Classification	Annual Loss (lb/year)	Estimation Method
Liquid Soap A and B Tanks	81S	80E	New Const.	396	3.3	8.58	5.6628	65,079	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	74	Steam or Hot Water	Dulles Airport, Washington DC	5.00E-01	vP Group 3	8.71	200	Does not apply	VOC	63.8	HAP	0.3	EPA
Liquid Soap A and B Tanks	82S	81E	New Const.	396	3.3	8.58	5.6628	65,079	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	74	Steam or Hot Water	Dulles Airport, Washington DC	5.00E-01	vP Group 3	8.71	200	Does not apply	VOC	63.8	HAP	0.3	EPA
Liquid Soap A and B Tanks	83S	82E	New Const.	396	3.3	8.58	5.6628	65,079	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	74	Steam or Hot Water	Dulles Airport, Washington DC	5.00E-01	vP Group 3	8.71	200	Does not apply	VOC	63.8	HAP	0.3	EPA
Liquid Soap A and B Tanks	84S	83E	New Const.	396	3.3	8.58	5.6628	65,079	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	74	Steam or Hot Water	Dulles Airport, Washington DC	5.00E-01	vP Group 3	8.71	200	Does not apply	VOC	63.8	HAP	0.3	EPA
Liquid Soap A and B Tanks	85S	84E	New Const.	396	3.3	8.58	5.6628	65,079	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	74	Steam or Hot Water	Dulles Airport, Washington DC	5.00E-01	vP Group 3	8.71	200	Does not apply	VOC	63.8	HAP	0.3	EPA
Liquid Soap A and B Tanks	86S	85E	New Const.	396	3.3	8.58	5.6628	65,079	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	74	Steam or Hot Water	Dulles Airport, Washington DC	5.00E-01	vP Group 3	8.71	200	Does not apply	VOC	63.8	HAP	0.3	EPA
Liquid Soap A and B Tanks	87S	86E	New Const.	1,585	5.3	13.78	9.0948	5,065,436	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90	Steam or Hot Water	Dulles Airport, Washington DC	1.23E-01	vP Group n/a	8.71	200	Does not apply	VOC	510.3	HAP	0.3	EPA
Liquid Soap A and B Tanks	88S	87E	New Const.	1,585	5.3	13.78	9.0948	5,065,436	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90	Steam or Hot Water	Dulles Airport, Washington DC	1.23E-01	vP Group n/a	8.71	200	Does not apply	VOC	510.3	HAP	n/a	EPA
Liquid Soap A and B Tanks	89S	88E	New Const.	1,585	5.3	13.78	9.0948	5,065,436	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90	Steam or Hot Water	Dulles Airport, Washington DC	1.23E-01	vP Group n/a	8.71	200	Does not apply	VOC	510.3	HAP	n/a	EPA
Liquid Soap A and B Tanks	90S	89E	New Const.	1,585	5.3	13.78	9.0948	5,065,436	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90	Steam or Hot Water	Dulles Airport, Washington DC	1.23E-01	vP Group n/a	8.71	200	Does not apply	VOC	510.3	HAP	n/a	EPA
Liquid Soap A and B Tanks	91S	90E	New Const.	1,585	5.3	13.78	9.0948	5,065,436	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90	Steam or Hot Water	Dulles Airport, Washington DC	1.23E-01	vP Group n/a	8.71	200	Does not apply	VOC	510.3	HAP	n/a	EPA
Liquid Soap A and B Tanks	92S	91E	New Const.	1,585	5.3	13.78	9.0948	5,065,436	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90	Steam or Hot Water	Dulles Airport, Washington DC	1.23E-01	vP Group n/a	8.71	200	Does not apply	VOC	510.3	HAP	n/a	EPA
Liquid Soap A and B Tanks	93S	92E	New Const.	1,585	5.3	13.78	9.0948	5,065,436	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90	Steam or Hot Water	Dulles Airport, Washington DC	1.23E-01	vP Group n/a	8.71	200	Does not apply	VOC	510.3	HAP	n/a	EPA
Liquid Soap A and B Tanks	94S	93E	New Const.	1,585	5.3	13.78	9.0948	5,065,436	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90	Steam or Hot Water	Dulles Airport, Washington DC	1.23E-01	vP Group n/a	8.71	200	Does not apply	VOC	510.3	HAP	n/a	EPA
Liquid Soap A and B Tanks	95S	94E	New Const.	1,585	5.3	13.78	9.0948	3,531,808	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90	Steam or Hot Water	Dulles Airport, Washington DC	1.23E-01	vP Group n/a	8.71	200	Does not apply	VOC	367.4	HAP	n/a	EPA
Liquid Soap A and B Tanks	96S	95E	New Const.	1,585	5.3	13.78	9.0948	3,531,808	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90	Steam or Hot Water	Dulles Airport, Washington DC	1.23E-01	vP Group n/a	8.71	200	Does not apply	VOC	367.4	HAP	n/a	EPA
Liquid Soap A and B Tanks	97S	96E	New Const.	1,585	5.3	13.78	9.0948	3,531,808	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90	Steam or Hot Water	Dulles Airport, Washington DC	1.23E-01	vP Group n/a	8.71	200	Does not apply	VOC	367.4	HAP	n/a	EPA
Liquid Soap A and B Tanks	98S	97E	New Const.	1,585	5.3	13.78	9.0948	3,531,808	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90	Steam or Hot Water	Dulles Airport, Washington DC	1.23E-01	vP Group n/a	8.71	200	Does not apply	VOC	367.4	HAP	n/a	EPA
Liquid Soap A and B Tanks	99S	98E	New Const.	1,585	5.3	13.78	9.0948	3,531,808	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90	Steam or Hot Water	Dulles Airport, Washington DC	1.23E-01	vP Group n/a	8.71	200	Does not apply	VOC	367.4	HAP	n/a	EPA

Attachment L

EMISSIONS UNIT DATA SHEET - STORAGE TANKS

1	3	4	6	8	9A	9B	10A	13A	18	20	22A	22B	22C	27	38B	39A	39C	39D	40	41				
Bulk Storage Area Name	Tank Equipment Identification Number	Emission Point Identification Number	Type of Change	Capacity (gallons)	Internal Diameter (ft)	Internal Height (ft)	Max Liquid Height	Max Annual Throughput (gal/yr)	Type of Tank	Shell Color/Roof Color	Are the Tanks Heated?	Provide the operating temperature (F)	Describe how heat is provided to the tank	City/State for TANKS calculations	Max Vapor Pressure (psi)	Material Name	Liquid Density (lb/gal)	Liquid Molecular Weight (lb/lb-mol)	Emission Control Devices	Material Classification	Annual Loss (lb/year)	Material Classification	Annual Loss (lb/year)	Estimation Method
Liquid Soap A and B Tanks	100S	99E	New Const.	1,585	5.3	13.78	9.0948	3,531,808	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90	Steam or Hot Water	Dulles Airport, Washington DC	1.23E-01	vP Group n/a	8.71	200	Does not apply	VOC	367.4	HAP	n/a	EPA
Liquid Soap A and B Tanks	101S	100E	New Const.	1,585	5.3	13.78	9.0948	3,531,808	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90	Steam or Hot Water	Dulles Airport, Washington DC	1.23E-01	vP Group n/a	8.71	200	Does not apply	VOC	367.4	HAP	n/a	EPA
Liquid Soap A and B Tanks	102S	101E	New Const.	1,585	5.3	13.78	9.0948	3,531,808	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90	Steam or Hot Water	Dulles Airport, Washington DC	1.23E-01	vP Group n/a	8.71	200	Does not apply	VOC	367.4	HAP	n/a	EPA
Liquid Soap A and B Tanks	103S	102E	New Const.	1,585	5.3	13.78	9.0948	5,297,712	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90	Steam or Hot Water	Dulles Airport, Washington DC	1.23E-01	vP Group n/a	8.71	200	Does not apply	VOC	532.0	HAP	n/a	EPA
Liquid Soap A and B Tanks	104S	103E	New Const.	1,585	5.3	13.78	9.0948	5,297,712	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90	Steam or Hot Water	Dulles Airport, Washington DC	1.23E-01	vP Group n/a	8.71	200	Does not apply	VOC	532.0	HAP	n/a	EPA
Liquid Soap A and B Tanks	105S	104E	New Const.	1,585	5.3	13.78	9.0948	5,297,712	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90	Steam or Hot Water	Dulles Airport, Washington DC	1.23E-01	vP Group n/a	8.71	200	Does not apply	VOC	532.0	HAP	n/a	EPA
Liquid Soap A and B Tanks	106S	105E	New Const.	1,585	5.3	13.78	9.0948	5,297,712	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90	Steam or Hot Water	Dulles Airport, Washington DC	1.23E-01	vP Group n/a	8.71	200	Does not apply	VOC	532.0	HAP	n/a	EPA
Liquid Soap A and B Tanks	107S	106E	New Const.	1,585	5.3	13.78	9.0948	5,297,712	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90	Steam or Hot Water	Dulles Airport, Washington DC	1.23E-01	vP Group n/a	8.71	200	Does not apply	VOC	532.0	HAP	n/a	EPA
Liquid Soap A and B Tanks	108S	107E	New Const.	1,585	5.3	13.78	9.0948	5,297,712	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90	Steam or Hot Water	Dulles Airport, Washington DC	1.23E-01	vP Group n/a	8.71	200	Does not apply	VOC	532.0	HAP	n/a	EPA
Liquid Soap A and B Tanks	109S	108E	New Const.	1,585	5.3	13.78	9.0948	5,297,712	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90	Steam or Hot Water	Dulles Airport, Washington DC	1.23E-01	vP Group n/a	8.71	200	Does not apply	VOC	532.0	HAP	n/a	EPA
Liquid Soap A and B Tanks	110S	109E	New Const.	1,585	5.3	13.78	9.0948	5,297,712	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90	Steam or Hot Water	Dulles Airport, Washington DC	1.23E-01	vP Group n/a	8.71	200	Does not apply	VOC	532.0	HAP	n/a	EPA
Liquid Soap A and B Tanks	111S	110E	New Const.	1,585	5.3	13.78	9.0948	2,731,247	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90	Steam or Hot Water	Dulles Airport, Washington DC	1.23E-01	vP Group n/a	8.71	200	Does not apply	VOC	292.7	HAP	n/a	EPA
Liquid Soap A and B Tanks	112S	111E	New Const.	1,585	5.3	13.78	9.0948	2,731,247	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90	Steam or Hot Water	Dulles Airport, Washington DC	1.23E-01	vP Group n/a	8.71	200	Does not apply	VOC	292.7	HAP	n/a	EPA
Liquid Soap A and B Tanks	113S	112E	New Const.	1,585	5.3	13.78	9.0948	2,731,247	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90	Steam or Hot Water	Dulles Airport, Washington DC	1.23E-01	vP Group n/a	8.71	200	Does not apply	VOC	292.7	HAP	n/a	EPA
Liquid Soap A and B Tanks	114S	113E	New Const.	1,585	5.3	13.78	9.0948	2,731,247	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90	Steam or Hot Water	Dulles Airport, Washington DC	1.23E-01	vP Group n/a	8.71	200	Does not apply	VOC	292.7	HAP	n/a	EPA
Liquid Soap A and B Tanks	115S	114E	New Const.	1,585	5.3	13.78	9.0948	2,731,247	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90	Steam or Hot Water	Dulles Airport, Washington DC	1.23E-01	vP Group n/a	8.71	200	Does not apply	VOC	292.7	HAP	n/a	EPA
Liquid Soap A and B Tanks	116S	115E	New Const.	1,585	5.3	13.78	9.0948	2,731,247	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90	Steam or Hot Water	Dulles Airport, Washington DC	1.23E-01	vP Group n/a	8.71	200	Does not apply	VOC	292.7	HAP	n/a	EPA
Liquid Soap A and B Tanks	117S	116E	New Const.	1,585	5.3	13.78	9.0948	2,731,247	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90	Steam or Hot Water	Dulles Airport, Washington DC	1.23E-01	vP Group n/a	8.71	200	Does not apply	VOC	292.7	HAP	n/a	EPA
Liquid Soap A and B Tanks	118S	117E	New Const.	1,585	5.3	13.78	9.1	2,731,247	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	90	Steam or Hot Water	Dulles Airport, Washington DC	1.23E-01	vP Group n/a	8.71	200	Does not apply	VOC	292.7	HAP	n/a	EPA

Attachment L

EMISSIONS UNIT DATA SHEET - STORAGE TANKS

1	3	4	6	8	9A	9B	10A	13A	18	20	22A	22B	22C	27	38B	39A	39C	39D	40	41				
Bulk Storage Area Name	Tank Equipment Identification Number	Emission Point Identification Number	Type of Change	Capacity (gallons)	Internal Diameter (ft)	Internal Height (ft)	Max Liquid Height	Max Annual Throughput (gal/yr)	Type of Tank	Shell Color/Roof Color	Are the Tanks Heated?	Provide the operating temperature (F)	Describe how heat is provided to the tank	City/State for TANKS calculations	Max Vapor Pressure (psi)	Material Name	Liquid Density (lb/gal)	Liquid Molecular Weight (lb/lb-mol)	Emission Control Devices	Material Classification	Annual Loss (lb/year)	Material Classification	Annual Loss (lb/year)	Estimation Method
Dry Consumer Laundry and Cleaning Products A Tanks	163S	132E	New Const.	42,879	13.5	36.1	23.8	39,447	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	0.50	vP Group 3	8.81	200	Does not apply	VOC	28.6	HAP	n/a	EPA
Dry Consumer Laundry and Cleaning Products A Tanks	164S	133E	New Const.	37,641	13.5	36.1	23.8	39,447	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	0.50	vP Group 3	8.81	200	Does not apply	VOC	28.6	HAP	n/a	EPA
Dry Consumer Laundry and Cleaning Products A Tanks	165S	134E	New Const.	6,809	7.9	18.4	12.1	39,447	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	0.50	vP Group 3	8.81	200	Does not apply	VOC	28.6	HAP	3.1	EPA
Dry Consumer Laundry and Cleaning Products A Tanks	166S	135E	New Const.	396	2.5	6.5	4.29	78,893	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	0.50	vP Group 3	8.81	200	Does not apply	VOC	47.1	HAP	0.2	EPA
Dry Consumer Laundry and Cleaning Products A Tanks	167S	136E	New Const.	396	2.5	6.5	4.29	78,893	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	0.50	vP Group 3	8.81	200	Does not apply	VOC	47.1	HAP	0.2	EPA
Dry Consumer Laundry and Cleaning Products A Tanks	168S	137E	New Const.	396	2.5	6.5	4.29	78,893	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	0.50	vP Group 3	8.81	200	Does not apply	VOC	47.1	HAP	0.2	EPA
Dry Consumer Laundry and Cleaning Products A Tanks	169S	138E	New Const.	181	2.3	6.0	3.96	39,447	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	0.50	vP Group 3	8.81	200	Does not apply	VOC	28.6	HAP	0.1	EPA
Dry Consumer Laundry and Cleaning Products A Tanks	170S	139E	New Const.	181	2.3	6.0	3.96	39,447	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	0.50	vP Group 3	8.81	200	Does not apply	VOC	28.6	HAP	0.1	EPA
Dry Consumer Laundry and Cleaning Products A Tanks	171S	140E	New Const.	181	2.3	6.0	3.96	39,447	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	0.50	vP Group 3	8.81	200	Does not apply	VOC	28.6	HAP	0.1	EPA
Dry Consumer Laundry and Cleaning Products A Tanks	172S	141E	New Const.	181	2.3	6.0	3.96	39,447	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	0.50	vP Group 3	8.81	200	Does not apply	VOC	28.6	HAP	0.1	EPA
Dry Consumer Laundry and Cleaning Products A Tanks	173S	142E	New Const.	181	2.3	6.0	3.96	39,447	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	0.50	vP Group 3	8.81	200	Does not apply	VOC	28.6	HAP	0.1	EPA
Dry Consumer Laundry and Cleaning Products A Tanks	174S	143E	New Const.	181	2.3	6.0	3.96	39,447	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	0.50	vP Group 3	8.81	200	Does not apply	VOC	28.6	HAP	0.1	EPA
Dry Consumer Laundry and Cleaning Products A Tanks	175S	144E	New Const.	181	2.3	6.0	3.96	39,447	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	0.50	vP Group 3	8.81	200	Does not apply	VOC	28.6	HAP	0.1	EPA
Dry Consumer Laundry and Cleaning Products A Tanks	176S	145E	New Const.	181	2.3	6.0	3.96	39,447	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	0.50	vP Group 3	8.81	200	Does not apply	VOC	28.6	HAP	0.1	EPA
Dry Consumer Laundry and Cleaning Products A Tanks	177S	146E	New Const.	181	2.3	6.0	3.96	39,447	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	0.50	vP Group 3	8.81	200	Does not apply	VOC	28.6	HAP	0.1	EPA
Dry Consumer Laundry and Cleaning Products A Tanks	178S	147E	New Const.	181	2.3	6.0	3.96	39,447	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	0.50	vP Group 3	8.81	200	Does not apply	VOC	28.6	HAP	0.1	EPA

Attachment L

EMISSIONS UNIT DATA SHEET - STORAGE TANKS

1	3	4	6	8	9A	9B	10A	13A	18	20	22A	22B	22C	27	38B	39A	39C	39D	40	41				
Bulk Storage Area Name	Tank Equipment Identification Number	Emission Point Identification Number	Type of Change	Capacity (gallons)	Internal Diameter (ft)	Internal Height (ft)	Max Liquid Height	Max Annual Throughput (gal/yr)	Type of Tank	Shell Color/Roof Color	Are the Tanks Heated?	Provide the operating temperature (F)	Describe how heat is provided to the tank	City/State for TANKS calculations	Max Vapor Pressure (psi)	Material Name	Liquid Density (lb/gal)	Liquid Molecular Weight (lb/lb-mol)	Emission Control Devices	Material Classification	Annual Loss (lb/year)	Material Classification	Annual Loss (lb/year)	Estimation Method
Dry Consumer Laundry and Cleaning Products A Tanks	179S	148E	New Const.	181	2.3	6.0	3.96	39,447	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	0.50	vP Group 3	8.81	200	Does not apply	VOC	28.6	HAP	0.1	EPA
Dry Consumer Laundry and Cleaning Products A Tanks	180S	149E	New Const.	181	2.3	6.0	3.96	39,447	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	0.50	vP Group 3	8.81	200	Does not apply	VOC	28.6	HAP	0.1	EPA
Dry Consumer Laundry and Cleaning Products A Tanks	181S	150E	New Const.	181	2.3	6.0	3.96	39,447	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	0.50	vP Group 3	8.81	200	Does not apply	VOC	28.6	HAP	0.1	EPA
Dry Consumer Laundry and Cleaning Products A Tanks	182S	151E	New Const.	181	2.3	6.0	3.96	39,447	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	0.50	vP Group 3	8.81	200	Does not apply	VOC	28.6	HAP	0.1	EPA
Dry Consumer Laundry and Cleaning Products A Tanks	183S	152E	New Const.	181	2.3	6.0	3.96	39,447	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	0.50	vP Group 3	8.81	200	Does not apply	VOC	28.6	HAP	0.1	EPA
Dry Consumer Laundry and Cleaning Products A Tanks	184S	153E	New Const.	181	2.3	6.0	3.96	39,447	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	0.50	vP Group 3	8.81	200	Does not apply	VOC	28.6	HAP	0.1	EPA
Dry Consumer Laundry and Cleaning Products A Tanks	185S	154E	New Const.	181	2.3	6.0	3.96	39,447	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	0.50	vP Group 3	8.81	200	Does not apply	VOC	28.6	HAP	0.1	EPA
Dry Consumer Laundry and Cleaning Products A Tanks	186S	155E	New Const.	181	2.3	6.0	3.96	39,447	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	0.50	vP Group 3	8.81	200	Does not apply	VOC	28.6	HAP	0.1	EPA
Dry Consumer Laundry and Cleaning Products A Tanks	187S	156E	New Const.	181	2.3	6.0	3.96	39,447	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	0.50	vP Group 3	8.81	200	Does not apply	VOC	28.6	HAP	0.1	EPA
Dry Consumer Laundry and Cleaning Products A Tanks	188S	157E	New Const.	181	2.3	6.0	3.96	39,447	Vertical Fixed Roof Aboveground	Grey/Grey	Yes	77	Steam or Hot Water	Dulles Airport, Washington DC	0.50	vP Group 3	8.81	200	Does not apply	VOC	28.6	HAP	0.1	EPA
Fuel Tanks	208S	177E	New Const.	35,756	15.25	39.65	26.17	32,062	Vertical Fixed Roof Aboveground	Grey/Grey	No	Ambient	N/A	Dulles Airport, Washington DC	2.20E-02	#2 Fuel Oil	7.1	130	Does not apply	VOC	20.6	HAP	n/a	EPA
Fuel Tanks	209S	178E	New Const.	5,162	8.0	20.8	13.73	70,000	Vertical Fixed Roof Aboveground	Grey/Grey	No	Ambient	N/A	Dulles Airport, Washington DC	2.20E-02	#2 Fuel Oil	7.1	130	Does not apply	VOC	4.6	HAP	n/a	EPA

Attachment L					
EMISSIONS UNIT DATA SHEET - BULK LIQUID TRANSFER OPERATIONS					
Number:	**Question:**	**Response:**			**Notes:**
	Sheet version:	Bulk Liquid Transfer			
0	Identification Number	19S			
1	Loading Area Name	Surfactant Bulk Liquid Transfer			
2	Type of Cargo Vessels Accommodated at this Transfer Point	Rail Tank Cars and Tank Trucks			Choose: Drums, Marine Vessels, Rail Tank Cars, and Tank Trucks
7	Projected Maximum Operating Schedule	24/7/365			
8	Bulk Liquid Data				
	Liquid Name	PAM	Surfactant	Sulfuric Acid	
	Annual throughput (Mgal/yr)	150	15,000	2,000	
	Max. Bulk Liquid Temp (F)	69	69	69	
	True vapor pressure (psia)	1.69E-03	1.50E-03	1.69E-03	
	Fill type	Submerged	Submerged	Submerged	
	VOC Emission Rate (lb/yr)	3.5E-01	60.1	--	
	H_2SO_4 Emission Rate (lb/yr)	1.1E-01	--	4.7	
	Control Equipment	N/A	N/A	N/A	

Attachment L
EMISSIONS UNIT DATA SHEET - PAVED HAUL ROADS

Utilities - Road - Constants

Parameter	Value	Unit
Industrial augmentation factor	1	dimensionless
Number of traffic lanes	2	
Surface material silt content[1]	3.3%	%
Surface dust loading	125	lb/mile

Utilities - Road - Parameters

Description	Average Weight[2] (tons)	Miles per Trip[2]	Maximum Trips per Hour	Maximum Trips per Year	Control Device ID	Control Efficiency %
Delivery Trucks	40	0.04167	30.8	365	--	--
Employee Vehicles	2	0.04167	0.5	365	--	--

Utilities - Road - Emissions

Pollutant	Uncontrolled TSP Emissions[3]		Controlled TSP Emissions	
	(lb/hr)	(tpy)	(lb/hr)	(tpy)
Delivery Trucks	5.0E-04	2.2E-03	--	--
Employee Vehicles	1.0E-06	4.4E-06	--	--
TOTAL	5.0E-04	2.2E-03	--	--

1. Conservatively assumed to be equal to average factor for Asphalt Batching, AP-42 Section 13.2.1 *Paved Roads*, Table 13.2.1-3
2. Conservative assumption based on Procter and Gamble design data.
3. From Emission Factor Documentation for AP-42 Section 13.2.1, *Paved Roads,* Equation 2-2, as sited in WV DEP R-13 Permit Form Attachment L for Haul Roads

Attachment L			
EMISSIONS UNIT DATA SHEET - INDIRECT HEAT EXCHANGER			
Number:	**Question:**	**Response:**	**Notes:**
	Sheet version:	Indirect Heat Exchanger	
0	Control Device ID No.	165E	
1	Manufacturer	Cleaver - Brooks	
2	Model Number: Serial Number:	TBD	
3	Number of Units	1	
4	Use	Plant steam	
7	Date Constructed	November 2016	
9	Maximum design heat input per unit	93	MMBtu/hr
10	Peak heat input per unit		
11	Steam produced at maximum design output	75,000	pph
12	Projected Operating Schedule	24/7/365	
13	Type of Firing Equipment to be Used	Natural Gas Burners Oil Burners	Choose from pulverized coal, spreader stoker, oil burners, natural gas burners, or other.
25	Fuel	Natural Gas	
	Quantity of Fuel Used (ft3/hr)	87,226	
	Quantity of Fuel Used Annually ($MMft^3/hr$)	6,693,504	
	BTU Content (BTU/ft^3)	1,000	
	Fuel	#2 Fuel Oil	
	Quantity of Fuel Used (gph at 60F)	685	
	Annual Fuel Use (Mgal/yr)	343	
	Sulfur Content (%)	0.15%	
	BTU Content (MMBtu/gal)	0.135	
38	Emissions after control (lb/hr)		
	CO	3.6	
	NO_X	7.1	
	Pb	1.0E-03	
	PM_{10}	7.5E-01	
	SO_2	6.1E-02	
	VOC	5.2E-01	

Attachment L			
EMISSIONS UNIT DATA SHEET - INDIRECT HEAT EXCHANGER			
Number:	**Question:**	**Response:**	**Notes:**
	Sheet version:	Indirect Heat Exchanger	
0	Control Device ID No.	166E	
1	Manufacturer	Cleaver - Brooks	
2	Model Number: Serial Number:	TBD	
3	Number of Units	1	
4	Use	Plant steam	
7	Date Constructed	November 2016	
9	Maximum design heat input per unit	93	MMBtu/hr
10	Peak heat input per unit		
11	Steam produced at maximum design output	75,000	pph
12	Projected Operating Schedule	24/7/365	
13	Type of Firing Equipment to be Used	Natural Gas Burners	Choose from pulverized coal, spreader stoker, oil burners, natural gas burners, or other.
25	Fuel	Natural Gas	
	Quantity of Fuel Used (ft3/hr)	92,506	
	Quantity of Fuel Used Annually ($MMft^3/hr$)	7,098,679	
	BTU Content (BTU/ft^3)	1,000	
38	Emissions after control (lb/hr)		
	CO	3.4	
	NO_X	6.7	
	Pb	4.5E-05	
	PM_{10}	7.0E-01	
	SO_2	5.6E-02	
	VOC	5.1E-01	

Attachment L			
EMISSIONS UNIT DATA SHEET - INDIRECT HEAT EXCHANGER			
Number:	**Question:**	**Response:**	**Notes:**
	Sheet version:	Indirect Heat Exchanger	
0	Control Device ID No.	**167E**	
1	Manufacturer	Cleaver - Brooks	
2	Model Number: Serial Number:	**TBD**	
3	Number of Units	1	
4	Use	Plant steam	
7	Date Constructed	November 2016	
9	Maximum design heat input per unit	33	MMBtu/hr
10	Peak heat input per unit		
11	Steam produced at maximum design output	26,755	pph
12	Projected Operating Schedule	24/7/365	
13	Type of Firing Equipment to be Used	Natural Gas Burners	Choose from pulverized coal, spreader stoker, oil burners, natural gas burners, or other.
25	Fuel	Natural Gas	
	Quantity of Fuel Used (ft3/hr)	33,000	
	Quantity of Fuel Used Annually ($MMft^3/hr$)	2,532,341	
	BTU Content (BTU/ft^3)	1,000	
38	Emissions after control (lb/hr)		
	CO	1.2	
	NO_X	2.4	
	Pb	1.6E-05	
	PM_{10}	2.5E-01	
	SO_2	2.0E-02	
	VOC	1.8E-01	

Attachment L			
EMISSIONS UNIT DATA SHEET - INDIRECT HEAT EXCHANGER			
Number:	**Question:**	**Response:**	**Notes:**
	Sheet version:	Indirect Heat Exchanger	
0	Control Device ID No.	168E	
1	Manufacturer	Cleaver - Brooks	
2	Model Number: Serial Number:	TBD	
3	Number of Units	1	
4	Use	Plant steam	
7	Date Constructed	November 2016	
9	Maximum design heat input per unit	14	MMBtu/hr
10	Peak heat input per unit		
11	Steam produced at maximum design output	11,605	pph
12	Projected Operating Schedule	As Needed	
13	Type of Firing Equipment to be Used	Natural Gas Burners	Choose from pulverized coal, spreader stoker, oil burners, natural gas burners, or other.
25	Fuel	Natural Gas	
	Quantity of Fuel Used (ft3/hr)	14,314	
	Quantity of Fuel Used Annually ($MMft^3/hr$)	1,098,422	
	BTU Content (BTU/ft^3)	1,000	

Attachment L			
EMISSIONS UNIT DATA SHEET - GENERAL			
Number:	**Question:**	**Response:**	**Notes:**
	Sheet version:	General	
0	Identification Number	1S and 2S	as assigned on Equipment List Form
1	Name or type and model of proposed affected source	Surfactant Making Process	
4	Names and maximum amount of proposed process materials produced per hour	6,000 gal/hr	gal/hr of finished product
5	Give chemical reactions, if applicable, that will be involved in the generation of air pollutants	1. Combustion of liquid S to SO_2' 2. Oxidation of SO_2 to SO_3 2. SO_3 reacted with organic fatty alcohol	
6	Combustion data	Sulfur will be burned. Natural gas burned during startup	
7	Projected operating schedule	24/7/365	
8	**Pollutant**	NO_X	
	Emission Rate (lb/hr)	1.8	
	Pollutant	SO_2	
	Emission Rate (lb/hr)	2.1	
	Pollutant	VOC	
	Emission Rate (lb/hr)	1.9	
	Pollutant	PM_{10}	
	Emission Rate (lb/hr)	7.0	
	Pollutant	CO	
	Emission Rate (lb/hr)	1.3	
	Pollutant	H_2SO_4	
	Emission Rate (lb/hr)	5.1	
	Emission Rate (lb/hr)	Lead	
	Pollutant	7.8E-06	
	Pollutant	HAP	
	Emission Rate (lb/hr)	3.0E-02	
9	Recordkeeping	NSPS VVa: Recordkeeping to show that facility is exempt.	

Attachment L			
EMISSIONS UNIT DATA SHEET - GENERAL			
Number:	**Question:**	**Response:**	**Notes:**
	Sheet version:	General	
0	Identification Number	119S	as assigned on Equipment List Form
1	Name or type and model of proposed affected source	Liquid Soap A and B Packing/Filling	
4	Names and maximum amount of proposed process materials produced per hour	9,457	gal/hour of finished product
5	Give chemical reactions, if applicable, that will be involved in the generation of air pollutants	N/A	
7	Projected operating schedule	24/7/365	
8	Pollutant	VOC	
	Emission Rate (lb/hr)	8.2E-02	
	Pollutant	HAP	
	Emission Rate (lb/hr)	1.4E-02	

Attachment L			
EMISSIONS UNIT DATA SHEET - GENERAL			
Number:	**Question:**	**Response:**	**Notes:**
	Sheet version:	General	
0	Identification Number	195S	as assigned on Equipment List Form
1	Name or type and model of proposed affected source	Dry Consumer Laundry and Cleaning Products A Additive 1	
4	Names and maximum amount of proposed process materials produced per hour	393,701	ft/hr of finished product
5	Give chemical reactions, if applicable, that will be involved in the generation of air pollutants	N/A	
7	Projected operating schedule	24/7/365	
8	Pollutant	VOC	
	Emission Rate (lb/hr)	3.2	

Attachment L			
EMISSIONS UNIT DATA SHEET - GENERAL			
Number:	**Question:**	**Response:**	**Notes:**
	Sheet version:	General	
0	Identification Number	216S	as assigned on Equipment List Form
1	Name or type and model of proposed affected source	Water Preatreatment Chemicals	
4	Names and maximum amount of proposed process materials produced per hour	44	lb/hr (of materials that contain VOC and/or HAP)
5	Give chemical reactions, if applicable, that will be involved in the generation of air pollutants	N/A	
7	Projected operating schedule	24/7/365	
8	Pollutant	VOC	
	Emission Rate (lb/hr)	2.9	
	Pollutant	HAP	
	Emission Rate (lb/hr)	9.1E-04	

ATTACHMENT M

Air Pollution Control Device Sheet

Attachment M			
AIR POLLUTION CONTROL DEVICE SHEET			
Number:	**Question:**	**Response:**	**Notes:**
	Sheet version:	Wet Collecting System - Scrubber	
	Equipment Description	Surfactant Making Process	
0	Control Device ID No.:	1C	Must match Emission Units Table
2	Method:	Packed Bed	Choices: *Packed bed, spray tower, mechanical, venturi, cycle, orifice, other (specify)*
10	Scrubbing Liquor:	Water	Composition and weight %
13	Pressure drop through scrubber:	~6	inches H_2O
15	Liquor flow rates to scrubber:	~572	Design maximum, gal/min
23	Gas flow rate:	~14,000 scfm	Design maximum, acfm
26	Type of pollutant(s) Controlled	SOx	Choose SOx, Odor, Particulate, Other

Number:	Question:	Response:	Notes:
	Sheet version:	Wet Collecting System - Scrubber	
	Equipment Description	Surfactant Making Process	
0	Control Device ID No.:	2C	Must match Emission Units Table
2	Method:	Packed Bed	Choices: *Packed bed, spray tower, mechanical, venturi, cycle, orifice, other (specify)*
10	Scrubbing Liquor:	Water	Composition and weight %
13	Pressure drop through scrubber:	~6	inches H_2O
15	Liquor flow rates to scrubber:	~572	Design maximum, gal/min
23	Gas flow rate:	~14,000 scfm	Design maximum, acfm
26	Type of pollutant(s) Controlled	SOx	Choose SOx, Odor, Particulate, Other

Number:	Question:	Response:	Notes:
	Sheet version:	Mechanical Collector-Cyclone	
	Equipment Description	Rotoclone	
0	Control Device ID No.:	3C	Must match Emission Units Table
2	Method:	Wet	Choices: *Wet, Single-stage, dry, multiple (number?), in series (number)*
5	Pressure Drop (in H2O)	~11.2	
9	Guaranteed collection efficiency:	96%	Also include minimum %
13	Total flow rate	~3000 acfm	
15	Gas Flow Rate into Collector	~2925 scfm	

Number:	Question:	Response:	Notes:
	Sheet version:	Mechanical Collector-Cyclone	
	Equipment Description	Rotoclone	
0	Control Device ID No.:	4C	Must match Emission Units Table
2	Method:	Wet	Choices: *Wet, Single-stage, dry, multiple (number?), in series (number)*
5	Pressure Drop (in H2O)	~11.2	
9	Guaranteed collection efficiency:	96%	Also include minimum %
13	Total flow rate	~3000 acfm	
15	Gas Flow Rate into Collector	~2925 scfm	

Number:	Question:	Response:	Notes:
	Sheet version:	Mechanical Collector-Cyclone	
	Equipment Description	Rotoclone	
0	Control Device ID No.:	5C	Must match Emission Units Table
2	Method:	Wet	Choices: *Wet, Single-stage, dry, multiple (number?), in series (number)*
5	Pressure Drop (in H2O)	~10.4	
9	Guaranteed collection efficiency:	96%	Also include minimum %
13	Total flow rate	~3000 acfm	
15	Gas Flow Rate into Collector	~3575 scfm	

Number:	Question:	Response:	Notes:
	Sheet version:	Mechanical Collector-Cyclone	
	Equipment Description	Rotoclone	
0	Control Device ID No.:	6C	Must match Emission Units Table
2	Method:	Wet	Choices: *Wet, Single-stage, dry, multiple (number?), in series (number)*
5	Pressure Drop (in H2O)	~11.2	
9	Guaranteed collection efficiency:	96%	Also include minimum %
13	Total flow rate	~3000 acfm	
15	Gas Flow Rate into Collector	~2925 scfm	

Number:	Question:	Response:	Notes:
	Sheet version:	Mechanical Collector-Cyclone	
	Equipment Description	Rotoclone	
0	Control Device ID No.:	7C	Must match Emission Units Table
2	Method:	Water	Choices: *Wet, Single-stage, dry, multiple (number?), in series (number)*
5	Pressure Drop (in H2O)	~11.2	
9	Guaranteed collection efficiency:	96%	Also include minimum %
13	Total flow rate	~9600 acfm	
15	Gas Flow Rate into Collector	~1430 scfm	

Attachment M
AIR POLLUTION CONTROL DEVICE SHEET

Number:	Question:	Response:	Notes:
	Sheet version:	Mechanical Collector-Cyclone	
	Equipment Description	Rotoclone	
0	Control Device ID No.:	8C	Must match Emission Units Table
2	Method:	Wet	Choices: *Wet, Single-stage, dry, multiple (number?), in series (number)*
5	Pressure Drop (in H2O)	~11.2	
9	Guaranteed collection efficiency:	96%	Also include minimum %
13	Total flow rate	~9600 acfm	
15	Gas Flow Rate into Collector	~1788 scfm	

Number:	Question:	Response:	Notes:
	Sheet version:	Mechanical Collector-Cyclone	
	Equipment Description	Rotoclone	
0	Control Device ID No.:	9C	Must match Emission Units Table
5	Pressure Drop (in H2O)	~11.2	
2	Method:	Wet	Choices: *Wet, Single-stage, dry, multiple (number?), in series (number)*
9	Guaranteed collection efficiency:	98%	Also include minimum %
13	Total flow rate	~5500 acfm	
15	Gas Flow Rate into Collector	~2925 scfm	

Number:	Question:	Response:	Notes:
	Sheet version:	Mechanical Collector-Cyclone	
	Equipment Description	Rotoclone	
0	Control Device ID No.:	10C	Must match Emission Units Table
2	Method:	Wet	Choices: *Wet, Single-stage, dry, multiple (number?), in series (number)*
5	Pressure Drop (in H2O)	~11.2	
9	Guaranteed collection efficiency:	98%	Also include minimum %
13	Total flow rate	~5500 acfm	
15	Gas Flow Rate into Collector	~2925 scfm	

Number:	Question:	Response:	Notes:
	Sheet version:	Mechanical Collector-Cyclone	
	Equipment Description	Rotoclone	
0	Control Device ID No.:	11C	Must match Emission Units Table
2	Method:	Wet	Choices: *Wet, Single-stage, dry, multiple (number?), in series (number)*
5	Pressure Drop (in H2O)	~11.2	
9	Guaranteed collection efficiency:	98%	Also include minimum %
13	Total flow rate	~5500 acfm	
15	Gas Flow Rate into Collector	~2925 scfm	

Number:	Question:	Response:	Notes:
	Sheet version:	Mechanical Collector-Cyclone	
	Equipment Description	Rotoclones	
0	Control Device ID No.:	12C	Must match Emission Units Table
2	Method:	Wet	Choices: *Wet, Single-stage, dry, multiple (number?), in series (number)*
5	Pressure Drop (in H2O)	~5.2	
9	Guaranteed collection efficiency:	98%	Also include minimum %
13	Total flow rate	~5500 acfm	
15	Gas Flow Rate into Collector	~4225 scfm	

Number:	Question:	Response:	Notes:
	Sheet version:	Mechanical Collector-Cyclone	
	Equipment Description	Rotoclone	
0	Control Device ID No.:	13C	Must match Emission Units Table
2	Method:	Wet	Choices: *Wet, Single-stage, dry, multiple (number?), in series (number)*
5	Pressure Drop (in H2O)	~9.2	
9	Guaranteed collection efficiency:	96%	Also include minimum %
13	Total flow rate	~5900 acfm	
15	Gas Flow Rate into Collector	~1300 scfm	

Attachment M			
AIR POLLUTION CONTROL DEVICE SHEET			
Number:	**Question:**	**Response:**	**Notes:**
	Sheet version:	Flare system	
	Equipment Description	Regenerative Thermal Oxidizer	
0	Control Device ID No.:	14C	Must match Emission Units Table
5	Max capacity of flare:	75	scf/min
7	Estimated combustion efficiency:	97%	Estimated %
8	Fuel Used	Natural Gas	
9	Burner Rating	~2 MMBtu/hr	
30	Maximum mass flow rate of waste gas:	~6146	scf. Estimated total combustible to flare.
31	Estimated total flow rate to flare including material to be burned, carrier gases, auxiliary fuel, etc.:	~158.6	lb/hr
33	Temperature of emission stream (inlet)	~104-184	Degrees F
	Temperature of emission stream (outlet)	~1500	Degrees F

Number:	**Question:**	**Response:**	**Notes:**
	Sheet version:	Baghouse	
	Equipment Description	Bin Vent Filter	
0	Control device ID No.:	15C	Must match Emission Units Table
16	Gas flow rate into collector:	~400 scfm	ACFM
21	Particulate Loading (outlet):	~0.02	grain/scf

Number:	**Question:**	**Response:**	**Notes:**
	Sheet version:	Baghouse	
	Equipment Description	Baghouse	
0	Control device ID No.:	16C	Must match Emission Units Table
16	Gas flow rate into collector:	~275 scfm	ACFM
21	Particulate Loading (outlet):	~0.02	grain/scf

Number:	**Question:**	**Response:**	**Notes:**
	Sheet version:	Baghouse	
	Equipment Description	Baghouse	
0	Control device ID No.:	17C	Must match Emission Units Table
16	Gas flow rate into collector:	~260 scfm	ACFM
21	Particulate Loading (outlet):	~0.02	grain/scf
Number:	**Question:**	**Response:**	**Notes:**
	Sheet version:	Baghouse	
	Equipment Description	Baghouse	
0	Control device ID No.:	18C	Must match Emission Units Table
16	Gas flow rate into collector:	~18000 scfm	ACFM
21	Particulate Loading (outlet):	~0.01	grain/scf

Number:	**Question:**	**Response:**	**Notes:**
	Sheet version:	Baghouse	
	Equipment Description	Baghouse	
0	Control device ID No.:	19C	Must match Emission Units Table
16	Gas flow rate into collector:	~18000 scfm	ACFM
21	Particulate Loading (outlet):	~0.01	grain/scf

Number:	**Question:**	**Response:**	**Notes:**
	Sheet version:	Baghouse	
	Equipment Descripton	Baghouse	
0	Control device ID No.:	20C	Must match Emission Units Table
16	Gas flow rate into collector:	~6500 scfm	ACFM
21	Particulate Loading (outlet):	~0.01	grain/scf

ATTACHMENT N

Supporting Emission Calculations

Table N-0. Emissions Summary

Business Unit/Process	Potential to Emit (tpy)								
	PM	PM_{10}	$PM_{2.5}$	VOC	HAPs	NO_x	CO	SO_2	H_2SO_4
Chemicals	**23.6**	**23.6**	**23.6**	**5.5**	**4.5E-01**	**4.7**	**4.7E-02**	**1.6**	**19.4**
Tanks	--	--	--	1.2	4.5E-01	--	--	--	1.5E-03
Truck Loading	--	--	--	5.2E-02	--	--	--	--	2.4E-03
SO_2 Scrubber	23.6	23.6	23.6	4.2	1.1E-03	4.7	4.7E-02	1.6	19.4
Soap Making A & B	**33.7**	**33.7**	**33.7**	**90.3**	**1.1E-01**	**1.1**	**5.8**	**6.2E-03**	**0.0**
Tanks	--	--	--	10.4	5.3E-02	--	--	--	--
RTO	6.5E-02	6.5E-02	6.5E-02	22.4	5.2E-06	1.1	5.8	6.2E-03	0.0
Dust Control	33.6	33.6	33.6	57.2	--	--	--	--	--
Packing/Filling	--	--	--	0.4	5.9E-02	--	--	--	--
Dry Consumer Products A	**16.7**	**16.7**	**16.7**	**14.5**	**3.3E-03**	**0.0**	**0.0**	**0.0**	**0.0**
Tanks	--	--	--	0.7	3.3E-03	--	--	--	--
Converting	16.7	16.7	16.7	--	--	--	--	--	--
Additive	--	--	--	13.8	--	--	--	--	--
Utilities	**13.1**	**13.1**	**13.0**	**18.6**	**2.0**	**78.7**	**43.4**	**6.4E-01**	**7.2E-03**
Boilers	7.4	7.5	7.3	5.3	1.8E+00	71.3	36.1	6.0E-01	6.7E-03
Engines	7.0E-02	6.9E-02	6.9E-02	6.7E-02	2.3E-02	3.5	0.7	1.6E-03	--
Cooling Towers	5.0	5.0	5.0	--	--	--	--	--	--
Heaters	6.0E-01	6.0E-01	6.0E-01	4.3E-01	1.5E-01	3.9	6.6	4.7E-02	5.1E-04
Fuel Tanks	--	--	--	1.3E-02	--	--	--	--	--
Water Treatment Chemicals	--	--	--	12.8	4.0E-03	--	--	--	--
Auxillary Activities	**2.2E-03**	**0.0**	**0.0**	**0.5**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Printing	--	--	--	0.5	--	--	--	--	--
Paved Roads	2.2E-03	--	--	--	--	--	--	--	--
Total	**87.0**	**87.1**	**87.0**	**129.4**	**2.6**	**84.4**	**49.3**	**2.3**	**19.4**

Table N-1. Surfactant Making - Outdoor Tank Emissions

EU ID	Vapor Pressure Group	Throughput[1] (gal/yr)	Vapor Pressure[1] (psia)	Molecular Weight[1] (lb/lb-mol)	Bulk Liquid Temperature[1,2] (°F)	Liquid Density[1] (lb/gal)	Tank Capacity[1] (gal)	VOC Potential to Emit[3]		HAP Potential to Emit[4]		H_2SO_4 Potential to Emit[3]	
								(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
3	n/a	20,327,735	3.50E-03	197	90.5	6.84	120,762	1.3E-02	5.5E-02	--	--	--	--
4	n/a	8,805,475	3.42E-03	197	89.6	7.18	48,345	5.1E-03	2.2E-02	4.3E-02	1.9E-01	--	--
5	n/a	9,481,192	3.92E-03	197	95	7.68	40,109	5.5E-03	2.4E-02	5.0E-02	2.2E-01	--	--
6	n/a	1,917,922	8.62E-01	46	Ambient	6.58	40,109	2.0E-01	8.6E-01	--	--	--	--
7	1	7,823,046	1.50E-03	323	99.5	8.69	15,125	2.2E-03	9.5E-03	4.6E-04	2.0E-03	--	--
8	1	7,823,046	1.50E-03	323	95	8.69	15,125	2.2E-03	9.6E-03	4.6E-04	2.0E-03	--	--
9	1	6,841,173	1.50E-03	323	95	8.69	15,125	2.0E-03	8.7E-03	--	--	--	--
10	n/a	39,115,231	1.32E-03	323	99.5	8.35	72,475	9.4E-03	4.1E-02	2.3E-03	1.0E-02	--	--
11	n/a	39,115,231	1.32E-03	323	99.5	8.35	72,475	9.4E-03	4.1E-02	2.3E-03	1.0E-02	--	--
12	n/a	39,115,231	1.24E-03	323	95	8.35	72,475	9.0E-03	3.9E-02	2.3E-03	1.0E-02	--	--
13	n/a	39,115,231	1.24E-03	323	95	8.35	72,475	9.0E-03	3.9E-02	2.3E-03	1.0E-02	--	--
14	n/a	34,205,863	1.24E-03	323	95	8.35	72,475	8.1E-03	3.6E-02	--	--	--	--
15	n/a	34,205,863	1.24E-03	323	95	8.35	72,475	8.1E-03	3.6E-02	--	--	--	--
16	1	115,491	1.50E-03	323	95	8.69	26,083	1.4E-04	6.3E-04	--	--	--	--
17	n/a	2,000,000	1.69E-03	98	77	15.36	15,125	--	--	--	--	3.5E-04	1.5E-03
18	n/a	150,000	1.69E-03	98	77	15.36	15,125	6.6E-05	2.9E-04	--	--	--	--
Total								***2.8E-01***	***1.2***	***1.0E-01***	***4.5E-01***	***3.5E-04***	***1.5E-03***

1. Chemical data and tank parameters from Procter and Gamble.
2. All tanks will be temperature controlled (heated and insulated) except for the ambient tank. Unheated tank emissions for cold months (Dec-Feb) conservatively assumed to be equal to max warm month emissions.
3. Emissions calculated per AP-42, Section 7.1 (*Organic Liquid Storage Tanks*) and Trinity calculations spreadsheets. Specifically, equations contained in Section 7.1.3.1 (*Total Losses from Fixed Roof Tanks*) are utilized.
4. Trace amounts of HAP byproduct in surfactant.

Table N-2. Surfactant Making - Truck Loading Emissions

EU ID	Description	Amount Loaded (gal/truck)	Frequency Loaded (trucks/yr)	Vapor Pressure Group	Vapor Pressure (psia)	Molecular Weight (lb/lb-mol)	Temp. R	Saturation Factor	VOC[1] (wt%)	H_2SO_4 wt%	Emission Factor ($lb/10^3$ gal)[2]		Hourly Emissions (lb/hr)		Annual Emissions (tpy)	
											VOC	H_2SO_4	VOC	H_2SO_4	VOC	H_2SO_4
19	PAM Truck Loadout	11,600	13	n/a	1.69E-03	98	528	0.6	100%	30%	2.35E-03	7.06E-04	4.0E-05	1.2E-05	1.8E-04	5.3E-05
	Surfactant Final Product Truck Loadout	11,600	1,293	1	1.50E-03	323	528	0.6	100%	0%	6.86E-03	--	1.2E-02	--	5.1E-02	--
	Sulfuric Acid Truck Loadout	11,600	172	n/a	1.69E-03	98	528	0.6	0%	100%	--	2.35E-03	--	5.4E-04	--	2.4E-03
														Total	5.2E-02	2.4E-03

1. Conservatively assumed that VOC content of PAM and surfactant finished product is 100%.
2. Loading loss emission factors calculated per AP-42, Chapter 5.2 (*Transportation and Marketing of Petroleum Liquids*), Equation 1. Assumes submerged filling.

Table N-3. Surfactant Making - Scrubber Stack

Emissions Unit	Operation[1]	Estimated Hours of Operation for System	Flowrate[2] (scfm)	Pollutant Concentration (ppm)[2]	Pollutant Concentration (mg/m³)	Normal Hourly Emissions (lb/hr)					Annual Emissions (tpy)				
				NO_X	NO_X	NO_x	SO_2	VOC	$PM_{10}/PM_{2.5}$[3]	H_2SO_4	NO_x	SO_2	VOC	$PM_{10}/PM_{2.5}$[3]	H_2SO_4
1C	Normal	8,760	14,000	5	10.13	5.3E-01	1.3E-01	4.51E-01	2.1	1.7	2.3	5.6E-01	2.0	9.4	7.4
	Change Over	365		--	--	--	--	9.02E-01	2.59	1.69	--	--	1.65E-01	4.73E-01	3.08E-01
	Sulfuric Acid Production	8,760		--	--	--	--	--	8.5E-01	8.5E-01	--	--	--	3.7	3.7
	Start-Up	288		--	--	--	1.8	--	1.7	1.7	--	2.60E-01	--	2.43E-01	2.43E-01
2C	Normal	8,760	14,000	5	10.13	5.3E-01	1.3E-01	4.5E-01	2.1	1.7	2.3	5.6E-01	2.0	9.4	7.4
	Change Over	156		--	--	--	--	9.0E-01	2.6	1.7	--	--	7.0E-02	2.0E-01	1.3E-01
	Sulfuric Acid Production	0		--	--	--	--	--	8.5E-01	8.5E-01	--	--	--	--	--
	Start-Up	288		--	--	--	1.8	--	1.7	1.7	--	2.6E-01	--	2.4E-01	2.4E-01
Total											**4.7**	**1.6**	**4.2**	**23.6**	**19.4**

Emissions Unit	Operation[1]	Pollutant Concentration (ppm)[2]	Pollutant Concentration (mg/m³)	Worst-Case Hourly Emissions Per Stack (lb/hr)				
		NO_X	NO_X	NO_x	SO_2	VOC	$PM_{10}/PM_{2.5}$[3]	H_2SO_4
1C or 2C Maximum Hour	Normal	5	10.13	5.3E-01	1.3E-01	4.5E-01	2.1	1.7
	Change Over	--	--	5.3E-01	--	1.4	4.7	3.4
	Start-Up	--	--	5.3E-01	1.9	--	3.4	3.4
Total[4]				**1.1**	**2.1**	**1.80**	**6.9**	**5.1**

1. Assumes process is running normally 8,760 hours per year. Change Over/Start-Up/Sulfuric Acid Production is added as additional emissions beyond the baseline.
2. Per vendor-provided specifications and emissions data.
3. Conservatively assumes $PM_{10} = PM_{2.5}$.
4. Maximum hourly emissions are calculated as the maximum of the start-up and change over emissions added to the normal emissions per stack.

Table N-4. Scrubber Preheaters - Start-up Operations [1]

Number of Heaters	Heater Rated Capacity (MMBtu/hr)	Annual Operating Hours (hr/yr)	Natural Gas Heating Value (HHV) (Btu/scf)	Pollutant	Emission Factor (lb/MMscf)	Reference	Emissions (lb/hr)	Emissions (tpy)
4	4	72	1,020	NO_x	50	2	7.8E-01	2.8E-02
				CO	84	2	1.3E+00	4.7E-02
				PM	7.60	2	1.2E-01	4.3E-03
				PM_{10}	7.60	2	1.2E-01	4.3E-03
				$PM_{2.5}$	7.60	2	1.2E-01	4.3E-03
				SO_2	0.60	2	9.4E-03	3.4E-04
				VOC	5.50	2	8.6E-02	3.1E-03
				H_2SO_4	6.50E-03	3	1.0E-04	3.7E-06
				Lead	5.00E-04	2	7.8E-06	2.8E-07
				2-Methylnaphthalene	2.40E-05	4	3.8E-07	1.4E-08
				3-Methylchloranthrene	1.80E-06	4	2.8E-08	1.0E-09
				7,12-Dimethylbenz(a)anthracene	1.60E-05	4	2.5E-07	9.0E-09
				Acenaphthene	1.80E-06	4	2.8E-08	1.0E-09
				Acenaphthylene	1.80E-06	4	2.8E-08	1.0E-09
				Anthracene	2.40E-06	4	3.8E-08	1.4E-09
				Benz(a)anthracene	1.80E-06	4	2.8E-08	1.0E-09
				Benzene	2.10E-03	4	3.3E-05	1.2E-06
				Benzo(a)pyrene	1.20E-06	4	1.9E-08	6.8E-10
				Benzo(b)fluoranthene	1.80E-06	4	2.8E-08	1.0E-09
				Benzo(g,h,i)perylene	1.20E-06	4	1.9E-08	6.8E-10
				Benzo(k)fluoranthene	1.80E-06	4	2.8E-08	1.0E-09
				Chrysene	1.80E-06	4	2.8E-08	1.0E-09
				Dibenzo(a,h)anthracene	1.20E-06	4	1.9E-08	6.8E-10
				Dichlorobenzene	1.20E-03	4	1.9E-05	6.8E-07
				Fluoranthene	3.00E-06	4	4.7E-08	1.7E-09
				Fluorene	2.80E-06	4	4.4E-08	1.6E-09
				Formaldehyde	7.50E-02	4	1.2E-03	4.2E-05
				Hexane	1.80E+00	4	2.8E-02	1.0E-03
				Indeno(1,2,3-cd)pyrene	1.80E-06	4	2.8E-08	1.0E-09
				Naphthalene	6.10E-04	4	9.6E-06	3.4E-07
				Phenanathrene	1.70E-05	4	2.7E-07	9.6E-09
				Pyrene	5.00E-06	4	7.8E-08	2.8E-09
				Toluene	3.40E-03	4	5.3E-05	1.9E-06
				Arsenic	2.00E-04	4	3.1E-06	1.1E-07
				Beryllium	1.20E-05	4	1.9E-07	6.8E-09
				Cadmium	1.10E-03	4	1.7E-05	6.2E-07
				Chromium	1.40E-03	4	2.2E-05	7.9E-07
				Cobalt	8.40E-05	4	1.3E-06	4.7E-08
				Lead	5.00E-04	4	7.8E-06	2.8E-07
				Manganese	3.80E-04	4	6.0E-06	2.1E-07
				Mercury	2.60E-04	4	4.1E-06	1.5E-07
				Nickel	2.10E-03	4	3.3E-05	1.2E-06
				Selenium	2.40E-05	4	3.8E-07	1.4E-08
				Max HAP			***2.8E-02***	***1.0E-03***
				Total HAPs			***3.0E-02***	***1.1E-03***

1. During startup, combustion emissions from the catalyst bed are exhausted through the SO_2 scrubber.
2. Natural gas emission factors from AP-42 Section 1.4. PM assumed to equal PM_{10}.
3. Natural gas factor calculated assuming 1% of sulfur becomes H_2SO_4.
4. Natural gas emission factors from AP-42, Tables 1.4-3 and 1.4-4.

Table N-5. Liquid Soap A and B Making - Outdoor Tank Emissions

EU ID	Description	Throughput[1] (gal/yr)	Vapor Pressure Group	Vapor Pressure (psia)	Molecular Weight (lb/lb-mol)	Liquid Density (lb/gal)	Bulk Liquid Temperature[2] (°F)	Tank Capacity[1] (gal)	VOC Potential to Emit[2,3] (lb/hr)	VOC Potential to Emit[2,3] (tpy)	HAP Potential to Emit[4] (lb/hr)	HAP Potential to Emit[4] (tpy)
20	Raw Material	17,908,909	n/a	1.32E-03	323	8.35	113	39,626	4.4E-03	1.9E-02	1.1E-03	4.6E-03
21	Raw Material	33,110,907	n/a	1.24E-03	323	8.35	113	39,626	6.7E-03	2.9E-02	2.0E-03	8.5E-03
22	Raw Material	24,252,405	n/a	1.24E-03	323	8.35	113	39,626	5.2E-03	2.3E-02	--	--
23	Raw Material	388,078	n/a	1.24E-03	323	8.35	113	7,925	2.9E-04	1.3E-03	2.2E-03	9.7E-03
24	Raw Material	306,000	n/a	2.03E-01	36	9.16	113	7,925	--	--	5.2E-03	2.3E-02
25	Raw Material	61,401,201	n/a	9.28E-17	343	0.88	113	39,626	9.0E-16	3.9E-15	--	--
26	Raw Material	914,258	n/a	n/a	503	7.51	113	15,850	n/a	n/a	--	--
27	Raw Material	3,089,634	n/a	1.60E-03	388	8.97	113	39,626	2.6E-03	1.1E-02	--	--
28	Raw Material	2,683,153	n/a	1.93E-04	270	6.78	113	26,417	1.6E-04	7.0E-04	--	--
29	Raw Material	1,386,258	n/a	1.16E-07	242	6.77	113	15,850	4.8E-08	2.1E-07	--	--
30	Raw Material	2,194,780	n/a	7.25E-05	503	8.35	113	26,417	1.0E-04	4.6E-04	--	--
31	Raw Material	2,255,347	n/a	3.30E-02	503	8.35	113	15,850	3.4E-02	1.5E-01	--	--
32	Raw Material	320,288	n/a	8.13E-01	368	7.93	113	15,850	2.4E-01	1.0E+00	--	--
33	Raw Material	375,946	n/a	4.83E-05	92	10.52	77	7,925	5.6E-07	4.1E-06	--	--
34	Raw Material	41,527	3	5.00E-01	200	8.71	Ambient	7,925	4.6E-02	2.0E-01	2.3E-04	1.0E-03
35	Raw Material	41,527	3	5.00E-01	200	8.71	Ambient	7,925	4.6E-02	2.0E-01	2.3E-04	1.0E-03
36	Raw Material	41,527	3	5.00E-01	200	8.71	Ambient	7,925	4.6E-02	2.0E-01	2.3E-04	1.0E-03
37	Raw Material	41,527	3	5.00E-01	200	8.71	Ambient	7,925	4.6E-02	2.0E-01	2.3E-04	1.0E-03
								Total	***4.8E-01***	***2.1***	***1.1E-02***	***5.0E-02***

1. Tank capacities and throughputs per Procter and Gamble design data sheets.
2. Ambient tanks emissions for cold months (Dec-Feb) conservatively assumed to be equal to max warm month emissions.
3. Emissions calculated per AP-42, Section 7.1 (*Organic Liquid Storage Tanks*) and Trinity calculations spreadsheets. Specifically, equations contained in Section 7.1.3.1 (*Total Losses from Fixed Roof Tanks*) are utilized.
4. HAP Emissions from perfumes assumed to be 0.5% of VOC emissions. Trace amount of byproduct HAP in surfactant.

Table N-6. Liquid Soap A and B Making - Indoor Tank Emissions

EU ID	Description	Throughput[1] (gal/yr)	Vapor Pressure Group[2]	Vapor Pressure[2] (psia)	Molecular Weight[2] (lb/lb-mol)	Liquid Density[2] (lb/gal)	Bulk Liquid Temperature[1] (°F)	Tank Capacity[1] (gal)	VOC Potential to Emit[2,3] (lb/hr)	VOC Potential to Emit[2,3] (tpy)	HAP Potential to Emit[4] (lb/hr)	HAP Potential to Emit[4] (tpy)
38	Raw Material	50,410	n/a	8.13E-01	503	8.50	77	396	2.7E-02	1.2E-01	--	--
39	Raw Material	70	n/a	8.13E-01	503	8.50	77	396	7.6E-05	3.3E-04	--	--
40	Raw Material	22,498	n/a	5.61E-02	292	12.02	77	396	8.8E-04	3.8E-03	--	--
41	Raw Material	17,177	n/a	2.90E-10	205	10.01	77	396	2.7E-12	1.2E-11	--	--
42	Raw Material	10,676	n/a	8.13E-01	233	8.96	77	396	5.4E-03	2.3E-02	--	--
43	Raw Material	197,326	n/a	8.13E-01	503	7.93	77	396	5.4E-02	2.3E-01	--	--
44	Raw Material	15,978	n/a	8.13E-01	503	8.68	77	396	1.7E-02	7.6E-02	--	--
45	Raw Material	162,092	n/a	1.82E-03	108	8.71	77	396	2.3E-05	9.9E-05	--	--
46	Raw Material	43,950	n/a	4.50E-01	503	8.31	77	396	1.4E-02	6.3E-02	--	--
47	Raw Material	11,225	n/a	8.13E-01	503	8.35	77	396	1.2E-02	5.3E-02	--	--
48	Raw Material	11,225	n/a	8.13E-01	503	8.35	77	396	1.2E-02	5.3E-02	--	--
49	Raw Material	49,355	n/a	6.82E-07	162	8.22	77	132	4.0E-09	1.8E-08	--	--
50	Raw Material	928,413	n/a	1.24E-03	323	8.35	77	793	2.0E-04	8.9E-04	--	--
51	Raw Material	229,138	n/a	n/a	n/a	n/a	77	396	n/a	n/a	--	--
52	Raw Material	1,320	n/a	1.24E-03	323	8.35	77	396	1.4E-06	6.2E-06	--	--
53	Raw Material	96,325	n/a	1.24E-03	323	8.35	77	396	3.5E-05	1.5E-04	--	--
54	Raw Material	356,289	n/a	1.24E-03	323	8.35	77	660	9.5E-05	4.1E-04	--	--
55	Raw Material	100	n/a	8.13E-01	503	8.50	77	396	1.1E-04	4.7E-04	--	--
56	Raw Material	383,271	n/a	1.59E-03	76	9.09	77	1,057	3.5E-05	1.5E-04	--	--
57	Raw Material	32,788	n/a	1.59E-03	76	9.09	77	1,057	1.0E-05	4.6E-05	--	--
58	Raw Material	62,603	n/a	1.59E-03	76	9.09	77	793	1.5E-05	6.6E-05	--	--
59	Raw Material	3,013	n/a	1.59E-03	76	9.09	77	396	9.6E-07	4.2E-06	--	--
60	Raw Material	2,605	n/a	5.80E-04	138	8.41	77	132	5.5E-07	2.4E-06	5.5E-07	2.4E-06
61	Raw Material	2,075	n/a	8.13E-01	503	8.31	77	396	2.2E-03	9.9E-03	--	--
62	Raw Material	76,385	n/a	8.13E-01	147	12.19	77	396	9.3E-03	4.1E-02	--	--
63	Raw Material	51,239	n/a	3.40E-01	503	7.59	77	396	1.1E-02	5.0E-02	--	--
64	Raw Material	65,079	3	0.50	200	8.71	74	396	7.3E-03	3.2E-02	3.6E-05	1.6E-04
65	Raw Material	65,079	3	0.50	200	8.71	74	396	7.3E-03	3.2E-02	3.6E-05	1.6E-04
66	Raw Material	65,079	3	0.50	200	8.71	74	396	7.3E-03	3.2E-02	3.6E-05	1.6E-04
67	Raw Material	65,079	3	0.50	200	8.71	74	396	7.3E-03	3.2E-02	3.6E-05	1.6E-04
68	Raw Material	65,079	3	0.50	200	8.71	74	396	7.3E-03	3.2E-02	3.6E-05	1.6E-04
69	Raw Material	65,079	3	0.50	200	8.71	74	396	7.3E-03	3.2E-02	3.6E-05	1.6E-04
70	Raw Material	65,079	3	0.50	200	8.71	74	396	7.3E-03	3.2E-02	3.6E-05	1.6E-04
71	Raw Material	65,079	3	0.50	200	8.71	74	396	7.3E-03	3.2E-02	3.6E-05	1.6E-04
72	Raw Material	65,079	3	0.50	200	8.71	74	396	7.3E-03	3.2E-02	3.6E-05	1.6E-04
73	Raw Material	65,079	3	0.50	200	8.71	74	396	7.3E-03	3.2E-02	3.6E-05	1.6E-04
74	Raw Material	65,079	3	0.50	200	8.71	74	396	7.3E-03	3.2E-02	3.6E-05	1.6E-04
75	Raw Material	65,079	3	0.50	200	8.71	74	396	7.3E-03	3.2E-02	3.6E-05	1.6E-04
76	Raw Material	65,079	3	0.50	200	8.71	74	396	7.3E-03	3.2E-02	3.6E-05	1.6E-04
77	Raw Material	65,079	3	0.50	200	8.71	74	396	7.3E-03	3.2E-02	3.6E-05	1.6E-04
78	Raw Material	65,079	3	0.50	200	8.71	74	396	7.3E-03	3.2E-02	3.6E-05	1.6E-04
79	Raw Material	65,079	3	0.50	200	8.71	74	396	7.3E-03	3.2E-02	3.6E-05	1.6E-04
80	Raw Material	65,079	3	0.50	200	8.71	74	396	7.3E-03	3.2E-02	3.6E-05	1.6E-04
81	Raw Material	65,079	3	0.50	200	8.71	74	396	7.3E-03	3.2E-02	3.6E-05	1.6E-04
82	Raw Material	65,079	3	0.50	200	8.71	74	396	7.3E-03	3.2E-02	3.6E-05	1.6E-04
83	Raw Material	65,079	3	0.50	200	8.71	74	396	7.3E-03	3.2E-02	3.6E-05	1.6E-04
84	Raw Material	65,079	3	0.50	200	8.71	74	396	7.3E-03	3.2E-02	3.6E-05	1.6E-04
85	Raw Material	65,079	3	0.50	200	8.71	74	396	7.3E-03	3.2E-02	3.6E-05	1.6E-04
86	Raw Material	65,079	3	0.50	200	8.71	74	396	7.3E-03	3.2E-02	3.6E-05	1.6E-04

Table N-6. Liquid Soap A and B Making - Indoor Tank Emissions

EU ID	Description	Throughput[1] (gal/yr)	Vapor Pressure Group[2]	Vapor Pressure[2] (psia)	Molecular Weight[2] (lb/lb-mol)	Liquid Density[2] (lb/gal)	Bulk Liquid Temperature[1] (°F)	Tank Capacity[1] (gal)	VOC Potential to Emit[2,3] (lb/hr)	VOC Potential to Emit[2,3] (tpy)	HAP Potential to Emit[4] (lb/hr)	HAP Potential to Emit[4] (tpy)
87	Finished Product	5,065,436	n/a	0.12	200	8.71	90	1,585	5.8E-02	2.6E-01	--	--
88	Finished Product	5,065,436	n/a	0.12	200	8.71	90	1,585	5.8E-02	2.6E-01	--	--
89	Finished Product	5,065,436	n/a	0.12	200	8.71	90	1,585	5.8E-02	2.6E-01	--	--
90	Finished Product	5,065,436	n/a	0.12	200	8.71	90	1,585	5.8E-02	2.6E-01	--	--
91	Finished Product	5,065,436	n/a	0.12	200	8.71	90	1,585	5.8E-02	2.6E-01	--	--
92	Finished Product	5,065,436	n/a	0.12	200	8.71	90	1,585	5.8E-02	2.6E-01	--	--
93	Finished Product	5,065,436	n/a	0.12	200	8.71	90	1,585	5.8E-02	2.6E-01	--	--
94	Finished Product	5,065,436	n/a	0.12	200	8.71	90	1,585	5.8E-02	2.6E-01	--	--
95	Finished Product	3,531,808	n/a	0.12	200	8.71	90	1,585	5.8E-02	2.6E-01	--	--
96	Finished Product	3,531,808	n/a	0.12	200	8.71	90	1,585	4.2E-02	1.8E-01	--	--
97	Finished Product	3,531,808	n/a	0.12	200	8.71	90	1,585	4.2E-02	1.8E-01	--	--
98	Finished Product	3,531,808	n/a	0.12	200	8.71	90	1,585	4.2E-02	1.8E-01	--	--
99	Finished Product	3,531,808	n/a	0.12	200	8.71	90	1,585	4.2E-02	1.8E-01	--	--
100	Finished Product	3,531,808	n/a	0.12	200	8.71	90	1,585	4.2E-02	1.8E-01	--	--
101	Finished Product	3,531,808	n/a	0.12	200	8.71	90	1,585	4.2E-02	1.8E-01	--	--
102	Finished Product	3,531,808	n/a	0.12	200	8.71	90	1,585	4.2E-02	1.8E-01	--	--
103	Finished Product	5,297,712	n/a	0.12	200	8.71	90	1,585	4.2E-02	1.8E-01	--	--
104	Finished Product	5,297,712	n/a	0.12	200	8.71	90	1,585	6.1E-02	2.7E-01	--	--
105	Finished Product	5,297,712	n/a	0.12	200	8.71	90	1,585	6.1E-02	2.7E-01	--	--
106	Finished Product	5,297,712	n/a	0.12	200	8.71	90	1,585	6.1E-02	2.7E-01	--	--
107	Finished Product	5,297,712	n/a	0.12	200	8.71	90	1,585	6.1E-02	2.7E-01	--	--
108	Finished Product	5,297,712	n/a	0.12	200	8.71	90	1,585	6.1E-02	2.7E-01	--	--
109	Finished Product	5,297,712	n/a	0.12	200	8.71	90	1,585	6.1E-02	2.7E-01	--	--
110	Finished Product	5,297,712	n/a	0.12	200	8.71	90	1,585	6.1E-02	2.7E-01	--	--
111	Finished Product	2,731,247	n/a	0.12	200	8.71	90	1,585	6.1E-02	2.7E-01	--	--
112	Finished Product	2,731,247	n/a	0.12	200	8.71	90	1,585	3.3E-02	1.5E-01	--	--
113	Finished Product	2,731,247	n/a	0.12	200	8.71	90	1,585	3.3E-02	1.5E-01	--	--
114	Finished Product	2,731,247	n/a	0.12	200	8.71	90	1,585	3.3E-02	1.5E-01	--	--
115	Finished Product	2,731,247	n/a	0.12	200	8.71	90	1,585	3.3E-02	1.5E-01	--	--
116	Finished Product	2,731,247	n/a	0.12	200	8.71	90	1,585	3.3E-02	1.5E-01	--	--
117	Finished Product	2,731,247	n/a	0.12	200	8.71	90	1,585	3.3E-02	1.5E-01	--	--
118	Finished Product	2,731,247	n/a	0.12	200	8.71	90	1,585	3.3E-02	1.5E-01	--	--
Total									***1.9***	***8.3***	***8.4E-04***	***3.7E-03***

1. Tank capacities and throughputs per Procter and Gamble design data sheets.
2. Finished product tanks assumed to contain a fractional amount of vapor pressure group 3 materials.
3. Emissions calculated per AP-42, Section 7.1 (*Organic Liquid Storage Tanks*) and Trinity calculations spreadsheets. Specifically, equations contained in Section 7.1.3.1 (*Total Losses from Fixed Roof Tanks*) are utilized.
4. HAP Emissions from perfumes assumed to be 0.5% of VOC emissions.

Table N-7. Soap Making Business A and B - Finished Product Packing and Capping Emissions

EU ID	Description	Temperature (°F)	Vapor Pressure[1] (psia)	Mol. Wt.[1] (lb/lb-mol)	Throughput (gal/yr)	Kn[3]	VOC Potential to Emit[2, 4]	
							(lb/hr)	(tpy)
119	Soap Making Business A and B Packing and Capping Line	90	0.50	200	82,847,333	0.20	6.8E-02	3.0E-01

1. Per product formulation for similar P&G facilities and operations
2. Finished product tanks assumed to contain a fractional amount of vapor pressure group 3 materials.
3. K_N calculated assuming infinitely many turnovers, N, per year (i.e., large material throughput and small bottle volume).
4. Emissions calculated per AP-42, Chapter 7.1 (*Organic Liquid Storage Tanks*), Equation 1-29.

Table N-8. Soap Making Business A and B - Finished Product Packing Emissions from Hot Melt Glue

Emissions Unit	Business Unit	Annual Glue Usage[1] (lb/hr)	VOC Emission Factor (lb/lb)	HAP Emission Factor (lb/lb)	VOC Emissions		HAP Emissions[2]	
					(lb/hr)	(tpy)	(lb/hr)	(tpy)
119	Soap Making Business A&B	50	2.70E-04	2.70E-04	1.4E-02	5.9E-02	1.4E-02	5.9E-02

1. Conservative assumption based on Procter and Gamble design data.
2. Conservatively assumed that all of the VOC in the hot melt glue is vinyl acetate.

Table N-9. Liquid Soap A and B - Rotoclone Particulate Emissions

Process Unit Numbers	Rotoclone Number[1]	Rotoclone Name	$PM/PM_{10}/PM_{2.5}$ Control Efficiency	Emission Factor[1]	Emission Factor Units	Annual Throughput[2]	Annual Throughput Units	$PM/PM_{10}/PM_{2.5}$ Emissions (tons/yr)
120S-123S	3C	Premix Rotoclone 1	96%	3.00E-02	gr/dscf	1,537,380,000	scf/yr	3.3
124S-127S	4C	Liquid Soap B Rotoclone 1	96%	3.00E-02	gr/dscf	1,537,380,000	scf/yr	3.3
128S-131S	5C	Liquid Soap B Rotoclone 2	96%	3.00E-02	gr/dscf	1,879,020,000	scf/yr	4.0
132S-135S	6C	Liquid Soap B Rotoclone 3	96%	3.00E-02	gr/dscf	1,537,380,000	scf/yr	3.3
136S-139S	7C	Scale and Lab Rotoclone 1[4]	96%	3.00E-02	gr/dscf	751,608,000	scf/yr	1.6
140S-144S	8C	Scale and Lab Rotoclone 2[4]	96%	3.00E-02	gr/dscf	939,510,000	scf/yr	2.0
146S-148S	9C	Liquid Soap A Rotoclone 1	98%	3.00E-02	gr/dscf	1,537,380,000	scf/yr	3.3
150S-152S	10C	Liquid Soap A Rotoclone 2	98%	3.00E-02	gr/dscf	1,537,380,000	scf/yr	3.3
154S-156S	11C	Liquid Soap A Rotoclone 3	98%	3.00E-02	gr/dscf	1,537,380,000	scf/yr	3.3
158S-160S	12C	Liquid Soap A Rotoclone 4	98%	3.00E-02	gr/dscf	2,220,660,000	scf/yr	4.8
161S-162S	13C	Liquid Soap B Rotoclone 4	96%	3.00E-02	gr/dscf	683,280,000	scf/yr	1.5
							Total	***33.6***

Table N-10. Liquid Soap A and B - Rotoclone VOC Emissions

Process Unit Numbers	Rotoclone Number[1]	Rotoclone Name	VOC Control Efficiency	Emission Factor[2]	Emission Factor Units	Annual Throughput[3] (lb/yr)	VOC Emissions[5] (tons/yr)
120S-123S	3C	Premix Rotoclone 1	0%	7.54E-02	lbs/1000 lbs	97,894,705	4.6
124S-127S	4C	Liquid Soap B Rotoclone 1	0%	7.54E-02	lbs/1000 lbs	181,515,950	8.6
128S-131S	5C	Liquid Soap B Rotoclone 2	0%	7.54E-02	lbs/1000 lbs	219,507,661	10.3
132S-135S	6C	Liquid Soap B Rotoclone 3	0%	7.54E-02	lbs/1000 lbs	208,743,343	9.8
136S-139S	7C	Scale and Lab Rotoclone 1[4]	0%	--	--	--	--
140S-144S	8C	Scale and Lab Rotoclone 2[4]	0%	--	--	--	--
146S-148S	9C	Liquid Soap A Rotoclone 1	0%	7.06E-02	lbs/1000 lbs	91,180,105	4.0
150S-152S	10C	Liquid Soap A Rotoclone 2	0%	7.06E-02	lbs/1000 lbs	98,497,027	4.3
154S-156S	11C	Liquid Soap A Rotoclone 3	0%	7.06E-02	lbs/1000 lbs	113,271,581	5.0
158S-160S	12C	Liquid Soap A Rotoclone 4	0%	7.06E-02	lbs/1000 lbs	113,271,581	5.0
161S-162S	13C	Liquid Soap B Rotoclone 4	0%	7.54E-02	lbs/1000 lbs	4,952,749	0.2
						Total	***57.2***

1. Control includes dust pick up points associated with identified process units.

2. Conservative assumptions based on P&G process knowledge for Liquid Soap A and B. Conservatively assumes $PM=PM_{10}=PM_{2.5}$

3. Annual throughputs based on maximum anticipated production volumes.

4. Scale and Lab Rotoclone is not used for measuring volatile materials.

5. A 25% safety factor is added to conservatively account for uncertainties in the emission factors.

Table N-11. Liquid Soap A - Regenerative Thermal Oxidizer Emissions

Parameter	Value	Unit
Control Device Number	14C	
Emission Unit Numbers	145S, 149S, 153S, 157S	
Potential Volatile Throughput (Total)	66,488	lb/hr, total
	291,217	tpy
Total Heat Input	2.4	MMBtu/hr
Potential Throughput	2.35E-03	MMCF/hr

Pollutant	Emission Factor	Units	Source	Uncontrolled Emissions (lb/hr)	Control Efficiency (%)	Controlled Emissions (lb/hr)	PTE (tpy)
$PM_{10}/PM_{2.5}$	7.6	lb/MMCF	AP-42	0.01	0	1.5E-02	6.5E-02
SO_2	6.00E-01	lb/MMCF	AP-42	1.41E-03	0	1.4E-03	6.2E-03
NO_X	1.00E-01	lb/MMBtu	Vendor	2.40E-01	0	2.4E-01	1.1
VOC - controlled[1,2]	4.71	lb/ton	Mass Balance	156.52	97	4.7	20.6
VOC - uncontrolled[1]	4.71	lb/ton	Mass Balance	156.52	0	156.5	1.9
CO	1.33	lb/hr	Vendor	1.33	0	1.3	5.8
Lead	5.00E-04	lb/MMCF	AP-42	1.18E-06	0	1.2E-06	5.2E-06
Ammonia	3.2	lb/MMCF	FIRE	0.01	0	7.5E-03	3.30E-02

1. Assumes 24 hours (12-month rolling) of uncontrolled emissions.

Table N-12. Dry Consumer Product A - Outdoor Tank Emissions

EU ID	Vapor Pressure Group	Throughput[1] (gal/yr)	Vapor Pressure (psia)	Molecular Weight (lb/lb-mol)	Bulk Liquid Temperature (°F)	Liquid Density (lb/gal)	Tank Capacity[1] (gal)	VOC Potential to Emit[2]		HAP Potential to Emit[3]	
								(lb/hr)	(tpy)	(lb/hr)	(tpy)
163	n/a	7,751,090	7.35E-09	282	160	7.00	42,879	1.2E-08	5.1E-08	--	--
164	n/a	13,608,386	7.35E-09	282	160	7.97	37,611	1.6E-08	7.1E-08	--	--
165	3	378,689	0.50	200	77	8.81	6,809	7.0E-02	3.1E-01	3.5E-04	1.5E-03
							Total	***7.0E-02***	***3.1E-01***	***3.5E-04***	***1.5E-03***

1. Tank capacities and throughputs per Procter and Gamble design data sheets. Throughputs are time averaged throughputs based on planned production lines for other similar Procter and Gamble facilities and business units, scaled according to ratio of planned production lines for the facility.

2. Emissions calculated per AP-42, Section 7.1 (*Organic Liquid Storage Tanks*) and Trinity calculations spreadsheets. Specifically, equations contained in Section 7.1.3.1 (*Total Losses from Fixed Roof Tanks*) are utilized.

3. HAP emissions from perfumes assumed to be 0.5% of VOC emissions.

Table N-13. Dry Consumer Product A - Indoor Tank Emissions

EU ID	Vapor Pressure Group	Throughput[1] (gal/yr)	Vapor Pressure[2] (psia)	Molecular Weight[2] (lb/lb-mol)	Bulk Liquid Temperature[2] (°F)	Liquid Density[2] (lb/gal)	Tank Capacity[1] (gal)	VOC Potential to Emit[3]		HAP Potential to Emit[4]	
								(lb/hr)	(tpy)	(lb/hr)	(tpy)
166	3	78,893	0.50	200	77	8.81	396	5.4E-03	2.4E-02	2.7E-05	1.2E-04
167	3	78,893	0.50	200	77	8.81	396	5.4E-03	2.4E-02	2.7E-05	1.2E-04
168	3	78,893	0.50	200	77	8.81	396	5.4E-03	2.4E-02	2.7E-05	1.2E-04
169	3	39,447	0.50	200	77	8.81	181	3.3E-03	1.4E-02	1.6E-05	7.2E-05
170	3	39,447	0.50	200	77	8.81	181	3.3E-03	1.4E-02	1.6E-05	7.2E-05
171	3	39,447	0.50	200	77	8.81	181	3.3E-03	1.4E-02	1.6E-05	7.2E-05
172	3	39,447	0.50	200	77	8.81	181	3.3E-03	1.4E-02	1.6E-05	7.2E-05
173	3	39,447	0.50	200	77	8.81	181	3.3E-03	1.4E-02	1.6E-05	7.2E-05
174	3	39,447	0.50	200	77	8.81	181	3.3E-03	1.4E-02	1.6E-05	7.2E-05
175	3	39,447	0.50	200	77	8.81	181	3.3E-03	1.4E-02	1.6E-05	7.2E-05
176	3	39,447	0.50	200	77	8.81	181	3.3E-03	1.4E-02	1.6E-05	7.2E-05
177	3	39,447	0.50	200	77	8.81	181	3.3E-03	1.4E-02	1.6E-05	7.2E-05
178	3	39,447	0.50	200	77	8.81	181	3.3E-03	1.4E-02	1.6E-05	7.2E-05
179	3	39,447	0.50	200	77	8.81	181	3.3E-03	1.4E-02	1.6E-05	7.2E-05
180	3	39,447	0.50	200	77	8.81	181	3.3E-03	1.4E-02	1.6E-05	7.2E-05
181	3	39,447	0.50	200	77	8.81	181	3.3E-03	1.4E-02	1.6E-05	7.2E-05
182	3	39,447	0.50	200	77	8.81	181	3.3E-03	1.4E-02	1.6E-05	7.2E-05
183	3	39,447	0.50	200	77	8.81	181	3.3E-03	1.4E-02	1.6E-05	7.2E-05
184	3	39,447	0.50	200	77	8.81	181	3.3E-03	1.4E-02	1.6E-05	7.2E-05
185	3	39,447	0.50	200	77	8.81	181	3.3E-03	1.4E-02	1.6E-05	7.2E-05
186	3	39,447	0.50	200	77	8.81	181	3.3E-03	1.4E-02	1.6E-05	7.2E-05
187	3	39,447	0.50	200	77	8.81	181	3.3E-03	1.4E-02	1.6E-05	7.2E-05
188	3	39,447	0.50	200	77	8.81	181	3.3E-03	1.4E-02	1.6E-05	7.2E-05
							Total	***8.1E-02***	***3.6E-01***	***4.1E-04***	***1.8E-03***

1. Tank capacities and throughputs per Procter and Gamble design data sheets. Throughputs are time averaged throughputs based on planned production lines for other similar Procter and Gamble facilities and business units, scaled according to ratio of planned production lines for the facility.

2. Raw material chemical properties per assigned vapor pressure grouping.

3. Emissions calculated per AP-42, Section 7.1 (*Organic Liquid Storage Tanks*) and Trinity calculations spreadsheets. Specifically, equations contained in Section 7.1.3.1 (*Total Losses from Fixed Roof Tanks*) are utilized.

4. HAP emissions from perfumes assumed to be 0.5% of VOC emissions.

Table N-14. Dry Consumer Products A - Particulate Control Device Emissions

EU ID	Control Device ID	Description	Control Type	Hours/Year Utilized	Fabric Filter Efficiency[1] (gr/scf)	Air Flowrate[2] (scfm)	$PM/PM_{10}/PM_{2.5}$ Potential to Emit (lb/hr)	$PM/PM_{10}/PM_{2.5}$ Potential to Emit (tpy)
189	15C	Dry Consumer Products A - Clay Silo - Loading	Bin Vent Filter	8,760	0.02	400	6.9E-02	3.0E-01
190	16C	Dry Consumer Products A - Clay FRL Exhaust	Baghouse	8,760	0.02	275	4.7E-02	2.1E-01
191	17C	Dry Consumer Products A - Feeder/Mixer Vent	Baghouse	8,760	0.02	260	4.5E-02	2.0E-01
192	18C	Dry Consumer Products A - Line 11	Baghouse	8,760	0.01	18,000	1.5	6.8
193	19C	Dry Consumer Products A - Line 13	Baghouse	8,760	0.01	18,000	1.5	6.8
194	20C	CVC	Baghouse	8,760	0.01	6,500	5.6E-01	2.4
						Total	**3.8**	**16.7**

1. Conservative assumptions based on P&G process knowledge for Dry Consumer Products A
2. Per P&G process knowledge for Dry Consumer Products A

Table N-15. Dry Consumer Products A - Additive Emissions

EU ID	Description	Substrate Coated Area[1] (ft^2)	Temperature (°F)	Vapor Pressure (psia)	Molecular Weight (lb/lb-mol)	Mass Transfer Coefficient[2] (ft/hr)	Application Frequency (%)	Number of Lines	Coating Mix (%)	VOC Content (%)	PMC Content (%)	VOC Emissions (lb/hr)	VOC Emissions (tpy)
195	Dry Consumer Products A - Additive	1,050	50	7.35E-09	282	39.18	100	2	95	100	n/a	3.1E-05	1.3E-04
	Dry Consumer Products A - Perfume	1,050	50	2.40E-02	200	43.93	100	2	5	100	25	3.2	13.8
											Total	***3.2***	***13.8***

1. The production lines are designed based on the following Procter and Gamble design specifications.

Substrate line specifications

Substrate length:	2,100	inches

2. Mass Transfer Coefficient (MTC) calculated using water (H_2O) as reference compound.

H_2O MTC:	98.03	ft/hr
H_2O Mol. Wt.:	18	lb/lb-mol

Table N-16. Utilities - Overall Utility Inventory

Equipment Type	Quantity	Design Size	
		Value	Units
Boilers	2	75,000	pph steam
	1	26,755	pph steam
	1	11,605	pph steam
Cooling Towers	1	307	Mgal/hr
	1	939	Mgal/hr
	1	451	Mgal/hr
Fire Pump Engine	2	311	hp
Backup/Standby Power Generator	3	350	kW
Engine ULSD Tanks	5	< 500	gallon
Vehicle Refueling ULSD Tank	1	5,000	gallon
Boiler ULSD Tank	1	35,000	gallon
Warehouse Heaters	6	3.05	MMBtu/hr

Equipment Type	Quantity	Design Size		Weighted Heat of Vaporization[1] (Btu/lb)	Boiler Efficiency (HHV)	Calculated Size	
		Value	Units			Value	Units
Boilers	2	75,000	pph steam	1,048.4	85%	93	MMBtu/hr
	1	26,755	pph steam	1,048.4	85%	33	MMBtu/hr
	1	11,605	pph steam	1,048.4	85%	14	MMBtu/hr

1. Steam parameters:

H_2O heat of vaporization (non-condensate return):	1,178	Btu/lb
H_2O heat of vaporization (condensate return):	1,016	Btu/lb
Condensate return:	80%	

Table N-17. Utilities - Boiler Nos. 1 - Parameters

Parameter	Value	Unit
New Boiler Heat Input:	93	MMBtu/hr
Number of New Boilers:	1	
Annual Gas Usage:	764	MMscf/yr
Annual Oil Usage:	343	Mgal/yr
Equivalent Gas Hours:	8,260	Hours at 100% Load
Equivalent Oil Hours:	500	Hours at 100% Load
Natural Gas Heating Value (HHV):	1,000	Btu/scf
Distillate Oil Heating Value (HHV):	0.135	MMBtu/gal
Distillate Oil Sulfur Content:	0.0015	%

Pollutant	Natural Gas Emission Factor	Units	Oil Emission Factor	Units	Reference	Natural Gas Hourly Emissions (lb/hr)	Fuel Oil Hourly Emissions (lb/hr)	Natural Gas Annual Emissions (tpy)	Fuel Oil Annual Emissions (tpy)	Emissions per Boiler (tpy)	Emissions for Boiler 1 (tpy)
NO_X	60	ppm	20	lb/Mgal	2, 3	6.7	13.7	27.8	3.4	31.2	31.2
CO	50	ppm	5	lb/Mgal	2, 3	3.4	3.4	15.0	8.6E-01	15.8	15.8
PM	7.60	lb/MMscf	2	lb/Mgal	2, 3	7.0E-01	1.4	2.9	3.4E-01	3.2	3.2
PM_{10}	7.60	lb/MMscf	2.30	lb/Mgal	2, 3	7.0E-01	1.6	2.9	3.9E-01	3.3	3.3
$PM_{2.5}$	7.60	lb/MMscf	1.55	lb/Mgal	2, 3	7.0E-01	1.1	2.9	2.7E-01	3.2	3.2
SO_2	0.60	lb/MMscf	2.13E-01	lb/Mgal	2, 3	5.6E-02	1.5E-01	2.3E-01	3.6E-02	2.7E-01	2.7E-01
VOC	5.50	lb/MMscf	2.00E-01	lb/Mgal	2, 3	5.1E-01	1.4E-01	2.2	3.4E-02	2.3	2.3
H_2SO_4	6.50E-03	lb/MMscf	3.68E-03	lb/Mgal	4	6.0E-04	2.5E-03	2.5E-03	6.3E-04	3.1E-03	3.1E-03

1. Natural gas and distillate oil emission factors based on manufacturer's ppm specifications for units with LNB and converted to lb/MMBtu using an F factor of 8,710 dscf/MMBtu for natural gas and 9,190 dscf/MMBtu for distillate oil.

2. Natural gas emission factors from AP-42 Section 1.4. PM assumed to equal PM_{10}.

3. Fuel oil emission factors from AP-42 Section 1.3

4. Natural gas factor calculated assuming 1% of sulfur becomes H_2SO_4. Fuel oil emission factor from Emergency Planning and Community Right-To-Know Act, EPCRA - Section 313: Guidance for Reporting Sulfuric Acid (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size). (March 1998) EPA-745-R-97-007.

* Maximum annual emissions per boiler assume either 500 hours on fuel oil with remainder of year on gas (NO_X, particulate, SO_2, H_2SO_4) or 8760 hr/yr gas (CO, VOC).

Table N-18. Utilities - Boiler Nos. 2 - Parameters

Parameter	Value	Unit
New Boiler Heat Input:	93	MMBtu/hr
Number of New Boilers:	1	
Hours of Operation on Natural Gas:	8,260	hr/yr
Hours of Operation on Oil:	500	hr/yr
Natural Gas Heating Value (HHV):	1,020	Btu/scf
Distillate Oil Heating Value (HHV):	0.135	MMBtu/gal

Pollutant	Natural Gas Emission Factor[1]	Units	Oil Emission Factor[2]	Units	Emissions per Boiler		Emissions for Boiler 1	
					lb/hr	tpy	lb/hr	tpy
2-Methylnaphthalene	2.4E-05	lb/MMscf	0.00	lb/Mgal	2.2E-06	9.0E-06	2.2E-06	9.0E-06
3-Methylchloranthrene	1.8E-06	lb/MMscf	0.00	lb/Mgal	1.6E-07	6.7E-07	1.6E-07	6.7E-07
7,12-Dimethylbenz(a)anthracene	1.6E-05	lb/MMscf	0.00	lb/Mgal	1.5E-06	6.0E-06	1.5E-06	6.0E-06
Acenaphthene	1.8E-06	lb/MMscf	2.1E-05	lb/Mgal	1.4E-05	4.3E-06	1.4E-05	4.3E-06
Acenaphthylene	1.8E-06	lb/MMscf	2.5E-07	lb/Mgal	1.7E-07	7.2E-07	1.7E-07	7.2E-07
Anthracene	2.4E-06	lb/MMscf	1.2E-06	lb/Mgal	8.4E-07	1.1E-06	8.4E-07	1.1E-06
Benz(a)anthracene	1.8E-06	lb/MMscf	4.0E-06	lb/Mgal	2.7E-06	1.4E-06	2.7E-06	1.4E-06
Benzene	2.1E-03	lb/MMscf	2.1E-04	lb/Mgal	1.9E-04	8.2E-04	1.9E-04	8.2E-04
Benzo(a)pyrene	1.2E-06	lb/MMscf	0.00	lb/Mgal	1.1E-07	4.5E-07	1.1E-07	4.5E-07
Benzo(b)fluoranthene	1.8E-06	lb/MMscf	1.5E-06	lb/Mgal	1.0E-06	9.3E-07	1.0E-06	9.3E-07
Benzo(g,h,i)perylene	1.2E-06	lb/MMscf	2.3E-06	lb/Mgal	1.5E-06	8.4E-07	1.5E-06	8.4E-07
Benzo(k)fluoranthene	1.8E-06	lb/MMscf	1.5E-06	lb/Mgal	1.0E-06	9.3E-07	1.0E-06	9.3E-07
Chrysene	1.8E-06	lb/MMscf	2.4E-06	lb/Mgal	1.6E-06	1.1E-06	1.6E-06	1.1E-06
Dibenzo(a,h)anthracene	1.2E-06	lb/MMscf	1.7E-06	lb/Mgal	1.1E-06	7.4E-07	1.1E-06	7.4E-07
Dichlorobenzene	1.2E-03	lb/MMscf	0.00	lb/Mgal	1.1E-04	4.5E-04	1.1E-04	4.5E-04
Ethylbenzene	0.00	lb/MMscf	6.4E-05	lb/Mgal	4.4E-05	1.1E-05	4.4E-05	1.1E-05
Fluoranthene	3.0E-06	lb/MMscf	4.8E-06	lb/Mgal	3.3E-06	2.0E-06	3.3E-06	2.0E-06
Fluorene	2.8E-06	lb/MMscf	4.5E-06	lb/Mgal	3.1E-06	1.8E-06	3.1E-06	1.8E-06
Formaldehyde	7.5E-02	lb/MMscf	3.3E-02	lb/Mgal	2.3E-02	3.4E-02	2.3E-02	3.4E-02
Hexane	1.8E+00	lb/MMscf	0.00	lb/Mgal	1.6E-01	6.7E-01	1.6E-01	6.7E-01
Indeno(1,2,3-cd)pyrene	1.8E-06	lb/MMscf	2.1E-06	lb/Mgal	1.5E-06	1.0E-06	1.5E-06	1.0E-06
Naphthalene	6.1E-04	lb/MMscf	1.1E-03	lb/Mgal	7.7E-04	4.2E-04	7.7E-04	4.2E-04
OCDD	0.00	lb/MMscf	3.1E-09	lb/Mgal	2.1E-09	5.3E-10	2.1E-09	5.3E-10
Phenanathrene	1.7E-05	lb/MMscf	1.1E-05	lb/Mgal	7.2E-06	8.2E-06	7.2E-06	8.2E-06
Pyrene	5.0E-06	lb/MMscf	4.3E-06	lb/Mgal	2.9E-06	2.6E-06	2.9E-06	2.6E-06
Toulene	3.4E-03	lb/MMscf	6.2E-03	lb/Mgal	4.2E-03	2.3E-03	4.2E-03	2.3E-03
1,1,1-Trichloroethane	0.00	lb/MMscf	2.4E-04	lb/Mgal	1.6E-04	4.0E-05	1.6E-04	4.0E-05
o-Xylene	0.00	lb/MMscf	1.1E-04	lb/Mgal	7.5E-05	1.9E-05	7.5E-05	1.9E-05
Arsenic	2.0E-04	lb/MMscf	1.3E-03	lb/Mgal	9.0E-04	3.0E-04	9.0E-04	3.0E-04
Antimony	0.00	lb/MMscf	5.3E-03	lb/Mgal	3.6E-03	9.0E-04	3.6E-03	9.0E-04
Beryllium	1.2E-05	lb/MMscf	2.8E-05	lb/Mgal	1.9E-05	9.3E-06	1.9E-05	9.3E-06
Cadmium	1.1E-03	lb/MMscf	4.0E-04	lb/Mgal	2.7E-04	4.8E-04	2.7E-04	4.8E-04
Chloride	0.00	lb/MMscf	3.5E-01	lb/Mgal	2.4E-01	5.9E-02	2.4E-01	5.9E-02
Chromium	1.4E-03	lb/MMscf	8.5E-04	lb/Mgal	5.8E-04	6.7E-04	5.8E-04	6.7E-04
Chromium VI	0.00	lb/MMscf	2.5E-04	lb/Mgal	1.7E-04	4.2E-05	1.7E-04	4.2E-05
Cobalt	8.4E-05	lb/MMscf	6.0E-03	lb/Mgal	4.1E-03	1.1E-03	4.1E-03	1.1E-03
Fluoride	0.00	lb/MMscf	3.7E-02	lb/Mgal	2.6E-02	6.4E-03	2.6E-02	6.4E-03
Lead	5.0E-04	lb/MMscf	1.5E-03	lb/Mgal	1.0E-03	4.5E-04	1.0E-03	4.5E-04
Manganese	3.8E-04	lb/MMscf	3.0E-03	lb/Mgal	2.1E-03	6.6E-04	2.1E-03	6.6E-04
Mercury	2.6E-04	lb/MMscf	1.1E-04	lb/Mgal	7.7E-05	1.2E-04	7.7E-05	1.2E-04
Nickel	2.1E-03	lb/MMscf	8.5E-02	lb/Mgal	5.8E-02	1.5E-02	5.8E-02	1.5E-02
Phosphorous	0.00	lb/MMscf	9.5E-03	lb/Mgal	6.5E-03	1.6E-03	6.5E-03	1.6E-03
Selenium	2.40E-05	lb/MMscf	6.8E-04	lb/Mgal	4.7E-04	1.3E-04	4.7E-04	1.3E-04
Total HAP					**5.3E-01**	**8.0E-01**	**5.3E-01**	**8.0E-01**

1. Natural gas emission factors from AP-42, Tables 1.4-3 and 1.4-4

2. Fuel oil emission factors from AP-42, Tables 1.3-9 and 1.3-11

3. Emissions are double-counted from the two scenarios (i.e., max oil and max gas are summed)

Table N-19. Utilities - Boiler Nos. 2 - Parameters

Parameter	Value	Unit
New Boiler Heat Input:	93	MMBtu/hr
Number of New Boilers:	1	
Annual Gas Usage:	810	MMscf/yr
Equivalent Gas Hours:	8,760	Hours at 100% Load
Natural Gas Heating Value (HHV):	1,000	Btu/scf

Pollutant	Natural Gas Emission Factor	Units	Reference	Natural Gas Hourly Emissions (lb/hr)	Natural Gas Annual Emissions (tpy)	Emissions for Boiler 2 (tpy)
NO_X	60	ppm	2	6.7	29.5	29.5
CO	50	ppm	2	3.4	15.0	15.0
PM	7.60	lb/MMscf	3	7.0E-01	3.1	3.1
PM_{10}	7.60	lb/MMscf	2	7.0E-01	3.1	3.1
$PM_{2.5}$	7.60	lb/MMscf	2	7.0E-01	3.1	3.1
SO_2	0.60	lb/MMscf	2	5.6E-02	2.4E-01	2.4E-01
VOC	5.50	lb/MMscf	2	5.1E-01	2.2	2.2
H_2SO_4	6.50E-03	lb/MMscf	4	6.0E-04	2.6E-03	2.6E-03

1. Natural gas factors based on manufacturer's ppm specifications for units with LNB and converted to lb/MMBtu using an F factor of 8,710 dscf/MMBtu for natural gas.

2. Guarantees from boiler vendor.

3. Natural gas emission factors from AP-42 Section 1.4. PM assumed to equal PM_{10}.

4. Natural gas factor calculated assuming 1% of sulfur becomes H_2SO_4.

Table N-20. Utilities - Boiler Nos. 2 - Parameters

Parameter	Value	Unit
New Boiler Heat Input:	93	MMBtu/hr
Number of New Boilers:	1	
Hours of Operation on Natural Gas:	8,760	hr/yr
Natural Gas Heating Value (HHV):	1,020	Btu/scf

Pollutant	Natural Gas Emission Factor[1]	Units	Emissions	
			lb/hr	tpy
2-Methylnaphthalene	2.4E-05	lb/MMscf	2.2E-06	9.5E-06
3-Methylchloranthrene	1.8E-06	lb/MMscf	1.6E-07	7.2E-07
7,12-Dimethylbenz(a)anthracene	1.6E-05	lb/MMscf	1.5E-06	6.4E-06
Acenaphthene	1.8E-06	lb/MMscf	1.6E-07	7.2E-07
Acenaphthylene	1.8E-06	lb/MMscf	1.6E-07	7.2E-07
Anthracene	2.4E-06	lb/MMscf	2.2E-07	9.5E-07
Benz(a)anthracene	1.8E-06	lb/MMscf	1.6E-07	7.2E-07
Benzene	2.1E-03	lb/MMscf	1.9E-04	8.3E-04
Benzo(a)pyrene	1.2E-06	lb/MMscf	1.1E-07	4.8E-07
Benzo(b)fluoranthene	1.8E-06	lb/MMscf	1.6E-07	7.2E-07
Benzo(g,h,i)perylene	1.2E-06	lb/MMscf	1.1E-07	4.8E-07
Benzo(k)fluoranthene	1.8E-06	lb/MMscf	1.6E-07	7.2E-07
Chrysene	1.8E-06	lb/MMscf	1.6E-07	7.2E-07
Dibenzo(a,h)anthracene	1.2E-06	lb/MMscf	1.1E-07	4.8E-07
Dichlorobenzene	1.2E-03	lb/MMscf	1.1E-04	4.8E-04
Fluoranthene	3.0E-06	lb/MMscf	2.7E-07	1.2E-06
Fluorene	2.8E-06	lb/MMscf	2.5E-07	1.1E-06
Formaldehyde	7.5E-02	lb/MMscf	6.8E-03	3.0E-02
Hexane	1.8E+00	lb/MMscf	1.6E-01	7.2E-01
Indeno(1,2,3-cd)pyrene	1.8E-06	lb/MMscf	1.6E-07	7.2E-07
Naphthalene	6.1E-04	lb/MMscf	5.5E-05	2.4E-04
Phenanathrene	1.7E-05	lb/MMscf	1.5E-06	6.8E-06
Pyrene	5.0E-06	lb/MMscf	4.5E-07	2.0E-06
Toulene	3.4E-03	lb/MMscf	3.1E-04	1.4E-03
Arsenic	2.0E-04	lb/MMscf	1.8E-05	7.9E-05
Beryllium	1.2E-05	lb/MMscf	1.1E-06	4.8E-06
Cadmium	1.1E-03	lb/MMscf	1.0E-04	4.4E-04
Chromium	1.4E-03	lb/MMscf	1.3E-04	5.6E-04
Cobalt	8.4E-05	lb/MMscf	7.6E-06	3.3E-05
Lead	5.0E-04	lb/MMscf	4.5E-05	2.0E-04
Manganese	3.8E-04	lb/MMscf	3.4E-05	1.5E-04
Mercury	2.6E-04	lb/MMscf	2.4E-05	1.0E-04
Nickel	2.1E-03	lb/MMscf	1.9E-04	8.3E-04
Selenium	2.40E-05	lb/MMscf	2.2E-06	9.5E-06
Total HAP			**1.7E-01**	**7.5E-01**

1. Natural gas emission factors from AP-42, Tables 1.4-3 and 1.4-4

Table N-21. Utilities - Boiler Nos. 3 - Parameters

Parameter	Value	Unit
New Boiler Heat Input:	33	MMBtu/hr
Number of New Boilers:	1	
Annual Gas Usage:	289	MMscf/yr
Equivalent Gas Hours:	8,760	Hours at 100% Load
Natural Gas Heating Value (HHV):	1,000	Btu/scf

Pollutant	Natural Gas Emission Factor	Units	Reference	Natural Gas Hourly Emissions (lb/hr)	Natural Gas Annual Emissions (tpy)	Emissions for Boiler 3 (tpy)
NO_X	60	ppm	2	2.4	10.5	10.5
CO	50	ppm	2	1.2	5.3	5.3
PM	7.60	lb/MMscf	3	2.5E-01	1.1	1.1
PM_{10}	7.60	lb/MMscf	2	2.5E-01	1.1	1.1
$PM_{2.5}$	7.60	lb/MMscf	2	2.5E-01	1.1	1.1
SO_2	0.60	lb/MMscf	2	2.0E-02	8.7E-02	8.7E-02
VOC	5.50	lb/MMscf	2	1.8E-01	7.9E-01	7.9E-01
H_2SO_4	6.50E-03	lb/MMscf	4	2.1E-04	9.4E-04	9.4E-04

1. Natural gas emission factors based on manufacturer's ppm specifications for units with LNB and converted to lb/MMBtu using an F factor of 8,710 dscf/MMBtu for natural gas.

2. Guarantees from boiler vendor.

3. Natural gas emission factors from AP-42 Section 1.4. PM assumed to equal PM_{10}.

4. Natural gas factor calculated assuming 1% of sulfur becomes H_2SO_4.

Table N-22. Utilities - Boiler Nos. 3 - Parameters

Parameter	Value	Unit
New Boiler Heat Input:	33	MMBtu/hr
Number of New Boilers:	1	
Hours of Operation on Natural Gas:	8,760	hr/yr
Natural Gas Heating Value (HHV):	1,020	Btu/scf

Pollutant	Natural Gas Emission Factor[1]	Units	Emissions	
			lb/hr	tpy
2-Methylnaphthalene	2.4E-05	lb/MMscf	7.8E-07	3.4E-06
3-Methylchloranthrene	1.8E-06	lb/MMscf	5.8E-08	2.6E-07
7,12-Dimethylbenz(a)anthracene	1.6E-05	lb/MMscf	5.2E-07	2.3E-06
Acenaphthene	1.8E-06	lb/MMscf	5.8E-08	2.6E-07
Acenaphthylene	1.8E-06	lb/MMscf	5.8E-08	2.6E-07
Anthracene	2.4E-06	lb/MMscf	7.8E-08	3.4E-07
Benz(a)anthracene	1.8E-06	lb/MMscf	5.8E-08	2.6E-07
Benzene	2.1E-03	lb/MMscf	6.8E-05	3.0E-04
Benzo(a)pyrene	1.2E-06	lb/MMscf	3.9E-08	1.7E-07
Benzo(b)fluoranthene	1.8E-06	lb/MMscf	5.8E-08	2.6E-07
Benzo(g,h,i)perylene	1.2E-06	lb/MMscf	3.9E-08	1.7E-07
Benzo(k)fluoranthene	1.8E-06	lb/MMscf	5.8E-08	2.6E-07
Chrysene	1.8E-06	lb/MMscf	5.8E-08	2.6E-07
Dibenzo(a,h)anthracene	1.2E-06	lb/MMscf	3.9E-08	1.7E-07
Dichlorobenzene	1.2E-03	lb/MMscf	3.9E-05	1.7E-04
Fluoranthene	3.0E-06	lb/MMscf	9.7E-08	4.3E-07
Fluorene	2.8E-06	lb/MMscf	9.1E-08	4.0E-07
Formaldehyde	7.5E-02	lb/MMscf	2.4E-03	1.1E-02
Hexane	1.8E+00	lb/MMscf	5.8E-02	2.6E-01
Indeno(1,2,3-cd)pyrene	1.8E-06	lb/MMscf	5.8E-08	2.6E-07
Naphthalene	6.1E-04	lb/MMscf	2.0E-05	8.6E-05
Phenanathrene	1.7E-05	lb/MMscf	5.5E-07	2.4E-06
Pyrene	5.0E-06	lb/MMscf	1.6E-07	7.1E-07
Toulene	3.4E-03	lb/MMscf	1.1E-04	4.8E-04
Arsenic	2.0E-04	lb/MMscf	6.5E-06	2.8E-05
Beryllium	1.2E-05	lb/MMscf	3.9E-07	1.7E-06
Cadmium	1.1E-03	lb/MMscf	3.6E-05	1.6E-04
Chromium	1.4E-03	lb/MMscf	4.5E-05	2.0E-04
Cobalt	8.4E-05	lb/MMscf	2.7E-06	1.2E-05
Lead	5.0E-04	lb/MMscf	1.6E-05	7.1E-05
Manganese	3.8E-04	lb/MMscf	1.2E-05	5.4E-05
Mercury	2.6E-04	lb/MMscf	8.4E-06	3.7E-05
Nickel	2.1E-03	lb/MMscf	6.8E-05	3.0E-04
Selenium	2.40E-05	lb/MMscf	7.8E-07	3.4E-06
Total HAP			**6.1E-02**	**2.7E-01**

1. Natural gas emission factors from AP-42, Tables 1.4-3 and 1.4-4

Table N-23. Utilities - Cooling Towers - Emissions

Parameter	Unit 1	Unit 2	Unit 3	*Emissions Total*
Location[1]	Surfactants	Central Utilities	Liquid Soap A and B	--
Flow Rate (gpm)[1]	5,117	15,650	7,517	--
Flow Rate (Mgal/hr)	307	939	451	--
Flow Rate (Mgal/yr)	2,689,320	8,225,640	3,950,760	--
Operating Hours (hr/yr)	8,760	8,760	8,760	--
Density of Water (lb/gal)	8.35	8.35	8.35	--
Total Dissolved Solids, TDS (ppm)	1,600	1,600	1,600	--
Drift (%)[2]	5.00E-03	5.00E-03	5.00E-03	--
Drift (gpm)	0.26	0.78	0.38	--
$PM/PM_{10}/PM_{2.5}$ (lb/gal)[3]	6.7E-07	6.7E-07	6.7E-07	--
$PM/PM_{10}/PM_{2.5}$ (lb/hr)	2.0E-01	6.3E-01	3.0E-01	***1.1***
$PM/PM_{10}/PM_{2.5}$ (tpy)	0.9	2.7	1.3	***5.0***

1. Client specification.

2. Drift Percentage for Induced Draft Cooler specified in email from Brian Mensinger (Trinity Consultants) to Allison Cole (Trinity Consultants) on July 22, 2015.

3. PM_{10} are conservatively overestimated by (TDS, ppm) x (Total Drift Rate, lb/gal) / 10^{6}, based on AP-42 Section 13.4-3.

Table N-24. Utilities - Engines - Inventory Summary

Engine Model	Type	Number	Size	Unit
Caterpillar C15	Backup/Standby Power Generator	3	350	kW
Clarke JW6H-UFADF0	Fire Pump	2	311	hp

Pollutant	Potential Emissions per Engine, Caterpillar C15 (tpy)	Potential Emissions per Engine, Clarke (tpy)	Emissions (tpy)
CO	1.4E-01	1.4E-01	6.9E-01
NO_X	8.7E-01	4.5E-01	3.5
VOC	1.1E-02	1.7E-02	6.7E-02
SO_2	3.6E-04	2.4E-04	1.6E-03
PM	1.2E-02	1.7E-02	7.0E-02
PM_{10}	1.2E-02	1.7E-02	6.9E-02
$PM_{2.5}$	1.2E-02	1.7E-02	6.9E-02

Pollutant	Potential Emissions per Engine, Caterpillar C15 (tpy)	Potential Emissions per Engine, Clarke (tpy)	Emissions (tpy)
Benzene	7.7E-04	5.1E-04	3.3E-03
Toluene	3.4E-04	2.2E-04	1.5E-03
Xylenes	2.4E-04	1.6E-04	1.0E-03
Propylene	2.1E-03	1.4E-03	9.2E-03
Formaldehyde	9.8E-04	6.4E-04	4.2E-03
Acetaldehyde	6.4E-04	4.2E-04	2.7E-03
Acrolein	7.7E-05	5.0E-05	3.3E-04
Polycyclic Aromatic Hydrocarbons (PAH)	1.4E-04	9.1E-05	6.0E-04
Max HAP	***2.1E-03***	***1.4E-03***	***9.2E-03***
Total HAPs	***5.3E-03***	***3.5E-03***	***2.3E-02***

Table N-25. Utilities - Engines - Caterpillar 350 kW

Source Designation	Engine	Generator
Date Manufactured	TBD	TBD
Expected Date Installed	4/30/2016	4/30/2016
Manufacturer[1]	Caterpillar	Caterpillar
Model No.[2]	C15	C15
Stroke Cycle[2]	4-Stroke	--
Fuel Used[2]	Diesel	--
Fuel Sulfur Content (%)[3]	0.0015	--
Rated Capacity (eKW)[2]	350.00	--
Calculated Horsepower (bhp)[4]	473.69	--
Generating Capacity (kW)[1]	--	350.00
Maximum Fuel Consumption at 100% Load (gal/hr)[2]	28.60	--
Heat Input (MMBtu/hr)[5]	3.32	--

Operational Detail	Value
Potential Annual Hours of Operation (hr/yr):	500.00
Potential Fuel Consumption (Mgal/yr):	14.30

Pollutant	Emission Factors	Units	Notes
CO	5.30E-01	g/hp-hr	2
NO_x	3.34	g/hp-hr	2
HC	4.18E-02	g/hp-hr	2, 6
SO_2	3.08E-06	lb/hp-hr	7
PM	4.60E-02	g/hp-hr	2, 8
PM_{10}	4.60E-02	g/hp-hr	2, 8
$PM_{2.5}$	4.60E-02	g/hp-hr	2, 8

Table N-25. Utilities - Engines - Caterpillar 350 kW

Pollutant	Potential Emissions (lb/hr)[11]	Potential Emissions (tpy)
CO	5.5E-01	1.4E-01
NO_x	3.5E+00	8.7E-01
VOC	4.4E-02	1.1E-02
SO_2	1.5E-03	3.6E-04
PM	4.8E-02	1.2E-02
PM_{10}	4.6E-02	1.2E-02
$PM_{2.5}$	4.6E-02	1.2E-02

Pollutant	Emission Factor (lb/MMBtu)[10]	Potential Emissions (lb/hr)[9]	Potential Emissions (tpy)
Benzene	9.33E-04	3.1E-03	7.7E-04
Toluene	4.09E-04	1.4E-03	3.4E-04
Xylenes	2.85E-04	9.5E-04	2.4E-04
Propylene	2.58E-03	8.6E-03	2.1E-03
Formaldehyde	1.18E-03	3.9E-03	9.8E-04
Acetaldehyde	7.67E-04	2.5E-03	6.4E-04
Acrolein	9.25E-05	3.1E-04	7.7E-05
Polycyclic Aromatic Hydrocarbons (PAH)	1.68E-04	5.6E-04	1.4E-04
Max HAP		***8.6E-03***	***2.1E-03***
Total HAPs		***2.1E-02***	***5.3E-03***

1. Client specification.

2. Values come from the unit's spec sheet "Caterpillar C15 ATAAC Diesel Engine." Found at http://s7d2.scene7.com/is/content/caterpillar/C10059394.

3. Per 40 CFR 80 Subpart I, maximum sulfur content of ULSD is 15 ppm (i.e. 0.0015%).

4. Diesel generator horsepower (BHP) back calculated from electric generator rated output (ekW). An inefficiency of 1% was included to account for losses from shaft work to electricity.

5. To convert from bhp to MMBtu/hr, an average brake-specific fuel consumption of 7,000 Btu/hp-hr was used per AP-42 P-42 Section 3.3, Table 3.3-1 "Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines," Supplement B, October 1996.

6. All hydrocarbon (HC) emissions are conservatively assumed to be VOC.

7. SO_2 emission factor from AP-42 Section 3.3, Table 3.3-1 "Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines," Supplement B, October 1996.

8. All particulates are assumed to be <1 micron in size, where PM, PM_{10}, and $PM_{2.5}$ are assumed to be equivalent, consistent with AP-42 Section 3.3, Table 3.3-1 "Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines," Supplement B, October 1996.

9. Emission Rate (lb/hr) = Rated Capacity (MMBtu/hr or bhp) × Emission Factor (lb/MMBtu or lb/bhp-hr).

10. Emission factors from AP-42 Section 3.3, Table 3.3-2 "Speciated Organic Compound Emission Factors for Uncontrolled Diesel Engines."

Table N-26. Utilities - Engines - Clarke

Source Designation	Engine
Date Manufactured	TBD
Expected Date Installed	4/30/2016
Manufacturer[1]	Clarke
Model No.[2]	JW6H-UFADF0
Stroke Cycle[2]	4-Stroke
Fuel Used[1]	Diesel
Fuel Sulfur Content (%)[3]	0.0015
Rated Horsepower (bhp)[2]	311.00
Maximum Fuel Consumption at 100% Load (gal/hr)[4]	16.13
Heat Input (MMBtu/hr)[5]	2.18

Operational Detail	Value
Potential Annual Hours of Operation (hr/yr):	500.00
Potential Fuel Consumption (Mgal/yr):	8.06

Pollutant	Emission Factors	Units	Notes
CO	8.00E-01	g/hp-hr	6
NO_X	2.61	g/hp-hr	6
HC	1.00E-01	g/hp-hr	6, 7
SO_2	3.08E-06	lb/hp-hr	8
PM	1.00E-01	g/hp-hr	6, 9
PM_{10}	1.00E-01	g/hp-hr	6, 9
$PM_{2.5}$	1.00E-01	g/hp-hr	6, 9

Table N-26. Utilities - Engines - Clarke

Pollutant	Potential Emissions (lb/hr)[10]	Potential Emissions (tpy)
CO	5.5E-01	1.4E-01
NO_X	1.8	4.5E-01
VOC	6.9E-02	1.7E-02
SO_2	9.6E-04	2.4E-04
PM	6.9E-02	1.7E-02
PM_{10}	6.9E-02	1.7E-02
$PM_{2.5}$	6.9E-02	1.7E-02

Pollutant	Emission Factor (lb/MMBtu)[11]	Potential Emissions (lb/hr)[10]	Potential Emissions (tpy)
Benzene	9.33E-04	2.0E-03	5.1E-04
Toluene	4.09E-04	8.9E-04	2.2E-04
Xylenes	2.85E-04	6.2E-04	1.6E-04
Propylene	2.58E-03	5.6E-03	1.4E-03
Formaldehyde	1.18E-03	2.6E-03	6.4E-04
Acetaldehyde	7.67E-04	1.7E-03	4.2E-04
Acrolein	9.25E-05	2.0E-04	5.0E-05
Polycyclic Aromatic Hydrocarbons (PAH)	1.68E-04	3.7E-04	9.1E-05
Max HAP		***5.6E-03***	***1.4E-03***
Total HAPs		***1.4E-02***	***3.5E-03***

1. Client specification.

2. Values come from the unit's spec sheet "Clarke JW6H-UFADJ0 Fire Engine Specifications." Found at http://www.clarkefire.com/Libraries/PDF/Spec_Sheet_JW6H-UFAA-AD_C133422.sflb.ashx

3. Per 40 CFR 80 Subpart I, maximum sulfur content of ULSD is 15 ppm (i.e. 0.0015%).

4. Maximum fuel consumption calculated as the heat input for the engine (MMBtu) divided by the energy density of diesel fuel (0.135 MMBtu/gal).

5. To convert from bhp to MMBtu/hr, an average brake-specific fuel consumption of 7,000 Btu/hp-hr was used per AP-42 P-42 Section 3.3, Table 3.3-1 "Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines," Supplement B, October 1996.

6. NO_X, HC, CO, and PM emission factors from John Deere "Rating Specific Emissions Data." Found at http://www.clarkefire.com/Libraries/PDF/Emissions_JW6H-UFADF0_6090HFC47A_1760rpm_2009.sflb.ashx

7. To conservatively over-estimate emissions, all hydrocarbon (HC) emissions are assumed to be VOC.

8. SO_2 emission factor from AP-42 Section 3.3, Table 3.3-1 "Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines," Supplement B, October 1996.

9. All particulates are assumed to be <1 micron in size, where PM, PM_{10}, and $PM_{2.5}$ are assumed to be equivalent, consistent with AP-42 Section 3.3, Table 3.3-1 "Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines," Supplement B, October 1996.

10. Emission Rate (lb/hr) = Rated Capacity (MMBtu/hr or bhp) × Emission Factor (lb/MMBtu or lb/bhp-hr).

11. Emission factors from AP-42 Section 3.3, Table 3.3-2 "Speciated Organic Compound Emission Factors for Uncontrolled Diesel Engines."

Table N-27. Utilities - Diesel Tank - Emissions

EU ID	Description	Throughput[1] (gal/yr)	Vapor Pressure[2] (psia)	Molecular Weight[2] (lb/lb-mol)	Bulk Liquid Temperature (°F)	Liquid Density[2] (lb/gal)	Total Capacity[1] (gal)	VOC Emissions[3] (lb/hr)	VOC Emissions[3] (tpy)
208	Diesel (Distillate Fuel Oil No. 2)	32,062	2.20E-02	130	Ambient	7.1	35,756	2.3E-03	1.0E-02
209	Diesel (Distillate Fuel Oil No. 2)	70,000	2.20E-02	130	Ambient	7.1	5,162	5.2E-04	2.3E-03
							Total	2.9E-03	1.3E-02

1. Tank throughput estimated assuming 24 hours/year for testing for two boilers (DSLTNK1), and one changeover per week (DSLTNK2). Capacity estimates from October 9, 2015 conference call,.
2. Chemical properties per EPA TANKS 4.09d database for distillate fuel oil no. 2.
3. Emissions calculated per AP-42, Section 7.1 (*Organic Liquid Storage Tanks*) and Trinity calculations spreadsheets. Specifically, equations contained in Section 7.1.3.1 (*Total Losses from Fixed Roof Tanks*) are utilized.

Table N-28. Utilities - Heaters

Parameter	Value	Unit
Heater Size:	3.05	MMBtu/hr
Operating Hours:	8,760	hr/yr
Natural Gas Heating Value (HHV):	1,020	Btu/scf
Annual Gas Usage:	26.18	MMscf/yr
Number of Heaters:	6	

Pollutant	Natural Gas Emission Factor	Units	Reference	Hourly Emissions per Heater (lb/hr)	Annual Emissions per Heater (tpy)	Annual Emissions for All Heaters (tpy)
NO_X	50.00	lb/MMscf	1	1.49E-01	6.5E-01	3.9
CO	84.00	lb/MMscf	1	2.51E-01	1.1	6.6
PM	7.60	lb/MMscf	1	2.27E-02	9.9E-02	6.0E-01
PM_{10}	7.60	lb/MMscf	1	2.27E-02	9.9E-02	6.0E-01
$PM_{2.5}$	7.60	lb/MMscf	1	2.27E-02	9.9E-02	6.0E-01
SO_2	0.60	lb/MMscf	1	1.79E-03	7.9E-03	4.7E-02
VOC	5.50	lb/MMscf	1	1.64E-02	7.2E-02	4.3E-01
H_2SO_4	6.50E-03	lb/MMscf	2	1.94E-05	8.5E-05	5.1E-04

1. Natural gas emission factors from AP-42 Section 1.4. PM assumed to equal PM_{10}.

2. Natural gas factor calculated assuming 1% of sulfur becomes H_2SO_4.

Table N-29. Utilities - Heaters

Parameter	Value	Unit
Heater Size:	3.05	MMBtu/hr
Number of Heaters:	6	
Hours of Operation:	8,760	hr/yr
Natural Gas Heating Value (HHV):	1,020	Btu/scf

Pollutant	Natural Gas Emission Factor[1]	Units	Emissions per Heater		Emissions for All Heaters	
			lb/hr	tpy	lb/hr	tpy
2-Methylnaphthalene	2.40E-05	lb/MMscf	7.2E-08	3.1E-07	4.3E-07	1.9E-06
3-Methylchloranthrene	1.80E-06	lb/MMscf	5.4E-09	2.4E-08	3.2E-08	1.4E-07
7,12-Dimethylbenz(a)anthracene	1.60E-05	lb/MMscf	4.8E-08	2.1E-07	2.9E-07	1.3E-06
Acenaphthene	1.80E-06	lb/MMscf	5.4E-09	2.4E-08	3.2E-08	1.4E-07
Acenaphthylene	1.80E-06	lb/MMscf	5.4E-09	2.4E-08	3.2E-08	1.4E-07
Anthracene	2.40E-06	lb/MMscf	7.2E-09	3.1E-08	4.3E-08	1.9E-07
Benz(a)anthracene	1.80E-06	lb/MMscf	5.4E-09	2.4E-08	3.2E-08	1.4E-07
Benzene	2.10E-03	lb/MMscf	6.3E-06	2.7E-05	3.8E-05	1.6E-04
Benzo(a)pyrene	1.20E-06	lb/MMscf	3.6E-09	1.6E-08	2.2E-08	9.4E-08
Benzo(b)fluoranthene	1.80E-06	lb/MMscf	5.4E-09	2.4E-08	3.2E-08	1.4E-07
Benzo(g,h,i)perylene	1.20E-06	lb/MMscf	3.6E-09	1.6E-08	2.2E-08	9.4E-08
Benzo(k)fluoranthene	1.80E-06	lb/MMscf	5.4E-09	2.4E-08	3.2E-08	1.4E-07
Chrysene	1.80E-06	lb/MMscf	5.4E-09	2.4E-08	3.2E-08	1.4E-07
Dibenzo(a,h)anthracene	1.20E-06	lb/MMscf	3.6E-09	1.6E-08	2.2E-08	9.4E-08
Dichlorobenzene	1.20E-03	lb/MMscf	3.6E-06	1.6E-05	2.2E-05	9.4E-05
Fluoranthene	3.00E-06	lb/MMscf	9.0E-09	3.9E-08	5.4E-08	2.4E-07
Fluorene	2.80E-06	lb/MMscf	8.4E-09	3.7E-08	5.0E-08	2.2E-07
Formaldehyde	7.50E-02	lb/MMscf	2.2E-04	9.8E-04	1.3E-03	5.9E-03
Hexane	1.80E+00	lb/MMscf	5.4E-03	2.4E-02	3.2E-02	1.4E-01
Indeno(1,2,3-cd)pyrene	1.80E-06	lb/MMscf	5.4E-09	2.4E-08	3.2E-08	1.4E-07
Naphthalene	6.10E-04	lb/MMscf	1.8E-06	8.0E-06	1.1E-05	4.8E-05
Phenanathrene	1.70E-05	lb/MMscf	5.1E-08	2.2E-07	3.0E-07	1.3E-06
Pyrene	5.00E-06	lb/MMscf	1.5E-08	6.5E-08	9.0E-08	3.9E-07
Toulene	3.40E-03	lb/MMscf	1.0E-05	4.5E-05	6.1E-05	2.7E-04
Arsenic	2.00E-04	lb/MMscf	6.0E-07	2.6E-06	3.6E-06	1.6E-05
Beryllium	1.20E-05	lb/MMscf	3.6E-08	1.6E-07	2.2E-07	9.4E-07
Cadmium	1.10E-03	lb/MMscf	3.3E-06	1.4E-05	2.0E-05	8.6E-05
Chromium	1.40E-03	lb/MMscf	4.2E-06	1.8E-05	2.5E-05	1.1E-04
Cobalt	8.40E-05	lb/MMscf	2.5E-07	1.1E-06	1.5E-06	6.6E-06
Lead	5.00E-04	lb/MMscf	1.5E-06	6.5E-06	9.0E-06	3.9E-05
Manganese	3.80E-04	lb/MMscf	1.1E-06	5.0E-06	6.8E-06	3.0E-05
Mercury	2.60E-04	lb/MMscf	7.8E-07	3.4E-06	4.7E-06	2.0E-05
Nickel	2.10E-03	lb/MMscf	6.3E-06	2.7E-05	3.8E-05	1.6E-04
Selenium	2.40E-05	lb/MMscf	7.2E-08	3.1E-07	4.3E-07	1.9E-06
Total HAP			**5.6E-03**	**2.5E-02**	**3.4E-02**	**1.5E-01**

1. Natural gas emission factors from AP-42, Tables 1.4-3 and 1.4-4

Table N-30. Cooling Tower/Boiler Feedwater/Wastewater Pretreatment Emissions

Material	Projected Usage (kg /year)	Volatile Content	Potential VOC emissions (tpy)	Potential HAP emissions (tpy)
Cooling Tower Water				
Nalco 3DT 265	49,932	0%	0.0	--
Nalco 7320	112,347	10%	12.2	--
Nalco 7330	57,921	1%	5.1E-01	--
Nalco Stabrex ST70	500	0%	0.0	--
Boiler Feedwater				
Nalco Nexguard 22310	17,100	0%	0.0	--
Nalco 1720	4,100	0%	0.0	--
Nalco 1820	280	40%	1.2E-01	--
Recycle Water Disinfection				
Sodium hypochlorite	4,380	N/A	4.0E-03	4.0E-03
Total			**12.8**	**4.0E-03**

Table N-31. Utilities - Ink Usage - Emissions

Business Unit	Annual Ink Usage[1] (lb/yr)	VOC Content[2] (%)	Emissions[2] (lb/hr)	Emissions[2] (tpy)
Soap Making Business A&B	500	100	5.7E-02	2.5E-01
Dry Consumer Products A	500	100	5.7E-02	2.5E-01
Total				0.5

1. Conservative assumption based on Procter and Gamble design data.

2. Conservatively assumed that the ink composition is 100% VOC and that all ink is lost to the atmosphere during usage.

Table N-32. Utilities - Road

Parameter	Value	Unit
Industrial augmentation factor	1	dimensionless
Number of traffic lanes	2	
Surface material silt content[1]	3.3%	%
Surface dust loading	125	lb/mile

Description	Average Weight[2] (tons)	Miles per Trip[2]	Maximum Trips per Hour	Maximum Trips per Year
Delivery Trucks	40	0.0417	30.8	365
Employee Vehicles	2	0.0417	0.5	365

Pollutant	Uncontrolled TSP Emissions[3] (lb/hr)	(tpy)
Delivery Trucks	5.0E-04	2.2E-03
Employee Vehicles	1.0E-06	4.4E-06
TOTAL	5.0E-04	2.2E-03

1. Conservatively assumed to be equal to average factor for Asphalt Batching, AP-42 Section 13.2.1 *Paved Roads*, Table 13.2.1-3
2. Conservative assumption based on Procter and Gamble design data.
3. From Emission Factor Documentation for AP-42 Section 13.2.1, *Paved Roads,* Equation 2-2, as sited in WV DEP R-13 Permit Form Attachment L for Haul Roads

ATTACHMENT O

Monitoring/Recordkeeping/Reporting/Testing Plans

Attachment O						
MONITORING, RECORDKEEPING, REPORTING, AND TESTING PLANS						
Plan Type	Emission unit	Pollutant	Requirements	Frequency	Method of Measurement	Regulatory Reference
TBD	1C	SO_2/H_2SO_4	Monitor pH	Hourly	TBD	TBD
TBD	2C	SO_2/H_2SO_4	Monitor pH	Hourly	TBD	TBD
TBD	3C	$PM/PM_{10}/PM_{2.5}$	Monitor pressure drop	Weekly	TBD	TBD
TBD	4C	$PM/PM_{10}/PM_{2.5}$	Monitor pressure drop	Weekly	TBD	TBD
TBD	5C	$PM/PM_{10}/PM_{2.5}$	Monitor pressure drop	Weekly	TBD	TBD
TBD	6C	$PM/PM_{10}/PM_{2.5}$	Monitor pressure drop	Weekly	TBD	TBD
TBD	7C	$PM/PM_{10}/PM_{2.5}$	Monitor pressure drop	Weekly	TBD	TBD
TBD	8C	$PM/PM_{10}/PM_{2.5}$	Monitor pressure drop	Weekly	TBD	TBD
TBD	9C	$PM/PM_{10}/PM_{2.5}$	Monitor pressure drop	Weekly	TBD	TBD
TBD	10	$PM/PM_{10}/PM_{2.5}$	Monitor pressure drop	Weekly	TBD	TBD
TBD	11C	$PM/PM_{10}/PM_{2.5}$	Monitor pressure drop	Weekly	TBD	TBD
TBD	12C	$PM/PM_{10}/PM_{2.5}$	Monitor pressure drop	Weekly	TBD	TBD
TBD	13C	$PM/PM_{10}/PM_{2.5}$	Monitor pressure drop	Weekly	TBD	TBD
TBD	14C	All Pollutants	Initial Compliance Demonstration	TBD	TBD	TBD
TBD	14C	HAP/VOC	Monitor internal temperature	Hourly	TBD	TBD
TBD	14C	HAP/VOC	Operate RTO when Liquid Soap A Hot Mix Tank is being used.[1]	TBD	TBD	TBD
TBD	15C	$PM/PM_{10}/PM_{2.5}$	Monitor pressure drop	Weekly	TBD	TBD
TBD	16C	$PM/PM_{10}/PM_{2.5}$	Monitor pressure drop	Weekly	TBD	TBD
TBD	17C	$PM/PM_{10}/PM_{2.5}$	Monitor pressure drop	Weekly	TBD	TBD
TBD	18C	$PM/PM_{10}/PM_{2.6}$	Monitor pressure drop	Weekly	TBD	TBD
TBD	19C	$PM/PM_{10}/PM_{2.5}$	Monitor pressure drop	Weekly	TBD	TBD
TBD	20C	$PM/PM_{10}/PM_{2.5}$	Monitor pressure drop	Weekly	TBD	TBD
TBD	1S-2S	Dioxane	Maintain records	Monthly	TBD	NSPS VVa
TBD	196S-199S	All Pollutants	Fuel Records, including % Sulfur	Monthly	TBD	NSPS Dc
TBD	203S-207S	All Pollutants	Fuel Records, including % Sulfur	Monthly	TBD	NSPS IIII
TBD	203S-207S	All Pollutants	Non-Resettable Hour Meter	Monthly	TBD	NSPS IIII
TBD	210S-215S	All Pollutants	Fuel Usage	Monthly	TBD	TBD

1. Assumes 24 hours (per 12-month rolling period) of uncontrolled operation.

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.

Pursley, Steven R

From: Hadley, Drew <hadley.ja@pg.com>
Sent: Wednesday, June 15, 2016 11:14 AM
To: Pursley, Steven R
Cc: Allison Cole
Subject: RE: WV DAQ Permit Application Incomplete for Procter & Gamble, Tabler Station
Attachments: WV DEP Minor NSR Letter 061516.doc

Categories: Red Category

Steven,
As we have discussed, Procter & Gamble has concluded that the Minor NSR permit application for the Tabler Station project as submitted does not contain confidential business information. As such we withdraw the claim of confidentiality, and would not intend to include Attachment Q with the application. Attached is a letter summarizing both that determination and our follow-up to your question regarding the source and emission point numbering. I know that Allison Cole of Trinity Consultants has sent a separate submission to you including the revised Attachment I to reflect the correct linkage between the sources and emission points.
Please let me know of any questions on the submission or our permit application. Allison and I would be pleased to have a brief call with you at your convenience regarding the revised attachment and any information needed to further assist with your review.

Best Regards,
Drew Hadley

Drew Hadley
Procter & Gamble
NA Supply Network Design - HS&E
513-634-9794 (o)
513-765-0497 (m)

From: Pursley, Steven R [mailto:Steven.R.Pursley@wv.gov]
Sent: Tuesday, June 07, 2016 4:54 PM
To: Fikes, Elizabeth
Cc: McKeone, Beverly D; Allison Cole (acole@trinityconsultants.com); Hadley, Drew; Russell Bailey (RBailey@trinityconsultants.com)
Subject: WV DAQ Permit Application Incomplete for Procter & Gamble, Tabler Station

RE: Application Status: Incomplete
Procter & Gamble, Tabler Station Facility
Permit Application No. R13-3316
Plant ID No. 003-00154

Ms. Fikes:

Your application for a Construction permit for a consumer products production facility was received by this Division on May 6, 2016 and assigned to the writer for review. Upon initial review of said application, it has been determined that the application as submitted is incomplete based on the following items:

1. Attachment Q of the permit was submitted despite the application containing (apparently) no confidential business information (CBI). Please confirm that there was no CBI contained in the application you submitted.

2. The Emission Units Table (Attachment I) of the application seems to assign different emission points to various tanks that will be controlled by the same equipment. Specifically tanks 120S through 158S. Please correct the entries so that each tank which vents through a common emission control device has the same emission point ID.

Please address the above deficiencies in writing as soon as possible. Application review will not commence until the application has been deemed to be technically complete.

Should you have any questions, please contact Steven R. Pursley, PE at (304) 926-0499 ext.1218 or reply to this email.

NON-CONFIDENTIAL

Procter&Gamble

The Procter & Gamble Company
Sharon Woods Innovation Center
11510 Reed Hartman Hwy, Cincinnati, OH 45241

June 15, 2016

Mr. Steven R. Pursley, PE
West Virginia Department of Environmental Protection
601 57th Street SE
Charleston, WV 25304

RE: Procter and Gamble – Tabler Station – Minor NSR Permit Application

Dear Mr. Pursley,

I am writing in response to your recent Determination of Incompleteness for the Procter & Gamble – Tabler Station project Minor NSR Permit Application. In the determination you highlighted two items requiring additional information –

1) The linkage between several emission units, control devices and emission point locations outlined in the Emission Units Table (Attachment I) needs additional clarification.

2) In the application we had included Attachment Q requesting protection of Confidential Business Information, however the final application was submitted with no specific information claimed as confidential.

In response to the first item, our environmental consultant, Allison Cole of Trinity Consultants, has reviewed and revised Attachment I to correct and clarify the linkage between the emission units, control devices and emission points. As that revision also led to a change in several of the related source numbers, Allison has updated each of the affected application pages for consistency. Allison has separately submitted the revised pages for your review.

Regarding the confidential business information, with the final application as revised and submitted following our pre-application review with you and Beverly McKeon on April 27, Procter & Gamble determined that no information would be claimed as confidential business information. With that determination, we did not submit a separate, non-confidential version of the application for public review. Based on the determination we withdraw the claim of confidentiality with the application information, and would not require Attachment Q to be included as a part of the application.

I believe we have addressed each of the items identified in your permit completeness review, and look forward to working with you as you continue the permit evaluation and issuance. Please contact me with any questions, and thank you for your continued support for our project.

Sincerely

J. Andrew Hadley
Environmental, Health & Safety Manager
NA Product Supply Engineering – Supply Network Design
Procter & Gamble

NON-CONFIDENTIAL

Pursley, Steven R

From: Pursley, Steven R
Sent: Tuesday, June 07, 2016 4:54 PM
To: 'fikes.em@pg.com'
Cc: McKeone, Beverly D; Allison Cole (acole@trinityconsultants.com); Hadley, Drew (hadley.ja@pg.com) (hadley.ja@pg.com); Russell Bailey (RBailey@trinityconsultants.com)
Subject: WV DAQ Permit Application Incomplete for Procter & Gamble, Tabler Station

RE: Application Status: Incomplete
Procter & Gamble, Tabler Station Facility
Permit Application No. R13-3316
Plant ID No. 003-00154

Ms. Fikes:

Your application for a Construction permit for a consumer products production facility was received by this Division on May 6, 2016 and assigned to the writer for review. Upon initial review of said application, it has been determined that the application as submitted is incomplete based on the following items:

1. Attachment Q of the permit was submitted despite the application containing (apparently) no confidential business information (CBI). Please confirm that there was no CBI contained in the application you submitted.

2. The Emission Units Table (Attachment I) of the application seems to assign different emission points to various tanks that will be controlled by the same equipment. Specifically tanks 120S through 158S. Please correct the entries so that each tank which vents through a common emission control device has the same emission point ID.

Please address the above deficiencies in writing as soon as possible. Application review will not commence until the application has been deemed to be technically complete.

Should you have any questions, please contact Steven R. Pursley, PE at (304) 926-0499 ext.1218 or reply to this email.

NON-CONFIDENTIAL

AIR QUALITY PERMIT NOTICE

Notice of Application Notice is given that the Procter & Gamble Manufacturing Company has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a Construction Permit for a manufacturing operation located at 396 , Development Drive, near Inwood in Berkeley County, West Virginia. The latitude and longitude coordinates are:

Latitude: 39o 24' 16.93" N (39.404703)
Longitude: 78o 0' 28.66" W(-78.007961)

The applicant estimates the potential to discharge the following Regulated Air Pollutants will be: Particulate matter: 87 tons per year, Particulate matter less than 2.5 microns: 87 tons per year; Particulate matter less than 10 microns: 87 tons per year; Sulfur Dioxide: 2.3 tons per year; Oxides of Nitrogen: 84 tons per year; Carbon Monoxide: 49 tons per year; Volatile Organic Compounds: 129 tons per year; Hazardous Air Pollutants: 2.6 tons per year, including Hexane (1.79 tons per year), Ethylene Oxide (0.42 tons per year), Formaldehyde (0.08 tons per year), Vinyl Acetate (0.06 tons per year) and 1,4-Dioxane (0.06 tons per year).

Startup of operation is planned to begin on or about the first day of April, 2017. 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 10th day of May, 2016

By: The Procter & Gamble Manufacturing Company
Elizabeth M. Fikes
Director of Product Supply
Sharon Woods Innovation Center
A2M 11-3
11510 Reed Hartman Highway
Cincinnati, OH 45241

5:10 (1t)

Certificate of Publication

This is to certify the annexed advertisement

TRINITY CONSULTANTS
NOTICE

appeared for 1 consecutive days/weeks in The Journal Publishing Company, a newspaper in the City of Martinsburg, WV in its issue beginning:

5-10-16

and ending

5-10-16

The Journal
207 W. King Street
Martinsburg, WV 25401

Fee ($) 55.02

THE STATE OF WEST VIRGINIA
COUNTY OF BERKELEY

The foregoing instrument was acknowledged before me this May 10 2016 by Bonnie Hunt

My commission expires Feb 7, 2021

Notary Public

OFFICIAL SEAL
STATE OF WEST VIRGINIA
NOTARY PUBLIC
Joni L. Wines
202 Grove Springs Lane
Harpers Ferry, WV 25425
My Commission Expires Feb. 7, 2021

Adkins, Sandra K

From: Adkins, Sandra K
Sent: Friday, May 06, 2016 3:27 PM
To: 'fikes.em@pg.com'; 'hadley.ja@pg.com'
Cc: McKeone, Beverly D; Pursley, Steven R
Subject: WV DAQ Permit Application Status for The Procter and Gamble Manufacturing Company; Tabler Station

RE: Application Status
The Procter and Gamble Manufacturing Company
Tabler Station
Facility ID No. 003-00154
Application No. R13-3316

Ms. Fikes,

Your application for construction permit for the Tabler Station was received by this Division on May 6, 2016, and was assigned to Steve Pursley. The following item was not included in the initial application submittal:

Original affidavit for Class I legal advertisement not submitted.

This item is necessary for the assigned permit writer to continue the 30-day completeness review.

Within 30 days, you should receive a letter from Steve stating the status of the permit application and, if complete, given an estimated time frame for the agency's final action on the permit.

Any determination of completeness shall not relieve the permit applicant of the requirement to subsequently submit, in a timely manner, any additional or corrected information deemed necessary for a final permit decision.

Should you have any questions, please contact the assigned engineer, Steve Pursley, at 304-926-0499, extension 1218.

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