AIR QUALITY PROGRAM
836 Fulton Street
Pittsburgh, PA 15233-2124

Title V Operating Permit
& Federally Enforceable State Operating Permit

Issued To: Synthomer Jefferson Hills LLC

Facility: Synthomer Jefferson Hills LLC
2200 State Highway 837
P.O. Box 545
West Elizabeth, PA 15088

ACHD Permit #: 0058-OP24

Date of Issuance: Month 00, 2024

Expiration Date: Month 00, 2024

Renewal Date: expiration date – 6mo.

Issued By:
JoAnn Truchan, P.E.
Program Manager, Engineering

Prepared By:
Helen O. Gurvich
Air Quality Engineer

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AMENDMENTS:

DATE SECTION(S)

I. CONTACT INFORMATION

Facility Location:	**Synthomer Jefferson Hills LLC** 2200 State Highway 837 West Elizabeth, PA 15088-0545
Permittee/Owner:	**Synthomer Jefferson Hills LLC** 25435 Harvard Road Beachwood, OH 44122
Permittee/Operator: **(if not Owner)**	**same as owner**
Responsible Official:	**Marshall Holmes**
Title:	Site Manager
Company:	Synthomer Jefferson Hills LLC
Address:	2200 State Highway 837 West Elizabeth, PA 15088-0545
Telephone Number:	(412) 813-2000
Fax Number:	(412) 384-7311
Facility Contact:	**Frederick T. Mullner**
Title:	Sr. Environmental Coordinator
Telephone Number:	(412) 813-2520
Fax Number:	(412) 384-7311
E-mail Address:	fred.mullner@synthomer.com

AGENCY ADDRESSES:

ACHD Engineer:	**Permitting Engineer**
Title:	Air Quality Engineer
Telephone Number:	412-578-8142
Fax Number:	412-578-8144
E-mail Address:	helen.gurvich@alleghenycounty.us
ACHD Contact:	**Program Manager, Engineering** **Allegheny County Health Department** Air Quality Program 836 Fulton Street Pittsburgh, PA 15233-2124 aqpermits@alleghenycounty.us
EPA Contact:	**ECAD – Air Section** **Environmental Protection Agency** Four Penn Center 1600 John F. Kennedy Boulevard Mail Code 3ED21 Philadelphia, PA 19103-2029

II. FACILITY DESCRIPTION

Synthomer Jefferson Hills LLC (Synthomer) located in Allegheny County, Pennsylvania, produces hydrocarbon resins and dispersions used primarily in hot melt adhesives, rubber and plastic compounding, coatings, sealants, and plastic modification. The resins are produced from C5 feedstock, monomers, solvents, and catalysts by way of cationic polymerization. Resins produced include aliphatic, aliphatic/aromatic, aromatic and liquids resins. Eastman Chemical Resins, Inc. acquired the Jefferson Site from Hercules, Inc. in 2001 and Synthomer acquired this facility from Eastman on April 1, 2022.

The facility presently consists of the following emission units:
Three (3) polymerization processes (C-5 Unit, MP Poly Unit, and WW Poly Unit); Hydrogenation Unit; Four (4) finishing processes (LTC Units and C5 Unit); Dresinate Unit; Emulsion Unit; Pilot Plant; Wastewater Treatment plant; Storage Tanks; Five (5) Boilers; one (1) Emergency Generator; and Miscellaneous Sources (Equipment leaks, Cooling Towers, Roadways, Degreasers).

The facility is a major source of Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs) and a minor source of particulate matter (PM), particulate matter less than 10 µm in diameter (PM_{10}), particulate matter less than 2.5 µm in diameter ($PM_{2.5}$), oxides of nitrogen (NO_X), oxides of sulfur (SO_X), and carbon monoxide (CO) as defined in Article XXI, §2101.20. The facility is also a minor source of greenhouse gas emissions (CO_2e) as defined in the U.S. EPA Greenhouse Gas Tailoring Rule.

The emission units regulated by this permit are summarized in Table II-1:

TABLE II-1: Emission Unit Identification

I.D.	Source Description	Control Device(s)	Maximum Capacity	Fuel/Raw Material	Stack I.D.
C-5 Unit - $AlCl_3$ Handling Operation					
T-210-1	$AlCl_3$ Silo	Baghouses (S-210-3), Scrubber(S-210-28)	140 MM lbs resin/year	Aluminum chloride ($AlCl_3$)	S042
S-210-11	$AlCl_3$ Receiver	Baghouses(S-210-11), Scrubber (S-210-28)			
H-210-14	$AlCl_3$ Charging Chamber	Scrubber (S-210-28)			
C-5 Unit – Polymerization Operation					
R-302-1	Reactor	Thermal oxidizer (B-411-2)	140 MM lbs/yr	$AlCl_3$, Isobutylene, Styrene, Alpha Methyl Styrene (AMS), Piperylene concentrate, Surfactants, Inhibitors	S044
A-301-1	Calcium dryer				
R-303-1	Soaker				
T-409-1	Filtrate receiver				
T-406-2	Filter condensate decanter				
T-502-4	Dependentanizer overhead receiver				
T-412-1	Wash solvent receiver				
T-412-1	ANNEX wash solvent receiver				
T-404-11	Precoat knockout pot				
T-403-1	Solvent flush tank				
T-800-1	Reclaim tank				

I.D.	Source Description	Control Device(s)	Maximum Capacity	Fuel/Raw Material	Stack I.D.
T-506-3	Inhibitor feed tank				
T-506-1	Inhibitor make-up tank				
T-609-1	Steam jet seal pot				
S-3630-1	C5 API Separator	Thermal oxidizer (B-411-2), Carbon bed (backup) (A3631-1A/1B)			S044/ S044A
T-501	500 Battery tanks: Tank 501	Thermal oxidizer (B-411-2), Carbon bed (backup) (A3631-1A/1B)	60,914 gal	Polymerizate	S044/ S044A
T-502	500 Battery tanks: Tank 502	Thermal oxidizer (B-411-2), Carbon bed (backup) (A3631-1A/1B)	60,914 gal	Polymerizate	S044/ S044A
T-503	500 Battery tanks: Tank 503	Thermal oxidizer (B-411-2), Carbon bed (backup) (A3631-1A/1B)	51,184 gal	API Oil, Polymerizate, Toluene	S044/ S044A
T-505	500 Battery tanks: Tank 505	Thermal oxidizer (B-411-2), Carbon bed (backup) (A3631-1A/1B)	8,484 gal	API Oil	S044/ S044A
T-506	500 Battery tanks: Tank 506	Thermal oxidizer (B-411-2), Carbon bed (backup) (A3631-1A/1B)	8,484 gal	API Oil	S044/ S044A
NA	Resin Kettle #8	None	140 MM lbs/yr	Resin	S052
NA	Resin Kettle #9	None		Resin	S053
NA	Resin Kettle #10	None		Resin	S054
S-5191A/ 1B	Sparkler filter	Condensers (E-519-6, E-519-7)		Polymerizate	S312
T-519-2	Sparkler precoat	None		Polymerizate	NA
NA	Reclaim dump station	Baghouse		Resin	S051
NA	Inhibitor dump station	Baghouse		Inhibitor	S048
NA	Precoat tank dump station	Baghouse		Precoat material	S310
NA	Resin product loading	Drumming controlled by UHF Filter & Filter demister (S-751-1)		Loading – Resin; Drumming – White Oil & Resin	S055 for drumming
J-1000-5	Cooling tower	Drift eliminator	1,700 gpm	Municipal make-up water	NA
J-1200-1	Cooling tower	Drift eliminator	1,870 gpm	Municipal make-up water	NA
T-50	Raw material tank 50	Internal floating roof	528,765 gal	J-RAF	S216

I.D.	Source Description	Control Device(s)	Maximum Capacity	Fuel/Raw Material	Stack I.D.
T-52	Raw material tank 52	Internal floating roof	528,765 gal	Piperylene Concentrate	S218
T-53	Raw material tank 53	Internal floating roof	528,765 gal	Piperylene Concentrate	S219
T-54	Raw material tank 54	Internal floating roof	1,469,451 gal	Piperylene Concentrate	S060
T-55	Raw material tank 55	Internal floating roof	579,586 gal	Piperylene Concentrate	S061
T-500	Raw material tank 500	Internal floating roof	112,251 gal	Toluene	S058
T-511	Raw material tank 511	None	15,228 gal	White oil	S274
T-121	Storage tank	None	19,432 gal	Resin	S064
T-123	Storage tank	None	20,080 gal	Resin	S066
T-124	Storage tank	None	24,864 gal	Resin	S097
T-161	Storage tank	None	158,630 gal	Resin	S238
T-365(1)	Storage tank	None	20,728 gal	Resin	S266
T-366	Storage tank	None	20,132 gal	Resin	S267
T-367	Storage tank	None	20,132 gal	Resin	S268
T-504	Storage tank	None	62,817 gal	Resin	S059
T-601	Storage tank	None	108,291 gal	Resin	S269
T-602	Storage tank	None	108,291 gal	Resin	S270
C-5 Unit – Pastillation Operation					
Past. Belt #1 & #2	Pastillating Belt #1 and #2	UHF filter & Fume filter demister (S-751-1)	11,000 lb/hr pastillated resin/belt	Resin	S055
J-1000-1	Cooling tower	Drift eliminator	4,300 gpm	Municipal make-up water	NA
J-4020-1	Cooling tower	Drift eliminator	686 gpm	Municipal make-up water	NA
Pastillator Solid Handling	Belt conveyors	Baghouse (S-726-1)	11,000 lb/hr pastillated resin/belt or 140 MM lbs resin/yr	Resin	S163
	Product Bins				
	Bag Filling Stations				
	Supersack Filling Station				
MP Poly Unit					
R-400-1	Reactor	Condenser (E-400-6), BF_3 scrubber (S-801-1)			S029

I.D.	Source Description	Control Device(s)	Maximum Capacity	Fuel/Raw Material	Stack I.D.
A-101, T-104-1, T-800-1, T-104-3	Mole sieve dryers, Mole sieve drain tank, Precoat tanks, Contaminated dryer solvent tank	None	103,000,000 lbs/year	Styrenes, HVD solvent, RHS solvent	S033
T-500-1, T-701-1, T-700-1, T-703-1, S-601-1, S-602-1	Neutralizers, Filtrate receiver, Solvent wash tank, Heel tank, Funda filter West, Funda filter East	3 Condensers (E-500-5, E-701-5, E-701-4)			S034
T-203-1, A-103-1	Preblend tank, Calcium chloride dryer	Condenser (E-203-4)			S035
T-301-1	Lime storage silo	Baghouse (S-301-2)			S030
S-303-1	Lime filter receiver	Baghouse (S-303-1)			S031
H-800-3	Precoat tank bag dump station	Baghouse (H-800-3)			F010
J-1001-1	Cooling tower	None	2,500 gpm	Municipal make-up water	NA
T-301, T-302, T-303	Storage tanks	None	75,202 gal each	Polymerizate	S039, S040, S041
	WW Poly Unit				
R-600-1	North Reactor	Condensers (E-600-6, E-600-9); BF_3 Scrubber (S-401-1)	80,000,000 lbs/yr	Styrenes, HVD solvent, RHS solvent	S017
R-601-1	South Reactor	Condensers (E-601-6, E-600-11); BF_3 Scrubber (S-401-1)			
A-100	Feed dryers	Condensers (E-200-6, E-200-7)			S013
A-100	Feed dryer (regeneration)	None			S013a
T-301-1	East preblend tank	Condenser (E-301-4)			S014
T-300-1	North preblend tank	Condenser (E-300-4)			S015
T-500-1	Slurry tank	None			S016
T-700-1	North neutralizer	Condensers (E-700-4, E-700-6)			S018
S-800-1 S-801-1	North Funda filter, South Funda filter	Condenser (E-800-3)			S019
T-800-6	Funda condensate tank	Carbon adsorber (A-800-8)			S019a
T-900-1 S-800-1	West filtrate receiver, North Funda filter	Condenser (E-900-7)			S020
T-701-1	South neutralizer	Condenser (E-701-7)			S021

I.D.	Source Description	Control Device(s)	Maximum Capacity	Fuel/Raw Material	Stack I.D.
T-1001-1	Reclaim pot	Condenser (E-1001-7) Baghouse (S-1003-1)			S022 S022a
T-903-1 S-800-1 S-801-1	Solvent wash receiver, North Funda filter, South Funda filter	Condenser (E-903-3)			S023
T-901-1 S-801-1	East filtrate receiver, South Funda filter	Condenser (E-901-7)			S027
T-700-1 T-701-1	North neutralizer and South neutralizer: local exhaust	None			S050
T-700-1 T-701-1	North neutralizer and South neutralizer: chamber below hopper	None			S050a
H-500-4	Slurry bag dump station	Baghouse (H-500-4)			S294
H-700-10	Lime/Filteraid bag dump station	Baghouse (H-700-10)			S295
J-4060-1	Cooling tower	None	1,000 gpm	Municipal make-up water	S316
T-68, T-69, T-74	Storage tanks	Condenser (E-201-1)	75,202 gal each	Polymerizate, RHS, HVD	S024
T-73, T-75, T-76, T-77	Storage tanks	Condenser (E-202-1)	75,202 gal each	Polymerizate, RHS, HVD	S025
T-67	Storage tank	Condenser (E-67-3)	75,200 gal	Polymerizate, RHS, HVD	S026
T-66	Storage tank	None	75,200 gal	HVD	S228
T-204	Storage tank	Condenser (E-204-4), Carbon adsorber (A-204-5A or 5B)	41,878 gal	Polymerizate, RHS, HVD	S300
T-205	Storage tank	Condenser (E-205-4), Carbon adsorber (A-204-5A or 5B)	25,381 gal	Polymerizate, RHS, HVD	S300
T-206	Storage tank	Condenser (E-206-4), Carbon adsorber (A-204-5A or 5B)	25,381 gal	Polymerizate, RHS, HVD	S300
T-207	Storage tank	Condenser (E-207-4), Carbon adsorber (A-204-5A or 5B)	25,381 gal	Polymerizate, RHS, HVD	S300
T-200	Storage tank	None	25,381 gal	Polymerizate, RHS, HVD	S239
T-201	Storage tank	None	25,381 gal	Polymerizate, RHS, HVD	S240
T-202	Storage tank	None	25,381 gal	Polymerizate, RHS, HVD	S241

I.D.	Source Description	Control Device(s)	Maximum Capacity	Fuel/Raw Material	Stack I.D.
T-10	Storage tank	None	110,159 gal	Polymerizate, RHS, HVD	S195
T-22	Storage tank	None	15,863 gal	Paramethyl styrene	S206
T-23	Storage tank	None	15,863 gal	Vinyl toluene	S207
T-24	Storage tank	None	15,863 gal	Paramethyl styrene	S208
T-25	Storage tank	None	15,863 gal	Vinyl toluene	S209
T-26	Storage tank	None	16,257 gal	Polymerizate, RHS	S210
T-28	Storage tank	None	16,257 gal	Polymerizate, RHS	S212
T-29	Storage tank	None	16,257 gal	Polymerizate, RHS	S213
T-34	Storage tank	None	169,000 gal	Polymerizate, RHS, HVD	S074
T-71	Storage tank	None	75,200 gal	Alpha methyl styrene	S230
T-72	Storage tank	None	75,200 gal	Styrene	S231
Hydrogenation (Hydro) Unit					
T-502-1	Solvent tank (tank 103)	Condensers (E-200-6, E-201-2)	22,500,000 lbs/yr	Polymerizate, catalyst, hydrogen	S004
T-501-1	Unfiltered product tank (tank 104)				
T-200-1	Metering tank				
T-603-3	Catalyst Catch tank				
S-603-1	Mott Filter				
T-603-5	Heel tank				
H-203-2	Catalyst unloading system	Baghouse (S-203-5)		Catalyst	S005
R-301-1	Autoclave #1	Condensers (E-401-2, E-402-2, E-403-2)	1,000 gal	Polymerizate, catalyst	S007
R-302-1	Autoclave #2		1,000 gal		
T-303-1	Vent tank				
T-100	Storage tank	Condenser (E-101-4)	6,000 gal	Polymerizate, RHS, HVD	S001
T-101	Storage tank		6,000 gal		
T-102	Storage tank	Condensers (E-104-1, E-104-2)	6,000 gal	Solvents	S012
T-105	Storage tank		6,000 gal		
T-106	Storage tank		6,000 gal		

I.D.	Source Description	Control Device(s)	Maximum Capacity	Fuel/Raw Material	Stack I.D.
J-4005-1	Cooling tower	None	400gpm	Municipal make-up water	NA
LTC Units					
T-301-1	Reclaim Solution Tank	Condenser E-301-4	67,240,000 lbs/yr	Intermediate Polymerizate	S108
NA	#1 Vacuum System	Condenser E-301B-E3			S109
NA	#2 Vacuum System	Condenser E-607-2			S110
NA	#4 Vacuum System	Condenser E-106-3			S124
RK#5	Resin Kettle #5	Condenser E-RK5-4			S111
RK#6	Resin Kettle #6	Condenser E-RK6-5			S112
RK#7	Resin Kettle #7	Condenser E-RK7-4			S113
NA	#1 and #2 Pastillator Belts	Scrubber S-127-3			S114
NA	Berndorf Belt	Scrubber S-105-1			S165
T-610-1	#1/#2 oil/water separator	Carbon Bed A-610-3A/3B			S110A
S-105-1	#4 oil/water separator	Carbon Bed A-108-5A/5B			S125
NA	#1 Pastillator baghouse	Baghouse S-108			S115
NA	#2 Pastillator baghouse	Baghouse S-640-1			S116
NA	Berndorf belt baghouse	Baghouse S-104-1			S084
NA	Drumming operation	None	1,250,000 gal/yr		NA
NA	Truck loading	None	2,500.000 gal/yr		NA
NA	Drumming operation	None	1,250,000 gal/yr	Blending solvents	NA
J-101-1	Cooling tower #1	None	375 gpm	Municipal make-up water	NA
J-645	Cooling tower #2	None	1,200 gpm	Municipal make-up water	NA
J-4030-1	Cooling tower #4	None	2,800 gpm	Municipal make-up water	NA
Dresinate Unit					
R-1-A	Crude Tall Oil Storage Tank	None	67,631 gal	Crude tall oil	S187
T-782	Tall Oil Rosin Storage Tank	None	10,000 gal	Tall oil rosin	S290
T-783[(1)]	Tall Oil Rosin Storage Tank	None	11,400 gal	Tall oil rosin	S160
T-80[(1)]	Dresinate TX Rosin Soap Percussor Storage Tank	None	24,881 gal	Dresinate TX Rosin Soap Percussor	S091

I.D.	Source Description	Control Device(s)	Maximum Capacity	Fuel/Raw Material	Stack I.D.
L-500-1	Double Drum Dryer	None	500 lbs/hr wet product	Wet product	S085
H-503-1	Auger Conveyor	Baghouse & Conveyor enclosure	300 lbs/hr dry product	Dry product	S086
L-501-1	Grinder	Baghouse			
NA	Bagging	Baghouse			
Emulsion Unit					
T-301-1	Emulsion Kettle #1	None	1,000 gal	Resin Blends	S291
T-302-1	Emulsion Kettle #2	None	1,000 gal	Resin Blends	S292
T-403-1	Storage vessel	None	2,200 gal	Water	None
T-403-3	Storage vessel	None	2,200 gal	Water	None
M-500-1, M-500-2	Mixing unit	None	NA	Emulsion product	None
T-783[(1)]	Storage Tank	None	11,400 gal	Rosin	S160
T-200-1	Storage tank	None	1,000 gal	Water condensate	S284
T-201-1	Storage tank	None	1,000 gal	Water condensate	S284
T-766	Storage tank	None	800 gal	Surfactant	S288
T-782	Storage tank	None	7,000 gal	Resin/Rosin	S290
T-761	Storage tank	None	10,000 gal	Heavy distillate	S283
T-773	Storage tank	None	2,500 gal	Crude tall oil	S289
T-402-3	Storage tank	None	17 gal	29% ammonium hydroxide	S161
T-411-1	Storage tank	None	500 gal	Surfactant	NA
T-408-1	Storage tank	None	500 gal	Surfactant	NA
T-407-1	Storage tank	None	500 gal	Surfactant	NA
T-405-1	Storage tank	None	500 gal	Surfactant	NA
T-406-1	Storage tank	None	500 gal	Surfactant	NA
T-412-1	Storage tank	None	500 gal	Surfactant	NA
T-401-1	Storage tank	None	80 gal	45% potassium hydroxide	None
T-R-1-A	Storage tank	None	17,600 gal	Crude tall oil	S187
T-775	Storage tank	None	8,768 gal	Emulsion waste	S287

I.D.	Source Description	Control Device(s)	Maximum Capacity	Fuel/Raw Material	Stack I.D.
T-605-1	Blend tank #5	None	20,000 gal	Bulk dispersion	S401
T-606-1	Blend tank #6	None	20,000 gal	Bulk dispersion	S400
T-504-1	Blend tank #4	None	5,000 gal	Bulk dispersion	S162
T-503-1	Blend tank #3	None	5,000 gal	Bulk dispersion	
T-502-1	Blend tank #2	None	6,000 gal	Bulk dispersion	
T-501-1	Blend tank #1	None	6,000 gal	Bulk dispersion	
Pilot Plant					
NA	Reactor – 50 gal	Carbon bed	Various	Hydrocarbon resin	S155
NA	Neutralizer				
NA	Funda filter				
J-125-1/J-400-1	Cooling Tower	None	400 gpm	Municipal make-up water	NA
Wastewater Treatment Plant					
701A	Wastewater tank	Condenser E-701-3, Carbon adsorber A-701-5A/5B	50,000 gal	Facility wastewater	S147
701B	Wastewater tank		50,000 gal		
T-713-1	Raw sump	Condenser E-713-2, Carbon adsorber A-701-5A/5B			
S-302-1	Air floatation tank		50,000 gal		
T-717-1	Oil sump				
T-714-1	Acid sump				
T-715-1	Final sump				
T-702-A	Pretreated water tank	None	50,000 gal	Facility wastewater	F033
T-702-B	Pretreated water tank	None	50,000 gal	Facility wastewater	F034
T-702-C	Pretreated water tank	None	50,000 gal	Facility wastewater	F035
T-411-1	Biotreatment aeration tank, including digester	None	47,304,000 gal/yr	Facility wastewater	F027
NA	Biotreatment clarifier	None	47,304,000 gal/yr	Facility wastewater	F028
T-724-1	Sludge batch tank	None	47,304,000 gal/yr	Facility wastewater	F036
S-410-1	Filter press (sludge solids handling)	None	47,304,000 gal/yr	Facility wastewater	F037
Storage Tanks (Minor significance)					

I.D.	Source Description	Control Device(s)	Maximum Capacity	Fuel/Raw Material	Stack I.D.
T-35	Storage tank	None	169,000 gal	Various solvent or stormwater	S075
T-78	Storage tank	None	169,000 gal	Recovered oil	S232
T-4	Storage tank	None	88,128 gal	Coproduct fuel (JSOL3)	S190
T-151	Storage tank	None	1,504,044 gal	Coproduct fuel (JSOL3)	S236
T-2	Storage tank	None	169,205 gal	Stormwater	S189
T-9	Storage tank	None	110,159 gal	C5 Ammonia water	S194
T-12	Storage tank	None	110,159 gal	Stormwater	S197
T-13	Storage tank	None	110,159 gal	Stormwater	S198
T-14	Storage tank	None	110,159 gal	C5 Ammonia water	S199
T-15	Storage tank	None	110,159 gal	C5 Ammonia water	S200
T-16	Storage tank	None	110,159 gal	C5 Ammonia water	S201
T-27	Storage tank	None	16,257 gal	Hazardous Waste	S211
T-150	Storage tank	None	1,504,044 gal	C5 Ammonia water/PMR water	S235
T-160	Storage tank	None	158,630 gal	Stormwater	-
T-208	Storage tank	None	25,381 gal	Hazardous waste (mix of. RHS/HVD)	S244
T-250	Storage tank	None	30,457 gal	Deluge water	S246
T-251	Storage tank	None	30,457 gal	Deluge water	S247
T-252	Storage tank	None	30,457 gal	Styrene or AMS	S248
T-254	Storage tank	None	15,275 gal	C5 API Discharge water (reserved for storm weather conditions)	S249
T-257	Storage tank	None	15,275 gal	C5 API Discharge water (reserved for storm weather conditions)	S252
T-261	Storage tank	None	20,728 gal	C5 Ammonia water	S256
T-262	Storage tank	None	20,080 gal	C5 Ammonia water	S038
T-263	Storage tank	None	20,080 gal	C5 API Discharge water	S257
T-264	Storage tank	None	20,080 gal	C5 API Discharge water	S258
T-265	Storage tank	None	20,080 gal	Hazardous Waste	S259

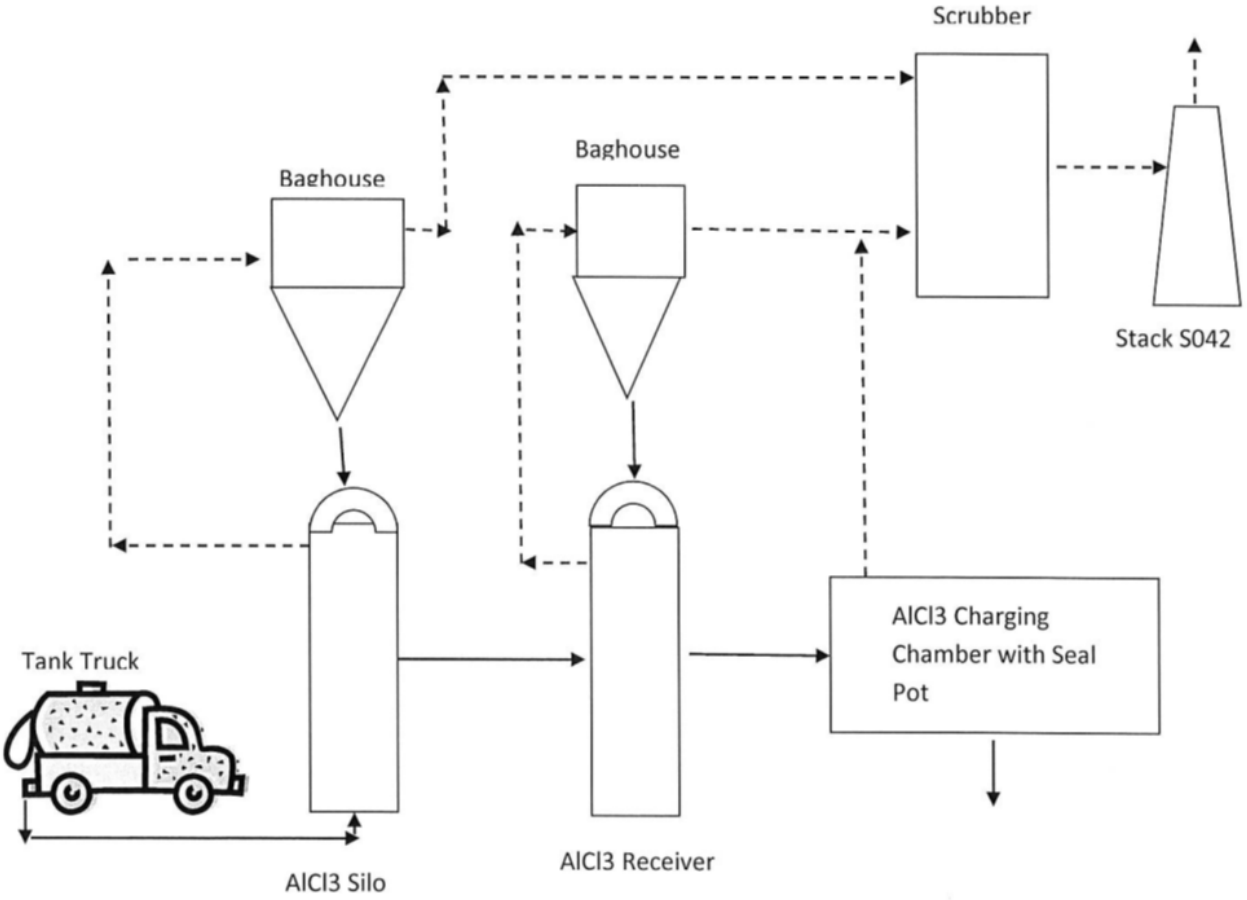
I.D.	Source Description	Control Device(s)	Maximum Capacity	Fuel/Raw Material	Stack I.D.
T-382	Storage tank	None	19,625 gal	Therminol	S271
T-408	Storage tank	None	9,776 gal	Anhydrous ammonia	NA
T-510	Storage tank	None	100,000 gal	Isobutylene	NA
T-513	Storage tank	None	3,714 gal	40/60 Ethylene Glycol/Water	S275
T-514	Storage tank	None	3,714 gal	40/60 Ethylene Glycol/Water	S276
T-762	Storage tank	None		Steam condensate	S284
T-763	Storage tank	None		Steam condensate	S285
T-2004-1 (T-278)	Storage tank	None		40/60 Ethylene Glycol/Water	S260
T-7065-1	Storage tank	None		40/60 Ethylene Glycol/Water	
T-703-3	Storage tank	None		40/60 Ethylene Glycol/Water	
T-105-2	Storage tank	None		40/60 Ethylene Glycol/Water	
T-801-4	Storage tank	None		8% Soda ash in water	
T-401-1	Storage tank	None		8% Soda ash in water	
Combustion Units					
BU-1	Unilux water-tube boiler #1, Model ZF 1800HS	Ultra-Low NOx Burner	18.6 MMBtu/hr	Natural gas	S141
BU-2	Unilux water-tube boiler #2, Model ZF 1800HS	Ultra-Low NOx Burner	18.6 MMBtu/hr	Natural gas	S141
BU-3	Unilux water-tube boiler #3, Model ZF 1800HS	Ultra-Low NOx Burner	18.6 MMBtu/hr	Natural gas	S143
BU-4	Unilux water-tube boiler #4, Model ZF 1800HS	Ultra-Low NOx Burner	18.6 MMBtu/hr	Natural gas	S143
B-5	Trane/Murray boiler #5, Model MCF2-38	None	38 MMBtu/hr	Natural gas	S144
B-3000	C5 Hot oil furnace	None	10.33 MMBtu/hr	Natural gas	S056
B-620-1	#2 LTC heater	None	8.8 MMBtu/hr	Natural gas	S107
B-9020-1	#4 LTC heater	None	10.0 MMBtu/hr	Natural gas	S119
NA	Boiler house emergency generator	None	250 kW	Diesel fuel	F100
E-9000-1	Electric heater (Emulsion Unit)	None	-	Hot oil	NA
Miscellaneous Sources					
NA	Equipment Leaks	None	NA	NA	NA

I.D.	Source Description	Control Device(s)	Maximum Capacity	Fuel/Raw Material	Stack I.D.
NA	Roadways	None	NA	NA	NA
NA	Barges	None	NA	NA	NA
NA	Degreasers	None	NA	NA	NA

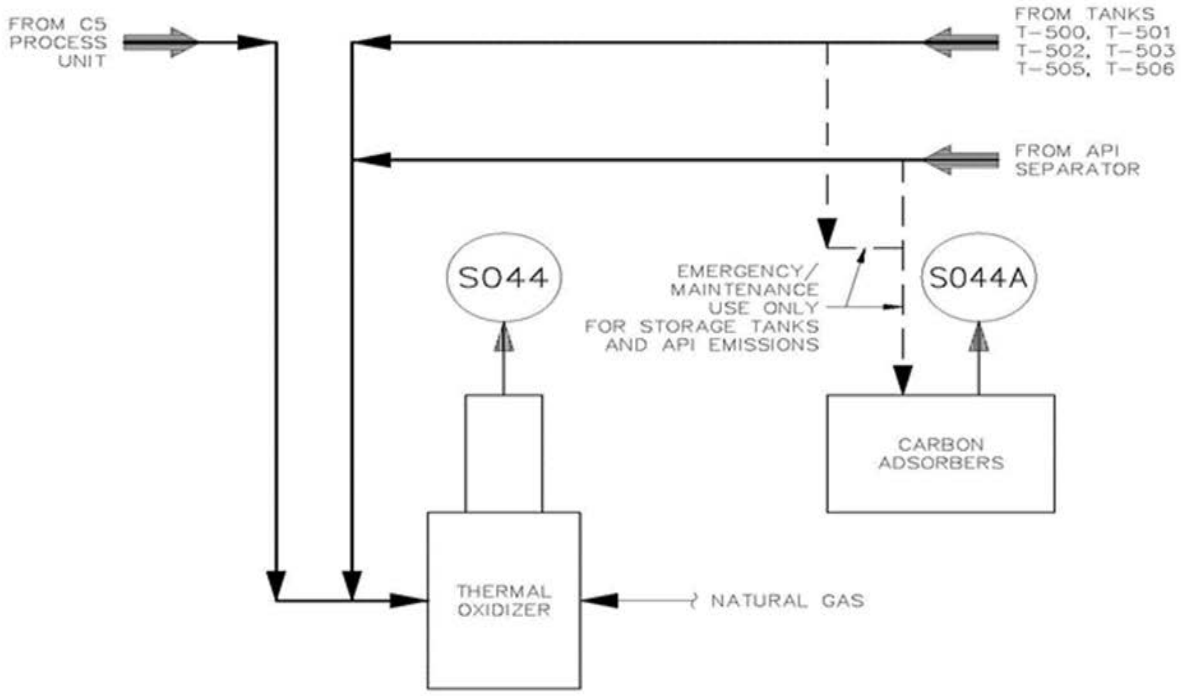
(1) Tank not included in any installation permit.

PROCESS FLOW DIAGRAMS

C5 Unit – $AlCl_3$ Handling Operation

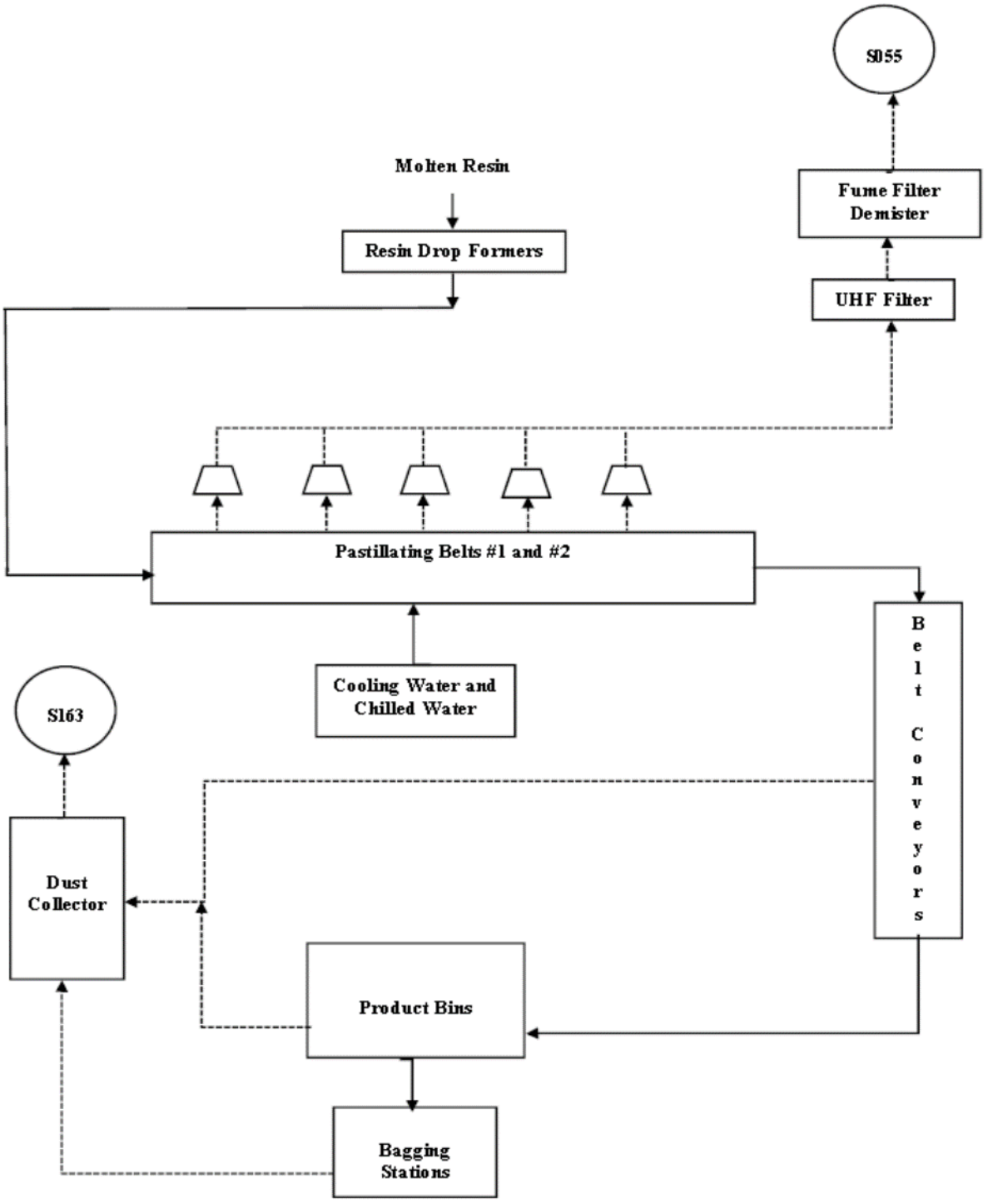


C5 Unit – Polymerization Process

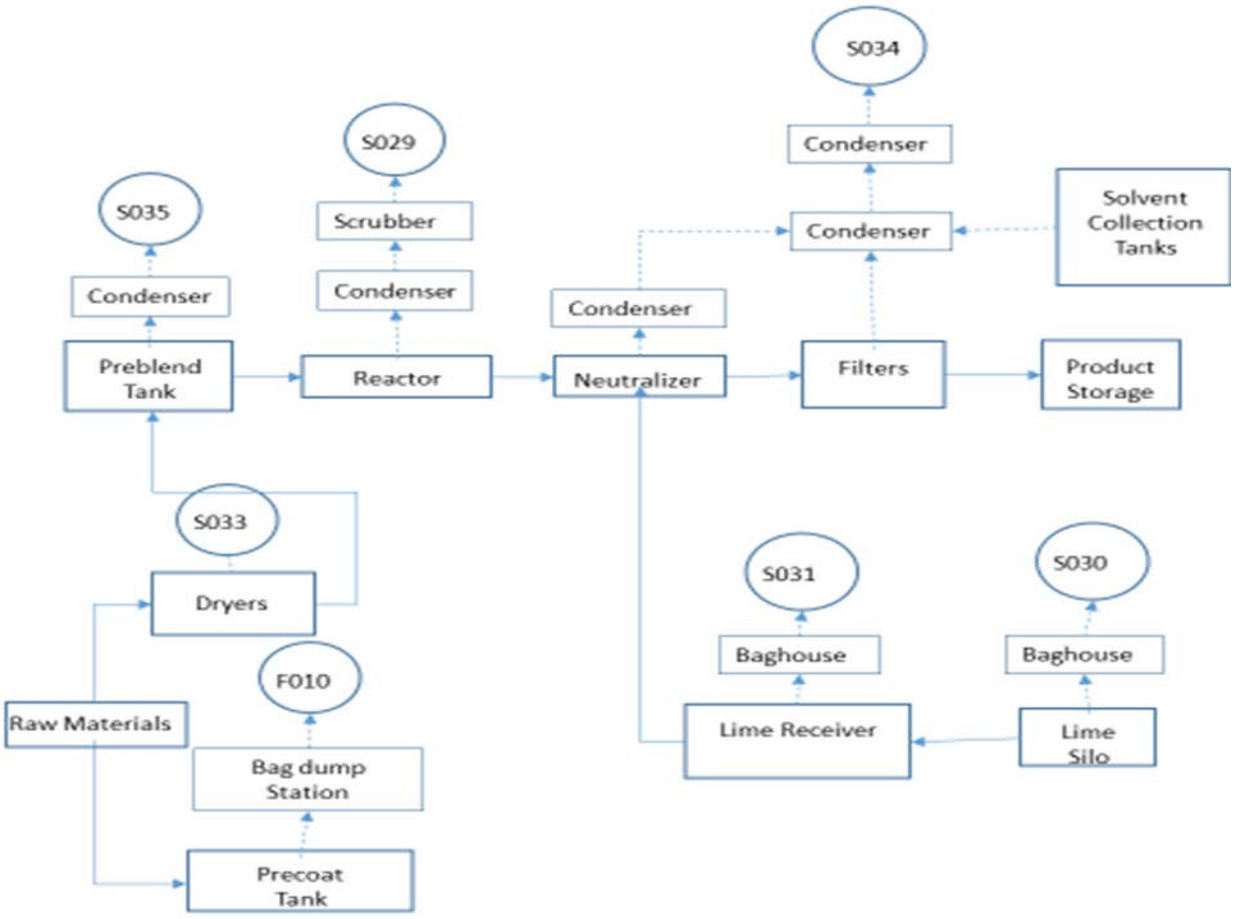


C5 POLY UNIT

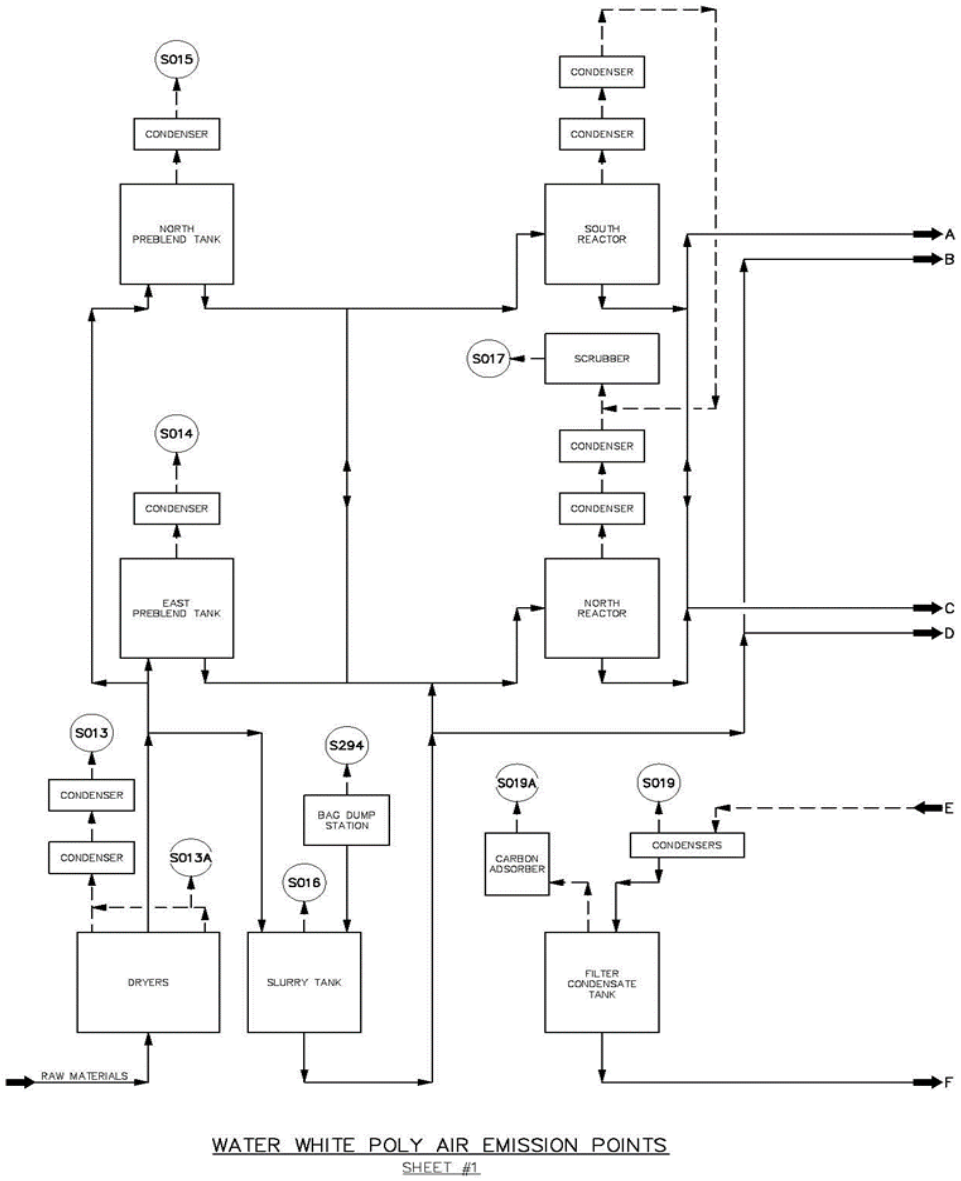
C5 Unit – Pastillation Operation



MP Poly Unit

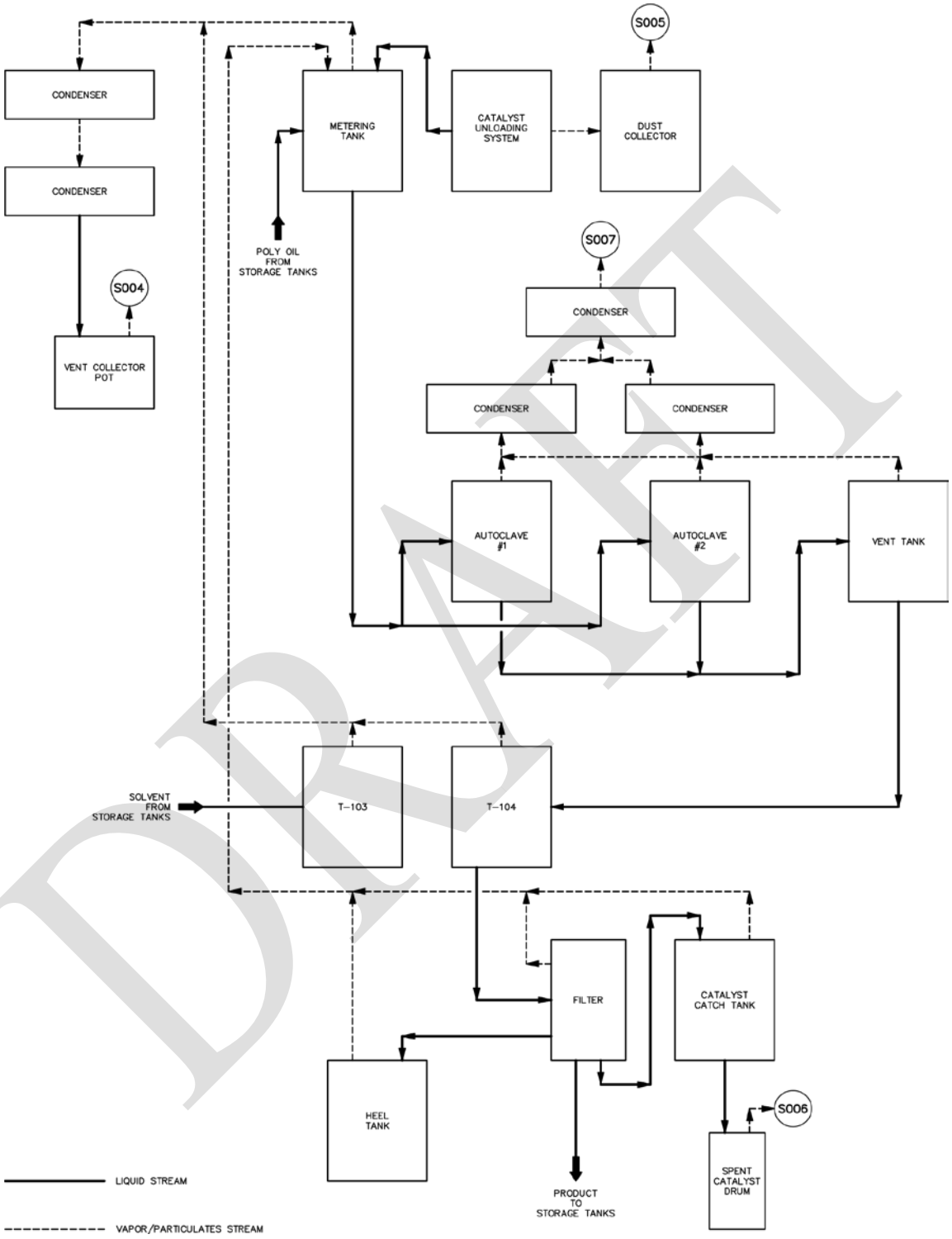

S034
Condenser
S029
Scrubber
Condenser
S035
Condenser
Condenser
Solvent Collection Tanks
Condenser
Preblend Tank
Reactor
Neutralizer
Filters
Product Storage
S033
Dryers
S031
S030
Baghouse
Baghouse
F010
Raw Materials
Lime Receiver
Lime Silo
Bag dump Station
Precoat Tank

WW Poly Unit

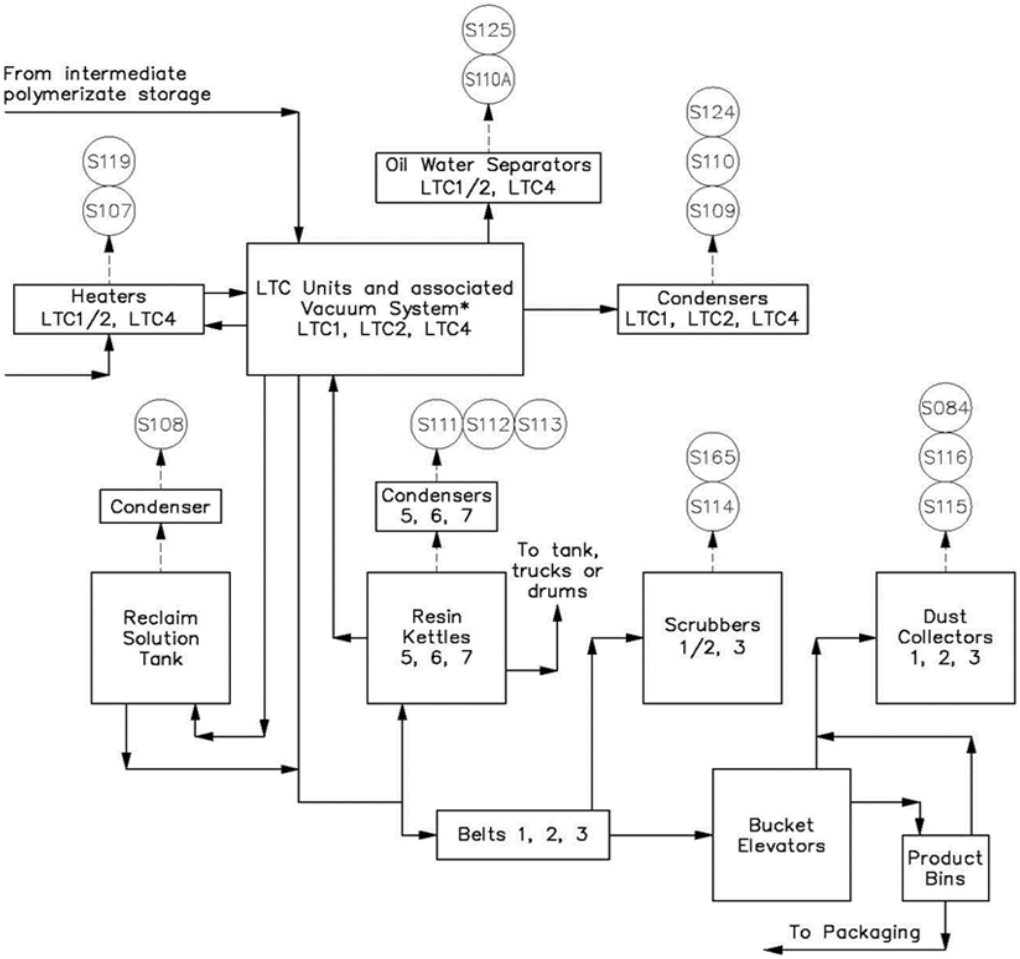


WATER WHITE POLY AIR EMISSION POINTS
SHEET #1

Hydrogenation Unit

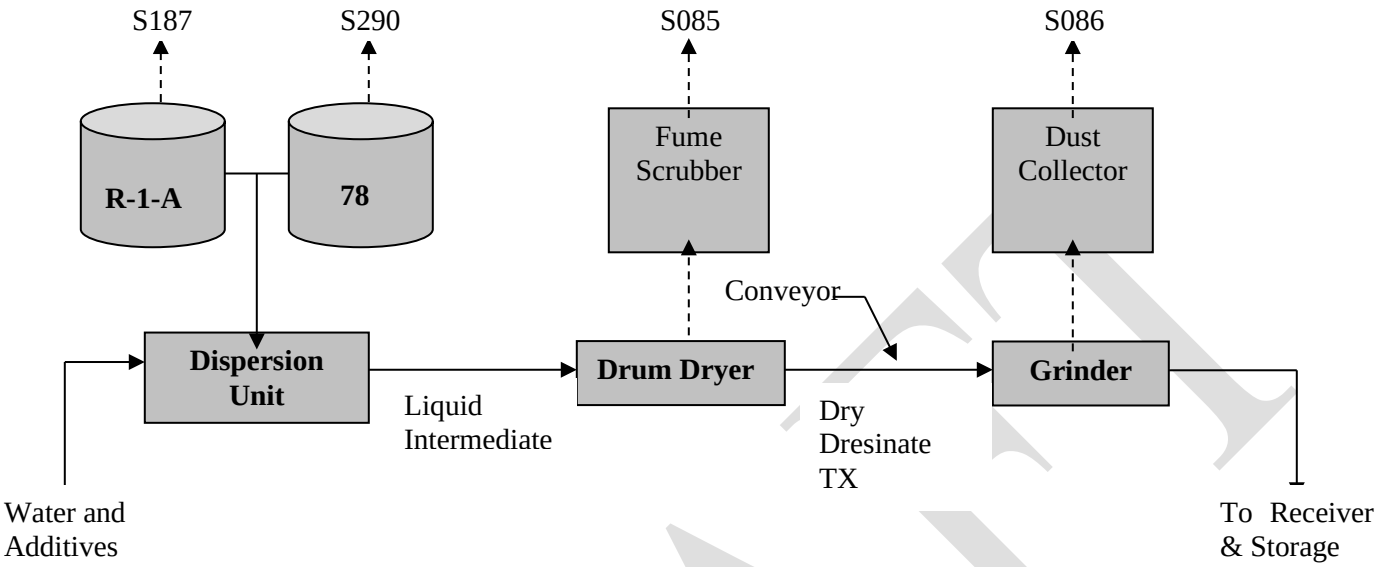


Principal of LTC Operations

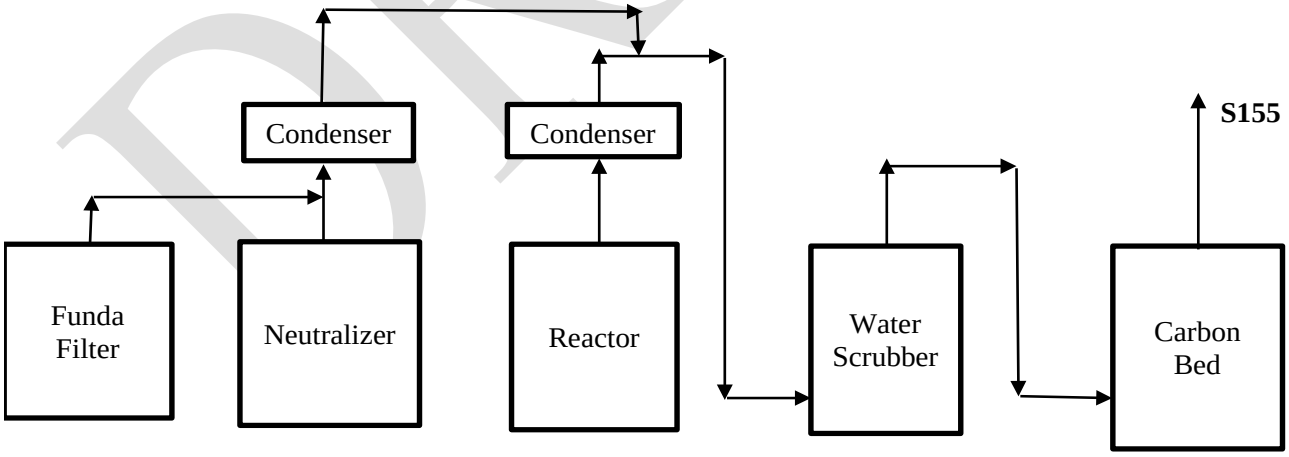


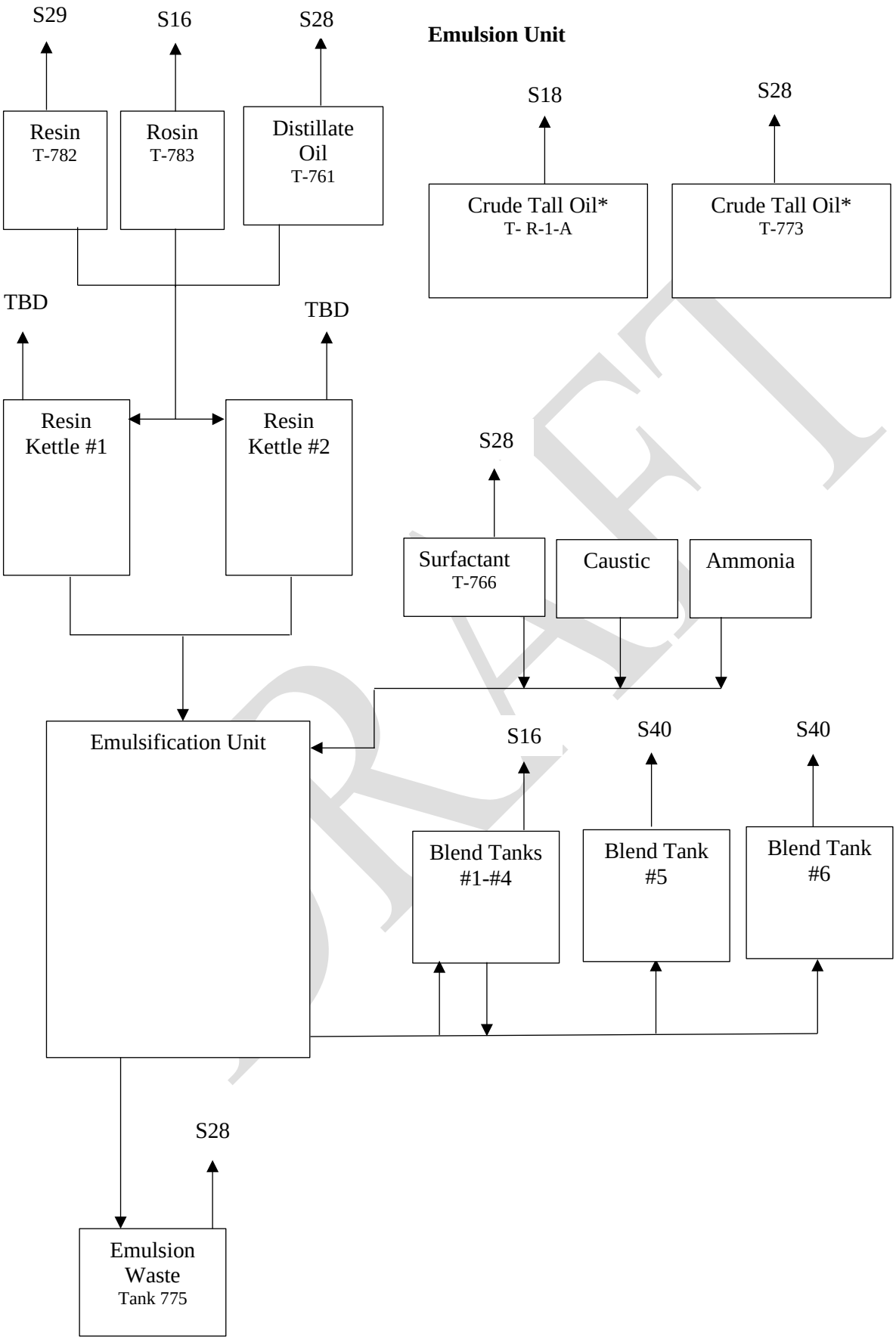
*LTC Unit and associated Vacuum System can include:
Rising film evaporator, separator, rectification column, reboiler, process condensers, vacuum pump, and cooling tower.

Dresinate Unit

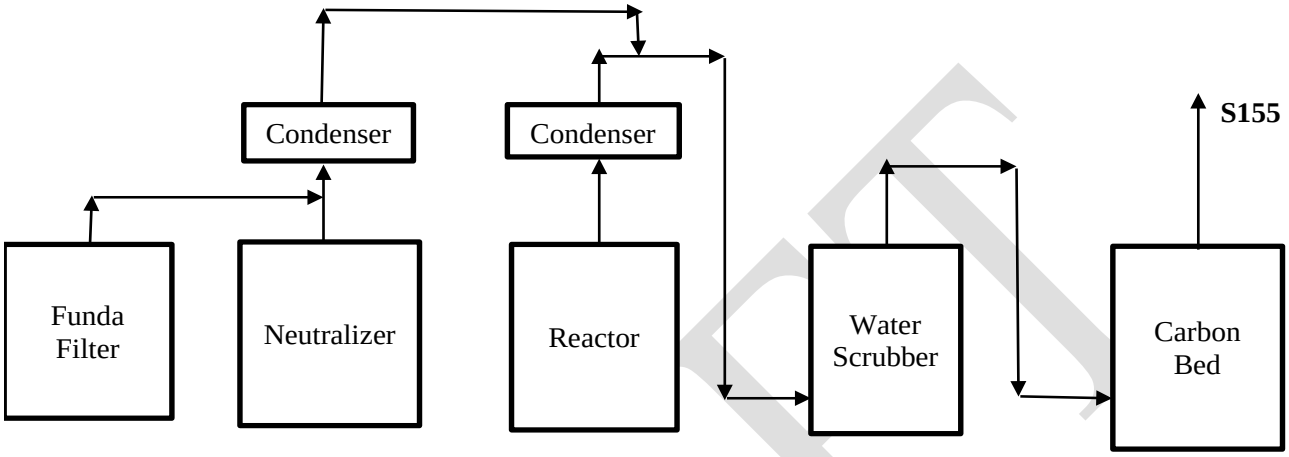


Pilot Plant (controlled sources only)

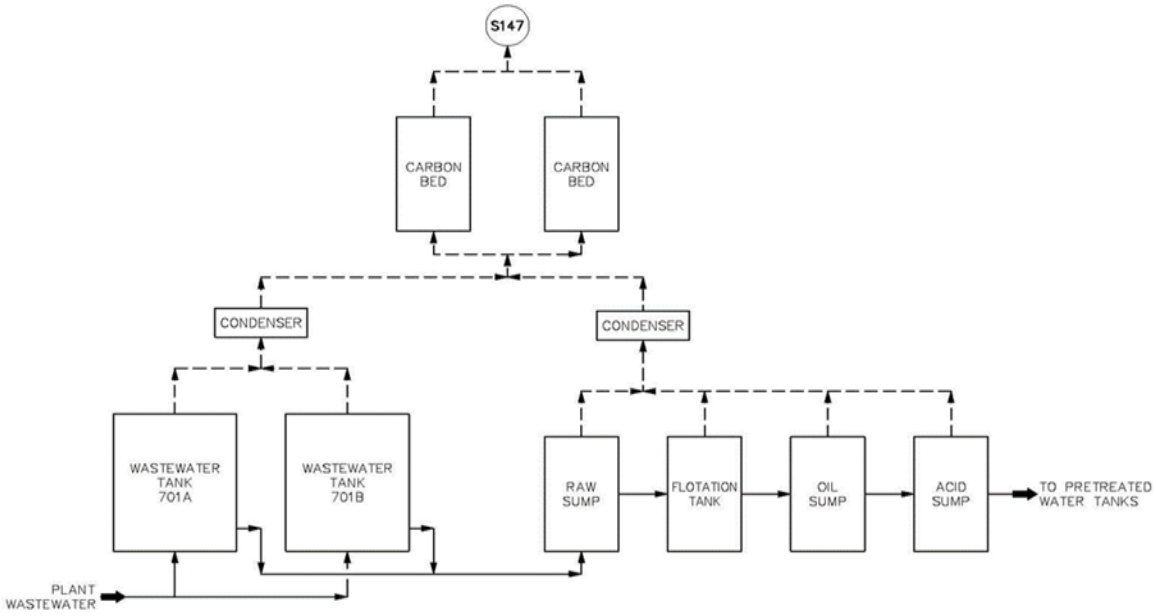



Emulsion Unit
S29
S16
S28
Resin
T-782
Rosin
T-783
Distillate Oil
T-761
S18
S28
Crude Tall Oil*
T- R-1-A
Crude Tall Oil*
T-773
TBD
TBD
Resin Kettle #1
Resin Kettle #2
S28
Surfactant
T-766
Caustic
Ammonia
Emulsification Unit
S16
S40
S40
Blend Tanks #1-#4
Blend Tank #5
Blend Tank #6
S28
Emulsion Waste
Tank 775

Pilot Plant (controlled sources only)



Wastewater Treatment Plant



WASTEWATER TREATMENT PLANT

DECLARATION OF POLICY

Pollution prevention is recognized as the preferred strategy (over pollution control) for reducing risk to air resources. Accordingly, pollution prevention measures should be integrated into air pollution control programs wherever possible, and the adoption by sources of cost-effective compliance strategies, incorporating pollution prevention, is encouraged. The Department will give expedited consideration to any permit modification request based on pollution prevention principles.

The permittee is subject to the terms and conditions set forth below. These terms and conditions constitute provisions of *Allegheny County Health Department Rules and Regulations, Article XXI Air Pollution Control*. The subject equipment has been conditionally approved for operation. The equipment shall be operated in conformity with the plans, specifications, conditions, and instructions which are part of your application, and may be periodically inspected for compliance by the Department. In the event that the terms and conditions of this permit or the applicable provisions of Article XXI conflict with the application for this permit, these terms and conditions and the applicable provisions of Article XXI shall prevail. Additionally, nothing in this permit relieves the permittee from the obligation to comply with all applicable Federal, State and Local laws and regulations.

III. GENERAL CONDITIONS – Major Source

1. Prohibition of Air Pollution (§2101.11)

a. It shall be a violation of this permit to fail to comply with, or to cause or assist in the violation of, any requirement of this permit, or any order or permit issued pursuant to authority granted by Article XXI. The permittee shall not willfully, negligently, or through the failure to provide and operate necessary control equipment or to take necessary precautions, operate any source of air contaminants in such manner that emissions from such source:
   1) Exceed the amounts permitted by this permit or by any order or permit issued pursuant to Article XXI;
   2) Cause an exceedance of the ambient air quality standards established by Article XXI §2101.10; or
   3) May reasonably be anticipated to endanger the public health, safety, or welfare.

b. It shall be a violation of this permit to operate, or allow to be operated, any source in such manner as to allow the release of air contaminants into the open air or to cause air pollution as defined in Article XXI, except as is explicitly permitted by this permit or Article XXI.

2. Definitions (§2101.20)

a. Except as specifically provided in this permit, terms used retain the meaning accorded them under the applicable provisions and requirements of Article XXI or the applicable federal or state regulation. Whenever used in this permit, or in any action taken pursuant to this permit, the words and phrases shall have the meanings stated, unless the context clearly indicates otherwise.

b. Unless specified otherwise in this permit or in the applicable regulation, the term "*year*" shall mean any twelve (12) consecutive months.

3. Conditions (§2102.03.c)

It shall be a violation of this permit giving rise to the remedies provided by Article XXI §2109.02, for any person to fail to comply with any terms or conditions set forth in this permit.

4. Certification (§2102.01)

Any report, or compliance certification submitted under this permit shall contain written certification by a responsible official as to truth, accuracy, and completeness. This certification and any other certification required under this permit shall be signed by a responsible official of the source, and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

5. Transfers (§2102.03.e)

This permit shall not be transferable from one person to another, except in accordance with Article XXI §2102.03.e and in cases of change-in-ownership which are documented to the satisfaction of the Department, and shall be valid only for the specific sources and equipment for which this permit was issued. The transfer of permits in the case of change-in-ownership may be made consistent with the administrative permit amendment procedure of Article XXI §2103.14.b. The required documentation and fee must be received by the Department at least 30 days before the intended transfer date.

6. Term (§2103.12.e, §2103.13.a)

a. This permit shall remain valid for five (5) years from the date of issuance, or such other shorter period if required by the Clean Air Act, unless revoked. The terms and conditions of an expired permit shall automatically continue pending issuance of a new operating permit provided the permittee has submitted a timely and complete application and paid applicable fees required under Article XXI Part C, and the Department through no fault of the permittee is unable to issue or deny a new permit before the expiration of the previous permit.

b. Expiration. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with the requirements of Article XXI Part C.

7. Need to Halt or Reduce Activity Not a Defense (§2103.12.f.2)

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

8. Property Rights (§2103.12.f.4)

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

9. Duty to Provide Information (§2103.12.f.5)

a. The permittee shall furnish to the Department in writing within a reasonable time, any information that the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Department copies of any records required to be kept by the permit.

b. Upon cause shown by the permittee the records, reports, or information, or a particular portion thereof, claimed by the permittee to be confidential shall be submitted to the Department in accordance with the requirements of Article XXI, §2101.07.d.4. Information submitted to the Department under a claim of confidentiality, shall be available to the US EPA and the PADEP upon request and without restriction. Upon request of the permittee the confidential information may be submitted to the USEPA and PADEP directly. Emission data or any portions of any draft, proposed, or issued permits shall not be considered confidential.

10. Modification of Section 112(b) Pollutants which are VOCs or PM10 (§2103.12.f.7)

Except where precluded under the Clean Air Act or federal regulations promulgated under the Clean Air Act, if this permit limits the emissions of VOCs or PM_{10} but does not limit the emissions of any hazardous air pollutants, the mixture of hazardous air pollutants which are VOCs or PM_{10} can be modified so long as no permit emission limitations are violated. A log of all mixtures and changes shall be kept and reported to the Department with the next report required after each change.

11. Right to Access (§2103.12.h.2)

Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized Department and other federal, state, county, and local government representatives to:

a. Enter upon the permittee's premises where a permitted source is located or an emissions-related activity is conducted, or where records are or should be kept under the conditions of the permit;
b. Have access to, copy and remove, at reasonable times, any records that must be kept under the conditions of the permit;
c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
d. As authorized by either Article XXI or the Clean Air Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements.

12. Certification of Compliance (§2103.12.h.5,)

a. The permittee shall submit on an annual basis, certification of compliance with all terms and conditions contained in this permit, including emission limitations, standards, or work practices. The certification of compliance shall be made consistent with General Condition III.4 above and shall include the following information at a minimum:

1) The identification of each term or condition of the permit that is the basis of the certification;
2) The compliance status;
3) Whether any noncompliance was continuous or intermittent;
4) The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with the provisions of this permit; and
5) Such other facts as the Department may require to determine the compliance status of the source.

b. All certification of compliance forms must be submitted to the Administrator as well as the Department by September 1 of each year for the time period beginning July 1 of the previous year and ending June 30 of the same year. The first report shall be due September 1, 2025 for the time

period beginning on the issuance date of this permit through June 30, 2025. Compliance certifications should be submitted online through the ACHD Air Quality Regulated Entities Portal (REP). If REP is not available, written notice should be sent to the Department at aqreports@alleghenycounty.us.

13. Record Keeping Requirements (§2103.12.j.1)

a. The permittee shall maintain records of required monitoring information that include the following:

1) The date, place as defined in the permit, and time of sampling or measurements;
2) The date(s) analyses were performed;
3) The company or entity that performed the analyses;
4) The analytical techniques or methods used;
5) The results of such analyses; and
6) The operating parameters existing at the time of sampling or measurement.

b. The permittee shall maintain and make available to the Department, upon request, records including computerized records that may be necessary to comply with the reporting and emission statements in Article XXI §2108.01.e. Such records may include records of production, fuel usage, maintenance of production or pollution control equipment or other information determined by the Department to be necessary for identification and quantification of potential and actual air contaminant emissions.

14. Retention of Records (§2103.12.j.2)

The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

15. Reporting Requirements (§2103.12.k)

a. The permittee shall submit reports of any required monitoring at least every six (6) months. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by the Responsible Official.

b. Prompt reporting of deviations from permit requirements is required, including those attributable to upset conditions as defined in this permit and Article XXI §2108.01.c, the probable cause of such deviations, and any corrective actions or preventive measures taken.

c. All reports submitted to the Department shall comply with the certification requirements of General Condition III.4 above.

d. Semiannual reports required by this permit shall be submitted to the Department as follows:
1) One semiannual report is due by July 31 of each year for the time period beginning January 1 and ending June 30.
2) One semiannual report is due by February 1 of each year for the time period beginning July 1 and ending December 31.

3) The first semiannual report shall be due July 31, 2024 for the time period beginning on the issuance date of this permit through June 30, 2024.

e. Reports should be submitted online through the ACHD Air Quality Regulated Entities Portal (REP). If REP is not available, written notice should be sent to the Department at aqreports@alleghenycounty.us.

16. Severability Requirement (§2103.12.l)

The provisions of this permit are severable, and if any provision of this permit is determined by a court of competent jurisdiction to be invalid or unenforceable, such a determination will not affect the remaining provisions of this permit.

17. Existing Source Reactivations (§2103.13.d)

The permittee shall not reactivate any source that has been out of operation or production for a period of one year or more unless the permittee has submitted a reactivation plan request to, and received a written reactivation plan approval from, the Department. Existing source reactivations shall meet all requirements of Article XXI §2103.13.d.

18. Administrative Permit Amendment Procedures (§2103.14.b)

An administrative permit amendment may be made consistent with the procedures of Article XXI §2103.14.b and §2103.24.b. Administrative permit amendments are not authorized for any amendment precluded by the Clean Air Act or the regulations there under.

19. Revisions and Minor Permit Modification Procedures (§2103.14.c)

Sources may apply for revisions and minor permit modifications on an expedited basis in accordance with Article XXI §2103.14.c and §2103.24.a.

20. Significant Permit Modifications (§2103.14.d)

Significant permit modifications shall meet all requirements of the applicable subparts of Article XXI, Part C, including those for applications, fees, public participation, review by affected States, and review by EPA, as they apply to permit issuance and permit renewal. The approval of a significant permit modification, if the entire permit has been reopened for review, shall commence a new full five (5) year permit term. The Department shall take final action on all such permits within nine (9) months following receipt of a complete application.

21. Duty to Comply (§2103.12.f.1)

The permittee shall comply with all permit conditions and all other applicable requirements at all times. Any permit noncompliance constitutes a violation of the Clean Air Act, the Air Pollution Control Act, and Article XXI and is grounds for any and all enforcement action, including, but not limited to, permit termination, revocation and reissuance, or modification, and denial of a permit renewal application.

22. Renewals (§2103.13.b.)

Renewal of this permit is subject to the same fees and procedural requirements, including those for public participation and affected State and EPA review, that apply to initial permit issuance. The application for renewal shall be submitted at least six (6) months but not more than eighteen (18) months prior to expiration of this permit. The application shall also include submission of a supplemental compliance review as required by Article XXI §2102.01.

23. Reopenings for Cause (§2103.12.f.3, §2103.25.a)

a. This permit shall be reopened and reissued under any of the following circumstances:

1) Additional requirements under the Clean Air Act become applicable to a major source with a remaining permit term of three (3) or more years. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended solely due to the failure of the Department to act on a permit renewal application in a timely fashion.
2) Additional requirements, including excess emissions requirements, become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into this permit.
3) The Department or EPA determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit.
4) The Administrator or the Department determines that this permit must be reissued or revoked to assure compliance with the applicable requirements.

b. This permit may be modified; revoked, reopened, and reissued; or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes, for changes that are provided for in this permit.

24. Reopenings for Cause by the EPA (§2103.25.b)

This permit may be modified, reopened and reissued, revoked or terminated for cause by the EPA in accordance with procedures specified in Article XXI §2103.25.b.

25. Annual Operating Permit Maintenance Fee (§2103.40)

In each year during the term of this permit, on or before December 31 of each year for the next calendar year, the permittee shall submit to the Department, in addition to any other applicable administration fees, an Annual Operating Permit Maintenance Fee in accordance with §2103.40. by check or money order payable to the "Allegheny County Air Pollution Control Fund" in the amount specified in the fee schedule applicable at that time.

26. Annual Major Source Emissions Fees Requirements (§2103.41)

No later than September 1 of each year, the permittee shall pay an annual emission fee in accordance with Article XXI §2103.41 for each ton of a regulated pollutant (except for carbon monoxide) actually emitted

from the source. The permittee shall not be required to pay an emission fee for emissions of more than 4,000 tons of each regulated pollutant. The emission fee shall be increased in each year after 1995 by the percentage, if any, by which the Consumer Price Index for the most recent calendar year exceeds the Consumer Price Index for the previous calendar year.

27. Other Requirements not Affected (§2104.08, §2105.02)

Compliance with the requirements of this permit shall not in any manner relieve any person from the duty to fully comply with any other applicable Federal, State, or County statute, rule, regulation, or the like, including but not limited to the odor emission standards under Article XXI §2104.04, any applicable NSPSs, NESHAPs, MACTs, or Generally Achievable Control Technology (GACT) standards now or hereafter established by the EPA, and any applicable requirements of BACT or LAER as provided by Article XXI, any condition contained in any applicable Installation or Operating Permit and/or any additional or more stringent requirements contained in an order issued to such person pursuant to Article XXI Part I.

28. Termination of Operation (§2108.01.a)

In the event that operation of any source of air contaminants is permanently terminated, the person responsible for such source shall so report, in writing, to the Department within 60 days of such termination.

29. Tests by the Department (§2108.02.d)

Notwithstanding any tests conducted pursuant to Article XXI §2108.02, the Department or another entity designated by the Department may conduct emissions testing on any source or air pollution control equipment. At the request of the Department, the person responsible for such source or equipment shall provide adequate sampling ports, safe sampling platforms and adequate utilities for the performance of such tests.

30. Other Rights and Remedies Preserved (§2109.02.b)

Nothing in this permit shall be construed as impairing any right or remedy now existing or hereafter created in equity, common law or statutory law with respect to air pollution, nor shall any court be deprived of such jurisdiction for the reason that such air pollution constitutes a violation of this permit.

31. Enforcement and Emergency Orders (§2109.03, §2109.05)

a. The person responsible for this source shall be subject to any and all enforcement and emergency orders issued to it by the Department in accordance with Article XXI §2109.03, §2109.04 and §2109.05.

b. Upon request, any person aggrieved by an Enforcement Order or Emergency Order shall be granted a hearing as provided by Article XXI §2109.03.d; provided however, that an Emergency Order shall continue in full force and effect notwithstanding the pendency of any such appeal.

c. Failure to comply with an Enforcement Order or immediately comply with an Emergency Order shall be a violation of this permit thus giving rise to the remedies provided by Article XXI §2109.02.

32. Penalties, Fines, and Interest (§2109.07.a)

A source that fails to pay any fee required under this permit when due shall pay a civil penalty of 50% of the fee amount, plus interest on the fee amount computed in accordance with Article XXI §2109.06.a.4 from the date the fee was required to be paid. In addition, the source may have this permit revoked for failure to pay any fee required.

33. Appeals (§2109.10)

In accordance with State Law and County regulations and ordinances, any person aggrieved by an order or other final action of the Department issued pursuant to Article XXI or any unsuccessful petitioner to the Administrator under Article XXI Part C, Subpart 2, shall have the right to appeal the action to the Director in accordance with the applicable County regulations and ordinances.

34. Risk Management (§2104.08, 40 CFR Part 68)

This source, as defined in 40 CFR Part 68.3, is subject to Part 68. This stationary source shall submit a risk management plan (RMP) by the date specified in Part 68.10. This stationary source shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by General Condition III.12 above.

35. Operational Flexibility (§2103.14.a)

a. The owner or operator shall not make any changes at this source, including trades of increases and decreases in emissions within the permitted source, without first obtaining a permit revision for such changes, unless:

1) The changes do not require an Installation Permit under §2102.04 of this Article or violate the terms of an Operating Permit or an Installation Permit;
2) The permit specifically allows for changes that do not cause specific emissions increases greater than a de minimis emission increase, and the changes do not exceed such emissions increase allowed under the permit, in accordance with General Condition III.36 below;
3) The changes do not violate major source applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements; and
4) By no later than seven (7) days prior to the date on which the implementation of the proposed change is commenced, a written notification is submitted to the Department, for attachment to the Department's copy of the relevant permit, which includes:
    a) A brief description of the change within the permitted source;
    b) The date on which the change will occur;
    c) The pollutants emitted; and
    d) Any change in emissions.

36. De Minimis Emission Increases (§2103.14.e)

a. The Department may allow, as a condition of an Operating Permit, *de minimis* emission increases from a new or existing source up to the amounts authorized in condition III.36.d below.

b. A *de minimis* increase may not occur at a source if it either:

1) Increases the emissions of a pollutant regulated under Section 112 of the Clean Air Act (42 U.S.C.A. §7412) except as authorized in conditions III.36.d.4) and 5) below;
2) Subjects the source to the permit requirements of Article XXI, §§2102.05, 2102.06, or 2102.07 (relating to prevention of significant deterioration of air quality and major new source and major modification review); or
3) Violates an applicable requirement of this Article, the state Air Pollution Control Act, the Clean Air Act, or the regulations promulgated under the Air Pollution Control Act or the Clean Air Act.

c. The permittee shall provide the Department with 7 days prior written notice of any *de minimis* emission increase. The notice shall identify and describe the pollutants that will be emitted as a result of the *de minimis* emissions increase and provide emission rates in tons/year and in terms necessary to establish compliance consistent with any applicable requirement. The Department may disapprove or condition the *de minimis* emission increase at any time.

d. Except as provided in condition III.36.e below, the maximum *de minimis* emission rate increases, as measured in tons/year, that may be authorized in the permit during the term of the permit are:
1) Four tons of carbon monoxide from an emissions unit during the term of the permit and 20 tons of carbon monoxide at the source during the term of the permit;
2) One ton of NO_X from an emissions unit during the term of the permit and 5 tons of NO_X at the source during the term of the permit;
3) One and six-tenths tons of oxides of sulfur from an emissions unit during the term of the permit and 8.0 tons of oxides of sulfur at the source during the term of the permit;
4) Six-tenths of a ton of PM_{10} from an emissions unit during the term of the permit and 3.0 tons of PM_{10} at the source during the term of the permit. This shall include emissions of a pollutant regulated under Section 112 of the Clean Air Act unless precluded by the Clean Air Act, the regulations thereunder, or Article XXI; and
5) One ton of VOC's from an emissions unit during the term of the permit and 5 tons of VOC's at the source during the term of the permit. This shall include emissions of a pollutant regulated under Section 112 of the Clean Air Act unless precluded by the Clean Air Act, the regulations thereunder, or Article XXI.

e. The Department may allow, as a condition of an operating permit, installation of the minor sources exempted under §2102.04.a.5 of Article XXI.

f. *De minimis* emission threshold levels cannot be met by offsetting emission increases with emission decreases at the same emissions unit.

37. Permit Shield (§2103.22)

a. The permittee's compliance with the conditions of this permit shall be deemed compliance with all major source applicable requirements as of the date of permit issuance, provided that:

1) Such major source applicable requirements are included and are specifically identified in the permit; or

2) The Department, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.

b. Nothing in Article XXI §2103.22.e or the Title V Permit shall alter or affect the following:

1) The provisions of Section 303 of the Clean Air Act and the provisions of Article XXI regarding emergency orders, including the authority of the Administrator and the Department under such provisions;
2) The liability of any person who owns, operates, or allows to be operated, a source in violation of any major source applicable requirements prior to or at the time of permit issuance;
3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; or
4) The ability of the EPA or the County to obtain information from the permittee pursuant to Section 114 of the Clean Air Act, the provisions of Article XXI and State law.

c. Unless precluded by the Clean Air Act or regulations therein, final action by the Department on administrative amendments, minor and significant permit modifications, and operational flexibility changes shall be covered by the permit shield provided such amendments, modifications and changes meet the relevant requirements of Article XXI.

d. The permit shield authorized under Article XXI §2103.22 is in effect for the permit terms and conditions as identified in this permit.

38. Circumvention (§2101.14)

For purposes of determining compliance with the provisions of this permit and Article XXI, no credit shall be given to any person for any device or technique, including but not limited to the operation of any source with unnecessary amounts of air, the combining of separate sources except as specifically permitted by Article XXI and the Department, the use of stacks exceeding Good Engineering Practice height as defined by regulations promulgated by the US EPA at 40 CFR §§51.100 and 51.110 and Subpart I, and other dispersion techniques, which without reducing the amount of air contaminants emitted, conceals or dilutes an emission of air contaminants which would otherwise violate the provisions of this Article; except that, for purposes of determining compliance with Article §2104.04 concerning odors, credit for such devices or techniques, except for the use of a masking agent, may be given.

39. Duty to Supplement and Correct Relevant Facts (§2103.11.d.2)

a. The permittee shall provide additional information as necessary to address requirements that become applicable to the source after the date it files a complete application but prior to the Department taking action on the permit application.

b. The permittee shall provide supplementary fact or corrected information upon becoming aware that incorrect information has been submitted or relevant facts were not submitted.

c. Except as otherwise required by this permit and Article XXI, the Clean Air Act, or the regulations thereunder, the permittee shall submit additional information as necessary to address changes occurring at the source after the date it files a complete application but prior to the Department taking action on the permit application.

d. The applicant shall submit information requested by the Department which is reasonably necessary to evaluate the permit application.

40. Effect (§2102.03.g.)

a. Except as specifically otherwise provided under Article XXI, Part C, issuance of a permit pursuant to Article XXI Part B or Part C shall not in any manner relieve any person of the duty to fully comply with the requirements of this permit, Article XXI or any other provision of law, nor shall it in any manner preclude or affect the right of the Department to initiate any enforcement action whatsoever for violations of this permit or Article XXI, whether occurring before or after the issuance of such permit. Further, except as specifically otherwise provided under Article XXI Part C the issuance of a permit shall not be a defense to any nuisance action, nor shall such permit be construed as a certificate of compliance with the requirements of this permit or Article XXI.

41. Installation Permits (§2102.04.a.1.)

It shall be a violation of this permit giving rise to the remedies set forth in Article XXI Part I for any person to install, modify, replace, reconstruct, or reactivate any source or air pollution control equipment which would require an installation permit or permit modification in accordance with Article XXI Part B or Part C.

IV. SITE LEVEL TERMS AND CONDITIONS

1. Reporting of Upset Conditions (§2103.12.k.2)

The permittee shall promptly report all deviations from permit requirements, including those attributable to upset conditions as defined in Article XXI §2108.01.c, the probable cause of such deviations, and any corrective actions or preventive measures taken.

2. Visible Emissions (§2104.01.a)

Except as provided for by Article XXI §2108.01.d pertaining to a cold start, no person shall operate, or allow to be operated, any source in such manner that the opacity of visible emissions from a flue or process fugitive emissions from such source, excluding uncombined water:

a. Equal or exceed an opacity of 20% for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period; or,

b. Equal or exceed an opacity of 60% at any time.

3. Odor Emissions (§2104.04) *(County-only enforceable)*

No person shall operate, or allow to be operated, any source in such manner that emissions of malodorous matter from such No person shall operate, or allow to be operated, any source in such manner that emissions of malodorous matter from such source are perceptible beyond the property line of such source. In addition, the Department may pursue the remedies provided by §2109.02 for any violation of this Section.
source are perceptible beyond the property line.

4. Materials Handling (§2104.05)

The permittee shall not conduct, or allow to be conducted, any materials handling operation in such manner that emissions from such operation are visible at or beyond the property line.

5. Operation and Maintenance (§2105.03)

All air pollution control equipment required by this permit or any order under Article XXI, and all equivalent compliance techniques approved by the Department, shall be properly installed, maintained, and operated consistently with good air pollution control practice.

6. Open Burning (§2105.50)

No person shall conduct, or allow to be conducted, the open burning of any material, except where the Department has issued an Open Burning Permit to such person in accordance with Article XXI §2105.50 or where the open burning is conducted solely for the purpose of non-commercial preparation of food for human consumption, recreation, light, ornament, or provision of warmth for outside workers, and in a manner which contributes a negligible amount of air contaminants.

7. Shutdown of Control Equipment (§2108.01.b)

a. In the event any air pollution control equipment is shut down for reasons other than a breakdown, the person responsible for such equipment shall report, in writing, to the Department the intent to

shut down such equipment at least 24 hours prior to the planned shutdown. Notwithstanding the submission of such report, the equipment shall not be shut down until the approval of the Department is obtained; provided, however, that no such report shall be required if the source(s) served by such air pollution control equipment is also shut down at all times that such equipment is shut down.

b. The Department shall act on all requested shutdowns as promptly as possible. If the Department does not take action on such requests within ten (10) calendar days of receipt of the notice, the request shall be deemed denied, and upon request, the owner or operator of the affected source shall have a right to appeal in accordance with the provisions of Article XI.

c. The prior report required by Site Level Condition IV.7.a above shall include:

1) Identification of the specific equipment to be shut down, its location and permit number (if permitted), together with an identification of the source(s) affected;
2) The reasons for the shutdown;
3) The expected length of time that the equipment will be out of service;
4) Identification of the nature and quantity of emissions likely to occur during the shutdown;
5) Measures, including extra labor and equipment, which will be taken to minimize the length of the shutdown, the amount of air contaminants emitted, or the ambient effects of the emissions;
6) Measures which will be taken to shut down or curtail the affected source(s) or the reasons why it is impossible or impracticable to shut down or curtail the affected source(s) during the shutdown; and
7) Such other information as may be required by the Department.

d. Written notice required by this condition should be submitted online through the ACHD Air Quality Regulated Entities Portal (REP). If REP is not available, written notice should be sent to the Department at aqreports@alleghenycounty.us.

8. Breakdowns (§2108.01.c)

a. In the event that any air pollution control equipment, process equipment, or other source of air contaminants breaks down in such manner as to have a substantial likelihood of causing the emission of air contaminants in violation of this permit, or of causing the emission into the open air of potentially toxic or hazardous materials, the person responsible for such equipment or source shall immediately, but in no event later than sixty (60) minutes after the commencement of the breakdown, notify the Department of such breakdown and shall, as expeditiously as possible but in no event later than seven (7) days after the original notification, provide written notice to the Department.

b. To the maximum extent possible, all oral and written notices required shall include all pertinent facts, including:

1) Identification of the specific equipment which has broken down, its location and permit number (if permitted), together with an identification of all related devices, equipment, and other sources which will be affected.
2) The nature and probable cause of the breakdown.
3) The expected length of time that the equipment will be inoperable or that the emissions will continue.
4) Identification of the specific material(s) which are being, or are likely to be emitted, together

with a statement concerning its toxic qualities, including its qualities as an irritant, and its potential for causing illness, disability, or mortality.

5) The estimated quantity of each material being or likely to be emitted.
6) Measures, including extra labor and equipment, taken or to be taken to minimize the length of the breakdown, the amount of air contaminants emitted, or the ambient effects of the emissions, together with an implementation schedule.
7) Measures being taken to shut down or curtail the affected source(s) or the reasons why it is impossible or impractical to shut down the source(s), or any part thereof, during the breakdown.

c. Notices required shall be updated, in writing, as needed to advise the Department of changes in the information contained therein. In addition, any changes concerning potentially toxic or hazardous emissions shall be reported immediately. All additional information requested by the Department shall be submitted as expeditiously as practicable.

d. Unless otherwise directed by the Department, the Department shall be notified whenever the condition causing the breakdown is corrected or the equipment or other source is placed back in operation by no later than 9:00 AM on the next County business day. Within seven (7) days thereafter, written notice shall be submitted pursuant to Paragraphs a and b above.

e. Breakdown reporting shall not apply to breakdowns of air pollution control equipment which occur during the initial startup of said equipment, provided that emissions resulting from the breakdown are of the same nature and quantity as the emissions occurring prior to startup of the air pollution control equipment.

f. In no case shall the reporting of a breakdown prevent prosecution for any violation of this permit or Article XXI.

g. Written notice required by this condition should be submitted online through the ACHD Air Quality Regulated Entities Portal (REP). If REP is not available, written notice should be sent to the Department at aqreports@alleghenycounty.us.

9. Cold Start (§2108.01.d)

In the event of a cold start on any fuel-burning or combustion equipment, except stationary internal combustion engines and combustion turbines used by utilities to meet peak load demands, the person responsible for such equipment shall report in writing to the Department the intent to perform such cold start at least 24 hours prior to the planned cold start. Such report shall identify the equipment and fuel(s) involved and shall include the expected time and duration of the startup. Upon written application from the person responsible for fuel-burning or combustion equipment which is routinely used to meet peak load demands and which is shown by experience not to be excessively emissive during a cold start, the Department may waive these requirements and may instead require periodic reports listing all cold starts which occurred during the report period. The Department shall make such waiver in writing, specifying such terms and conditions as are appropriate to achieve the purposes of Article XXI. Such waiver may be terminated by the Department at any time by written notice to the applicant. Cold start notifications should be submitted online through the ACHD Air Quality Regulated Entities Portal (REP). If REP is not available, written notice should be sent to the Department at aqreports@alleghenycounty.us.

10. Emissions Inventory Statements (§2108.01.e & g)

a. Emissions inventory statements in accordance with Article XXI §2108.01.e shall be submitted to the Department by March 15 of each year for the preceding calendar year. The Department may require more frequent submittals if the Department determines that more frequent submissions are required by the EPA or that analysis of the data on a more frequent basis is necessary to implement the requirements of Article XXI or the Clean Air Act.

b. The failure to submit any report or update within the time specified, the knowing submission of false information, or the willful failure to submit a complete report shall be a violation of this permit giving rise to the remedies provided by Article XXI §2109.02.

11. Orders (§2108.01.f)

In addition to meeting the requirements of General Condition III.28 and Site Level Conditions IV.7 through IV.10 above, inclusive, the person responsible for any source shall, upon order by the Department, report to the Department such information as the Department may require in order to assess the actual and potential contribution of the source to air quality. The order shall specify a reasonable time in which to make such a report.

12. Violations (§2108.01.g)

The failure to submit any report or update thereof required by General Condition III.28 and Site Level Conditions IV.7 through IV.11 above, inclusive, within the time specified, the knowing submission of false information, or the willful failure to submit a complete report shall be a violation of this permit giving rise to the remedies provided by Article XXI §2109.02.

13. Emissions Testing (§2108.02)

a. **Orders:** The person responsible for any source shall, upon order by the Department, conduct, or cause to be conducted, such emissions tests as specified by the Department within such reasonable time as is specified by the Department. Test results shall be submitted in writing to the Department within 20 days after completion of the tests, unless a different period is specified in the Department's order. Emissions testing shall comply with all applicable requirements of Article XXI §2108.02.e.

b. **Tests by the Department:** Notwithstanding any tests conducted pursuant to this permit, the Department or another entity designated by the Department may conduct emissions testing on any source or air pollution control equipment. At the request of the Department, the permittee shall provide adequate sampling ports, safe sampling platforms and adequate utilities for the performance of such tests.

c. **Testing Requirements:** No later than 45 days prior to conducting any tests required by this permit, the person responsible for the affected source shall submit for the Department's approval a written test protocol explaining the intended testing plan, including any deviations from standard testing procedures, the proposed operating conditions of the source during the test, calibration data for specific test equipment and a demonstration that the tests will be conducted under the direct supervision of persons qualified by training and experience satisfactory to the Department to conduct such tests. In addition, at least 30 days prior to conducting such tests, the person responsible shall notify the Department in writing of the time(s) and date(s) on which the tests will be conducted

and shall allow Department personnel to observe such tests, record data, provide pre-weighed filters, analyze samples in a County laboratory and to take samples for independent analysis. Test results shall be comprehensively and accurately reported in the units of measurement specified by the applicable emission limitations of this permit.

d. Test methods and procedures shall conform to the applicable reference method set forth in this permit or Article XXI Part G, or where those methods are not applicable, to an alternative sampling and testing procedure approved by the Department consistent with Article XXI §2108.02.e.2.

e. **Violations:** The failure to perform tests as required by this permit or an order of the Department, the failure to submit test results within the time specified, the knowing submission of false information, the willful failure to submit complete results, or the refusal to allow the Department, upon presentation of a search warrant, to conduct tests, shall be a violation of this permit giving rise to the remedies provided by Article XXI §2109.02.

14. Abrasive Blasting (§2105.51)

a. Except where such blasting is a part of a process requiring an operating permit , no person shall conduct or allow to be conducted, abrasive blasting or power tool cleaning of any surface, structure, or part thereof, which has a total area greater than 1,000 square feet unless such abrasive blasting complies with all applicable requirements of Article XXI §2105.51.

b. In addition to complying with all applicable provisions of §2105.51, no person shall conduct, or allow to be conducted, abrasive blasting of any surface unless such abrasive blasting also complies with all other applicable requirements of Article XXI unless such requirements are specifically addressed by §2105.51.

15. Asbestos Abatement (§2105.62, §2105.63)

In the event of removal, encasement, or encapsulation of Asbestos-Containing Material (ACM) at a facility or in the event of the demolition of any facility, the permittee shall comply with all applicable provisions of Article XXI §2105.62 and §2105.63.

16. Protection of Stratospheric Ozone (40 CFR Part 82)

a. Permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
   1) All containers in which a Class I or Class II substance is stored or transported, all products containing a Class I substance, and all products directly manufactured with a process that uses a Class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to §82.106;
   2) The placement of the required warning statement must comply with the requirements pursuant to §82.108;
   3) The form of the label bearing the required warning statement must comply with the requirements pursuant to §82.110; and
   4) No person may modify, remove or interfere with the required warning statement except as described in §82.112.

b. Permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F:

1) Persons opening appliances for maintenance, service, repair or disposal must comply with the prohibitions and required practices pursuant to §82.154 and §82.156;
2) Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158;
3) Persons maintaining, servicing, repairing or disposing of appliances, must be certified by an approved technician certification program pursuant to §82.161;
4) Persons maintaining, servicing, repairing or disposing of appliances must certify to the Administrator of the U.S. Environmental Protection Agency pursuant to §82.162;
5) Persons disposing of small appliances, motor vehicle air conditioners (MVAC) and MVAC-like appliances, must comply with the record keeping requirements pursuant to §82.166;
6) Owners of commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to §82.156; and
7) Owners or operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.

c. If the permittee manufactures, transforms, destroys, imports or exports a Class I or Class II substance, the Permittee is subject to all the requirements as specified in 40 CFR Part 82, Subpart A (Production and Consumption Controls).

d. If the permittee performs a service on a motor vehicle that involves an ozone-depleting substance, refrigerant or regulated substitute substance in the MVAC, the Permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B (Servicing of Motor Vehicle Air Conditioners).

e. The permittee may switch from any ozone-depleting substance to any alternative that is listed as acceptable in the Significant New Alternatives Policy (SNAP) program promulgated pursuant to 40 CFR Part 82, Subpart G.

17. Volatile Organic Compound Storage Tanks (§2105.12.a)

No person shall place or store, or allow to be placed or stored, a volatile organic compound having a vapor pressure of 1.5 psia or greater under actual storage conditions in any aboveground stationary storage tank having a capacity equal to or greater than 2,000 gallons but less than or equal to 40,000 gallons, unless there is in operation on such tank pressure relief valves which are set to release at the higher of 0.7 psig of pressure or 0.3 psig of vacuum or at the highest possible pressure and vacuum in accordance with State or local fire codes, National Fire Prevention Association guidelines, or other national consensus standard approved in writing by the Department. Petroleum liquid storage vessels that are used to store produced crude oil and condensate prior to lease custody transfer are exempt from these requirements.

18. Permit Source Premises (§2105.40)

a. **General:** No person shall operate, or allow to be operated, any source for which a permit is required by Article XXI Part C in such manner that emissions from any open land, roadway, haul road, yard, or other premises located upon the source or from any material being transported within such source or from any source-owned access road, haul road, or parking lot over five (5) parking spaces:

1) Are visible at or beyond the property line of such source;
2) Have an opacity of 20% or more for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period; or
3) Have an opacity of 60% or more at any time.

b. **Deposition on Other Premises:** Visible emissions from any solid or liquid material that has been deposited by any means from a source onto any other premises shall be considered emissions from such source within the meaning of Site Level Condition IV.18.a above.

19. Parking Lots and Roadways (§2105.42)

a. The permittee shall not maintain for use, or allow to be used, any parking lot over 50 parking spaces or used by more than 50 vehicles in any day or any other roadway carrying more than 100 vehicles in any day or 15 vehicles in any hour in such manner that emissions from such parking lot or roadway:

1) Are visible at or beyond the property line;
2) Have an opacity of 20% or more for a period or periods aggregating more than three (3) minutes in any 60 minute period; or
3) Have an opacity of 60% or more at any time.

b. Visible emissions from any solid or liquid material that has been deposited by any means from a parking lot or roadway onto any other premises shall be considered emissions from such parking lot or roadway.

c. Site Level Condition IV.19.a above shall apply during any repairs or maintenance done to such parking lot or roadway.

d. Notwithstanding any other provision of this permit, the prohibitions of Site Level Condition IV.19 may be enforced by any municipal or local government unit having jurisdiction over the place where such parking lots or roadways are located. Such enforcement shall be in accordance with the laws governing such municipal or local government unit. In addition, the Department may pursue the remedies provided by Article XXI §2109.02 for any violations of Site Level Condition IV.19.

20. Permit Source Transport (§2105.43)

a. No person shall transport, or allow to be transported, any solid or liquid material outside the boundary line of any source for which a permit is required by Article XXI Part C in such manner that there is any visible emission, leak, spill, or other escape of such material during transport.

b. Notwithstanding any other provision of this permit, the prohibitions of Site Level Condition IV.20 may be enforced by any municipal or local government unit having jurisdiction over the place where such visible emission, leak, spill, or other escape of material during transport occurs. Such enforcement shall be in accordance with the laws governing such municipal or local government unit. In addition, the Department may pursue the remedies provided by Article XXI §2109.02 for any violation of Site Level Condition IV.20.

21. Construction and Land Clearing (§2105.45)

a. No person shall conduct, or allow to be conducted, any construction or land clearing activities in such manner that the opacity of emissions from such activities:

1) Equal or exceed 20% for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period; or

2) Equal or exceed 60% at any time.

b. Notwithstanding any other provision of this permit, the prohibitions of Site Level Condition IV.21 may be enforced by any municipal or local government unit having jurisdiction over the place where such construction or land clearing activities occur. Such enforcement shall be in accordance with the laws governing such municipal or local government unit. In addition, the Department may pursue the remedies provided by Article XXI §2109.02 for any violations of Site Level Condition IV.21.

22. Mining (§2105.46)

No person shall conduct, or allow to be conducted, any mining activities in such manner that emissions from such activities:

a. Are visible at or beyond the property line;
b. Have an opacity of 20% or more for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period; or,
c. Have an opacity of 60% or more at any time.

23. Demolition (§2105.47)

a. No person shall conduct, or allow to be conducted, any demolition activities in such manner that the opacity of the emissions from such activities equal or exceed 20% for a period or periods aggregating more than three (3) minutes in any 60 minute period.

b. Notwithstanding any other provisions of this permit, the prohibitions of Site Level Condition IV.23 may be enforced by any municipal or local government unit having jurisdiction over the place where such demolition activities occur. Such enforcement shall be in accordance with the laws governing such municipal or local government unit. In addition, the Department may pursue the remedies provided by Article XXI §2109.02 for any violations of Site Level Condition IV.23.

24. Fugitive Emissions (§2105.49)

The person responsible for a source of fugitive emissions, in addition to complying with all other applicable provisions of this permit shall take all reasonable actions to prevent fugitive air contaminants from becoming airborne. Such actions may include, but are not limited to:

a. The use of asphalt, oil, water, or suitable chemicals for dust control;
b. The paving and maintenance of roadways, parking lots and the like;
c. The prompt removal of earth or other material which has been deposited by leaks from transport, erosion or other means;
d. The adoption of work or other practices to minimize emissions;
e. Enclosure of the source; and
f. The proper hooding, venting, and collection of fugitive emissions.

25. Episode Plans (§2106.02 and Article XXI Part F)

The permittee shall upon written request of the Department, submit a source curtailment plan, consistent with good industrial practice and safe operating procedures, designed to reduce emissions of air

contaminants during air pollution episodes. Such plans shall meet the requirements of Article XXI §2106.02.

26. New Source Performance Standards (§2105.05)

a. It shall be a violation of this permit giving rise to the remedies provided by §2109.02 of Article XXI for any person to operate, or allow to be operated, any source in a manner that does not comply with all requirements of any applicable NSPS now or hereafter established by the EPA, except if such person has obtained from EPA a waiver pursuant to Section 111 or Section 129 of the Clean Air Act or is otherwise lawfully temporarily relieved of the duty to comply with such requirements.

b. Any person who operates, or allows to be operated, any source subject to any NSPS shall conduct, or cause to be conducted, such tests, measurements, monitoring and the like as is required by such standard. All notices, reports, test results and the like as are required by such standard shall be submitted to the Department in the manner and time specified by such standard. All information, data and the like which is required to be maintained by such standard shall be made available to the Department upon request for inspection and copying.

27. National Emission Standards for Hazardous Air Pollutants (§2104.08)

a. The permittee shall comply with each applicable emission limitation, work practice standard, and operation and maintenance requirement of 40 CFR Part 63, Subpart DDDDD – *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters*.

b. The permittee shall comply with each applicable emission limitation, work practice standard, and operation and maintenance requirement of40 CFR Part 61, Subpart FF – *National Emission Standard for Benzene Waste Operations*.

c. The permittee shall comply with each applicable emission limitation, work practice standard, and operation and maintenance requirement of 40 CFR Part 63, Subpart FFFF - *National Emission Standard for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing.*

d. The permittee shall comply with each applicable emission limitation, work practice standard, and operation and maintenance requirement of 40 CFR Part 63, Subpart SS (as referenced by Subpart FFFF) - *National Emission Standard for Closed Vent Systems, Control Devices, Recovery Devices and Routing.*

e. The permittee shall comply with each applicable emission limitation, work practice standard, and operation and maintenance requirement of 40 CFR Part 63, Subpart UU (as referenced by Subpart FFFF) - *National Emission Standard for Equipment Leaks – Control Level 2 Standards.*

28. Greenhouse Gas Reporting (40 CFR Part 98)

If the facility emits 25,000 metric tons or more of carbon dioxide equivalent (CO_2e) in any 12-month period, the facility shall submit reports to the US EPA in accordance with 40 CFR Part 98.

V. EMISSION UNIT LEVEL TERMS AND CONDITIONS

A. C5 Unit – $AlCl_3$ Handling Operation

Process Description: $AlCl_3$ silo, $AlCl_3$ receiver, $AlCl_3$ charging chamber
Max. Design Rate: 140 MM lbs resin/year
Raw Materials: Aluminum Chloride ($AlCl_3$)
Control Device: 2 Baghouses and Wet Scrubber

1. Restrictions:

a. Permittee shall at no time, conduct or allow to be conducted, $AlCl_3$ filling of, or material transfer through, the $AlCl_3$ Silo, $AlCl_3$ Receiver and $AlCl_3$ Charging Chamber unless the subject silo, receiver, charging chamber and associated control equipment are properly maintained and operated according to the following conditions, at all times: [IP #0058-I008c, V.A.1.a; §2103.12.a.2.D]

1) The silo, receiver and charging chamber shall be closed, with the exception of required ventilation and maintenance access, at all times while in $AlCl_3$ service. The silo and receiver shall exhaust all $AlCl_3$ emissions to their respective baghouses, at all times while in $AlCl_3$ service.
2) The silo baghouse and receiver baghouse shall be in service treating all $AlCl_3$ emissions from the silo and receiver at all times during the unloading of, or transfer through, the silo and receiver, of $AlCl_3$. Each baghouse shall be equipped with automatic cleaning controls.
3) The silo baghouse, receiver baghouse and charging chamber shall exhaust all $AlCl_3$ emissions to the 2 eductors-type scrubbers at all times while in $AlCl_3$ service.
4) The subject scrubber shall be placed in series and shall be in service treating all $AlCl_3$ emissions from the subject baghouses and charging chamber while the baghouses and charging chamber are in $AlCl_3$ service. The scrubber shall be equipped with instrumentation that shall continuously measure the recycle rate to within 6.0% of the measuring span of the device during operation in $AlCl_3$ service.
5) The scrubbing liquid recycle rate shall be a minimum of 77 gpm based on an hourly block average.
6) The scrubbing liquid pH shall be greater than 5.0 based on an hourly block average while in operation treating $AlCl_3$ emissions.
7) The subject silo, receiver and charging chamber shall handle $AlCl_3$ only.

b. Emissions from the $AlCl_3$ scrubber system shall not exceed the following at any time: [IP #0058-I008c, V.A.1.b; §2103.12.a.2.D]

TABLE V-A-1: Emission Limitations

POLLUTANT	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year)*
Total Suspended Particulates	0.16	0.55
PM_{10}	0.16	0.55
Hydrochloric Acid	0.16	0.55

* A year is defined as any consecutive 12-month period.

2. Testing Requirements:

The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Article XXI §2108.02. [§2103.12.h.1]

3. Monitoring Requirements:

a. The permittee shall inspect the $AlCl_3$ Silo, $AlCl_3$ Receiver, $AlCl_3$ charging Chamber and control equipment for compliance with conditions in section V.A.1.a above, as follows. [IP #0058-I008c, V.A.3.a; §2103.12.a.2.D]

1) The permittee shall inspect the $AlCl_3$ silo during truck unloading, a minimum of once per month for compliance with conditions V.A.1.a.1) through V.A.1.a.4) above.
2) The permittee shall inspect the $AlCl_3$ receiver weekly for compliance with conditions V.A.1.a.1) through V.A.1.a.4) above.
3) The permittee shall inspect the $AlCl_3$ charging chamber weekly for compliance with conditions V.A.1.a.1) and V.A.1.a.4) above.

b. The permittee shall record the scrubbing liquid pH and recycle rate at least once every 15 minutes while the equipment associated with the scrubber is in operation. [IP #0058-I008c, V.A.3.b; §2103.12.a.2.D]

c. Any excursions from the subject specifications shall be corrected as soon as possible. [IP #0058-I008c, V.A.3.c; §2103.12.a.2.D]

4. Record Keeping Requirements:

a. The Permittee shall record the quantity of $AlCl_3$ unloaded per truck, the number of incoming $AlCl_3$ trucks, the duration of each truck unloading and the hours of operation of the $AlCl_3$ silo baghouse during unloading, for each $AlCl_3$ truck unloading event. [IP #0058-I008c, V.A.4.a; §2103.12.a.2.D]

b. The permittee shall record the results of the inspections required by conditions V.A.3.a.1) through V.A.3.a.3) above at the time of each inspection. Episodes of non-compliance with the specified conditions and corrective actions taken shall be recorded upon occurrence. [IP #0058-I008c, V.A.4.b; §2103.12.a.2.D]

c. The permittee shall record the $AlCl_3$ usage for the C-5 process on a monthly basis. [IP #0058-I008c, V.A.4.c; §2103.12.a.2.D]

d. All records required under this section shall be maintained by the permittee for a period of five years following the date of such record. [§2103.12.j.2]

5. Reporting Requirements:

a. The permittee shall report all instances of non-compliance with conditions V.A.1.a, V.A.1.b, V.A.3.a and V.A.4.a through V.A.4.d above along with all corrective action taken to restore compliance, to the Department every six months. Reports shall be submitted in accordance with Condition III.15 above. [IP #0058-I008c, V.A.5.a; §2103.12.a.2.D; §2103.12.k]

b. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8, if appropriate. [§2103.12.k]

6. Work Practice Standard:

a. The permittee may swap out the existing baghouse with an identical unit (the same air volume and efficiency) periodically to prevent corrosion, and will notify the Department at least 10 days prior to make a replacement. [IP #0058-I008c, V.A.6.a; §2103.12.a.2.D]

b. The permittee shall maintain and implement the Preventative Maintenance and Operations (PMO) Plan submitted to and approved by the Department. The permittee shall maintain the original approved PMO Plan and all subsequent revisions for a period of five years and have them available for inspection. [IP #0058-I008c, V.A.6.b; §2103.12.a.2.D]

7. Additional Requirements:

None except as provided elsewhere.

~PERMIT SHIELD IN EFFECT~

B. C5 Unit – Polymerization Process

Process Description: Hydrocarbon resin manufacture
Facility ID: C-5 Polymerization Unit
Max. Design Rate: 140 MM lbs resin/year
Raw Materials: Toluene, alpha methyl styrene, isobutylene, styrene & piperylene
Control Device: Thermal Oxidizer, UHF Filter, Baghouses, Condensers

1. Restrictions:

a. The C-5 polymerization process shall be limited to 140 million pounds of finished resin produced in any consecutive 12-month period. [IP #0058-I011f, V.A.1.a; §2103.12.a.2.D]

b. The permittee shall not operate or allow to be operated the following process equipment unless all emissions from these units are ducted to the subject thermal oxidizer: [IP #0058-I011f, V.A.1.b; §2103.12.a.2.D; 40 CFR 63.2450(a)]

R-302-1 Reactor	T-412-1 Wash Solvent Receiver
R-303-1 Soaker	T-412-1 ANNEX Wash Solvent Receiver
T-409-1 Filtrate Receiver	T-502-4 Depentanizer Overhead Receiver
T-406-2 Filter Condensate Decanter	S-404-11 Precoat Knock-out Pot
T-403-1 Solvent Flush Tank	T-506-3 Inhibitor Feed Tank
T-506-1 Inhibitor Make-up Tank	A-301-1 Calcium Dryer (out of service)
S-3630-1 C-5 API Separator	T-800-1 Reclaim Tank
500 Battery Tanks (501, 502, 503, 505 & 506)	T-609-1 Steam Jet Seal Pot

c. The thermal oxidizer shall be properly operated and maintained according to good engineering practices, manufacturer's recommendations and the following conditions at all times while treating process emissions: [IP #0058-I011f, V.A.1.c; §2105.30; §2103.12.a.2.D; 40 CFR 63, Subpart FFFF Table 1.1.a.i; 40 CFR 63, Subpart FFFF Table 2.1.a.; 40 CFR §63.2450(a); 40 CFR §63.988(a)(1) and (2)]

1) The minimum VOC destruction efficiency shall be 98% by weight;
2) The minimum HAPs destruction efficiency shall be 98% by weight;
3) The minimum ammonia destruction efficiency shall be 98% by weight;
4) The residence time shall be greater than 0.5 second;
5) The minimum operating temperature shall be temperature that corresponds to 98% destruction efficiency as demonstrated by the most recent stack test or 1,400 °F, whichever is greater; and
6) The maximum flowrate at the inlet to the oxidizer shall not exceed 500 scfm at any time.

d. The thermal oxidizer shall be equipped with instrumentation that continuously monitors the temperature of gases exiting the combustion chamber to within 2.2 °C (4 °F) of actual and records temperatures to within ½°F. The permittee shall at all times properly maintain and calibrate the continuous temperature monitor and recorder in accordance with manufacturer's specifications and good engineering practices. [IP #0058-I011f, V.A.1.d; §2103.12.a.2.D]

e. When the thermal oxidizer is not operating, the permittee shall reroute emissions from Tanks 501, 502, 503, 505 and 506, and oil/water separator S-3630-1 to a carbon bed to reduce emissions by 95% by weight, or to a VOC outlet gas concentration of 20 ppm or less. This requirement shall not apply during the first 45 minutes after the thermal oxidizer shuts down or otherwise unexpectedly

goes out of service. The permittee shall cease filling the above-mentioned storage tanks and shall cease operating the C-5 Process Unit as soon as practicable after the thermal oxidizer shuts down, but in any event no later than thirty (30) minutes after the thermal oxidizer shuts down. All periods of thermal oxidizer shut down must be recorded. [IP #0058-I011f, V.A.1.e; §2103.12.a.2.D; Subpart FFFF Table 1.1.a.i]

f. The permittee shall not operate the Reclaim Dump station, Inhibitor Dump station, or Precoat Tank Dump station unless emissions of particulate matter are exhausted to baghouses which are properly maintained and operated at all times. [IP #0058-I011f, V.A.1.f; §2103.12.a.2.D; §2105.03]

g. The baghouses shall have a particulate matter and PM_{10} minimum control efficiency of 99.9% at all times during process operations. [IP #0058-I011f, V.A.1.g; §2103.12.a.2.D]

h. The permittee shall not operate the Resin product loading (drumming) unless VOC emissions are exhausted to the UHF Filter at all times. [IP #0058-I011f, V.A.1.h; §2103.12.a.2.D]

i. The permittee shall not operate or allow to be operated the Sparkler Filter unless all emissions are router to the condensers E-519-6 and E-519-7. [IP #0058-I011f, V.A.1.i; §2103.12.a.2.D; §2105.06.b.3]

j. The permittee shall properly maintain and operate the condensers E-519-6 and E-519-7 at all times when emissions from Sparkler filters are routed to them. [IP #0058-I011f, V.A.1.j; §2103.12.a.2.D; §2105.03]

k. Emissions from the Thermal Oxidizer shall not exceed the following at any time: [IP #0058-I011f, V.A.1.k; §2103.12.a.2.D]

TABLE V-B-1: Emission Limitations

POLLUTANT	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year)*
Particulate Matter	0.05	0.20
PM_{10}	0.05	0.20
Nitrogen Oxides	5.99	26.24
Carbon Monoxide	0.09	0.41
Volatile Organic Compounds	0.11	0.46
Total HAPs	0.11	0.46
Ammonia	0.02	0.09
Toluene	0.11	0.46

* A year is defined as any consecutive 12-month period.

l. Baghouses PM/PM_{10} emissions due to operation of the Reclaim Dump station, Inhibitor Dump station, or Precoat Tank Dump station shall not exceed the following at any time [IP #0058-I011f, V.A.1.l; §2103.12.a.2.D]:

TABLE V-B-2: Emission Limitations

STACK ID	SOURCE DESCRIPTION	ANNUAL EMISSION LIMIT (tons/year)*
S051	Reclaim Dump Station	0.03
S048	Inhibitor Dump Station	0.01
S310	Precoat Tank Dump Station	≤0.0

* A year is defined as any consecutive 12-month period.

m. UHF filter VOC emissions due to resin product loading operation (drumming) shall not exceed 0.14 tons/year at any time. A year is defined as any consecutive 12-month period. [IP #0058-I011f, V.A.1.m; §2103.12.a.2.D].

n. Sparkler filter VOC, toluene, and HAP emissions due to operation shall not exceed 0.05 tons/year at any time. A year is defined as any consecutive 12-month period. [IP #0058-I011f, V.A.1.n; §2103.12.a.2.D].

o. Except as provided in Condition V.B.1.p below, the permittee shall operate the C5 Polymerization Unit using a 75% molar substitution rate of caustic for ammonia. Caustic is defined as a solution of 50% sodium hydroxide. [IP #0058-I011f, V.A.1.o; §2103.12.a.2.D].

p. The permittee may operate C5 Polymerization Unit using 100% ammonia as the neutralizing solution provided that it operates using only one Funda Filter. [IP #0058-I011f, V.A.1.p; §2103.12.a.2.D]

q. Opening a safety device is allowed at any time conditions require it to avoid unsafe conditions. [40 CFR §63.2450(p), §2103.12.a.2.B]

r. The permittee shall meet the following requirements for closed vent systems: [40 CFR §63.982(c), §2103.12.a.2.B]

1) Each closed vent system must be designed and operated to collect the vapors from the emission point and to route the vapors to the control device. [§63.983(a)(1)]
2) Closed vent system must be operated at all times when emissions are vented to or collected by them. [§63.983(a)(2)]

s. All C5 Polymerization Process Unit shall use condensers as recovery devices to maintain their respective Total Resource Effectiveness (TRE) index above 1.9. [§2103.12.a; §2104.08; 40 CFR 63, Subpart FFFF]

t. The permittee shall be in compliance with the emission limits and work practice standards in 40 CFR 63, subpart FFFF at all times, except during periods of startup, shutdown, and malfunction (SSM). [40 CFR 63.2450(a), §2103.12.a.2.B]

u. At all times, including periods of startup, shutdown, and malfunction, the permittee must operate and maintain all C5 Polymerization process equipment, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions during a period of startup, shutdown, or malfunction does not require the permittee to achieve emission levels that

are required by condition V.B.1.c above, at other times if this is not consistent with safety and good air pollution control practices, nor does it require the permittee to make any further efforts to reduce emissions if levels required by condition V.B.1.c above have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department which may include, but is not limited to, monitoring results, review of operation and maintenance procedures (including the startup, shutdown, and malfunction plan required in condition V.B.5.b below, review of operation and maintenance records, and inspection of the source. [40 CFR 63.6(e)(1)(i), §2103.12.a.2.B]

v. Malfunctions must be corrected as soon as practicable after their occurrence. To the extent that an unexpected event arises during a startup, shutdown, or malfunction, the permittee must comply by minimizing emissions during such a startup, shutdown, and malfunction event consistent with safety and good air pollution control practices. [40 CFR 63.6(e)(1)(ii), §2103.12.a.2.B]

2. Testing Requirements:

a. Testing shall be performed in accordance with the Site Level Condition IV.13 ("Emissions Testing Requirements") to determine compliance with the emission limitations and efficiencies of conditions V.B.1.c and V.B.1.k. [IP #0058-I011f, V.A.2.a; §2103.12.a.2.D]

b. Emissions testing of the thermal oxidizer for VOC, NO_X and ammonia shall be conducted at least once every five years in accordance with §2108.02. [IP #0058-I011f, V.A.2.b; §2103.12.a.2.D; §2108.02]

1) Testing shall be performed at the inlet and outlet of the thermal oxidizer to demonstrate compliance with the VOC, HAP and ammonia destruction efficiencies required by Conditions V.B.1.c.1) through V.B.1.c.3) above.
2) Testing for VOC, HAP, and ammonia emissions (inlet and outlet) shall consist of three one-hour test runs conducted at maximum VOC, HAP and ammonia process emission production. VOC efficiency and emission tests shall include one filter cleaning cycle per test run.
3) Testing for VOC, NO_X and ammonia emissions shall consist of EPA methods1 through 4, 7, 18 and EPA approved methodology for ammonia. HAP testing shall consist of EPA method 18.

c. Emissions testing shall be performed at the inlet and the outlet of the UHF Filter control unit to determine VOC emissions and the control unit's efficiency, in accordance with a test protocol approved by the Allegheny County Health Department. During the testing, the following operating parameters shall be recorded for each run and reported as part of the emission test report [IP #0058-I011f, V.A.2.c; §2103.12.a.2.D; §2108.02.]:

1) Fan speed or amperage for the UHF Filter;
2) Pressure drops across the UHF Filter;
3) Resin feed rate;
4) Finished resin produced (lbs/hour); and
5) Type of resin produced (MSDS)

d. The Department reserves the right to require additional emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Article XXI §2108.02. [§2103.12.h.1]

3. Monitoring Requirements:

a. The permittee shall inspect the thermal oxidizer, the equipment in Condition V.B.1.b above and associated ductwork monthly for proper operation of and integrity of the oxidizer, process equipment and gaseous collection systems. [IP #0058-I011f, V.A.3.a; §2103.12.a.2.D]

b. The permittee shall install, operate, and maintain a colorimetric indicator to monitor the performance of the carbon bed. In the absence of any bright purple color in the indicator, the carbon canister shall be replaced within 24 hours. [IP #0058-I011f, V.A.3.c; §2103.12.a.2.D; 40 CFR §63.995(c), 40 CFR §63.996(d)]

c. The permittee shall install, operate, and maintain instrumentation to continuously measure the differential pressure drops across the UHF Filter and baghouses to within 0.5" w.c. The monitoring device used to determine differential pressure shall be certified by the manufacturer to be accurate to within a gage pressure of ±10% of the maximum pressure drop measured. A one-hour block average differential pressure drop shall be established as a required limit for the C-5 UHF filter. The permittee shall record the differential pressure drop across the UHF filter every fifteen (15) minutes while the process unit is in operation. [IP #0058-I011f, V.A.3.d; §2103.12.a.2.D]

d. The permittee shall inspect the process line and control equipment weekly for compliance with conditions V.B.1.c through V.B.1.g above. The differential pressure drops across the UHF Filter and baghouses shall be recorded at the time of inspection. [IP #0058-I011f, V.A.3.e; §2103.12.a.2.D]

e. The permittee shall inspect the process lines and control equipment prior to the cleaning of the sparkler filters for compliance with conditions V.B.1.i and V.B.1.j above. [IP #0058-I011f, V.A.3.f; §2103.12.a.2.D]

f. The permittee shall inspect the process lines and control equipment at the drumming station prior to any drumming activity for compliance with condition V.B.1.h above. [IP #0058-I011f, V.A.3.g; §2103.12.a.2.D]

g. Inlet and outlet testing ports shall be provided on the UHF Filter. Such test ports shall be located in accordance with EPA test methods 1 and 2 (40 CFR Part 60). [IP #0058-I011f, V.A.3.h; §2103.12.a.2.D]

h. The permittee shall use a temperature device capable of providing a continuous record of the minimum operating temperature for the thermal oxidizer. Monitoring results shall be recorded as specified in condition below. [40 CFR 63.990(c)(2); §2103.12.a.2.B]

i. For continuous the minimum operating temperature records, the permittee must maintain records as specified below: [§63.998(b)(1); §2103.12.a.2.B]

1) A record of values measured at least once every 15 minutes or each measured value for systems which measure more frequently than once every 15 minutes; or
2) A record of block average values for 15-minute or shorter periods calculated from all measured data values during each period or from at least one measured data value per minute if measure more frequently than once per minute.

j. The permittee shall perform inspection and monitoring of the closed vent system. Except for closed vent systems that are designated as unsafe or difficult to inspect, each closed vent system must be inspected as follows: [§63.983(b); §2103.12.a.2.B]

1) If constructed of hard piping, must conduct an initial inspection in accordance with §63.983(c) (Method 21 of 40 CFR Part 60), and an annual inspection for visible, audible, or olfactory indications of leaks.
2) If constructed of ductwork, must conduct an initial and annual inspection in accordance with §63.983(c) (Method 21 of 40 CFR Part 60).

k. Equipment subject to the leak detection and reporting requirements shall be monitored. Leaks, as indicated by an instrument reading greater than 500 ppmv above background or by visual inspections, must be repaired as soon as practical unless a delay of repair is required under §63.983(d)(3). A first attempt at repair must be made no later than 5 days after the leaks detected, and repairs must be completed no later than 15 days after the leak is detected or at the beginning of the next introduction of vapors to the system, whichever is later. [§63.983(d)(2)]

l. Monitoring data recorded during periods of monitoring system breakdowns, repairs, preventive maintenance, calibration checks, zero (low-level) and high-level adjustments, periods of non-operation of the process unit (or portion thereof) resulting in cessation of the emissions to which the monitoring applies, shall not be included in any average to determine compliance, except monitoring data is to be collected during periods of startup, shutdown, and malfunction. [IP #0058-I011f, V.A.3.i; §2103.12.a.2.D; §2103.12.i; 40 CFR §63.998(b)(2); 40 CFR §63.2450(l)]

m. Daily average values of continuously monitored parameters must be calculated from the data and retained for 5-years. The daily average must be calculated as the average of all values for a monitored parameter recorded during the operating day. The average must cover a 24-hour period if operation is continuous, or the period of operation per operating day of operation is not continuous. [40 CFR §63.998(b)(3); §2103.12.a.2.B]

n. An excursion means that the daily average value of monitoring data for a parameter is greater than the maximum or less than the minimum established. Values from startup, shutdown and malfunctions are to be included in the averages. Excused excursions are not allowed. [40 CFR §63.998(b)(6); §2103.12.a.2.B]

4. Record Keeping Requirements:

a. The permittee shall keep and maintain the following data: [IP #0058-I011f, V.A.4.a; §2103.12.a.2.D; 40 CFR §63.2525(b)]

1) All records of monitoring required by V.B.3 above;
2) Resin production and hours of operation; (daily, monthly, 12-month);
3) Records of operation, maintenance, inspection, calibration and/or replacement of equipment;
4) Stack test protocols and reports; and
5) Manufacturer's specifications.

b. The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance. [IP #0058-I011f, V.A.4.b; §2103.12.a.2.D]

c. The permittee shall maintain relevant records for all documentation supporting initial notifications and notification of compliance status. [40 CFR 63.10(b)(2)(xiv); §2103.12.a.2.B]

d. The permittee shall keep the records of the following: [40 CFR 63.998(c)(1); §2103.12.a.2.B]

1) A record of the procedure used for calibrating the CPMS [40 CFR 63.998(c)(1)(i)]
2) A record of the results of each calibration checks and all maintenance performed on the CPMS: [40 CFR 63.998(c)(1)(ii)(A)-(H); §63.2450(k)(1)]
   a) The date and the time of completion of calibration and preventative maintenance of the CPMS;
   b) The "as found" and "as left" CPMS readings, whenever an adjustment is made that affects the CPMS reading and a "no adjustment" statement otherwise;
   c) The start time and duration or start and stop times of any periods when the CPMS is inoperative;
   d) Records of the occurrence and duration of each start-up, shutdown, and malfunction of CPMS used to comply with this subpart during which excess emissions occur;
   e) For each start-up, shutdown, and malfunction during which excess emissions occur, records whether the procedures specified in the source's start-up, shutdown, and malfunction plan were followed, and documentation of actions taken that are not consistent with the plan;
   f) Records documenting each start-up, shutdown, and malfunction event;
   g) Records of CPMS start-up, shutdown, and malfunction event that specify that there were no excess emissions during the event;
   Records of the total duration of operating time.

e. The permittee shall maintain records for of the following: [40 CFR 63.998(d)(1); §2103.12.a.2.B]

1) Identification of all parts of the closed vent system that are designated as unsafe or difficult to inspect, an explanation of why the equipment is unsafe or difficult to inspect, and the plan for inspecting the equipment required by 40 CFR §63.983(b)(2)(ii) or (III);
2) When a leak is detected, the following information must be recorded and kept for 5 years [40 CFR §63.998(d)(1)(iii)(A)-(F)]
   a) The instrument and the equipment identification number and the operator name, initials, or identification number;
   b) The date the leak was detected and the date of the first attempt to repair the leak;
   c) The date of successful repair of the leak;
   d) The maximum instrument reading measured by procedures in §63.998(c) after the leak is successfully repaired or determined to be non-repairable;
   e) Reason for delay of repair if a leak is not repaired within 15 days after discovery;
   f) Copies of compliance reports.
3) For each instrumental or visual inspection conducted in accordance with §63.983(b)(1) during which no leaks are detected, records that the inspection was performed, date of the inspection, and a statement that no leaks were detected. [40 CFR §63.998(d)(1)(iv)]
4) Regulated source and control equipment start-up, shutdown, and malfunction records [40 CFR §63.998(d)(3)]
   a) Record of the occurrence and duration of each start-up, shutdown, and malfunction of operation of process equipment or control equipment during which excess emissions occur must be maintained [40 CFR §63.998(d)(3)(i)]
   b) For each start-up, shutdown, and malfunction during which excess emissions occur, records that the procedures specified in the source's start-up, shutdown, and malfunction

plan were followed, and documentation of actions taken that are not consistent with the plan. [40 CFR §63.998(d)(3)(ii)]

c) Records of monitored parameters outside the operating limit. The permittee shall record the occurrences and the cause of periods when the monitored parameters are outside of the parameter ranges documented in the Notification of Compliance Status report. This information shall also be reported in the Compliance report. [40 CFR §63.998(d)(5)]

f. Records each time a safety device is opened to avoid unsafe conditions in accordance with §63.2450(p). [40 CFR §63.2525(f); §2103.12.a.2.B]

g. All records required under this section shall be maintained by the permittee for a period of five years following the date of such record. [§2103.12.j.2; 40 CFR 63.10(b)]

5. Reporting Requirements:

a. The permittee shall report the following information to the Department in accordance with General Condition III.15 above. The reports shall contain all required information for the time period of the report: [IP #0058-I011f, V.A.5.a; §2103.12.a.2.D]

1) Monthly and 12-month data required to be recorded by condition V.B.4.a; and
2) Non-compliance information required to be recorded by V.B.4.b above.

b. The permittee must develop a written startup, shutdown, and malfunction plan that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction; and a program of corrective action for malfunctioning process, air pollution control, and monitoring equipment used to comply with the relevant standard. The startup, shutdown, and malfunction plan does not need to address any scenario that would not cause the source to exceed the emission limitation in condition V.B.1.k above. The purpose of the startup, shutdown, and malfunction plan is as follows. [40 CFR 63.6 (e)(3)(i)); §2103.12.a.2.B]

1) Ensure that, at all times, the permittee operates and maintains each C5 Polymerization process equipment, including associated air pollution control and monitoring equipment, in a manner which satisfies the general duty to minimize emissions established by condition V.B.1.u above.;
2) Ensure that the permittee is prepared to correct malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of hazardous air pollutants; and
3) Reduce the reporting burden associated with periods of startup, shutdown, and malfunction (including corrective action taken to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation).

c. The notification of compliance status report must include the information below. [40 CFR 63.2520(d)(2); §2103.12.a.2.B]

1) The results of any applicability determinations, emission calculations, or analyses used to identify and quantify HAP usage or HAP emissions from the affected source.
2) The results of emissions profiles, performance tests, engineering analyses, design evaluations, inspections and repairs, and calculations used to demonstrate initial compliance. For performance tests, results must include descriptions of sampling and analysis procedures and quality assurance procedures.

3) Descriptions of monitoring devices, monitoring frequencies, and the operating limits established during the initial compliance demonstrations, including data and calculations to support the levels established.

d. The compliance report must contain the information specified below. [40 CFR 63.2520(e); §2103.12.a.2.B]

1) Company name and address.
2) Statement by a responsible official with that official's name, title, and signature, certifying the accuracy of the content of the report.
3) Date of report and beginning and ending dates of the reporting period.
4) For each start-up, shutdown, and malfunction (SSM) during which excess emissions occur, the compliance report must include records that the procedures specified in the startup, shutdown, and malfunction plan (SSMP) were followed or documentation of actions taken that are not consistent with the SSMP, and include a brief description of each malfunction.

e. Records each time a safety device is opened to avoid unsafe conditions in accordance with 40 CFR §63.2450(p). [40 CFR §63.2450(p); §2103.12.a.2.B]

f. Records of the results of each CPMS calibration check and the maintenance performed. [40 CFR §63.2525(g); §2103.12.a.2.B]

g. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8, if appropriate. [§2103.12.k]

6. Work Practice Standard:

a. The permittee is permitted to replace the existing condensers and baghouses listed in this permit with an identical unit of the same efficiency periodically to prevent corrosion. The permittee shall notify the Department in writing at least ten (10) days prior to such action. [IP #0058-I011f, V.A.6.a; §2103.12.a.2.D]

b. The permittee shall maintain and implement the Preventative Maintenance and Operations (PMO) Plan submitted to and approved by the Department. The permittee shall maintain the original approved PMO Plan and all subsequent revisions for a period of five years and have them available for inspection. [IP #0058-I011f, V.A.6.b; §2103.12.a.2.D]

c. The permittee shall operate the source, control device and monitoring equipment at all times, including periods of SSM, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Malfunctions must be corrected as soon as practicable after their occurrence. [40 CFR 63.6(e)(1); §2103.12.a.2.B]

d. Under the requirements of 40 CFR Part 63, Subpart FFFF, the permittee is required to have a Leak Detection and Repair (LDAR) program. The permittee shall comply with each applicable conditions of Section VI.F below.

7. Additional Requirements:

None except as provided elsewhere.

~PERMIT SHIELD IN EFFECT~

C. C5 Unit – Pastillation Process

Process Description: Resin Production Line
Max. Design Rate: 11,000 lbs/hr Pastillated Resin per Belt or 140 MM lbs resin/year
Raw Materials: Resin
Control Device(s): UHF Filter, Fume Filter Demister & Baghouse

1. Restrictions:

a. The permittee shall not operate the #1 and #2 Pastillating Belts unless VOC emissions are exhausted to the UHF Filter and the Fume Filter Demister (S-751-1) at all times. The minimum capture efficiency of the UHF Filter/Demister shall be 90%. [IP #0058-I018a, V.A.1.a; §2103.12.a.2.D]

b. The permittee shall not operate the #1 or #2 belt conveyor, product bin, or bag filling station unless emissions of particulate matter are exhausted to a baghouse (S-726-1) which is properly maintained and operated at all times. [IP #0058-I018a, V.A.1.b; §2103.12.a.2.D; §2105.03]

c. The baghouse (S-726-1) shall have a particulate matter and PM_{10} minimum control efficiency of 99.9% at all times during process operations. [IP #0058-I018a, V.A.1.c; §2103.12.a.2.D]

d. Baghouse (S-726-1) emissions due to the pastillator solid handling operations after pastillation shall not exceed the following at any time: [IP #0058-I018a, V.A.1.d; §2103.12.a.2.D]

TABLE V-C-1: Emission Limitations

Pollutant	Emissions (lbs/hr)	Annual Emissions (tons/year)[1]
PM [2]	1.10	3.50
PM_{10}	1.10	3.50
$PM_{2.5}$	1.10	3.50

[1] A year is defined as any 12 consecutive months.
[2] PM includes PM_{10} and $PM_{2.5}$.

e. Fume filter & demister stack (S-751-1) emissions due to operation of the #1 and #2 Pastillating Belts shall not exceed the following at any time: [IP #0058-I018a,V.A.1.e; §2103.12.a.2.D]

TABLE V-C-2: Emission Limitations

Pollutant	Emissions (lbs/hr)	Annual Emissions (tons/year)[1]
VOCs	1.95	6.21

[1] A year is defined as any 12 consecutive months.

f. Combined production of the #1 and #2 Pastillating Belts shall be limited to 140,000,000 pounds of pastillated resin per consecutive 12-month period. [IP #0058-I018a, V.A.1.f; §2103.12.a.2.D]

2. Testing Requirements:

The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Article XXI §2108.02. [§2103.12.h.1]

3. Monitoring Requirements:

a. The permittee shall install, operate and maintain instrumentation to measure the pressure drops across the UHF Filter/Demister (S-751-1) and baghouse (S-726-1) to within 1" w.c. of actual. [IP #0058-I018a, V.A.3.a; §2103.12.a.2.D]

b. The permittee shall inspect the process line and control equipment weekly for compliance with conditions V.C.1.a, V.C.1.b and V.C.1.c above. The differential pressure drops across the UHF Filter/Demister (S-751-1) and baghouse (S-726-1) shall be recorded at the time of inspection. [IP #0058-I018a, V.A.3.b; §2103.12.a.2.D]

c. Inlet and outlet testing ports shall be provided on the UHF Filter/Demister (S-751-1) and baghouse (S-726-1). Such test ports shall be located in accordance with EPA test methods 1 and 2 (40 CFR Part 60). [IP #0058-I018a, V.A.3.c; §2103.12.a.2.D]

4. Record Keeping Requirements:

a. The permittee shall keep and maintain the following data: [IP #0058-I018a, V.A.4.a; §2103.12.a.2.D]

1) Amount (lbs.) of molten resin pastillated (monthly, 12-month rolling total);
2) Hours of operation of the production line (monthly, 12-month rolling total);
3) The results of all inspections conducted according to condition V.C.3.b above (weekly);
4) Data recorded as per condition V.C.3.b above (weekly, monthly high and low values);
5) Records of testing, maintenance, inspection, calibration and/or replacement of process or control equipment.

b. The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance. [IP #0058-I018a, V.A.4.b; §2103.12.a.2.D]

c. All records shall be retained by the facility for at least five (5) years. These records shall be made available to the Department upon request for inspection and/or copying. [IP #0058-I018a, V.A.4.c; §2103.12.a.2.D]

5. Reporting Requirements:

a. The permittee shall report the following information to the Department in accordance with General Condition III.15 above. The reports shall contain all required information for the time period of the report: [IP #0058-I018a, V.A.5.a; §2103.12.a.2.D]

1) Monthly and 12-month data required to be recorded by condition V.C.4.a above; and
2) Non-compliance information required to be recorded by V.C.4.b above.

b. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 above, if appropriate. [IP #0058-I018a, V.A.5.b; §2103.12.a.2.D]

6. Work Practice Standard:

a. The permittee shall maintain and implement the Preventative Maintenance and Operations (PMO) Plan submitted to and approved by the Department. The permittee shall maintain the original approved PMO Plan and all subsequent revisions for a period of five years and have them available for inspection. [IP #0058-I018a, V.A.6.a; §2103.12.a.2.D]

b. The permittee shall do the following for Pastillating Belts #1 and #2 and associated equipment: [§2105.03; IP #0058-I026a, V.B.2.a; §2103.12.a.2.D]
1) Perform regular maintenance in accordance with the manufacturer's or the operator's maintenance procedures;
2) Keep records of any maintenance; and
3) Keep a copy of either the manufacturer's or the operator's maintenance procedures.

c. The Pastillating Belts #1 and #2 shall be properly operated and maintained at all times according to good engineering practices, with the exception of activities to mitigate emergency conditions. [§2105.03; IP #0058-I026a, V.B.2.b; §2103.12.a.2.D]

d. The permittee may swap out the existing baghouse with an identical unit (the same air volume and efficiency) periodically to prevent corrosion, and will notify the Department at least 10 days prior to make a replacement. [§2103.12.a.2.D]

7. Additional Requirements:

None except as provided elsewhere.

~PERMIT SHIELD IN EFFECT~

D. C5 Unit – Storage Tanks

Tank ID	Material Stored	Capacity (gal)	Control Device	Emission Point
T-50	J-RAF	528,765	Floating Roof	S216
T-52	Piperylene Concentrate	528,765	Floating Roof	S218
T-53	Piperylene Concentrate	528,765	Floating Roof	S219
T-54	Piperylene Concentrate	1,469,451	Floating Roof	S060
T-55	Piperylene Concentrate	579,586	Floating Roof	S061
T-500	Toluene	112,251	Floating Roof	S058
T-511	White Oil	15,228	NA	S274
T-121	Resin	19,432	NA	S064
T-123	Resin	20,080	NA	S066
T-124	Resin	24,864	NA	S097
T-161	Resin	158,630	NA	S238
T-365	Resin	20,728	NA	S266
T-366	Resin	20,132	NA	S267
T-367	Resin	20,132	NA	S268
T-504	Resin	60,914	NA	S059
T-601	Resin	108,291	NA	S269
T-602	Resin	108,291	NA	S270
T-501	Polymerizate	60,914	TO/Carbon Bed	S044/S044A
T-502	Polymerizate	60,914	TO/Carbon Bed	S044/S044A
T-503	API Oil, Polymerizate, Toluene	51,184	TO/Carbon Bed	S044/S044A
T-505	API Oil	8,484	TO/Carbon Bed	S044/S044A
T-506	API Oil	8,484	TO/Carbon Bed	S044/S044A

1. Restrictions:

a. The permittee shall store all materials in accordance with table above and Site Level Condition IV.17 above [§2105.12.a]

b. The maximum throughput for Tank 53 shall not exceed 12.482 million gallons per year during any 12 consecutive months. [IP #0058-I021, V.A.1.b; §2103.12.a.2.D]

c. The permittee shall equip Tanks 50, 52, 53, 54, 55, and 500 with an internal floating roof with the following specifications: [IP #0058-I017, V.A.1.b; IP #0058-I021, V.A.1.c; §2105.12(b)(1); §2103.12.a.2.D; §60.112b(a)(1)(i)-(ix)]

5) The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it). The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.[§60.112b(a)(1)(i)]

6) The internal floating roof shall be equipped with a mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof. [§2105.12(c)(2)(A); §60.112b(a)(1)(ii)]]

7) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface. [§60.112b(a)(1)(iii)]
8) Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use. [§2105.12(c)(2)(C)(i); §60.112b(a)(1)(iv)]
9) Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. [§2105.12(c)(2)(C)(ii); §60.112b(a)(1)(v)]
10) Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting. [§2105.12(c)(2)(C)(iii); §60.112b(a)(1)(vi)]
11) Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening. [§60.112b(a)(1)(vii)]
12) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover. [§60.112b(a)(1)(viii)]
13) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover. [§60.112b(a)(1)(ix)]

d. Emissions from the storage tanks shall not exceed the following at any time: [IP #0058-I011f, V.B.1.b; IP #0058-I017, V.A.1.c; IP #0058-I021, V.A.1.d; §2103.12.a.2.B&D]

TABLE V-D-1: Emission Limitations

Storage Tank	VOC Emissions (tons/year)*	HAP Emissions (tons/year)*
T-52	1.49	-
T-53	0.41	-
T-50, T-54, T-55, T-500, & T-511	5.91	0.20
T-121, T-123, T-124, T-366, T-365, T-367, T-601, T-602, T-161, & T-504	3.78	0.26
Total	11.59	0.46

* A year is defined as any consecutive 12-month period.

2. Testing Requirements:

The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Article XXI §2108.02. [§2103.12.h.1]

3. Monitoring Requirements:

a. The permittee shall measure and record the throughput of material that is pumped into each storage tank using material receipt records, level measurement changes, or mass flow meters. [IP #0058-I011f, V.B.3.a; §2103.12.a.2.D; §2103.12.i]

b. The permittee shall include the operation, calibration, and maintenance of the level instrumentation and mass flow meters in the Preventative Maintenance and Operation Plan required by condition . [IP #0058-I011f, V.B.3.b; §2103.12.a.2.D; §2103.12.i]

c. The permittee shall visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the permittee shall repair the items before filling the storage vessel. [IP #0058-I017, V.A.3.a; IP #0058-I021, V.A.3.a; §2105.12.c.2.; §2103.12.a.2.D; §60.113b(a)(1)]

d. The permittee shall visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the liquid inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the permittee shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Department in the inspection report required in condition V.D.5.c.3). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible. [IP #0058-I017, V.A.3.b; IP #0058-I021, V.A.3.b; §2103.12.a.2.D; §60.113b(a)(2)]

e. The permittee shall visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes, and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the permittee shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years. [IP #0058-I017, V.A.3.c; IP #0058-I021, V.A.3.c; §2103.12.a.2.D; §60.113b(a)(4)]

f. The permittee shall notify the Department in writing at least 30 days prior to the filling or refilling of the tank to afford the Department the opportunity to have an observer present. If the inspection required in condition V.D.3.e above is not planned and the permittee could not have known about the inspection 30 days in advance or refilling the tank, the permittee shall notify the Department at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Department at least 7 days prior to the refilling. [IP #0058-I017, V.A.3.d; IP #0058-I021, V.A.3.d; §2103.12.a.2.D ; §60.113b(a)(5)]

g. Equipment subject to the leak detection and reporting requirements shall be monitored. Leaks, as indicated by an instrument reading greater than 500 ppmv above background or by visual inspections, must be repaired as soon as practical unless a delay of repair is required under §63.983(d)(3). A first attempt at repair must be made no later than 5 days after the leaks detected, and repairs must be completed no later than 15 days after the leak is detected or at the beginning of the next introduction of vapors to the system, whichever is later. (§63.983(d)(2))

4. Record Keeping Requirements:

a. The permittee shall maintain an Above-Ground Storage Tank Log (AST log) for the tanks T-50, T-54, T-55, T-500, T-511, T-121, T-123, T-124, T-161, T-365, T-366, T-367, T-504, T-501, T-502, T-503, T-505, T-506, T-601,T-602; update the log at least once per week and shall make the log available for inspection by the Department. The AST log shall include the information on the parameters listed in Table below, using the methodologies identified therein. [IP #0058-I011f, V.B.4.a; §2103.12.a.2.D; §2103.12.j]

PARAMETER	METHODOLOGY
- AST ID and date installed and/or modified - AST size	Engineering records and diagrams. Permittee shall provide the installation and modification dates where the dates are known.
- Material store by name - A daily measurement of the level of material in each AST	The level of the material in each tank shall be measured daily and entered into the AST log at a minimum weekly.
- Temperature	Unheated tanks: Use 28°C (equal to the local maximum monthly (July)) average temperature as reported by the National Weather Service for the Pittsburgh area to calculate vapor pressure of the tank for the AST Log. Use the default temperature for Pittsburgh, Pennsylvania as provided by TANKS4.09d (or the most recent version) or replacement as identified by ACHD for emission calculation and compliance determinations. Heated Tanks: Use the heater setting as the temperature for each heated tank.
- Pressure (unpressurized or Nitrogen blanketed tanks)	Use the default atmospheric pressure for Pittsburgh, Pennsylvania as provided by TANKS 4.09.d for emission calculation and compliance determinations.
- Vapor pressure of the material stored	Use the Antoine's coefficients developed from vapor pressure testing as well as tank temperature (28°C for unheated tanks) and material data from the AST log entries to calculate vapor pressure.

b. The permittee shall keep readily accessible records for Tanks 52 and 53 showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. These records shall be kept for the life of the tank. [IP #0058-I017, V.A.4.a; IP #0058-I021, V.A.4.a; §2103.12(j); §60.116b(a)-(b)]

c. The permittee shall record the following information for Tanks 52 and 53. Such records shall provide sufficient data and calculations to clearly demonstrate that the applicable requirements are being met, and shall include but not be limited to the following: [IP #0058-I017, V.A.4.b; IP #0058-I021, V.A.4.b; §2105.12(f)(3); §60.116b(c)]

1) Type, amount, and period of storage of each volatile organic liquid stored (each addition, monthly and 12-month);
2) Maximum true vapor pressure of each liquid as stored (monthly);
3) Date and reason for each tank cleaning (monthly, 12-month summary);
4) Results of all inspections performed on the tank.

d. The maximum true vapor pressure for Tanks 52 and 53 shall be calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service. The vapor pressure under actual storage conditions shall be determined using a temperature which is representative of the average storage temperature for the hottest month of the year in which such storage takes place. [IP #0058-I017, V.A.4.c; IP #0058-I021, V.A.4.c; §2105.12(d); §60.116b(e)(1)]

e. The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance. [IP #0058-I021, V.A.4.d; §2103.12.a.2.D; §2103.12.h.5.B]

f. All records required under this section shall be maintained by the permittee for a period of five years following the date of such record. These records shall be made available to the Department upon request for inspection and/or copying. [§2103.12.j.2; §60.116b(a)]

5. Reporting Requirements:

a. The permittee shall submit semiannual reports to the Department in accordance with General Condition III.15 above. The reports shall contain all required information for the time period of the report: [IP #0058-I017, V.A.5.a; IP #0058-I021, V.A.5.a; §2103.12(k)]

1) Data required to be recorded by conditions V.D.4.a, V.D.4.b, V.D.4.c, and V.D.4.d above; and
2) Non-compliance information required to be recorded by V.D.4.e above.

b. The permittee shall submit notification of intent to store any new material in storage tanks, other than indicated in condition V.D above, to the Department a minimum of ten (10) working days prior to the intended store date. This notification shall at minimum include the Material Safety Data Sheet, the maximum true vapor pressure and the emissions calculations for the new materials. [IP #0058-I011f, V.B.5.a; §2103.12.a.2.D]

c. For the internal floating roof tanks, the permittee shall meet the following requirements: [IP #0058-I017, V.A.5.b; IP #0058-I021, V.A.5.b; §60.115b(a)(1)-(3)]

1) Furnish the Department with a report that describes the control equipment and certifies that the control equipment meets the specifications of conditions V.D.1.c and V.D.3.c. This report shall be an attachment to the notification required by condition above.[§60.115b(a)(1)]
2) Keep a record of each inspection performed as required by conditions V.D.3.c, V.D.3.d, and V.D.3.e. Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings). [§60.115b(a)(2)]

3) If any of the conditions described in condition V.D.3.d are detected during the annual visual inspection required by condition V.D.3.d, a report shall be furnished to the Department within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made.[§60.115b(a)(3)]

d. The permittee shall report to the Department the calculated VOC and HAP emissions from the storage tanks in the previous 12-month period within 30 days upon request by the Department. Emissions estimates shall be based on storage tank emissions using Tanks 4.0 or other EPA approved methodology. [IP #0058-I017, V.A.5.c; IP #0058-I021, V.A.5.c; IP #0058-I011f, V.B.5.b; §2103.12.k]

e. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8, if appropriate. [§2103.12.k]

6. Work Practice Standard:

a. The permittee shall maintain and implement the Preventative Maintenance and Operations (PMO) Plan submitted to and approved by the Department. The permittee shall maintain the original approved PMO Plan and all subsequent revisions for a period of five years and have them available for inspection. [IP #0058-I011f,V.A.3.b; §2103.12.a.2.D]

b. The permittee shall do the following for all VOC storage tanks and associated equipment: [§2105.03, IP #0058-I026a,V.A.2.a; §2103.12.a.2.D]
1) Perform regular maintenance in according with the manufacturer's or the operator's maintenance procedures;
2) Keep records of any maintenance; and
3) Keep a copy of either the manufacturer's or the operator's maintenance procedures.

c. The VOC storage tanks shall be properly operated and maintained at all times according to good engineering practices, with the exception of activities to mitigate emergency conditions. [§2105.03; IP #0058-I026a,V.A.2.b; §2103.12.a.2.D]

d. Under the requirements of 40 CFR Part 63, Subpart FFFF, the permittee is required to have a Leak Detection and Repair (LDAR) program. The permittee shall comply with each applicable conditions of Section VI.F below.

7. Additional Requirements:

None except as provided elsewhere.

~PERMIT SHIELD IN EFFECT~

E. MP Poly (Multi-Purpose Polymerization) Unit - Process

Process Description: Batch process for hydrocarbon resin manufacturer
Facility ID: MP Poly
Max. Design Rate: 103,000,000 lbs/year polymerizate
Raw Materials: Pure monomers of styrene and substituted styrenes and recycled high-value distillate (HVD) or recycled hydrogenated solvent (RHS)
Control Device: Vent condensers (5), Wet scrubber (1), Baghouses (3)

1. Restrictions:

a. The maximum production rate for MP Poly process unit shall not exceed 103,000,000 pounds per 12-month rolling period of polymerizate. [IP #0058-I022a, V.A.1.a; §2103.12.a.2.D]

b. The permittee shall not operate or allow to be operated the following equipment unless all emissions from the equipment are routed to the subject control devices: [IP #0058-I022a, V.A.1.b; §2103.12.a.2.D; 40 CFR 63.2450(a)]

Table V-E-1: MP Poly Unit Controlled Equipment

Equipment I.D.	Equipment Description	Control Device(s)	Stack I.D.
R-400-1	Reactor	Condenser E-400-6, BF_3 Scrubber	S029
T-301-1	Lime Storage Silo	Baghouse S-301-2	S030
S-303-1	Lime Filter Receiver	Baghouse S-303-1	S031
T-500-1	Neutralizer	Condenser E-500-5	S034
E-500-5 T-700-1 T-703-1 S-602-1 S-601-1 T-701-1	Neutralizer Vent Condenser Solvent Wash Tank Heel Tank Funda Filter East Funda Filter West Filtrate Receiver	Condenser E-701-5, Condenser E-701-4	S034
T-203-1 A-103-1	Preblend Tank Calcium Chloride Dryer	Condenser E-203-4	S035
H-800-3	Precoat Tank Bag Dump Station	Baghouse H-800-3	F010

c. The BF_3 Scrubber shall be properly operated and maintained according to good engineering practices and manufacturer's recommendations at all times while treating process emissions. [IP #0058-I022a, V.A.1.c; §2103.12.a.2.D]

d. The existing S-301-2, S-303-1, and H-800-3 baghouses shall be properly maintained and operated with a minimum particulate removal efficiency of 99.0%. [IP #0058-I022a, V.A.1.d; §2103.12.a.2.D]

e. The permittee shall not discharge or allow to be discharged gases from the S-301-2 and S-303-1 baghouses stacks in excess of 0.02 gr/dscf. [IP #0058-I022a, V.A.1.e; §2103.12.a.2.D]

f. The permittee shall properly maintain and operate the condensers E-400-6, E-500-5, E-701-5, E-701-4, and E-203-4 at all times when emissions are routed to them. [IP #0058-I022a, V.A.1.f; IP #0058-I026a, V.C.1.b; §2103.12.a.2.D; §2105.03]

g. The inlet coolant temperature to the condensers E-203-4 (S035) and E-701-4 (S034) shall not exceed 10°C (50°F) over any one hour block average when emissions are routed through the condensers with the exception of activities to mitigate emergency conditions. [IP #0058-I022a, V.A.1.g; IP #0058-I026a, V.C.1.c; §2103.12.a.2.D]

h. The exit vapor temperature from the condensers E-203-4 (S035) and E-701-4 (S034) shall not exceed 35°C (95°F) over any one-hour block average when emissions are being routed through them unless the temperature exceedance is due solely to high ambient temperature. Documentation, as specified in condition V.E.1.i below must be collected for each one-hour block average exit temperature over 35 C (95 F). [IP #0058-I022a, V.A.1.h; §2103.12.a.2.D]

i. If the measured one-hour block average exit vapor temperatures exceed 35°C (95°F) from an applicable condenser, the permittee shall take the following actions: [IP #0058-I026a, V.C.1.d; §2103.12.a.2.D]

1) Confirm that the glycol cooler is operating properly by reviewing current operating conditions (e.g., that the chiller system is operating and circulating coolant, and that glycol coolant is being supplied or exiting the condensers at required temperatures). Corrective actions are required to be taken to correct loss of coolant supply or to return the coolant supply/exit temperature to required temperatures.
2) The following documentation will be maintained:
   a) Identification of the condenser.
   b) The exit vapor and inlet coolant supply temperatures at the time of exceedance.
   c) The ambient air temperature at the time of exceedance.
   d) The estimated quantity of excess VOC and total HAP emitted, if any, generated during the exceedance.
   e) The nature and probable cause of the event causing the exceedance, including if the exceedance was due solely to high ambient temperatures.
   f) Appropriate corrective actions taken.
3) Periods of exit vapor temperatures in excess of 35 °C (95 °F) not due solely to high ambient temperature shall be considered a breakdown in accordance with §2108.01.

j. The inlet coolant temperature to the condenser E-400-6 (S029) shall not exceed 10 °F (5.6 °C) above ambient air temperature over any one-hour block average when emissions are routed through it except during activities to mitigate emergency conditions and except that at no time will coolant temperature be required to be less than 50 °F. [IP #0058-I022a, V.A.1.i; §2103.12.a.2.D]

k. The exit vapor temperature from condenser E-400-6 (S029) shall not exceed 40 °C (104 °F) over any one-hour block average when emissions are being routed through it unless the temperature

exceedance is due solely to high ambient temperature. Documentation as specified in condition V.E.1.l below must be collected for each one-hour block average exit temperature over 40 °C (104 °F). [IP #0058-I022a, V.A.1.j; §2103.12.a.2.D]

l. If the measured one-hour block average exit vapor temperatures exceed 40 °C (104 °F) from a condenser, the permittee shall take the following actions: [§2103.12.a.2.B]

i. Confirm that the cooling tower is operating properly by reviewing current operating conditions (e.g., that the cooling system is operating and circulating cooling water, and that cooling water is being supplied at less than 10 °F (5.6 °C) above ambient (except that at no time will coolant temperature be required to be less than 50 °F (10 °C)). Corrective actions are required to be taken to correct loss of coolant supply or to return the coolant supply temperature to less than 10 °F (5.6 °C) above ambient (except that at no time will coolant temperature be required to be less than 50 °F (10 °C).

ii. The following documentation will be maintained:

1. Identification of the condenser.
2. The exit vapor and inlet coolant supply temperatures at the time of exceedance.
3. The ambient air temperature at the time of exceedance.
4. The estimated quantity of excess VOC and total HAP emitted, if any, generated during the exceedance.
5. The nature and probable cause of the event causing the exceedance, including of the exceedance was due solely to high ambient temperatures.
6. Appropriate corrective actions taken.

iii. Periods of exit vapor temperatures in excess of 40 °C (104 °F) not due solely to high ambient temperature shall be considered a breakdown in accordance with §2108.01.

m. Emissions from MP Poly Unit process (emission points S029, S030, S031, S033, S034, S035 and cooling tower) shall not exceed the following at any time: [IP #0058-I022a, V.A.1.k; §2103.12.a.2.D]

POLLUTANT	SHORT TERM EMISSION LIMIT (lb/batch[2])	ANNUAL EMISSION LIMIT (tons/year[1])
Volatile Organic Compounds	21.5	13.5
Hazardous Air Pollutants	0.34	0.46
Particulate Matter	NA	1.77

[1] A year is defined as any consecutive 12-month period.
[2] Exclusive of auxiliary operations such as flushes, unit flushes, vessel cleaning, and dryer regenerations.

n. Opening a safety device is allowed at any time conditions require it to avoid unsafe conditions. [40 CFR §63.2450(p), §2103.12.a.2.B]

o. The permittee shall meet the following requirements for closed vent systems: [40 CFR §63.982(c), §2103.12.a.2.B]

1) Each closed vent system must be designed and operated to collect the vapors from the emission point and to route the vapors to the control device. [§63.983(a)(1)]
2) Closed vent system must be operated at all times when emissions are vent to, or collected by them. [§63.983(a)(2)]

p. All MP Poly Process Unit shall use condensers as recovery devices to maintain their respective Total Resource Effectiveness (TRE) index above 1.9. [§2103.12.a; §2104.08; 40 CFR §63.2450, Table 1, 1.a.iii]

q. The permittee shall be in compliance with the emission limits and work practice standards in 40 CFR 63, subpart FFFF at all times, except during periods of startup, shutdown, and malfunction (SSM). [40 CFR 63.2450(a), §2103.12.a.2.B]

r. At all times, including periods of startup, shutdown, and malfunction, the permittee must operate and maintain all MP Poly process equipment, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions during a period of startup, shutdown, or malfunction does not require the permittee to achieve emission levels that are required by condition V.E.1.p above, at other times if this is not consistent with safety and good air pollution control practices, nor does it require the permittee to make any further efforts to reduce emissions if levels required by condition V.E.1.p above have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department which may include, but is not limited to, monitoring results, review of operation and maintenance procedures (including the startup, shutdown, and malfunction plan required in condition V.E.5.b below, review of operation and maintenance records, and inspection of the source. [40 CFR 63.6(e)(1)(i), §2103.12.a.2.B]

s. Malfunctions must be corrected as soon as practicable after their occurrence. To the extent that an unexpected event arises during a startup, shutdown, or malfunction, the permittee must comply by minimizing emissions during such a startup, shutdown, and malfunction event consistent with safety and good air pollution control practices. [40 CFR 63.6(e)(1)(ii), §2103.12.a.2.B]

2. Testing Requirements:

The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Article XXI §2108.02. [IP #0058-I022a, V.A.2; §2103.12.a.2.D; §2103.12.h.1]

3. Monitoring Requirements:

a. The permittee shall visually inspect the BF_3 Scrubber at least once per day for visible emissions. If visible emissions are detected, the permittee shall adjust the flow of water to the scrubber accordingly. [IP #0058-I022a, V.A.3.a; §2103.12.a.2.D; §2103.12.i; 40 CFR §63.996]

b. The permittee shall inspect the BF_3 Scrubber system once per week to ensure that there is no evidence of chemical attack on the structural integrity. Immediate repairs shall be made to correct any failures or deficiencies observed in the system. [IP #0058-I022a, V.A.3.b; §2103.12.a.2.D; §2103.12.i; 40 CFR §63.996]

c. The permittee shall measure the vapor pressure the HVD and RHS solvents quarterly. Determine vapor pressure in accordance with ASTM Method D 5842-04 “Standard Practice for Sampling and Handling of Fuels for Volatility Measurement” (or latest version) and ASTM Standard D 2879-97, “Standard Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition

Temperature of Liquids by Isoteniscope" (or latest version). [IP #0058-I022a, V.A.3.c; §2103.12.a.2.D]

d. The permittee shall install, operate, and maintain an inlet coolant temperature instrument on E-203-4, E-701-4, and E-400-6 condensers that continuously monitors the coolant inlet temperature. The temperature probes used shall be certified by the manufacturer to be accurate to within 2% of the temperature measured in Celsius or to within 2.5°C, whichever is greater. The permittee shall record the coolant inlet temperature at least once every 15 minutes while the equipment associated with the temperature probe and transmitter is in operation. [IP #0058-I022a, V.A.3.d; IP #0058-I026a, V.C.2.a; §2103.12.a.2.D; §2103.12.i]

e. The permittee shall install, operate, and maintain temperature probes and transmitters capable of continuously monitoring outlet gas temperature on E-203-4, E-701-4, and E-400-6 condensers. The temperature probes used shall be certified by the manufacturer to be accurate to within 2% of the temperature measured in Celsius or to within 2.5°C, whichever is greater. The permittee shall record the outlet gas temperature at least once every 15 minutes while the equipment associated with the temperature probe and transmitter is in operation. [IP #0058-I022a, V.A.3.e; §2103.12.a.2.D; §2103.12.i]

f. The permittee shall perform inspection and monitoring of the closed vent system. Except for closed vent systems that are designated as unsafe or difficult to inspect, each closed vent system must be inspected as follows: [§63.983(b), §2103.12.a.2.B]
   1) If constructed of hard piping, must conduct an initial inspection in accordance with §63.983(c) (Method 21 of 40 CFR Part 60), and an annual inspection for visible, audible, or olfactory indications of leaks.
   2) If constructed of ductwork, must conduct an initial and annual inspection in accordance with §63.983(c) (Method 21 of 40 CFR Part 60).

g. Equipment subject to the leak detection and reporting requirements shall be monitored. Leaks, as indicated by an instrument reading greater than 500 ppmv above background or by visual inspections, must be repaired as soon as practical unless a delay of repair is required under §63.983(d)(3). A first attempt at repair must be made no later than 5 days after the leaks detected, and repairs must be completed no later than 15 days after the leak is detected or at the beginning of the next introduction of vapors to the system, whichever is later. [§63.983(d)(2)]

h. Monitoring data recorded during periods of monitoring system breakdowns, repairs, preventive maintenance, calibration checks, zero (low-level) and high-level adjustments, periods of non-operation of the process unit (or portion thereof) resulting in cessation of the emissions to which the monitoring applies, shall not be included in any average to determine compliance, except monitoring data is to be collected during periods of startup, shutdown, and malfunction. [IP #0058-I022a, V.A.3.f; §2103.12.a.2.D; §2103.12.i; 40 CFR §63.998(b)(2), 40 CFR §63.2450(l)]

i. Daily average values of continuously monitored parameters must be calculated from the data and retained for 5-years. The daily average must be calculated as the average of all values for a monitored parameter recorded during the operating day. The average must cover a 24-hour period if operation is continuous, or the period of operation per operating day of operation is not continuous. [40 CFR §63.998(b)(3), §2103.12.a.2.B]

j. An excursion means that the daily average value of monitoring data for a parameter is greater than the maximum or less than the minimum established. Values from startup, shutdown and

malfunctions are to be included in the averages. Excused excursions are not allowed. [40 CFR §63.998(b)(6), §2103.12.a.2.B]

4. Record Keeping Requirements:

a. The permittee shall keep and maintain sufficient records to demonstrate compliance with the requirements of this permit. Such records shall clearly demonstrate that all applicable requirements are met. [IP #0058-I022a, V.A.4.a; §2103.12.a.2.D; §2103.12.j]

b. The permittee shall keep and maintain records of all vapor pressure measurements made pursuant to condition V.E.3.c above. [IP #0058-I022a, V.A.4.b; §2103.12.a.2.D; §2103.12.j]

c. The permittee shall keep and maintain records of monthly and twelve months moving polymerizate production. [IP #0058-I022a, V.A.4.c; §2103.12.a.2.D; §2103.12.j]

d. The permittee shall keep and maintain records of monthly and twelve-month moving VOC and HAP emissions to demonstrate compliance with condition V.E.1.m above. The most recent vapor pressure information determined pursuant to condition V.E.3.c above and monthly average condenser exit gas temperatures shall be used in the emission calculations. [IP #0058-I022a, V.A.4.d; §2103.12.a.2.D; §2103.12.j]

e. The permittee shall keep and maintain records of monthly maximum VOC and HAP pounds per batch emissions to demonstrate compliance with condition V.E.1.m above. The most recent vapor pressure information determined pursuant to condition V.E.3.c above and the monthly maximum hourly average condenser exit gas temperatures shall be used in the emission calculations. [IP #0058-I022a, V.A.4.e; §2103.12.a.2.D; §2103.12.j]

f. The permittee shall keep and maintain the following data on-site for these operations: [IP #0058-I022a, V.A.4.f; IP #0058-I026a, V.C.3.a; §2103.12.a.2.D; §2103.12.j & k; 40 CFR §63.2525(b)]
   1) All records of monitoring required by V.E.3 above.
   2) Records of operation, inspection, calibration, maintenance and/or replacement of process vessels or control equipment.
   3) Stack test protocols and reports.
   4) Manufacturer's specifications when this information is available.

g. The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance. [IP #0058-I022a, V.A.4.g; §2103.12.a.2.D; §2103.12.h.5.B]

h. The permittee shall maintain records of activities necessary to mitigate emergency conditions subject to Conditions V.E.1.g above and V.E.1.j above in this permit. Records shall include the beginning and ending time of the emergency, the nature of the emergency, and actions taken to mitigate the emergency. [IP #0058-I022a, V.A.4.h; §2103.12.a.2.D]

i. The permittee shall maintain relevant records for all documentation supporting initial notifications and notification of compliance status. [40 CFR 63.10(b)(2)(xiv), §2103.12.a.2.B]

j. The permittee shall keep the records of the following: [40 CFR 63.998(c)(1), §2103.12.a.2.B]

1) A record of the procedure used for calibrating the CPMS [40 CFR 63.998(c)(1)(i), §2103.12.a.2.B]
2) A record of the results of each calibration checks and all maintenance performed on the CPMS: [40 CFR 63.998(c)(1)(ii), §63.2450(k)(1), §2103.12.a.2.B]
   a) The date and the time of completion of calibration and preventative maintenance of the CPMS; [40 CFR 63.998(c)(1)(ii)(A), §2103.12.a.2.B]
   b) The "as found" and "as left" CPMS readings, whenever an adjustment is made that affects the CPMS reading and a "no adjustment" statement otherwise; [40 CFR 63.998(c)(1)(ii)(B), §2103.12.a.2.B]
   c) The start time and duration or start and stop times of any periods when the CPMS is inoperative; [40 CFR 63.998(c)(1)(ii)(C), §2103.12.a.2.B]
   d) Records of the occurrence and duration of each start-up, shutdown, and malfunction of CPMS used to comply with this subpart during which excess emissions occur; [40 CFR 63.998(c)(1)(ii)(D), §2103.12.a.2.B]
   e) For each start-up, shutdown, and malfunction during which excess emissions occur, records whether the procedures specified in the source's start-up, shutdown, and malfunction plan were followed, and documentation of actions taken that are not consistent with the plan; [40 CFR 63.998(c)(1)(ii)(E), §2103.12.a.2.B]
   f) Records documenting each start-up, shutdown, and malfunction event; [40 CFR 63.998(c)(1)(ii)(F), §2103.12.a.2.B]
   g) Records of CPMS start-up, shutdown, and malfunction event that specify that there were no excess emissions during the event; [40 CFR 63.998(c)(1)(ii)(G), §2103.12.a.2.B]
   h) Records of the total duration of operating time. [40 CFR §63.998(c)(1)(ii)(H), §2103.12.a.2.B]

k. The permittee shall maintain records for of the following: [40 CFR 63.998(d)(1), §2103.12.a.2.B]

1) Identification of all parts of the closed vent system that are designated as unsafe or difficult to inspect, an explanation of why the equipment is unsafe or difficult to inspect, and the plan for inspecting the equipment required by 40 CFR §63.983(b)(2)(ii) or (III);
2) When a leak is detected, the following information must be recorded and kept for 5 years [40 CFR §63.998(d)(1)(iii), §2103.12.a.2.B]
   a) The instrument and the equipment identification number and the operator name, initials, or identification number; [40 CFR §63.998(d)(1)(iii)(A), §2103.12.a.2.B]
   b) The date the leak was detected and the date of the first attempt to repair the leak; [40 CFR §63.998(d)(1)(iii)(B), §2103.12.a.2.B]
   c) The date of successful repair of the leak; [40 CFR §63.998(d)(1)(iii)(C), §2103.12.a.2.B]
   d) The maximum instrument reading measured by procedures in §63.998(c) after the leak is successfully repaired or determined to be non-repairable; [40 CFR §63.998(d)(1)(iii)(D), §2103.12.a.2.B]
   e) Reason for delay of repair if a leak is not repaired within 15 days after discovery; [40 CFR §63.998(d)(1)(iii)(E), §2103.12.a.2.B]
   f) Copies of compliance reports. [40 CFR §63.998(d)(1)(iii)(F), §2103.12.a.2.B]
3) For each instrumental or visual inspection conducted in accordance with §63.983(b)(1) during which no leaks are detected, records that the inspection was performed, date of the inspection, and a statement that no leaks were detected. [40 CFR §63.998(d)(1)(iv), §2103.12.a.2.B]
4) Regulated source and control equipment start-up, shutdown, and malfunction records [40 CFR §63.998(d)(3), §2103.12.a.2.B]

a) Record of the occurrence and duration of each start-up, shutdown, and malfunction of operation of process equipment or control equipment during which excess emissions occur must be maintained [40 CFR §63.998(d)(3)(i), §2103.12.a.2.B]
b) For each start-up, shutdown, and malfunction during which excess emissions occur, records that the procedures specified in the source's start-up, shutdown, and malfunction plan were followed, and documentation of actions taken that are not consistent with the plan. [40 CFR §63.998(d)(3)(ii), §2103.12.a.2.B]
c) Records of monitored parameters outside the operating limit. The permittee shall record the occurrences and the cause of periods when the monitored parameters are outside of the parameter ranges documented in the Notification of Compliance Status report. This information shall also be reported in the Compliance report. [40 CFR §63.998(d)(5), §2103.12.a.2.B]

l. Records each time a safety device is opened to avoid unsafe conditions in accordance with §63.2450(p). [40 CFR §63.2525(f), §2103.12.a.2.B]

m. All records required under this section shall be maintained by the permittee for a period of five years following the date of such record. [§2103.12.j.2; 40 CFR 63.10(b)]

5. Reporting Requirements:

a. The permittee shall submit semi-annual reports to the Department in accordance with General Condition III.15 above. The reports shall contain all required information for the time period of the report: [IP #0058-I022a, V.A.5.a; §2103.12.a.2.D; §2103.12.k]
1) Vapor pressure measurement results required to be recorded by condition V.E.4.b above;
2) Monthly and 12-month data required to be recorded by conditions V.E.4.c through V.E.4.e above; and
3) Non-compliance information required to be recorded by V.E.4.g above.

b. The permittee must develop a written startup, shutdown, and malfunction plan that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction; and a program of corrective action for malfunctioning process, air pollution control, and monitoring equipment used to comply with the relevant standard. The startup, shutdown, and malfunction plan does not need to address any scenario that would not cause the source to exceed the emission limitation in condition V.E.3.g above. The purpose of the startup, shutdown, and malfunction plan is as follows. (40 CFR 63.6 (e)(3)(i)), §2103.12.a.2.B)

4) Ensure that, at all times, the permittee operates and maintains each MP Poly Unit process equipment, including associated air pollution control and monitoring equipment, in a manner which satisfies the general duty to minimize emissions established by condition V.B.1.u above; [40 CFR 63.6 (e)(3)(i)(A), §2103.12.a.2.B]

5) Ensure that the permittee is prepared to correct malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of hazardous air pollutants; and [40 CFR 63.6 (e)(3)(i)(B), §2103.12.a.2.B]

6) Reduce the reporting burden associated with periods of startup, shutdown, and malfunction (including corrective action taken to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation). [40 CFR 63.6 (e)(3)(i)(C), §2103.12.a.2.B]

c. The notification of compliance status report must include the information below. [40 CFR 63.2520(d)(2), §2103.12.a.2.B]

4) The results of any applicability determinations, emission calculations, or analyses used to identify and quantify HAP usage or HAP emissions from the affected source. [40 CFR 63.2520(d)(2)(i), §2103.12.a.2.B]
5) The results of emissions profiles, performance tests, engineering analyses, design evaluations, inspections and repairs, and calculations used to demonstrate initial compliance. For performance tests, results must include descriptions of sampling and analysis procedures and quality assurance procedures. [40 CFR 63.2520(d)(2)(ii), §2103.12.a.2.B]
6) Descriptions of monitoring devices, monitoring frequencies, and the operating limits established during the initial compliance demonstrations, including data and calculations to support the levels established. [40 CFR 63.2520(d)(2)(iii), §2103.12.a.2.B]

d. The compliance report must contain the information specified below. [40 CFR 63.2520(e), §2103.12.a.2.B]

5) Company name and address. [40 CFR 63.2520(e)(1), §2103.12.a.2.B]
6) Statement by a responsible official with that official's name, title, and signature, certifying the accuracy of the content of the report. [40 CFR 63.2520(e)(2), §2103.12.a.2.B]
7) Date of report and beginning and ending dates of the reporting period. [40 CFR 63.2520(e)(3), §2103.12.a.2.B]
8) For each start-up, shutdown, and malfunction (SSM) during which excess emissions occur, the compliance report must include records that the procedures specified in the startup, shutdown, and malfunction plan (SSMP) were followed or documentation of actions taken that are not consistent with the SSMP, and include a brief description of each malfunction. [40 CFR 63.2520(e)(4), §2103.12.a.2.B]

e. Records each time a safety device is opened to avoid unsafe conditions in accordance with [40 CFR §63.2450(p), §2103.12.a.2.B]

f. Records of the results of each CPMS calibration check and the maintenance performed. [40 CFR §63.2525(g), §2103.12.a.2.B]

g. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 above, if appropriate. [§2103.12.k]

6. Work Practice Standard:

a. The permittee is permitted to replace the existing condensers and baghouses listed in this permit with an identical unit of the same efficiency periodically to prevent corrosion. The permittee shall notify the Department in writing at least ten (10) days prior to such action. [IP #0058-I022a, V.A.6.a; §2103.12.a.2.D]

b. The permittee shall maintain on site all operating and maintenance manuals and equipment specifications for the BF_3 Scrubber for the life of the equipment if any. [IP #0058-I022a, V.A.6.b; §2103.12.a.2.D]

c. The permittee shall maintain on site all operating and maintenance manuals and equipment specifications for the S-301-2, S-303-1, and H-800-3 baghouses for the life of the equipment if any. [IP #0058-I022a, V.A.6.c; §2103.12.a.2.D]

d. The permittee shall maintain onsite, for emergency replacement, 25% of the total number of bags or filter elements use by the baghouses. [IP #0058-I022a, V.A.6.d; §2103.12.a.2.D; §2105.03]

e. Material removed from the fabric filter shall be disposed of in a manner preventing entrainment into the atmosphere. [IP #0058-I022a, V.A.6.e; §2103.12.a.2.D; §2101.11.c.]

f. The permittee shall maintain and implement the Preventive Maintenance and Operations (PMO) Plan submitted to and approved by the Department. The permittee shall maintain the original approved PMO Plan and all subsequent revisions for a period of five years and have them available for inspection. [IP #0058-I022a, V.A.6.f; §2103.12.a.2.D]

g. The permittee shall do the following for MP Poly Unit (filtrate system: filtrate receiver, neutralizer, solvent wash tank, heel tank, Funda filter) and associated equipment: [§2105.03; IP #0058-I026a, V.C.4.a]
1) Perform regular maintenance in accordance with the manufacturer's or the operator's maintenance procedures;
2) Keep records of any maintenance; and
3) Keep a copy of either the manufacturer's or the operator's maintenance procedures.

h. The MP Poly Unit (filtrate system: filtrate receiver, neutralizer, solvent wash tank, heel tank, Funda filter) shall be properly operated and maintained at all times according to good engineering practices, with the exception of activities to mitigate emergency conditions. [§2105.03; IP #0058-I026a, V.C.4.b]

i. The permittee shall operate the source, control device and monitoring equipment at all times, including periods of SSM, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Malfunctions must be corrected as soon as practicable after their occurrence. [40 CFR 63.6(e)(1), §2103.12.a.2.B]

j. Under the requirements of 40 CFR Part 63, Subpart FFFF, the permittee is required to have a Leak Detection and Repair (LDAR) program. The permittee shall comply with each applicable conditions of Section VI.F below.

7. Additional Requirements:

None except as provided elsewhere.

~PERMIT SHIELD IN EFFECT~

F. MP Poly Unit - Storage Tanks

Process Description: Storage Tanks
Facility ID: T-301; T-302; T-303
Capacity: 75,202 gallon each
Raw Materials: Polymerizate
Control Device: None

1. Restrictions:

a. The maximum combined throughput for tanks T-301, T-302, and T-303 shall not exceed 15.52 million gallons per year during any 12 consecutive months. [IP #0058-I022a, V.B.1.a; §2103.12.a.2.D]

b. Emissions due to operations of tanks T-301, T-302, and T-303 shall not exceed the following at any time [IP #0058-I022a, V.B.1.b; §2103.12.a.2.D]:

Table V-F-1: MP Poly Tank Emissions

POLLUTANT	TPY[1]
Volatile Organic Compounds (VOCs)	1.37
Hazardous Air Pollutants (HAPs)	0.054

[1] A year is defined as any consecutive 12-month period.

2. Testing Requirements:

The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Article XXI §2108.02. [§2103.12.h.1]

3. Monitoring Requirements:

a. The permittee shall install, operate and maintain an above-ground storage tank monitoring system using mass flow meters to measure and record the throughput of polymerizate that is pumped into each tank T-301, T-302, and T-303. The permittee shall use the data derived from this system to enter the daily material throughput for each tank in the above-ground storage tank log required by condition V.F.4.a below. [IP #0058-I022a, V.B.3.a; §2103.12.i]

b. The permittee shall include the operation, calibration, and maintenance of the mass flow meters in the Preventative Maintenance and Operation plan required by condition V.F.6 below. [IP #0058-I022a, V.B.3.b; §2103.12.i]

4. Record Keeping Requirements:

a. The permittee shall maintain an Above-Ground Storage Tank Log (AST log) for tanks T-301; T-302; T-303, update the log at least once per week and shall make the log available for inspection by the Department. The AST log shall include the information on the parameters listed in Table below, using the methodologies identified therein. [IP #0058-I022a, V.B.4.a; §2103.12.j]

Table V-F-2: MP Poly Above-Ground Storage Tank Log

PARAMETER	METHODOLOGY
- AST ID and date installed and/or modified - AST size	Engineering records and diagrams. Permittee shall provide the installation and modification dates where the dates are known.
- Material store by name - The date the material was first placed in the AST and all dates of additions to or removals from the AST	Use the log generated by the AST material throughput monitoring system described by condition V.F.3.a above.
- Temperature (unheated tanks)	Use 28°C (equal to the local maximum monthly (July)) average temperature as reported by the National Weather Service for the Pittsburgh area to calculate vapor pressure of the tank for the AST Log. Use the default temperature for Pittsburgh, Pennsylvania as provided by TANKS4.09d (or the most recent version) or replacement as identified by ACHD for emission calculation and compliance determinations.
- Pressure (unpressurized or Nitrogen blanketed tanks)	Use the default atmospheric pressure for Pittsburgh, Pennsylvania as provided by TANKS 4.09.d for emission calculation and compliance determinations.
- Vapor pressure of the material stored	Use the Antoine's coefficients developed from vapor pressure testing as well as unheated tank temperature of 28°C and material data from the AST log entries to calculate vapor pressure.

b. The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance. [§2103.12.a.2.D]

c. All records required under this section shall be maintained by the permittee for a period of five years following the date of such record. [§2103.12.j.2]

5. Reporting Requirements:

a. The permittee shall report the following information to the Department in accordance with General Condition III.15 above. The reports shall contain all required information for the time period of the report: [IP #0058-I022a, V.B.5.a; §2103.12.a.2.D]

1) Non-compliance information required to be recorded by V.F.4.b above.

b. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 above, if appropriate. [§2103.12.k]

c. The permittee shall submit notification of intent to store any new material in storage tanks T-301, T-302, and T-303 , other than indicated in the permit application No. 0058-OP22, to the Department a minimum of ten (10) working days prior to the intended store date. This notification shall at

minimum include the Material Safety Data Sheet, the maximum true vapor pressure and the emissions calculations for the new materials. [IP #0058-I022a, V.B.5.c; §2103.12.a.2.D]

6. Work Practice Standard:

The permittee shall maintain and implement the Preventive Maintenance and Operations (PMO) Plan submitted to and approved by the Department. The permittee shall maintain the original approved PMO Plan and all subsequent revisions for a period of five years and have them available for inspection. [§2103.12.a.2.D]

7. Additional Requirements:

None except as provided elsewhere.

~PERMIT SHIELD IN EFFECT~

G. WW Poly (Water White Polymerization) Unit - Process

Process Description: Batch process for hydrocarbon resin manufacturer
Facility ID: WW Poly
Max. Production Rate: 80,000,000 lbs/year polyoil
Raw Materials: Pure monomers of styrene and substituted styrenes and recycled high-value distillate (HVD) or recycled hydrogenated solvent (RHS)
Control Device: Vent condensers (12), carbon adsorber (1), wet scrubber (1), baghouse (1)

1. Restrictions:

a. The maximum production rate for WW Poly process unit shall not exceed 80 million pounds per 12-month rolling period of polyoil. [IP #0058-I023a, V.A.1.a; §2103.12.a.2.D]

b. The permittee shall not operate or allow to be operated the following equipment unless all emissions from the equipment are routed to the subject control device(s). [IP #0058-I023a, V.A.1.b; §2103.12.a.2.D; §2105.06.b.3; 40 CFR 63.2450(a)]

Table V-G-1: WW Poly Controlled Equipment

Equipment I.D.	Equipment Description	Control Device(s)	Stack I.D.
A-100	Feed Dryers	Condenser E-200-6 followed by Condenser E-200-7	S013
T-301-1	East Pre-Blend Tank	Condenser E-301-4	S014
T-300-1	North Pre-Blend Tank	Condenser E-300-4	S015
R-600-1	North Reactor	Condenser E-600-6 followed by Condenser E-600-9 followed by BF_3 Scrubber S-401-1	S017
R-601-1	South Reactor	Condenser E-601-6 followed by Condenser E-601-11 followed by BF_3 Scrubber S-401-1	S017
T-700-1	North Neutralizer	Condenser E-700-4 followed by Condenser E-700-6	S018
S-800-1	Funda Filters steam-out process	Condenser E-800-3	S019
T-800-6	Funda Condensate Tank	Carbon adsorber A-800-8	S019A
S-800-1 T-900-1	North Funda Filter West Filtrate Receiver	Condenser E-900-7	S020
T-701-1	South Neutralizer	Condenser E-701-7	S021
T-1001-1	Reclaim Pot	Condenser E-1001-7 Reclaim Dust Collector S-1003-1	S022 S022A

Equipment I.D.	Equipment Description	Control Device(s)	Stack I.D.
T-903-1 S-800-1 S-801-1	Solvent Wash Receiver North Funda Filter South Funda Filter	Condenser E-903-3	S023
T-901-1 S-800-1	East Filtrate Receiver South Funda Filter	Condenser E-901-7	S027
H-500-4	Slurry Bag Dump Station	Baghouse H-500-4	S294
H-700-10	Lime- Filteraid Bag Dump Station	Baghouse H-700-10	S295

c. The BF_3 Scrubber and Carbon Bed shall be properly operated and maintained according to good engineering practices and manufacturer's recommendations at all times while treating process emissions. [IP #0058-I023a, V.A.1.c; §2103.12.a.2.D]

d. The existing H-500-4 and H-700-10 bag dump station shall be properly maintained and operated with a minimum particulate removal efficiency of 99.0%. [IP #0058-I023a, V.A.1.d; §2103.12.a.2.D]

e. Refrigerated vent condensers [E-200-7 (S013), E-600-9 and E-601-11 (S017), E-700-6 (S018), E-900-7 (S020), E-701-7 (S021), E-903-3 (S023), and E-901-7 (S027)]: The condensers shall be properly maintained and operated according to good engineering practices, manufacturer's recommendations and the following conditions at all times while treating process emissions: [IP #0058-I023a, V.A.1.e; IP #0058-I026a, V.D.1.b; §2103.12.a.2.D; §2105.06.b.3]

1) The inlet coolant temperature to each condenser shall not exceed 10°C any one-hour block average when emissions are routed through the condenser with the exception of activities to mitigate emergency conditions;
2) The exit vapor temperature of each condenser shall not exceed 35°C (95°F) over any one-hour block average when emissions are being routed through them unless the temperature exceedance is due solely to high ambient temperature. Documentation, as specified in condition V.G.1.e.3) below must be collected for each one-hour block average exit temperature over 35°C (95°F);
3) If measured one-hour block average exit vapor temperatures exceed 35°C (95°F) from a condenser, the permittee shall take the following actions:
   a) Confirm that the glycol cooler is operating properly by reviewing current operating conditions (e.g., that the chiller system is operating and circulating coolant, and that glycol coolant is being supplied at less than 10°C). Corrective actions are required to be taken to correct loss of coolant supply or to return the coolant supply/exit temperature to required temperatures.
   b) The following documentation will be maintained:
      1. Identification of the condenser.
      2. The exit vapor and inlet coolant supply temperatures at the time of exceedance.
      3. The ambient air temperature at the time of exceedance.
      4. The estimated quantity of excess VOC and total HAP emitted, if any, generated during the exceedance.
      5. The nature and probable cause of the event causing the exceedance, including if the exceedance was due solely to high ambient temperatures.
      6. Appropriate corrective actions taken

c) Periods of exit vapor temperatures in excess of 35°C (95°F) not due solely to high ambient temperature shall be considered a breakdown in accordance with §2108.01.

f. Cooling tower water chilled vent condensers [E-301-4 (S014); E-300-4 (S015); E-800-3 (S019); E-1001-7 (S022)]: The condensers shall be properly operated and maintained according to good engineering practices, manufacturer's recommendations and the following conditions at all times while treating process emissions: [IP #0058-I023a, V.A.1.f; §2103.12.a.2.D; §2105.06.b.3]

1) The inlet coolant temperature to each condenser shall not exceed 10°F (5.6°C) above ambient air temperature over any one-hour block average when emissions are routed through the condenser with the exception of activities to mitigate emergency conditions and except that at no time will coolant temperature be required to be less than 50°F (10°C).
2) The exit vapor temperature of each condenser shall not exceed 40°C (104°F) over any one-hour block average when emissions are being routed through them unless the temperature exceedance is due solely to high ambient temperature. Documentation as specified in condition V.G.1.f.3) below must be collected for each one-hour block average exit temperature over 40°C (104°F).
3) If measured one-hour block average exit vapor temperatures exceed 40°C from a condenser, the permittee shall take the following actions:
   a) Confirm that the cooling tower is operating properly by reviewing current operating conditions (e.g., that the cooling system is operating and circulating cooling water, and that cooling water is being supplied at less than 10°F (5.6°C) above ambient (except that at no time will coolant temperature be required to less than 50°F (10 °C). Corrective actions are required to be taken to correct loss of coolant supply or to return the coolant supply temperature to less than 10°F (5.6°C) above ambient (except that at no time will coolant temperature be required to less than 50°F (10 °C)).
   b) The following documentation will be maintained:
      1. Identification of the condenser.
      2. The exit vapor and inlet coolant supply temperatures at the time of exceedance.
      3. The ambient air temperature at the time of exceedance.
      4. The estimated quantity of excess VOC and total HAP emitted, if any, generated during the exceedance.
      5. The nature and probable cause of the event causing the exceedance, including of the exceedance was due solely to high ambient temperatures.
      6. Appropriate corrective actions taken.
   c) Periods of exit vapor temperatures in excess of 40°C not due solely to high ambient temperature shall be considered a breakdown in accordance with §2108.01.

g. Emissions from the WW Poly Unit process (emission points S013, S013a, S014 – S019, S019a, S020 – S022, S022a, S023, S027, S050, S050a, S294, S295) shall not exceed the following at any time: [IP #0058-I023a, V.A.1.g; §2103.12.a.2.D]

TABLE V-G-2: WW Poly Process Unit Emission Limitations

POLLUTANT	SHORT TERM EMISSION LIMIT (lb/batch[2])	ANNUAL EMISSION LIMIT (tons/year[1])
Volatile Organic Compounds	46.22	26.30
Hazardous Air Pollutants	3.72	2.88
Styrene	3.21	2.33
Particulate Matter	NA	0.63

[1] A year is defined as any consecutive 12-month period.
[2] Auxiliary operations not included.

h. Opening a safety device is allowed at any time conditions require it to avoid unsafe conditions. [40 CFR §63.2450(p), §2103.12.a.2.B]

i. The permittee shall meet the following requirements for closed vent systems: [40 CFR §63.982(c), §2103.12.a.2.B]

1) Each closed vent system must be designed and operated to collect the vapors from the emission point and to route the vapors to the control device. [§63.983(a)(1)]
2) Closed vent system must be operated at all times when emissions are vent to, or collected by them. [§63.983(a)(2)]

j. All WW Poly Process Unit shall use condensers as recovery devices to maintain their respective Total Resource Effectiveness (TRE) index above 1.9. [§2103.12.a; §2104.08; 40 CFR §63.2450, Table 1, 1.a.iii]

k. The permittee shall be in compliance with the emission limits and work practice standards in 40 CFR 63, subpart FFFF at all times, except during periods of startup, shutdown, and malfunction (SSM). [40 CFR 63.2450(a), §2103.12.a.2.B]

l. At all times, including periods of startup, shutdown, and malfunction, the permittee must operate and maintain all WW Poly process equipment, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions during a period of startup, shutdown, or malfunction does not require the permittee to achieve emission levels that are required by condition V.G.1.j above, at other times if this is not consistent with safety and good air pollution control practices, nor does it require the permittee to make any further efforts to reduce emissions if levels required by condition V.G.1.j above have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department which may include, but is not limited to, monitoring results, review of operation and maintenance procedures (including the startup, shutdown, and malfunction plan required in condition V.G.5.b below, review of operation and maintenance records, and inspection of the source. [40 CFR 63.6(e)(1)(i), §2103.12.a.2.B]

m. Malfunctions must be corrected as soon as practicable after their occurrence. To the extent that an unexpected event arises during a startup, shutdown, or malfunction, the permittee must comply by minimizing emissions during such a startup, shutdown, and malfunction event consistent with safety and good air pollution control practices. [40 CFR 63.6(e)(1)(ii), §2103.12.a.2.B]

2. Testing Requirements:

The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Article XXI §2108.02. [IP #0058-I023a, V.A.2; §2103.12.a.2.D; §2103.12.h.1]

3. Monitoring Requirements:

a. The permittee shall visually inspect the BF_3 Scrubber at least once per day for visible emissions. If visible emissions are detected, the permittee shall adjust the flow of water to the scrubber accordingly. [IP #0058-I023a, V.A.3.a; §2103.12.a.2.D; §2103.12.i; 40 CFR §63.996(d)]

b. The permittee shall inspect the BF_3 Scrubber system once per week to ensure that there is no evidence of chemical attack on the structural integrity. Immediate repairs shall be made to correct any failures or deficiencies observed in the system. [IP #0058-I023a, V.A.3.b; §2103.12.a.2.D; §2103.12.i; 40 CFR §63.996(d)]

c. The permittee shall inspect the baghouse for proper operation at least once per week when operational. [IP #0058-I023a, V.A.3.c; §2103.12.a.2.D; §2103.12.i]

d. The permittee shall measure the vapor pressure the HVD and RHS solvents quarterly. Determine vapor pressure in accordance with ASTM Method D 5842-04 “Standard Practice for Sampling and Handling of Fuels for Volatility Measurement” (or latest version) and ASTM Standard D 2879-97, “Standard Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope” (or latest version). [IP #0058-I023a, V.A.3.d; §2103.12.a.2.D]

e. The permittee shall install, operate, and maintain an inlet coolant temperature instrument on E-200-7, E-300-4, E-301-4, E-600-9, E-601-11, E-700-6, E-701-7, E-800-3, E-900-7, E-901-7, E-903-3, and E-1001-7 condensers that continuously monitor the coolant inlet temperature. The temperature probes used shall be certified by the manufacturer to be accurate to within 2% of the temperature measured in Celsius or to within 2.5°C, whichever is greater. The permittee shall record the coolant inlet temperature at least once every 15 minutes while the equipment associated with the temperature probe and transmitter is in operation. [IP #0058-I023a, V.A.3.e; IP #0058-I026a, V.D.2.a; §2103.12.a.2.D; §2103.12.i]

f. The permittee shall install, operate, and maintain temperature probes and transmitters capable of continuously monitoring outlet gas temperature on E-200-7, E-300-4, E-301-4, E-600-9, E-601-11, E-700-6, E-701-7, E-800-3, E-900-7, E-901-7, E-903-3, and E-1001-7 condensers. The temperature probes used shall be certified by the manufacturer to be accurate to within 2% of the temperature measured in Celsius or to within 2.5°C, whichever is greater. The permittee shall record the outlet gas temperature at least once every 15 minutes while the equipment associated with the temperature probe and transmitter is in operation. [IP #0058-I023a, V.A.3.f; §2103.12.a.2.D; §2103.12.i]

g. The permittee shall perform inspection and monitoring of the closed vent system. Except for closed vent systems that are designated as unsafe or difficult to inspect, each closed vent system must be inspected as follows: [§63.983(b), §2103.12.a.2.B]
1) If constructed of hard piping, must conduct an initial inspection in accordance with §63.983(c)

(Method 21 of 40 CFR Part 60), and an annual inspection for visible, audible, or olfactory indications of leaks.

2) If constructed of ductwork, must conduct an initial and annual inspection in accordance with §63.983(c) (Method 21 of 40 CFR Part 60).

h. Equipment subject to the leak detection and reporting requirements shall be monitored. Leaks, as indicated by an instrument reading greater than 500 ppmv above background or by visual inspections, must be repaired as soon as practical unless a delay of repair is required under §63.983(d)(3). A first attempt at repair must be made no later than 5 days after the leaks detected, and repairs must be completed no later than 15 days after the leak is detected or at the beginning of the next introduction of vapors to the system, whichever is later. [§63.983(d)(2)]

i. Monitoring data recorded during periods of monitoring system breakdowns, repairs, preventive maintenance, calibration checks, zero (low-level) and high-level adjustments, periods of non-operation of the process unit (or portion thereof) resulting in cessation of the emissions to which the monitoring applies, shall not be included in any average to determine compliance, except monitoring data is to be collected during periods of startup, shutdown, and malfunction. [IP #0058-I023a, V.A.3.g; §2103.12.a.2.D; §2103.12.i; 40 CFR §63.998(b)(2), 40 CFR §63.2450(l)]

j. The permittee shall install, operate, and maintain a colorimetric indicator to monitor the performance of the carbon bed adsorber A-800-8. The indicator shall be monitored daily through visual inspection to detect a change in color. When a color change is detected, the canister shall be replaced within 24 hours. [IP #0058-I023a, V.A.3.h; §2103.12.a.2.D; 40 CFR §63.996(d)]

k. Daily average values of continuously monitored parameters must be calculated from the data and retained for 5-years. The daily average must be calculated as the average of all values for a monitored parameter recorded during the operating day. The average must cover a 24-hour period if operation is continuous, or the period of operation per operating day of operation is not continuous. [40 CFR §63.998(b)(3), §2103.12.a.2.B]

l. An excursion means that the daily average value of monitoring data for a parameter is greater than the maximum or less than the minimum established. Values from startup, shutdown and malfunctions are to be included in the averages. Excused excursions are not allowed. [40 CFR §63.998(b)(6), §2103.12.a.2.B]

4. Record Keeping Requirements:

a. The permittee shall keep and maintain sufficient records to demonstrate compliance with the requirements of this permit. Such records shall clearly demonstrate that all applicable requirements are met. [IP #0058-I023a, V.A.4.a; §2103.12.a.2.D; §2103.12.j]

b. The permittee shall keep and maintain records of all vapor pressure measurements made pursuant to condition V.G.3.d above. [IP #0058-I023a, V.A.4.b; §2103.12.a.2.D; §2103.12.j]

c. The permittee shall keep and maintain records of monthly and twelve months moving polymerizate production. [IP #0058-I023a, V.A.4.c; §2103.12.a.2.D; §2103.12.j]

d. The permittee shall keep and maintain records of monthly and twelve-month moving VOC and HAP emissions to demonstrate compliance with condition V.G.1.g above. The most recent vapor pressure information determined pursuant to condition V.G.3.d above and monthly average

condenser exit gas temperatures shall be used in the emission calculations. [IP #0058-I023a, V.A.4.d; §2103.12.a.2.D; §2103.12.j]

e. The permittee shall keep and maintain records of monthly maximum VOC and HAP pounds per batch emissions to demonstrate compliance with condition V.G.1.g above. The most recent vapor pressure information determined pursuant to condition V.G.3.d above and the monthly maximum hourly average condenser exit gas temperatures shall be used in the emission calculations. [IP #0058-I023a, V.A.4.e; §2103.12.a.2.D; §2103.12.j]

f. The permittee shall keep and maintain the following data on-site for these operations: [IP #0058-I023a, V.A.4.f; IP #0058-I026a, V.D.3.a; §2103.12.a.2.D; §2103.12.j; 40 CFR §63.2525(b)]
1) All records of monitoring required by V.G.3 above.
2) Records of operation, inspection, calibration, maintenance and/or replacement of process vessels or control equipment.
3) Stack test protocols and reports.
4) Manufacturer's specifications when this information is available.

g. The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance. [IP #0058-I023a, V.A.4.g; §2103.12.a.2.D; §2103.12.h.5.B]

h. The permittee shall maintain records of activities necessary to mitigate emergency conditions subject to Conditions V.G.1.e above and V.G.1.f above. Records shall include the beginning and ending time of the emergency, the nature of the emergency, and actions taken to mitigate the emergency. [IP #0058-I023a, V.A.4.h; §2103.12.a.2.D]

i. The permittee shall maintain relevant records for all documentation supporting initial notifications and notification of compliance status. [40 CFR 63.10(b)(2)(xiv), §2103.12.a.2.B]

j. The permittee shall keep the records of the following: [40 CFR 63.998(c)(1), §2103.12.a.2.B]

1) A record of the procedure used for calibrating the CPMS [40 CFR 63.998(c)(1)(i), §2103.12.a.2.B]
2) A record of the results of each calibration checks and all maintenance performed on the CPMS: [40 CFR 63.998(c)(1)(ii), §63.2450(k)(1), §2103.12.a.2.B]
   a) The date and the time of completion of calibration and preventative maintenance of the CPMS;
   b) The "as found" and "as left" CPMS readings, whenever an adjustment is made that affects the CPMS reading and a "no adjustment" statement otherwise;
   c) The start time and duration or start and stop times of any periods when the CPMS is inoperative;
   d) Records of the occurrence and duration of each start-up, shutdown, and malfunction of CPMS used to comply with this subpart during which excess emissions occur;
   e) For each start-up, shutdown, and malfunction during which excess emissions occur, records whether the procedures specified in the source's start-up, shutdown, and malfunction plan were followed, and documentation of actions taken that are not consistent with the plan;
   f) Records documenting each start-up, shutdown, and malfunction event;
   g) Records of CPMS start-up, shutdown, and malfunction event that specify that there were no excess emissions during the event;

h) Records of the total duration of operating time.

k. The permittee shall maintain records for of the following: [40 CFR 63.998(d)(1), §2103.12.a.2.B]

1) Identification of all parts of the closed vent system that are designated as unsafe or difficult to inspect, an explanation of why the equipment is unsafe or difficult to inspect, and the plan for inspecting the equipment required by 40 CFR §63.983(b)(2)(ii) or (III);
2) When a leak is detected, the following information must be recorded and kept for 5 years [40 CFR §63.998(d)(1)(iii), §2103.12.a.2.B]
   a) The instrument and the equipment identification number and the operator name, initials, or identification number;
   b) The date the leak was detected and the date of the first attempt to repair the leak;
   c) The date of successful repair of the leak;
   d) The maximum instrument reading measured by procedures in §63.998(c) after the leak is successfully repaired or determined to be non-repairable;
   e) Reason for delay of repair if a leak is not repaired within 15 days after discovery;
   f) Copies of compliance reports.
3) For each instrumental or visual inspection conducted in accordance with §63.983(b)(1) during which no leaks are detected, records that the inspection was performed, date of the inspection, and a statement that no leaks were detected. [40 CFR §63.998(d)(1)(iv), §2103.12.a.2.B]
4) Regulated source and control equipment start-up, shutdown, and malfunction records [40 CFR §63.998(d)(3), §2103.12.a.2.B]
   a) Record of the occurrence and duration of each start-up, shutdown, and malfunction of operation of process equipment or control equipment during which excess emissions occur must be maintained
   b) For each start-up, shutdown, and malfunction during which excess emissions occur, records that the procedures specified in the source's start-up, shutdown, and malfunction plan were followed, and documentation of actions taken that are not consistent with the plan.
   c) Records of monitored parameters outside the operating limit. The permittee shall record the occurrences and the cause of periods when the monitored parameters are outside of the parameter ranges documented in the Notification of Compliance Status report. This information shall also be reported in the Compliance report.

l. Records each time a safety device is opened to avoid unsafe conditions in accordance with §63.2450(p). [40 CFR §63.2525(f), §2103.12.a.2.B]

m. All records required under this section shall be maintained by the permittee for a period of five years following the date of such record. [IP #0058-I023a, V.A.4.i; §2103.12.a.2.D; §2103.12.j.2; 40 CFR 63.10(b)]

5. Reporting Requirements:

a. The permittee shall submit semi-annual reports to the Department in accordance with General Condition III.15 above. The reports shall contain all required information for the time period of the report: [IP #0058-I023a, V.A.5.a; §2103.12.a.2.D; §2103.12.k]
   1) Vapor pressure measurement results required to be recorded by condition V.G.4.b above;
   2) Monthly and 12-month data required to be recorded by conditions V.G.4.c through V.G.4.e above; and
   3) Non-compliance information required to be recorded by V.G.4.g above.

b. The permittee must develop a written startup, shutdown, and malfunction plan that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction; and a program of corrective action for malfunctioning process, air pollution control, and monitoring equipment used to comply with the relevant standard. The startup, shutdown, and malfunction plan does not need to address any scenario that would not cause the source to exceed the emission limitation in condition V.B.1.k above. The purpose of the startup, shutdown, and malfunction plan is as follows. [40 CFR 63.6 (e)(3)(i)), §2103.12.a.2.B]

1) Ensure that, at all times, the permittee operates and maintains each C5 Polymerization process equipment, including associated air pollution control and monitoring equipment, in a manner which satisfies the general duty to minimize emissions established by condition V.B.1.u above;

2) Ensure that the permittee is prepared to correct malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of hazardous air pollutants; and

3) Reduce the reporting burden associated with periods of startup, shutdown, and malfunction (including corrective action taken to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation).

c. The notification of compliance status report must include the information below. [40 CFR 63.2520(d)(2), §2103.12.a.2.B]

1) The results of any applicability determinations, emission calculations, or analyses used to identify and quantify HAP usage or HAP emissions from the affected source.
2) The results of emissions profiles, performance tests, engineering analyses, design evaluations, inspections and repairs, and calculations used to demonstrate initial compliance. For performance tests, results must include descriptions of sampling and analysis procedures and quality assurance procedures.
3) Descriptions of monitoring devices, monitoring frequencies, and the operating limits established during the initial compliance demonstrations, including data and calculations to support the levels established.

d. The compliance report must contain the information specified below. [40 CFR 63.2520(e), §2103.12.a.2.B]

1) Company name and address.
2) Statement by a responsible official with that official's name, title, and signature, certifying the accuracy of the content of the report.
3) Date of report and beginning and ending dates of the reporting period.
4) For each start-up, shutdown, and malfunction (SSM) during which excess emissions occur, the compliance report must include records that the procedures specified in the startup, shutdown, and malfunction plan (SSMP) were followed or documentation of actions taken that are not consistent with the SSMP, and include a brief description of each malfunction.

e. Records each time a safety device is opened to avoid unsafe conditions in accordance with [40 CFR §63.2450(p), §2103.12.a.2.B]

f. Records of the results of each CPMS calibration check and the maintenance performed. [40 CFR §63.2525(g), §2103.12.a.2.B]

g. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 above, if appropriate. [§2103.12.k; §2108.01.c]

6. Work Practice Standard:

a. The permittee is permitted to replace the existing condensers and baghouses listed in this permit with an identical unit of the same efficiency periodically to prevent corrosion. The permittee shall notify the Department in writing at least ten (10) days prior to such action. [IP #0058-I023a, V.A.6.a; §2103.12.a.2.D]

b. The permittee shall maintain on site all operating and maintenance manuals and equipment specifications for the BF_3 Scrubber for the life of the equipment if any. [IP #0058-I023a, V.A.6.b; §2103.12.a.2.D; §2105.03]

c. The permittee shall maintain on site all operating and maintenance manuals and equipment specifications for the H-500-4 and H-700-10 bag dump stations for the life of the equipment if any [IP #0058-I023a, V.A.6.c; §2103.12.a.2.D; §2105.03]

d. The permittee shall maintain onsite, for emergency replacement, 25% of the total number of bags or filter elements use by the baghouses. [IP #0058-I023a, V.A.6.d; §2103.12.a.2.D; §2105.03]

e. Material removed from the fabric filter shall be disposed of in a manner preventing entrainment into the atmosphere. [IP #0058-I023a, V.A.6.e; §2103.12.a.2.D; §2101.11.c.]

f. The permittee shall maintain and implement the Preventive Maintenance and Operations (PMO) Plan submitted to and approved by the Department. The permittee shall maintain the original approved PMO Plan and all subsequent revisions for a period of five years and have them available for inspection. [IP #0058-I023a, V.A.6.f; §2103.12.a.2.D]

g. The permittee shall do the following for WW Poly Unit (feed dryers and regeneration, west filtrate receiver, solvent wash receiver, and east filtrate receiver) and associated equipment: [§2105.03; IP #0058-I026a, V.D.4.a]

1) Perform regular maintenance in accordance with the manufacturer's or the operator's maintenance procedures;
2) Keep records of any maintenance; and
3) Keep a copy of either the manufacturer's or the operator's maintenance procedures.

h. The WW Poly Unit (feed dryers and regeneration, west filtrate receiver, solvent wash receiver, and east filtrate receiver) shall be properly operated and maintained at all times according to good engineering practices, with the exception of activities to mitigate emergency conditions. [§2105.03; IP #0058-I026a, V.D.4.b]

i. The permittee shall operate the source, control device and monitoring equipment at all times, including periods of SSM, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Malfunctions must be corrected as soon as practicable after their occurrence. [40 CFR 63.6(e)(1), §2103.12.a.2.B]

j. Under the requirements of 40 CFR Part 63, Subpart FFFF, the permittee is required to have a Leak Detection and Repair (LDAR) program. The permittee shall comply with each applicable conditions of Section VI.F below.

7. Additional Requirements:

None except as provided elsewhere.

~PERMIT SHIELD IN EFFECT~

H. WW Poly - Storage Tanks

Process Description: Storage Tanks
Facility ID: See Table in V.I.1.a
Capacity: See Table in II-1
Raw Materials: Polymerizate, Solvents, Monomer, Waste
Control Device: Condensers (7), Carbon adsorbers (2)

1. Restrictions:

a. The permittee shall not operate or allow to be operated the following equipment unless all emissions from the equipment are ducted to the subject control device(s). [IP #0058-I023a, V.B.1.a; §2103.12.a.2.D; §2105.06(b)3]

Table V-E-1: MP Poly Unit Controlled Storage Tanks

Equipment I.D.	Equipment Description	Control Device(s)		Emission Point
T-68, T-69, T-74	Storage Tanks	Condenser E-201-1		S024
T-73, T-75, T-76, T-77	Storage Tanks	Condenser E-202-1		S025
T-67	Storage Tank	Condenser E-67-3		S026
T-204	Storage Tank	Condenser E-204-4	Carbon Adsorber A-204-5A or 5B	S300
T-205	Storage Tank	Condenser E-205-4		
T-206	Storage Tank	Condenser E-206-4		
T-207	Storage Tank	Condenser E-207-4		

b. Emissions of volatile organic compounds (VOCs) and hazardous air pollutants (HAPs) from the tanks ## 10, 22-26, 28, 29, 34, 66-69, 71-77, 200-202, and 204-207 shall not exceed the following at any time: [IP #0058-I023a, V.B.1.b; §2103.12.a.2.D]

TABLE V-H-2: WW Poly Storage Tanks Emissions Limits

POLLUTANT	TPY[1]
Volatile Organic Compounds (VOCs)	10.02
Hazardous Air Pollutants (HAPs)	0.49

[1] A year is defined as any consecutive 12-month period.

c. The inlet coolant temperature to the condensers E-201-1, E-202-1, and E-67-3 shall not exceed 10°C (50°F) over any one-hour block average when emissions are routed through the condensers

with the exception of activities to mitigate emergency conditions. [IP #0058-I023a, V.B.1.c; IP #0058-I026a, V.E.1.b; §2103.12.a.2.D; §2105.06.b.3]

d. The exit vapor temperature from the condensers E-201-1, E-202-1, and E-67-3 shall not exceed 35°C (95°F) over any one-hour block average when emissions are being routed through them unless the temperature exceedance is due solely to high ambient temperature. Documentation, as specified in condition V.H.1.e below must be collected for each one-hour block average exit temperature over 35°C (95°F). [IP #0058-I023a, V.B.1.d; §2103.12.a.2.D]

e. If the measured one-hour block average exit vapor temperatures exceed 35°C (95°F) from an applicable condenser, the permittee shall take the following actions:[§2103.12.a.2.B]

1) Confirm that the glycol cooler is operating properly by reviewing current operating conditions (e.g., that the chiller system is operating and circulating coolant, and that glycol coolant is being supplied or exiting the condensers at required temperatures). Corrective actions are required to be taken to correct loss of coolant supply or to return the coolant supply/exit temperature to required temperatures.

2) The following documentation will be maintained:
   a) Identification of the condenser.
   b) The exit vapor and inlet coolant supply temperatures at the time of exceedance.
   c) The ambient air temperature at the time of exceedance.
   d) The estimated quantity of excess VOC and total HAP emitted, if any, generated during the exceedance.
   e) The nature and probable cause of the event causing the exceedance, including if the exceedance was due solely to high ambient temperatures.
   f) Appropriate corrective actions taken.

3) Periods of exit vapor temperatures in excess of 35°C (95°F) not due solely to high ambient temperature shall be considered a breakdown in accordance with §2108.01.

2. Testing Requirements:

The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Article XXI §2108.02. [§2103.12.h.1]

3. Monitoring Requirements:

a. The permittee shall operate and maintain an above-ground storage tank monitoring system using mass flow meters to measure and record throughput of solvent, polymerizate, and raw materials that are pumped for storage tanks 200, 201, 202, 204, 205, 206, 207, 26, 27, 28, 29, 66, 67, 68, 69, 73, 74, 75, 76, and 77. The permittee shall use the data derived from this system to enter the daily material throughput for each tank in the above-ground storage tank log required by condition V.H.4.a below. [IP #0058-I023a, V.B.3.a; §2103.12.a.2.D]

b. The permittee shall measure and record the throughput of material that is pumped into storage tanks 10, 22, 23, 24, 25, 34, 71, and 72 using material receipt records, level measurement changes, or mass flow meters. [IP #0058-I023a, V.B.3.b; §2103.12.a.2.D]

c. The permittee shall include the operation, calibration, and maintenance of the level instrumentation and mass flow meters in the Preventative Maintenance and Operation Plan required by V.G.6.f above [IP #0058-I023a, V.B.3.c; §2103.12.a.2.D; §2103.12.i]

d. The permittee shall install, operate, and maintain an inlet coolant temperature instrument on E-201-1, E-202-2, and E-67-3 condensers that continuously monitors the coolant inlet temperature. The temperature probes used shall be certified by the manufacturer to be accurate to within 2% of the temperature measured in Celsius or to within 2.5°C, whichever is greater. The permittee shall record the coolant inlet temperature at least once every 15 minutes while the equipment associated with the temperature probe and transmitter is in operation. [IP #0058-I023a, V.B.3.d; §2103.12.a.2.D; §2103.12.i]

e. The permittee shall install, operate, and maintain temperature probes and transmitters capable of continuously monitoring outlet gas temperature on E-201-1, E-202-2, and E-67-3 condensers. The temperature probes used shall be certified by the manufacturer to be accurate to within 2% of the temperature measured in Celsius or to within 2.5°C, whichever is greater. The permittee shall record the outlet gas temperature at least once every 15 minutes while the equipment associated with the temperature probe and transmitter is in operation. [IP #0058-I023a, V.B.3.e; §2103.12.a.2.D; §2103.12.i]

f. Monitoring data recorded during periods of monitoring system breakdowns, repairs, preventive maintenance, calibration checks, zero (low-level) and high-level adjustments, periods of non-operation of the process unit (or portion thereof) resulting in cessation of the emissions to which the monitoring applies, shall not be included in any average to determine compliance, except monitoring data is to be collected during periods of startup, shutdown and malfunction. [IP #0058-I023a, V.B.3.f; §2103.12.a.2.D; §2103.12.i]

g. The permittee shall install, operate and maintain a colorimetric indicator to monitor the performance of the carbon bed adsorber A-204-5A or 5B. The indicator shall be monitored daily through visual inspection to detect a change in color. When a color change is detected, the canister shall be replaced within 24 hours. [IP #0058-I023a, V.B.3.g; §2103.12.a.2.D]

4. Record Keeping Requirements:

a. The permittee shall maintain an Above-Ground Storage Tank Log (AST log), update the log at least once per week and shall make the log available for inspection by the Department. The AST log shall include the information on the parameters listed in Table below, using the methodologies identified therein. [IP #0058-I023a, V.B.4.a; §2103.12.a.2.D; §2103.12.j]

Table V-H-3: WW Poly Above-Ground Storage Tank Log

PARAMETER	METHODOLOGY
- AST ID and date installed and/or modified - AST size	Engineering records and diagrams. Permittee shall provide the installation and modification dates where the dates are known.
- Material store by name - The date the material was first placed in the AST and all dates or additions to or removals from the tanks listed in V.H.3.a above	Use the log generated by the AST material throughput monitoring system described by condition V.H.3.a above for tanks listed in V.H.3.a above. The level of the material in each tank listed in V.H.3.b above shall be measured daily. All information listed in

PARAMETER	METHODOLOGY
- A daily measurement of the level of the material for the tanks listed in V.H.3.b above	this section shall be entered into the AST log at a minimum weekly.
- Temperature (unheated tanks)	Unheated: Use 28°C (equal to the local maximum monthly (July)) average temperature as reported by the National Weather Service for the Pittsburgh area to calculate vapor pressure of the tank for the AST Log. Use the default temperature for Pittsburgh, Pennsylvania as provided by TANKS4.09d (or the most recent version) or replacement as identified by ACHD for emission calculation and compliance determinations. Heated: Use the heater setting as the temperature for each heated tank.
- Pressure (unpressurized or Nitrogen blanketed tanks)	Use the default atmospheric pressure for Pittsburgh, Pennsylvania as provided by TANKS 4.09.d (or the most recent version) or replacement as identified by ACHD for emission calculation and compliance determinations.
- Vapor pressure of the material stored	Use the Antoine's coefficients developed from vapor pressure testing as well as unheated tank temperature of 28°C and material data from the AST log entries to calculate vapor pressure.

b. The permittee shall keep and maintain records of condenser coolant temperature. [§2103.12.j, IP #0058-I026a, V.E.2.a; §2103.12.a.2.D]

c. The permittee shall keep records of operation, inspection, calibration, maintenance and/or replacement of process or control equipment. [§2103.12.j & k; IP #0058-I026a, V.E.2.b; §2103.12.a.2.D]

d. All records required under this section and condition V.H.2 shall be maintained by the permittee for a period of five years following the date of such record. [IP #0058-I023a, V.B.4.b; §2103.12.a.2.D; §2103.12.j.2]

5. Reporting Requirements:

a. The permittee shall report all non-compliance information required to be recorded by V.H.4.b above in accordance with General Condition III.15 above. The reports shall contain all required information for the time period of the report: [IP #0058-I023a, V.B.5.a; §2103.12.a.2.D; §2103.12.k]

b. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 above if appropriate. [IP #0058-I023a, V.B.5.b; §2103.12.a.2.D; §2103.12.k; §2108.01.c]

c. The permittee shall submit notification of intent to store any new material in storage tanks listed in V.H.1.a above, other than polymerizate, solvents, monomer, or waste, to the Department a minimum of ten (10) working days prior to the intended store date. This notification shall at minimum include the Material Safety Data Sheet, the maximum true vapor pressure and the emissions calculations for the new materials. [IP #0058-I023a, V.B.5.c; §2103.12.a.2.D]

6. Work Practice Standard:

a. The permittee is permitted to replace the existing condensers listed in this permit with an identical unit of the same efficiency periodically to prevent corrosion. The permittee shall notify the Department in writing at least ten (10) days prior to such action. [IP #0058-I023a, V.B.6.a; §2103.12.a.2.D; §2102.04.e]

b. The permittee shall maintain and implement the Preventative Maintenance and Operations (PMO) Plan submitted to and approved by the Department. The permittee shall maintain the original approved PMO Plan and all subsequent revisions for a period of five years and have them available for inspection. [IP #0058-I023a, V.B.6.b; §2103.12.a.2.D]

c. The permittee shall do the following for WW Poly storage tanks (73, 75, 76, 77) and associated equipment: [§2105.03; IP #0058-I026a, V.E.3.a; §2103.12.a.2.D]]
1) Perform regular maintenance in accordance with the manufacturer's or the operator's maintenance procedures;
2) Keep records of any maintenance; and
3) Keep a copy of either the manufacturer's or the operator's maintenance procedures.

d. The WW Poly storage tanks (73, 75, 76, 77) shall be properly operated and maintained at all times according to good engineering practices, with the exception of activities to mitigate emergency conditions. [§2105.03; IP #0058-I026a, V.E.3.b; §2103.12.a.2.D]

e. Under the requirements of 40 CFR Part 63, Subpart FFFF, the permittee is required to have a Leak Detection and Repair (LDAR) program. The permittee shall comply with each applicable conditions of Section VI.F below.

7. Additional Requirements:

None except as provided elsewhere.

~PERMIT SHIELD IN EFFECT~

I. Hydrogenation (Hydro) Unit - Process

Process Description: Batch process for hydrogenation of polymerizate from another processes.
Facility ID: Hydro Unit
Max. Production Rate: 22.5 MM lb/yr of Hydrogenated polymerizate
Raw Materials: Polymerizate, catalyst, hydrogen
Control Device: Baghouse (1), condensers (5)

1. Restrictions:

a. The maximum production rate for Hydrogenation unit shall not exceed 22.5 million pounds per 12-month rolling period of Hydrogenated polymerizate and the maximum liquid flow rate from Autoclaves #1 and #2 to the Vent tank shall not exceed 67 gallons per minute at any time. [IP #0058-I027a, V.A.1.a; IP #0058-I026a, V.H.1.a; §2103.12.a.2.D]

b. The permittee shall not operate or allow to be operated the following equipment unless all emissions from the equipment are routed to the subject control device(s). [IP #0058-I027a, V.A.1.b; §2103.12.a.2.D; §2105.06(b)3; 40 CFR 63.2450 (a)]

Table V-I-1: Hydro Unit Controlled Equipment

Equipment Description	Control Device(s)	Stack I.D.
Metering tank, Catalyst unloading system, Catalyst catch tank, Tanks T-103 & T-104, Mott filter, Heel tank	Condenser E-200-6 followed by Condenser E-201-2	S004
Autoclaves #1 & #2, Vent tank	Condenser E-401-2 & E-402-2 followed by Condenser E-403-2	S007
Catalyst unloading system	Baghouse S-203-5	S005

c. Refrigerated vent condensers [E-200-6 and E-201-2 (S004), E-401-2, E-402-2, and E-403-2 (S007)]: The condensers shall be properly maintained and operated according to good engineering practices, manufacturer's recommendations and the following conditions at all times while treating process emissions: [IP #0058-I027a, V.A.1.c; IP #0058-I026a, V.H.1.b; §2103.12.a.2.D; §2105.06.b.3]

1) The outlet coolant temperature of condensers E-201-2 and E-403-2 shall not exceed 4.4°C (40°F) for any one-hour block average when emissions are routed through the condenser with the exception of activities to mitigate emergency conditions;
2) The exit vapor temperature of condensers E-201-2 and E-403-2 shall not exceed 35°C (95°F) over any one-hour block average when emissions are being routed through them unless the temperature exceedance is due solely to high ambient temperature. Documentation, as specified in condition V.I.1.c.3) below must be collected for each one-hour block average exit temperature over 35°C (95°F).
3) If measured one-hour block average exit vapor temperatures exceed 35°C (95°F) from a condenser, the permittee shall take the following actions:
   a) Confirm that the glycol cooler is operating properly by reviewing current operating conditions (e.g., that the chiller system is operating and circulating coolant, and that glycol coolant is being supplied or exiting the condensers at required temperatures). Corrective

actions are required to be taken to correct loss of coolant supply or to return the coolant supply/exit temperature to required temperatures.

b) The following documentation will be maintained:
1. Identification of the condenser.
2. The exit vapor and inlet coolant supply temperatures at the time of exceedance.
3. The ambient air temperature at the time of exceedance.
4. The estimated quantity of excess VOC and total HAP emitted, if any, generated during the exceedance.
5. The nature and probable cause of the event causing the exceedance, including if the exceedance was due solely to high ambient temperatures.
6. Appropriate corrective actions taken.

c) Periods of exit vapor temperatures in excess of 35°C (95°F) not due solely to high ambient temperature shall be considered a breakdown in accordance with §2108.01.

d. The permittee shall not operate or allow to be operated the Catalyst Unloading System unless all emissions from this system are directed through a Baghouse S-203-5 with 99% efficiency before being exhausted into the atmosphere. [IP #0058-I027a, V.A.1.d; §2103.12.a.2.D;]

e. The Baghouse shall be properly operated and maintained according to good engineering practices and manufacturer's recommendations at all times while treating process emissions. [IP #0058-I027a, V.A.1.e; §2103.12.a.2.D]

f. Emissions from the Hydrogenation Unit (emission points S004, S005, S006, and S007) shall not exceed the following at any time: [IP #0058-I027a, V.A.1.f; §2103.12.a.2.D]

Table V-I-2: Hydro Unit Emissions Limits

Stack ID	Equipment Description	VOC		HAPs		PM	
		tpy[1]	lb/batch	tpy[1]	lb/batch	tpy[1]	lb/hr
S004	Tanks T-103 and T-104, Metering tank, Catalyst Catch tank, Mott Filter, Heel tank, Vent collection pot, Fresh catalyst addition, Mott flush and N_2 purge	12.97	21.54	0.071	0.71	-	-
S005	Catalyst unloading system	-	-	-	-	0.0002	0.021
S006	Spent catalyst drumming	0.05	-	-	-	-	-
S007	Vent tank, Autoclaves #1 charging, Autoclaves #2 charging	15.13	26.73	0.015	0.15	-	-
	Total	**28.15**	**48.27**	**0.086**	**0.86**	**0.0002**	**0.021**

[1]A year is defined as any consecutive 12-month period.

g. Opening a safety device is allowed at any time conditions require it to avoid unsafe conditions. [40 CFR §63.2450(p), §2103.12.a.2.B]

h. The permittee shall meet the following requirements for closed vent systems: [40 CFR §63.982(c), §2103.12.a.2.B]

1) Each closed vent system must be designed and operated to collect the vapors from the emission point and to route the vapors to the control device. [§63.983(a)(1)]
2) Closed vent system must be operated at all times when emissions are vent to, or collected by them. [§63.983(a)(2)]

i. All Hydro Process Unit shall use condensers as recovery devices to maintain their respective Total Resource Effectiveness (TRE) index above 1.9. [§2103.12.a; §2104.08; 40 CFR §63.2450, Table 1, 1.a.iii]

j. The permittee shall be in compliance with the emission limits and work practice standards in 40 CFR 63, subpart FFFF at all times, except during periods of startup, shutdown, and malfunction (SSM). [40 CFR 63.2450(a), §2103.12.a.2.B]

k. At all times, including periods of startup, shutdown, and malfunction, the permittee must operate and maintain all Hydro process equipment, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions during a period of startup, shutdown, or malfunction does not require the permittee to achieve emission levels that are required by condition V.I.1.i above, at other times if this is not consistent with safety and good air pollution control practices, nor does it require the permittee to make any further efforts to reduce emissions if levels required by condition V.I.1.i above have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department which may include, but is not limited to, monitoring results, review of operation and maintenance procedures (including the startup, shutdown, and malfunction plan required in condition V.I.5.b below, review of operation and maintenance records, and inspection of the source. [40 CFR 63.6(e)(1)(i), §2103.12.a.2.B]

l. Malfunctions must be corrected as soon as practicable after their occurrence. To the extent that an unexpected event arises during a startup, shutdown, or malfunction, the permittee must comply by minimizing emissions during such a startup, shutdown, and malfunction event consistent with safety and good air pollution control practices. [40 CFR 63.6(e)(1)(ii), §2103.12.a.2.B]

2. Testing Requirements:

The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Site Level Condition Article XXI §2108.02. [§2103.12.h.1]

3. Monitoring Requirements:

a. The permittee shall inspect the baghouse for proper operation at least once per week when operational. [IP #0058-I027a, V.A.3.a; §2103.12.a.2.D; §2103.12.i]

b. The permittee shall measure the vapor pressure of the HVD and RHS solvents quarterly. The vapor pressure shall be determined in accordance with ASTM Method D 5842-04 “Standard Practice for Sampling and Handling of Fuels for Volatility Measurement” (or latest version) and ASTM Standard D 2879-97, “Standard Test Method for Vapor Pressure-Temperature Relationship and

Initial Decomposition Temperature of Liquids by Isoteniscope" (or latest version). [IP #0058-I027a, V.A.3.b; §2103.12.a.2.D]

c. The permittee shall install, operate, and maintain an outlet coolant temperature instrument on E-201-2 and E-403-2 condensers that continuously monitor the coolant outlet temperature. The temperature probes used shall be certified by the manufacturer to be accurate to within 2% of the temperature measured in Celsius or to within 2.5°C, whichever is greater. The permittee shall record the coolant outlet temperature at least once every 15 minutes while the equipment associated with the temperature probe and transmitter is in operation. [IP #0058-I027a, V.A.3.c; IP #0058-I026a, V.H.3.a; §2103.12.a.2.D; §2103.12.i]

d. The permittee shall install, operate, and maintain temperature probes and transmitters capable of continuously monitoring outlet gas temperature on E-201-2 and E-403-2 condensers. The temperature probes used shall be certified by the manufacturer to be accurate to within 2% of the temperature measured in Celsius or to within 2.5°C, whichever is greater. The permittee shall record the outlet gas temperature at least once every 15 minutes while the equipment associated with the temperature probe and transmitter is in operation. [IP #0058-I027a, V.A.3.d; §2103.12.a.2.D; §2103.12.i; 40 CFR 63.990(c)(2)]

e. The permittee shall perform inspection and monitoring of the closed vent system. Except for closed vent systems that are designated as unsafe or difficult to inspect, each closed vent system must be inspected as follows: [§63.983(b), §2103.12.a.2.B]

1) If constructed of hard piping, must conduct an initial inspection in accordance with §63.983(c) (Method 21 of 40 CFR Part 60), and an annual inspection for visible, audible, or olfactory indications of leaks.
2) If constructed of ductwork, must conduct an initial and annual inspection in accordance with §63.983(c) (Method 21 of 40 CFR Part 60).

f. Equipment subject to the leak detection and reporting requirements shall be monitored. Leaks, as indicated by an instrument reading greater than 500 ppmv above background or by visual inspections, must be repaired as soon as practical unless a delay of repair is required under §63.983(d)(3). A first attempt at repair must be made no later than 5 days after the leaks detected, and repairs must be completed no later than 15 days after the leak is detected or at the beginning of the next introduction of vapors to the system, whichever is later. [§63.983(d)(2)]

g. Monitoring data recorded during periods of monitoring system breakdowns, repairs, preventive maintenance, calibration checks, zero (low-level) and high-level adjustments, periods of non-operation of the process unit (or portion thereof) resulting in cessation of the emissions to which the monitoring applies, shall not be included in any average to determine compliance, except monitoring data is to be collected during periods of startup, shutdown, and malfunction. [IP #0058-I027a, V.A.3.e; §2103.12.a.2.D; §2103.12.i]

h. Daily average values of continuously monitored parameters must be calculated from the data and retained for 5-years. The daily average must be calculated as the average of all values for a monitored parameter recorded during the operating day. The average must cover a 24-hour period if operation is continuous, or the period of operation per operating day of operation is not continuous. [40 CFR §63.998(b)(3), §2103.12.a.2.B]

i. An excursion means that the daily average value of monitoring data for a parameter is greater than the maximum or less than the minimum established. Values from startup, shutdown and

malfunctions are to be included in the averages. Excused excursions are not allowed. [40 CFR §63.998(b)(6), §2103.12.a.2.B]

4. Record Keeping Requirements:

a. The permittee shall keep and maintain sufficient records to demonstrate compliance with the requirements of this permit. Such records shall clearly demonstrate that all applicable requirements are met. [§2103.12.j]

b. The permittee shall keep and maintain records of all vapor pressure measurements made pursuant to condition V.I.3.b above. [IP #0058-I027a, V.A.4.b; §2103.12.a.2.D; §2103.12.j]

c. The permittee shall keep and maintain records of the daily amount of polymerizate charged into the process and monthly and twelve months Hydrogenated polymerizate production. The daily amount shall be calculated every day beginning at 12:00 am for 24 consecutive hours. [IP #0058-I027a, V.A.4.c; IP #0058-I026a, V.H.2.a; §2103.12.a.2.D; §2103.12.j]

d. The permittee shall keep and maintain records of monthly maximum VOC and HAP pounds per batch emissions to demonstrate compliance with condition V.I.1.f above. The most recent vapor pressure information determined pursuant to condition V.I.3.b above and the monthly maximum hourly average condenser exit gas temperatures shall be used in the emission calculations. [IP #0058-I027a, V.A.4.d; §2103.12.a.2.D; §2103.12.j]

e. The permittee shall keep and maintain records of monthly and twelve-month moving VOC and HAP emissions to demonstrate compliance with condition V.I.1.f above. The most recent vapor pressure information determined pursuant to condition V.I.3.b above and monthly average condenser exit gas temperatures shall be used in the emission calculations. [IP #0058-I027a, V.A.4.e; §2103.12.a.2.D; §2103.12.j]

f. The permittee shall keep and maintain the following data on-site for these operations: [IP #0058-I027a, V.A.4.f; IP #0058-I026a, V.H.2.a; §2103.12.a.2.D; §2103.12.j; 40 CFR §63.2525(b)]
   1) All records of monitoring required by V.I.3 above.
   2) Records of operation, inspection, calibration, maintenance and/or replacement of process vessels or control equipment.
   3) Stack test protocols and reports.
   4) Manufacturer’s specifications when this information is available.

g. The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance. [IP #0058-I027a, V.A.4.g; §2103.12.a.2.D; §2103.12.h.5.B]

h. The permittee shall maintain records of activities necessary to mitigate emergency conditions subject to ConditionsV.I.1.c above. Records shall include the beginning and ending time of the emergency, the nature of the emergency, and actions taken to mitigate the emergency. [IP #0058-I027a, V.A.4.h; §2103.12.a.2.D]

i. The permittee shall maintain relevant records for all documentation supporting initial notifications and notification of compliance status. [40 CFR 63.10(b)(2)(xiv), §2103.12.a.2.B]

j. The permittee shall keep the records of the following: [40 CFR 63.998(c)(1), §2103.12.a.2.B]

1) A record of the procedure used for calibrating the CPMS [40 CFR 63.998(c)(1)(i), §2103.12.a.2.B]
2) A record of the results of each calibration checks and all maintenance performed on the CPMS: [40 CFR 63.998(c)(1)(ii), §63.2450(k)(1), §2103.12.a.2.B]
   a) The date and the time of completion of calibration and preventative maintenance of the CPMS;
   b) The "as found" and "as left" CPMS readings, whenever an adjustment is made that affects the CPMS reading and a "no adjustment" statement otherwise;
   c) The start time and duration or start and stop times of any periods when the CPMS is inoperative;
   d) Records of the occurrence and duration of each start-up, shutdown, and malfunction of CPMS used to comply with this subpart during which excess emissions occur;
   e) For each start-up, shutdown, and malfunction during which excess emissions occur, records whether the procedures specified in the source's start-up, shutdown, and malfunction plan were followed, and documentation of actions taken that are not consistent with the plan;
   f) Records documenting each start-up, shutdown, and malfunction event;
   g) Records of CPMS start-up, shutdown, and malfunction event that specify that there were no excess emissions during the event;
   h) Records of the total duration of operating time.

k. The permittee shall maintain records for of the following: [40 CFR 63.998(d)(1), §2103.12.a.2.B]

1) Identification of all parts of the closed vent system that are designated as unsafe or difficult to inspect, an explanation of why the equipment is unsafe or difficult to inspect, and the plan for inspecting the equipment required by 40 CFR §63.983(b)(2)(ii) or (III);
2) When a leak is detected, the following information must be recorded and kept for 5 years [40 CFR §63.998(d)(1)(iii), §2103.12.a.2.B]
   a) The instrument and the equipment identification number and the operator name, initials, or identification number;
   b) The date the leak was detected and the date of the first attempt to repair the leak;
   c) The date of successful repair of the leak;
   d) The maximum instrument reading measured by procedures in §63.998(c) after the leak is successfully repaired or determined to be non-repairable;
   e) Reason for delay of repair if a leak is not repaired within 15 days after discovery;
   f) Copies of compliance reports.
3) For each instrumental or visual inspection conducted in accordance with §63.983(b)(1) during which no leaks are detected, records that the inspection was performed, date of the inspection, and a statement that no leaks were detected. [40 CFR §63.998(d)(1)(iv), §2103.12.a.2.B]
4) Regulated source and control equipment start-up, shutdown, and malfunction records [40 CFR §63.998(d)(3), §2103.12.a.2.B]
   a) Record of the occurrence and duration of each start-up, shutdown, and malfunction of operation of process equipment or control equipment during which excess emissions occur must be maintained
   b) For each start-up, shutdown, and malfunction during which excess emissions occur, records that the procedures specified in the source's start-up, shutdown, and malfunction plan were followed, and documentation of actions taken that are not consistent with the plan.

c) Records of monitored parameters outside the operating limit. The permittee shall record the occurrences and the cause of periods when the monitored parameters are outside of the parameter ranges documented in the Notification of Compliance Status report. This information shall also be reported in the Compliance report.

l. Records each time a safety device is opened to avoid unsafe conditions in accordance with §63.2450(p). [40 CFR §63.2525(f), §2103.12.a.2.B]

m. All records required under this section shall be maintained by the permittee for a period of five years following the date of such record. [§2103.12.j.2]

5. Reporting Requirements:

a. The permittee shall submit semi-annual reports to the Department in accordance with General Condition III.15. The reports shall contain all required information for the time period of the report: [IP #0058-I027a, V.A.5.a; §2103.12.a.2.D; §2103.12.k]
1) Vapor pressure measurement results required to be recorded by condition V.I.4.b above;
2) Monthly and 12-month data required to be recorded by conditions V.I.4.c through V.I.4.e above; and
3) Non-compliance information required to be recorded by V.I.4.g above.

b. The permittee must develop a written startup, shutdown, and malfunction plan that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction; and a program of corrective action for malfunctioning process, air pollution control, and monitoring equipment used to comply with the relevant standard. The startup, shutdown, and malfunction plan does not need to address any scenario that would not cause the source to exceed the emission limitation in condition V.B.1.k above. The purpose of the startup, shutdown, and malfunction plan is as follows. [40 CFR 63.6 (e)(3)(i)), §2103.12.a.2.B]

1) Ensure that, at all times, the permittee operates and maintains each C5 Polymerization process equipment, including associated air pollution control and monitoring equipment, in a manner which satisfies the general duty to minimize emissions established by condition V.B.1.u above;

2) Ensure that the permittee is prepared to correct malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of hazardous air pollutants; and

3) Reduce the reporting burden associated with periods of startup, shutdown, and malfunction (including corrective action taken to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation).

c. The notification of compliance status report must include the information below. [40 CFR 63.2520(d)(2), §2103.12.a.2.B]

1) The results of any applicability determinations, emission calculations, or analyses used to identify and quantify HAP usage or HAP emissions from the affected source.
2) The results of emissions profiles, performance tests, engineering analyses, design evaluations, inspections and repairs, and calculations used to demonstrate initial compliance. For performance tests, results must include descriptions of sampling and analysis procedures and quality assurance procedures.
3) Descriptions of monitoring devices, monitoring frequencies, and the operating limits

established during the initial compliance demonstrations, including data and calculations to support the levels established.

d. The compliance report must contain the information specified below. [40 CFR 63.2520(e), §2103.12.a.2.B]

1) Company name and address.
2) Statement by a responsible official with that official's name, title, and signature, certifying the accuracy of the content of the report.
3) Date of report and beginning and ending dates of the reporting period.]
4) For each start-up, shutdown, and malfunction (SSM) during which excess emissions occur, the compliance report must include records that the procedures specified in the startup, shutdown, and malfunction plan (SSMP) were followed or documentation of actions taken that are not consistent with the SSMP, and include a brief description of each malfunction.

e. Records each time a safety device is opened to avoid unsafe conditions in accordance with [40 CFR §63.2450(p), §2103.12.a.2.B]

f. Records of the results of each CPMS calibration check and the maintenance performed. [40 CFR §63.2525(g), §2103.12.a.2.B]

g. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 above, if appropriate. [§2103.12.k]

6. Work Practice Standard:

a. The permittee is permitted to replace the existing condensers and baghouse using for this process with an identical unit of the same efficiency periodically to prevent corrosion. The permittee shall notify the Department in writing at least ten (10) days prior to such action. [IP #0058-I027a, V.A.6.a; §2103.12.a.2.D]

b. The permittee shall maintain on site all operating and maintenance manuals and equipment specifications for the baghouse for the life of the equipment if any [IP #0058-I027a, V.A.6.b; §2103.12.a.2.D; §2105.03]

c. The permittee shall maintain onsite, for emergency replacement, 25% of the total number of bags or filter elements installed in the baghouse, except during periods following bag replacement to allow for replenishment of the stock of spare bags." [IP #0058-I027a, V.A.6.c; §2103.12.a.2.D; 2105.03]

d. Material removed from the fabric filter shall be disposed of in a manner preventing re-entrainment into the atmosphere. [IP #0058-I027a, V.A.6.d; §2103.12.a.2.D; 2101.11.c.]

e. The permittee shall do the following for Hydrogenation Unit (tanks 103 and 104, metering tank, catalyst catch tank, Mott filter, Heel tank, Vent tanks, Autoclaves #1 and #2) and associated equipment: [IP #0058-I027a, V.A.6.e; IP #0058-I026a, V.H.4.a; §2103.12.a.2.D; §2105.03]
1) Perform regular maintenance in accordance with the manufacturer's or the operator's maintenance procedures;
2) Keep records of any maintenance; and
3) Keep a copy of either the manufacturer's or the operator's maintenance procedures.

f. The Hydrogenation Unit (tanks 103 and 104, metering tank, catalyst catch tank, Mott filter, Heel tank, Vent tanks, Autoclaves #1 and #2) shall be properly operated and maintained at all times according to good engineering practices, with the exception of activities to mitigate emergency conditions. [IP #0058-I027a, V.A.6.f; IP #0058-I026a, V.H.4.b; §2103.12.a.2.D; §2105.03]

g. The permittee shall operate the source, control device and monitoring equipment at all times, including periods of SSM, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Malfunctions must be corrected as soon as practicable after their occurrence. [40 CFR 63.6(e)(1), §2103.12.a.2.B]

h. Under the requirements of 40 CFR Part 63, Subpart FFFF, the permittee is required to have a Leak Detection and Repair (LDAR) program. The permittee shall comply with each applicable conditions of Section VI.F below.

7. Additional Requirements:

None except as provided elsewhere.

~PERMIT SHIELD IN EFFECT~

J. Hydrogenation (Hydro) Unit - Storage Tanks

Process Description: Fixed roof storage tanks
Facility ID: See Table in V.K.1.a
Capacity: See Table in II-1
Raw Materials: Various solvents and Polymerizates
Control Device: Condensers

1. Restrictions:

a. The permittee shall not operate or allow to be operated the following equipment unless all emissions from the equipment are ducted to the subject control device(s). [IP #0058-I027a, V.B.1.a; §2103.12.a.2.D; §2105.06(b)]

Table V-J-1: Hydro Unit Controlled Storage Tanks

Equipment I.D.	Equipment Description	Control Device(s)	Emission Point
T-100, T-101	Storage Tanks	Condenser E-101-4	S001
T-102, T-105, T-106	Storage Tanks	Condenser E-104-1 followed by Condenser E-104-2	S012

b. Emissions from the Storage Tanks shall not exceed the following at any time: [IP #0058-I027a, V.B.1.b; §2103.12.a.2.D]

TABLE V-J-2: Hydro Unit Storage Tanks Emissions Limits

POLLUTANT	Stack S001 TPY[1]	Stack S012 TPY[1]	Total TPY[1]
Volatile Organic Compounds (VOC)	1.27	7.35	8.62
Hazardous Air Pollutants (HAP)	0.007	-	0.007

[1] A year is defined as any consecutive 12-month period.

c. The outlet coolant temperature for the condensers E-101-4 (S001) and E-104-2 (S012) shall not exceed 4.4°C (40°F) over any one-hour block average when emissions are routed through the condenser with the exception of activities to mitigate emergency conditions. [IP #0058-I027a, V.B.1.d; IP #0058-I026a, V.H.1.b; §2103.12.a.2.D §2103.12.a.2.D; §2105.06.b.3]

d. The exit vapor temperature from the condensers E-101-4 and E-104-2 shall not exceed 35°C (95°F) over any one-hour block average when emissions are being routed through them unless the temperature exceedance is due solely to high ambient temperature. Documentation, as specified in condition V.J.1.e below must be collected for each one-hour block average exit temperature over 35°C (95°F). [IP #0058-I027a, V.B.1.c; §2103.12.a.2.D]

e. If the measured one-hour block average exit vapor temperatures exceed 35° C (95° F) from an applicable condenser, the permittee shall take the following actions:

1) Confirm that the glycol cooler is operating properly by reviewing current operating conditions (e.g., that the chiller system is operating and circulating coolant, and that glycol coolant is being supplied or exiting the condensers at required temperatures). Corrective actions are required to be taken to correct loss of coolant supply or to return the coolant supply/exit temperature to required temperatures.

2) The following documentation will be maintained:
   a) Identification of the condenser.
   b) The exit vapor and inlet coolant supply temperatures at the time of exceedance.
   c) The ambient air temperature at the time of exceedance.
   d) The estimated quantity of excess VOC and total HAP emitted, if any, generated during the exceedance.
   e) The nature and probable cause of the event causing the exceedance, including if the exceedance was due solely to high ambient temperatures.
   f) Appropriate corrective actions taken.

3) Periods of exit vapor temperatures in excess of 35°C (95°F) not due solely to high ambient temperature shall be considered a breakdown in accordance with §2108.01.

2. Testing Requirements:

The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Article XXI §2108.02. [§2103.12.h.1]

3. Monitoring Requirements:

a. The permittee shall operate and maintain an above-ground storage tank monitoring system using mass flow meters to measure and record throughput of solvents and polymerizates that are pumped for storage tanks 100, 101, 102, 105, and 106. The permittee shall use the data derived from this system to enter the daily material throughput for each tank in the above-ground storage tank log required by condition V.J.4.a below. [IP #0058-I027a, V.B.3.a; §2103.12.a.2.D; §2103.12.i]

b. The permittee shall install, operate, and maintain an outlet coolant temperature instrument on E-101-4 and E-104-2 condensers that continuously monitors the coolant outlet temperature. The temperature probes used shall be certified by the manufacturer to be accurate to within 2% of the temperature measured in Celsius or to within 2.5°C, whichever is greater. The permittee shall record the coolant outlet temperature at least once every 15 minutes while the equipment associated with the temperature probe and transmitter is in operation. [IP #0058-I027a, V.B.3.b; IP #0058-I026a, V.H.3.a; §2103.12.a.2.D; §2103.12.i]

c. The permittee shall install, operate, and maintain temperature probes and transmitters capable of continuously monitoring outlet gas temperature on E-101-4 and E-104-2 condensers. The temperature probes used shall be certified by the manufacturer to be accurate to within 2% of the temperature measured in Celsius or to within 2.5°C, whichever is greater. The permittee shall record the outlet gas temperature at least once every 15 minutes while the equipment associated with the temperature probe and transmitter is in operation. [IP #0058-I027a, V.B.3.c; §2103.12.a.2.D; §2103.12.i]

d. Monitoring data recorded during periods of monitoring system breakdowns, repairs, preventive maintenance, calibration checks, zero (low-level) and high-level adjustments, periods of non-operation of the process unit (or portion thereof) resulting in cessation of the emissions to which the monitoring applies, shall not be included in any average to determine compliance, except monitoring data is to be collected during periods of startup, shutdown and malfunction. [IP #0058-I027a, V.B.3.d; §2103.12.a.2.D; §2103.12.i]

e. The permittee shall include the operation, calibration, and maintenance of the level instrumentation and mass flow meters in the Preventative Maintenance and Operation Plan required by V.J.6 below. [IP #0058-I027a, V.B.3.e; §2103.12.a.2.D; §2103.12.i]

4. Record Keeping Requirements:

a. The permittee shall maintain an Above-Ground Storage Tank Log (AST log), update the log at least once per week and shall make the log available for inspection by the Department. The AST log shall include the information on the parameters listed in Table below, using the methodologies identified therein. [IP #0058-I027a, V.B.4.a; §2103.12.a.2.D; §2103.12.j]

Table V-J-3: Hydro Unit Above-Ground Storage Tank Log

	PARAMETER	METHODOLOGY
1)	- AST ID and date installed and/or modified - AST size	Engineering records and diagrams. Permittee shall provide the installation and modification dates where the dates are known.
2)	- Material store by name - A daily measurement of the level of material in each AST	Use the log generated by the AST material throughput monitoring system described by condition V.J.4.a above.
3)	- Temperature	Unheated tanks: Use 28°C (equal to the local maximum monthly (July)) average temperature as reported by the National Weather Service for the Pittsburgh area to calculate vapor pressure of the tank for the AST Log. Use the default temperature for Pittsburgh, Pennsylvania as provided by TANKS4.09d (or the most recent version) or replacement as identified by ACHD for emission calculation and compliance determinations. Heated tanks: Use the heater setting as the temperature for each heated tank.
4)	- Pressure (unpressurized or Nitrogen blanketed tanks)	Use the default atmospheric pressure for Pittsburgh, Pennsylvania as provided by TANKS 4.09.d (or the most recent version) or replacement as identified by ACHD for emission calculation and compliance determinations.

	PARAMETER	METHODOLOGY
5)	- Vapor pressure of the material stored	Use the Antoine's coefficients developed from vapor pressure testing as well as unheated tank temperature of 28°C and material data from the AST log entries to calculate vapor pressure.

b. The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance. [IP #0058-I027a, V.B.4.b; §2103.12.a.2.D; §2103.12.h.5.B]

c. The permittee shall keep and maintain production records and records of condenser coolant temperature. [§2103.12.j, IP #0058-I026a, V.H.2.a; §2103.12.a.2.D]

d. The permittee shall keep records of operation, inspection, calibration, maintenance and/or replacement of process or control equipment. [§2103.12.j & k; IP #0058-I026a, V.H.2.b; §2103.12.a.2.D]

e. All records required under this section and condition V.J.4 above shall be maintained by the permittee for a period of five years following the date of such record. [IP #0058-I027a, V.B.4.c; §2103.12.a.2.D; §2103.12.j.2]

5. Reporting Requirements:

a. The permittee shall submit notification of intent to store any new material in storage tanks listed in V.J.1.a above, other than solvents, to the Department a minimum of ten (10) working days prior to the intended store date. This notification shall at minimum include the Material Safety Data Sheet, the maximum true vapor pressure and the emissions calculations for the new materials. [IP #0058-I027a, V.B.5.a; §2103.12.a.2.D; §2102.04.b.6]

b. The permittee shall submit semi-annual reports to the Department in accordance with General Condition III.15. The reports shall contain all non-compliance information required to be recorded by V.J.4.b above for the time period of the report. [IP #0058-I027a, V.B.5.b; §2103.12.a.2.D; §2103.12.k]

c. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 above if appropriate. [IP #0058-I027a, V.B.5.c; §2103.12.a.2.D; §2103.12.k; §2108.01.c]

6. Work Practice Standard:

a. The permittee is permitted to replace the existing condensers listed in this permit with an identical unit of the same efficiency periodically to prevent corrosion. The permittee shall notify the Department in writing at least ten (10) days prior to such action. [IP #0058-I027a, V.B.6.a; §2103.12.a.2.D]

b. The permittee shall maintain and implement the Preventative Maintenance and Operations (PMO) Plan submitted to and approved by the Department. The permittee shall maintain the original

approved PMO Plan and all subsequent revisions for a period of five years and have them available for inspection. [IP #0058-I027a, V.B.6.b; §2103.12.a.2.D]

c. The permittee shall do the following for Storage tanks 102, 105, 106 and associated equipment: [IP #0058-I027a, V.B.6.c; IP #0058-I026a, V.H.4.a; §2103.12.a.2.D; §2105.03]
   1) Perform regular maintenance in accordance with the manufacturer's or the operator's maintenance procedures;
   2) Keep records of any maintenance; and
   3) Keep a copy of either the manufacturer's or the operator's maintenance procedures.

d. The Storage tanks 102, 105, 106 shall be properly operated and maintained at all times according to good engineering practices, with the exception of activities to mitigate emergency conditions. [IP #0058-I027a, V.B.6.d; IP #0058-I026a, V.H.4.b; §2103.12.a.2.D; §2105.03]

7. Additional Requirements:

None except as provided elsewhere.

~PERMIT SHIELD IN EFFECT~

K. LTC Operations - Process

Process Description: LTC Process operations
Facility ID: #1, #2 and #4 LTC Units
Max. Design Rate: 67.24 MM lbs of finished resin per year; combined
Raw Materials: Intermediate Polymerizate, Blending Solvents
Control Device: Fume scrubbers (2), baghouses (3), carbon beds (2), and condensers (7)

1. Restrictions:

a. The maximum production rate for all three LTC units (#1,#2, and #4) shall not exceed 67.24 MM pounds per year of finished resin combined. [IP #0058-I016b, V.A.1.a; §2103.12.a.2.D]

b. The permittee shall not operate or allow to be operated the following equipment unless all emissions from the equipment are routed to the subject control device(s). [IP #0058-I016b, V.A.1.b; §2103.12.a.2.D; §2105.06(b)3; 40 CFR 63.2450 (a)]

Table V-K -1: LTC Controlled Equipment

Equipment Description	Control Device(s)	Stack I.D.
LTC Unit #1	Condenser E-301B-E3	S109
LTC Unit #2	Condenser E-607-2	S110
LTC Unit #4	Condenser E-106-3	S124
Reclaim Tank	Condenser E-301-4	S108
Resin Kettle 5	Condenser E-RK5-4	S111
Resin Kettle 6	Condenser E-RK6-5	S112
Resin Kettle 7	Condenser E-RK7-4	S113
#1 Pastillator Belt	Baghouse S-108 Scrubber S-127-3	S115 S114
#2 Pastillator Belt	Baghouse S-640-1 Scrubber S-127-3	S116 S114
Berndorf Pastillator Belt	Baghouse S-104-1 Scrubber S-105-1	S084 S165
LTC #1/#2 Oil Water Separator	Carbon Bed	S110A
LTC #4 Oil Water Separator	Carbon Bed	S125

c. All LTC Units shall use condensers as recovery devices to maintain their respective Total Resource Effectiveness (TRE) index above 1.9. [IP #0058-I016b, V.A.1.c; §2103.12.a.2.D; 40 CFR§63.2450, Table 1, 1.a.iii]

d. Cooling tower water chilled vent condensers [E-301B-E3 (S109); E-301-4 (S108); E-607-2 (S110); E-RK5-4 (S111); E-RK6-5 (S112); E-RK7-4 (S113)]: The condensers shall be properly operated and maintained according to good engineering practices, manufacturer's recommendations and the following conditions at all times while treating process emissions: [IP #0058-I016b, V.A.1.d; IP #0058-I026a, V.F.1.b; §2103.12.a.2.D; §2105.06(b)3]

1) The inlet coolant temperature to each condenser shall not exceed 10°F (5.6°C) above ambient air temperature over any one-hour block average when emissions are routed through the condenser with the exception of activities to mitigate emergency conditions and except that at no time will coolant temperature be required to be less than 50°F (10°C).

2) The exit vapor temperature of each condenser shall not exceed 40°C (104°F) over any one-hour block average when emissions are being routed through them unless the temperature exceedance is due solely to high ambient temperature. Documentation as specified in condition V.K.1.d.3) below must be collected for each one-hour block average exit temperature over 40°C (104°F).

3) If measured one-hour block average exit vapor temperatures exceed 40°C (104°F) from a condenser, the permittee shall take the following actions:
   a) Confirm that the cooling tower is operating properly by reviewing current operating conditions (e.g., that the cooling system is operating and circulating cooling water, and that cooling water is being supplied at less than 10°F (5.6°C) above ambient (except that at no time will coolant temperature be required to less than 50°F (10 °C). Corrective actions are required to be taken to correct loss of coolant supply or to return the coolant supply temperature to less than 10°F (5.6°C) above ambient (except that at no time will coolant temperature be required to less than 50°F (10°C)).
   b) The following documentation will be maintained:
      i) Identification of the condenser.
      ii) The exit vapor and inlet coolant supply temperatures at the time of exceedance.
      iii) The ambient air temperature at the time of exceedance.
      iv) The estimated quantity of VOC and total HAP emitted, if any, generated during the exceedance.
      v) The nature and probable cause of the event causing the exceedance, including if the exceedance was due solely to high ambient temperatures.
      vi) Appropriate corrective actions taken.

   c) Periods of exit vapor temperatures in excess of 40°C (104°F) not due solely to high ambient temperature shall be considered a breakdown in accordance with §2108.01.

e. Refrigerated vent condenser E-106-3 (S124): The condenser shall be properly maintained and operated according to good engineering practices, manufacturer's recommendation following conditions at all times while treating process emissions: [IP #0058-I016b, V.A.1.e; §2103.12.a.2.D; §2105.06.b.3]

1) The inlet coolant temperature to the condenser shall not exceed 10°C (50°F) over any one-hour block average when emissions are routed through the condenser with the exception of activities to mitigate emergency conditions;

2) The exit vapor temperature of the condenser shall not exceed 35°C (95°) over any one-hour block average when emissions are being routed through it, them, unless the temperature exceedance is due solely to high ambient temperature. Documentation, as specified in condition

V.K.1.e.3) below must be collected for each one-hour block average exit temperature over 35°C (95°F).

3) If measured one-hour block average exit vapor temperatures exceed 35°C (95°) from a condenser, the permittee shall take the following actions:
   a) Confirm that the glycol cooler is operating properly by reviewing current operating conditions (e.g., that the chiller system is operating and circulating coolant, and that glycol coolant is being supplied or exiting the condensers at required temperatures). Corrective actions are required to be taken to correct loss of coolant supply or to return the coolant supply/exit temperature to required temperatures

   b) The following documentation will be maintained:
      i) Identification of the condenser.
      ii) The exit vapor and inlet coolant supply temperatures at the time of exceedance.
      iii) The ambient air temperature at the time of exceedance.
      iv) The estimated quantity of VOC and total HAP emitted, if any, generated during the exceedance.
      v) The nature and probable cause of the event causing the exceedance, including if the exceedance was due solely to high ambient temperatures.
      vi) Appropriate corrective actions taken.

   c) Periods of exit vapor temperatures in excess of 35°C (95°F) not due solely to high ambient temperature shall be considered a breakdown in accordance with §2108.01.

f. The vacuum leak rate from the #1 and #4 LTC Vacuum Systems shall not exceed 10 lb/hr. The vacuum leak rate from #2 LTC Vacuum System shall not exceed 15 lb/hr. Compliance with this condition shall be demonstrated during the regular compliance test required under condition V.K.2.c below. [IP #0058-I016b, V.A.1.f; IP #0058-I026a, V.F.1.c; §2103.12.a.2.D; §2103.12.a.2.D]

g. Combined production of the #1 and #2 Pastillating Belts shall be limited to 60,000,000 pounds of pastillated resin per consecutive 12-month period. [IP #0058-I016b, V.A.1.h; §2103.12.a.2.D]

h. Production of the #3 Pastillator Belt (or Berndorf Belt) shall be limited to 30,000,000 pounds of pastillated resin per consecutive 12-month period. [IP #0058-I016b, V.A.1.i; §2103.12.a.2.D]

i. The #1 LTC Pastillator Belt baghouse shall be properly maintained and operated with a minimum particulate removal efficiency of 99%.The #2 Pastillator Belt and the #3 Pastillator Belt (or Berndorf Belt) baghouses shall be properly maintained and operated with a minimum particulate removal efficiency of 99.9%.[IP #0058-I016b, V.A.1.j; §2103.12.a.2.D]

j. The Scrubbers and Carbon Beds shall be properly operated and maintained according to good engineering practices and manufacturer's recommendations at all times while treating process emissions. [IP #0058-I016b, V.A.1.k; §2103.12.a.2.D]

k. The #1/#2 Pastillator Belt scrubber (S-127-3) and #3 Pastillator Belt scrubber (S-105-1) shall each have a minimum water recirculation flowrate of 30 gpm based on an hourly block average and a minimum pressure drop of 20" W.C. based on an hourly block average. [IP #0058-I016b, V.A.1.l; §2103.12.a.2.D]

l. Emissions from the LTC operations (emission points S084, S108-S116, S110A, S124, S125, S165, and Truck Loading & Drumming) shall not exceed the following at any time: [IP #0058-I016b, V.A.1.m; §2103.12.a.2.D]

TABLE V-0-2: LTC Process Emission Limitations

POLLUTANT	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year)*
Volatile Organic Compounds	15.32	17.89
$PM/PM_{10}/PM_{2.5}$	0.11	0.48
Total HAPs	0.46	0.79
Styrene	0.27	0.78

* A year is defined as any consecutive 12-month period.

m. Opening a safety device is allowed at any time conditions require it to avoid unsafe conditions. [40 CFR §63.2450(p), §2103.12.a.2.B]

n. The permittee shall meet the following requirements for closed vent systems: [40 CFR §63.982(c), §2103.12.a.2.B]

1) Each closed vent system must be designed and operated to collect the vapors from the emission point and to route the vapors to the control device. [§63.983(a)(1)]
2) Closed vent system must be operated at all times when emissions are vent to, or collected by them. [§63.983(a)(2)]

o. The permittee shall be in compliance with the emission limits and work practice standards in 40 CFR 63, subpart FFFF at all times, except during periods of startup, shutdown, and malfunction (SSM). [40 CFR 63.2450(a), §2103.12.a.2.B]

p. At all times, including periods of startup, shutdown, and malfunction, the permittee must operate and maintain all LTC process equipment, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions during a period of startup, shutdown, or malfunction does not require the permittee to achieve emission levels that are required by condition V.K.1.c above, at other times if this is not consistent with safety and good air pollution control practices, nor does it require the permittee to make any further efforts to reduce emissions if levels required by condition V.K.1.c above have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department which may include, but is not limited to, monitoring results, review of operation and maintenance procedures (including the startup, shutdown, and malfunction plan required in condition V.K.5.b below, review of operation and maintenance records, and inspection of the source. [40 CFR 63.6(e)(1)(i), §2103.12.a.2.B]

q. Malfunctions must be corrected as soon as practicable after their occurrence. To the extent that an unexpected event arises during a startup, shutdown, or malfunction, the permittee must comply by minimizing emissions during such a startup, shutdown, and malfunction event consistent with safety and good air pollution control practices. [40 CFR 63.6(e)(1)(ii), §2103.12.a.2.B]

2. Testing Requirements:

a. All emissions testing shall be performed in accordance with the Site Level Condition IV.13 above ("Emissions Testing Requirements") and Article XXI §2108.02. [IP #0058-I016b, V.A.2.a; §2103.12.a.2.D; §2108.02.]

b. Emissions testing shall be performed at the outlet of each fume scrubber for VOC and total HAPs in accordance with EPA Reference Methods 25 and/or 18 and in accordance with the Allegheny County Health Dept. Source Testing Manual. During the testing, the following operating parameters shall be recorded and reported as part of the emission test report [IP #0058-I016b, V.A.2.b; §2103.12.a.2.D; §2108.02.]:
1) Resin feed rate (gal/min);
2) Finished resin produced (lbs/hour);
3) Type of resin produced (MSDS); and
4) Scrubber liquid flow rate.

c. Emissions testing shall be performed at the outlet of each Vacuum System condenser (S109, S110, and S124) for VOC and total HAPs in accordance with EPA Reference Methods 25 and/or 18 and in accordance with the Allegheny County Health Dept. Source Testing Manual. Testing shall be performed during the period of maximum emissions from the process. At a minimum, the information necessary to accurately assess emissions in accordance with the EIIP methodology shall be recorded including the following operating parameters. The information shall be reported as part of the emission test report [IP #0058-I016b, V.A.2.c; §2103.12.a.2.D; §2108.02]:
1) Condenser coolant inlet or outlet temperature (continuous);
2) Outlet vapor temperature (continuous);
3) Vacuum pump status (continuous);
4) Polymerizate feed rate (gal/min); and
5) Type of resin produced (MSDS)

d. Emissions testing in accordance with Conditions V.K.2.b above and V.K.2.c above shall be performed at least once every five years after the most recent stack test. [IP #0058-I016b, V.A.2.d; §2103.12.a.2.D; §2108.02]

e. The Department reserves the right to require additional emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Article XXI §2108.02. [§2103.12.h.1]

3. Monitoring Requirements:

a. The permittee shall visually inspect scrubbers at least once per day for visible emissions. If visible emissions are detected, the permittee shall adjust the flow of water to the scrubbers accordingly. [IP #0058-I016b, V.A.3.b; §2103.12.a.2.D; §2103.12.i]

b. The permittee shall monitor and record the pressure drop across each LTC Pastillator baghouse once per calendar day. [IP #0058-I016b, V.A.3.c; §2103.12.a.2.D; §2103.12.i]

c. The permittee shall install, operate, and maintain either an inlet or outlet coolant temperature instrument on the applicable condensers that continuously monitor the coolant inlet or outlet temperature. The temperature probes used shall be certified by the manufacturer to be accurate to

within 2% of the temperature measured in Celsius or to within 2.5°C, whichever is greater. The permittee shall record the coolant inlet or outlet temperature at least once every 15 minutes while the equipment associated with the temperature probe and transmitter is in operation. [§2103.12.a.2.B]

d. The permittee shall install, operate, and maintain temperature probes and transmitters capable of continuously monitoring outlet gas temperature on the condensers. The temperature probes used shall be certified by the manufacturer to be accurate to within 2% of the temperature measured in Celsius or to within 2.5°C, whichever is greater. The permittee shall record the outlet gas temperature at least once every 15 minutes while the equipment associated with the temperature probe and transmitter is in operation. [§2103.12.a.2.B]

e. Monitoring data recorded during periods of monitoring system breakdowns, repairs, preventative maintenance, calibration checks, zero (low-level) and high-level adjustments, periods of non-operation of the process unit (or portions thereof) resulting in cessation of the emissions to which the monitoring applies, shall not be included in any average to determine compliance, except monitoring data is to be collected during periods of startup, shutdown, and malfunction. [40 CFR §63.998(b)(2), 40 CFR §63.2450(l); §2103.12.a.2.B]

f. The permittee shall monitor and record the liquid flowrate and pressure drop of scrubbers S-127-3 and S-105-1 at least once every 15 minutes when the process is in operation. [IP #0058-I016b, V.A.3.e; §2103.12.a.2.D; §2103.12.i]

g. The permittee shall continuously monitor when the vacuum pump for each system is in operation. [IP #0058-I016b,V.A.3.f; IP #0058-I026a, V.F.2.b; §2103.12.a.2.D; §2103.12.i]

h. The permittee shall use a colorimetric indicator to monitor the carbon bed on the oil-water separator (accumulator) for breakthrough. The indicator shall be monitored daily through visual inspection to detect a change in color. When a color changed is detected, the canister shall be replaced within 24 hours. [IP #0058-I016b, V.A.3.g; §2103.12.a.2.D; 40 CFR §63.995(c), §63.996(d)]

i. The permittee shall monitor and record the exit vapor temperature of each of the following condensers at least once every 15 minutes when the process is in operation: S108, S109, S110, S111, S112, S113, and S124. [IP #0058-I026a, V.F.2.a; §2103.12.a.2.D]

j. The permittee shall perform inspection and monitoring of the closed vent system. Except for closed vent systems that are designated as unsafe or difficult to inspect, each closed vent system must be inspected as follows: [§63.983(b), §2103.12.a.2.B]
   1) If constructed of hard piping, must conduct an initial inspection in accordance with §63.983(c) (Method 21 of 40 CFR Part 60), and an annual inspection for visible, audible, or olfactory indications of leaks.
   2) If constructed of ductwork, must conduct an initial and annual inspection in accordance with §63.983(c) (Method 21 of 40 CFR Part 60).

k. Equipment subject to the leak detection and reporting requirements shall be monitored. Leaks, as indicated by an instrument reading greater than 500 ppmv above background or by visual inspections, must be repaired as soon as practical unless a delay of repair is required under §63.983(d)(3). A first attempt at repair must be made no later than 5 days after the leaks detected, and repairs must be completed no later than 15 days after the leak is detected or at the beginning of the next introduction of vapors to the system, whichever is later. [§63.983(d)(2)]

l. Daily average values of continuously monitored parameters must be calculated from the data and retained for 5-years. The daily average must be calculated as the average of all values for a monitored parameter recorded during the operating day. The average must cover a 24-hour period if operation is continuous, or the period of operation per operating day of operation is not continuous. [40 CFR §63.998(b)(3), §2103.12.a.2.B]

m. An excursion means that the daily average value of monitoring data for a parameter is greater than the maximum or less than the minimum established. Values from startup, shutdown and malfunctions are to be included in the averages. Excused excursions are not allowed. [40 CFR §63.998(b)(6), §2103.12.a.2.B]

4. Record Keeping Requirements:

a. The permittee shall keep and maintain sufficient records to demonstrate compliance with the requirements of this permit. Such records shall clearly demonstrate that all applicable requirements are met. [IP #0058-I016b, V.A.4.a; §2103.12.a.2.D; §2103.12.j]

b. The permittee shall keep and maintain the following data on-site for these operations: [IP #0058-I016b, V.A.4.b; IP #0058-I026a, V.F.3.a; §2103.12.a.2.D; §2103.12.j & k; 40 CFR§63.2525(b]

1) All records of monitoring required by V.K.3 above.
2) Records of operation, inspection, calibration, maintenance and/or replacement of process or control equipment.
3) Maximum resin (lb/min) and polymerizate (gal/min) feed rates (daily).
4) Amount (lbs.) of resin and polymerizate (monthly, 12-month rolling total)
5) Changes in #4 LTC Vacuum System vacuum pump status (upon occurrence).
6) Any additional data/records not provided by items V.K.4.b.1) and V.K.4.b.2) above that are necessary to accurately assess emissions in accordance with the EIIP methodology.

c. The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance. [IP #0058-I016b, V.A.4.c; §2103.12.a.2.D; §2103.12.h.5.B]

d. The permittee shall maintain relevant records for all documentation supporting initial notifications and notification of compliance status. [40 CFR 63.10(b)(2)(xiv), §2103.12.a.2.B]

e. The permittee shall keep the records of the following: [40 CFR 63.998(c)(1), §2103.12.a.2.B]

1) A record of the procedure used for calibrating the CPMS [40 CFR 63.998(c)(1)(i), §2103.12.a.2.B]
2) A record of the results of each calibration checks and all maintenance performed on the CPMS: [40 CFR 63.998(c)(1)(ii), §63.2450(k)(1), §2103.12.a.2.B]
   a) The date and the time of completion of calibration and preventative maintenance of the CPMS;
   b) The “as found” and “as left” CPMS readings, whenever an adjustment is made that affects the CPMS reading and a “no adjustment” statement otherwise;
   c) The start time and duration or start and stop times of any periods when the CPMS is inoperative;

d) Records of the occurrence and duration of each start-up, shutdown, and malfunction of CPMS used to comply with this subpart during which excess emissions occur;
e) For each start-up, shutdown, and malfunction during which excess emissions occur, records whether the procedures specified in the source's start-up, shutdown, and malfunction plan were followed, and documentation of actions taken that are not consistent with the plan;
f) Records documenting each start-up, shutdown, and malfunction event;
g) Records of CPMS start-up, shutdown, and malfunction event that specify that there were no excess emissions during the event;
h) Records of the total duration of operating time.

f. The permittee shall maintain records for of the following: [40 CFR 63.998(d)(1), §2103.12.a.2.B]

1) Identification of all parts of the closed vent system that are designated as unsafe or difficult to inspect, an explanation of why the equipment is unsafe or difficult to inspect, and the plan for inspecting the equipment required by 40 CFR §63.983(b)(2)(ii) or (III);
2) When a leak is detected, the following information must be recorded and kept for 5 years [40 CFR §63.998(d)(1)(iii), §2103.12.a.2.B]
   a) The instrument and the equipment identification number and the operator name, initials, or identification number;
   b) The date the leak was detected and the date of the first attempt to repair the leak;
   c) The date of successful repair of the leak;
   d) The maximum instrument reading measured by procedures in §63.998(c) after the leak is successfully repaired or determined to be non-repairable;
   e) Reason for delay of repair if a leak is not repaired within 15 days after discovery;
   f) Copies of compliance reports.
3) For each instrumental or visual inspection conducted in accordance with §63.983(b)(1) during which no leaks are detected, records that the inspection was performed, date of the inspection, and a statement that no leaks were detected. [40 CFR §63.998(d)(1)(iv), §2103.12.a.2.B]
4) Regulated source and control equipment start-up, shutdown, and malfunction records [40 CFR §63.998(d)(3), §2103.12.a.2.B]
   a) Record of the occurrence and duration of each start-up, shutdown, and malfunction of operation of process equipment or control equipment during which excess emissions occur must be maintained
   b) For each start-up, shutdown, and malfunction during which excess emissions occur, records that the procedures specified in the source's start-up, shutdown, and malfunction plan were followed, and documentation of actions taken that are not consistent with the plan.
   c) Records of monitored parameters outside the operating limit. The permittee shall record the occurrences and the cause of periods when the monitored parameters are outside of the parameter ranges documented in the Notification of Compliance Status report. This information shall also be reported in the Compliance report.

g. Records each time a safety device is opened to avoid unsafe conditions in accordance with §63.2450(p). [40 CFR §63.2525(f), §2103.12.a.2.B]

h. All records shall be retained by the facility for at least five (5) years. These records shall be made available to the Department upon request for inspection and/or copying. [IP #0058-I016b, V.A.4.d; §2103.12.a.2.D; §2103.12.j.2; 40 CFR 63.10(b)]

5. Reporting Requirements:

a. The permittee shall report the following information to the Department in accordance with General Condition III.15 above on a semiannual basis. The reports shall contain all required information for the time period of the report: [IP #0058-I016b, V.A.5.a; §2103.12.a.2.D; §2103.12.k.1]

1) Overall total quantity monthly and 12-month rolling of the resin and polymerizate data required to be recorded by V.K.4.b.4) above condition ; and
2) Non-compliance information required to be recorded by V.K.4.c above.

b. The permittee must develop a written startup, shutdown, and malfunction plan that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction; and a program of corrective action for malfunctioning process, air pollution control, and monitoring equipment used to comply with the relevant standard. The startup, shutdown, and malfunction plan does not need to address any scenario that would not cause the source to exceed the emission limitation in condition V.K.1.l above. The purpose of the startup, shutdown, and malfunction plan is as follows. [40 CFR 63.6 (e)(3)(i)), §2103.12.a.2.B]

1) Ensure that, at all times, the permittee operates and maintains each C5 Polymerization process equipment, including associated air pollution control and monitoring equipment, in a manner which satisfies the general duty to minimize emissions established by condition V.B.1.u above;

2) Ensure that the permittee is prepared to correct malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of hazardous air pollutants; and

3) Reduce the reporting burden associated with periods of startup, shutdown, and malfunction (including corrective action taken to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation).

c. The notification of compliance status report must include the information below. [40 CFR 63.2520(d)(2), §2103.12.a.2.B]

1) The results of any applicability determinations, emission calculations, or analyses used to identify and quantify HAP usage or HAP emissions from the affected source.
2) The results of emissions profiles, performance tests, engineering analyses, design evaluations, inspections and repairs, and calculations used to demonstrate initial compliance. For performance tests, results must include descriptions of sampling and analysis procedures and quality assurance procedures.
3) Descriptions of monitoring devices, monitoring frequencies, and the operating limits established during the initial compliance demonstrations, including data and calculations to support the levels established.

d. The compliance report must contain the information specified below. [40 CFR 63.2520(e), §2103.12.a.2.B]

1) Company name and address.
2) Statement by a responsible official with that official's name, title, and signature, certifying the accuracy of the content of the report.
3) Date of report and beginning and ending dates of the reporting period.
4) For each start-up, shutdown, and malfunction (SSM) during which excess emissions occur, the compliance report must include records that the procedures specified in the startup, shutdown,

and malfunction plan (SSMP) were followed or documentation of actions taken that are not consistent with the SSMP, and include a brief description of each malfunction.

e. Records each time a safety device is opened to avoid unsafe conditions in accordance with [40 CFR §63.2450(p), §2103.12.a.2.B]

f. Records of the results of each CPMS calibration check and the maintenance performed. [40 CFR §63.2525(g), §2103.12.a.2.B]

g. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 above, if appropriate. [IP #0058-I016b, V.A.5.b; §2103.12.a.2.D; §2103.12.k; §2108.01.c]

6. Work Practice Standard:

a. The permittee is permitted to replace the existing condensers and baghouses listed in this permit with an identical unit of the same efficiency periodically to prevent corrosion. The permittee shall notify the Department in writing at least ten (10) days prior to such action. [IP #0058-I016b, V.A.6.a; §2103.12.a.2.D]

b. The permittee shall maintain and implement the Preventative Maintenance and Operations (PMO) Plan submitted to and approved by the Department. The permittee shall maintain the original approved PMO Plan and all subsequent revisions for a period of five years and have them available for inspection. [IP #0058-I016b, V.A.6.b; §2103.12.a.2.D]

c. The permittee shall maintain on site all operating and maintenance manuals and equipment specifications for the scrubbers for the life of the equipment if any. [IP #0058-I016b, V.A.6.c; §2103.12.a.2.D; §2105.03]

d. The permittee shall maintain on site all operating and maintenance manuals and equipment specifications for the baghouses for the life of the equipment if any [IP #0058-I016b, V.A.6.d; §2103.12.a.2.D; §2105.03]

e. The permittee shall maintain onsite, for emergency replacement, 25% of the total number of bags or filter elements use by the baghouses. [IP #0058-I016b, V.A.6.e; §2103.12.a.2.D; §2105.03]

f. Material removed from the baghouses shall be disposed of in a manner preventing entrainment into the atmosphere. [IP #0058-I016b, V.A.6.f; §2103.12.a.2.D; §2101.11.c.]

g. The permittee shall do the following for LTC Process (#1 and #2 Vacuum systems and #1/#2 Pastillator Belt) and associated equipment:[§2105.03; IP #0058-I026a, V.F.4.a; §2103.12.a.2.D]
1) Perform regular maintenance in accordance with the manufacturer's or the operator's maintenance procedures;
2) Keep records of any maintenance; and
3) Keep a copy of either the manufacturer's or the operator's maintenance procedures.

h. The LTC Process (#1 and #2 Vacuum systems and #1/#2 Pastillator Belt) shall be properly operated and maintained at all times according to good engineering practices, with the exception of activities to mitigate emergency conditions. [§2105.03; IP #0058-I026a, V.F.3.b; §2103.12.a.2.D]

i. Under the requirements of 40 CFR Part 63, Subpart FFFF, the permittee is required to have a Leak Detection and Repair (LDAR) program. The permittee shall comply with each applicable conditions of Section VI.F below.

7. Additional Requirements:

None except as provided elsewhere.

~PERMIT SHIELD IN EFFECT~

L. Dresinate Unit

Process Description: Dresinate Production Line
Max. Design: 500 lbs/hr wet product
Raw Materials: Crude Tall Oil, Tall oil rosin
Control Device(s): Baghouse, scrubber

1. Restrictions

a. The permittee shall not operate the Dresinate TX auger conveyor, grinder and bagging process unless emissions of particulate matter are exhausted to a baghouse which is properly maintained and operated according to the following conditions at all times. [IP #0058-I012a, V.A.1.a; §2103.12.a.2.D]
   1) The differential pressure drop across the baghouse shall not exceed 15“ w.c. nor go below 1” w.c.; and
   2) The baghouse shall have a particulate and PM-10 minimum control efficiency of 99.5% at all times during process operations.

b. The auger conveyor from the dryer to the grinder shall be completely enclosed at all times while in production with the exception of access for repair, inspection, and maintenance. [IP #0058-I012a, V.A.1.b; §2103.12.a.2.D]

c. There shall be no emissions of hazardous air pollutants from the Dresinate TX process. [IP #0058-I012a, V.A.1.c; §2103.12.a.2.D]

d. Particulate Matter (PM) emissions from the Dresinate TX Production Line baghouse shall not exceed 0.06 lbs/hr or 0.25 tons per any twelve consecutive months. [IP #0058-I012a, V.A.1.d; §2103.12.a.2.D]

e. Volatile organic compound emissions from the Fume Scrubber (S085) shall not exceed 1.25 lb/hr or 5.5 tons per any twelve consecutive months. [IP #0058-I012a, V.A.1.e; §2103.12.a.2.D]

f. Production of Dresinate TX shall be limited to 2,500 tons of dry product per consecutive 12- month period. [IP #0058-I012a, V.A.1.f; §2103.12.a.2.D]

2. Testing Requirements

a. Emissions testing shall be performed in accordance with the Site Level Condition IV.13 (“Emissions Testing Requirements”) to determine compliance with the emission limitations of condition V.L.1.d above. [IP #0058-I012a, V.A.2.a; §2103.12.a.2.D]

b. The Department reserves the right to require additional emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Article XXI §2108.02. [IP #0058-I012a, V.A.2.b; §2103.12.a.2.D; §2103.12.h.1]

3. Monitoring Requirements

a. The permittee shall have instrumentation to measure the pressure drop across the venturi scrubber and baghouse to within 1” w.c. of actual and the scrubbing liquid flowrate for the scrubber to within

1 gpm of actual. [IP #0058-I012a, V.A.3.a; §2103.12.a.2.D]

b. The permittee shall inspect the process line and control equipment weekly during Dresinate TX production for compliance with conditions V.L.1.a, V.L.1.b and V.L.1.c above. The differential pressure drops across the scrubber and baghouse and the scrubbing liquid flowrate shall be recorded at the time of inspection. [IP #0058-I012a, V.A.3.b; §2103.12.a.2.D]

c. Inlet and outlet testing ports shall be provided on the scrubbing unit and baghouse. [IP #0058-I012a, V.A.3.c; §2103.12.a.2.D]

4. Record Keeping Requirements

a. The permittee shall keep and maintain the following data: [IP #0058-I012a, V.A.4.a; §2103.12.a.2.D]

1) Dresinate TX production and raw material usage (monthly, 12-month rolling);
2) Hours of operation of the production line (monthly, 12-month rolling);
3) The results of all inspections conducted according to condition V.L.3.b above (weekly);
4) Data recorded as per condition V.L.3.b above (weekly, monthly high and low values);
5) Records of testing, maintenance, inspection, calibration and/or replacement of process or control equipment.

b. The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance. [IP #0058-I012a, V.A.4.b; §2103.12.a.2.D]

c. All records shall be retained by the facility for at least five (5) years. These records shall be made available to the Department upon request for inspection and/or copying. [IP #0058-I012a, V.A.4.c; §2103.12.a.2.D]

5. Reporting Requirements

a. The permittee shall report the following information to the Department semiannually in accordance with General Condition III.15 above. The reports shall contain all required information for the time period of the report: [IP #0058-I012a, V.A.5.a; §2103.12.a.2.D]

1) Monthly and 12-month data required to be recorded by condition V.L.4.a above; and
2) Non-compliance information required to be recorded by V.L.4.b above.

b. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 above, if appropriate. [IP #0058-I012a, V.A.5.b; §2103.12.a.2.D]

6. Work Practice Standard

a. The permittee shall do the following for Dresinate Production Line (Double Drum Dryer) and associated equipment: [§2105.03; IP #0058-I026a, V.G.2.a; §2103.12.a.2.D]
1) Perform regular maintenance in accordance with the manufacturer's or the operator's maintenance procedures;
2) Keep records of any maintenance; and

3) Keep a copy of either the manufacturer's or the operator's maintenance procedures.

b. The Dresinate Production Line (Double Drum Dryer) shall be properly operated and maintained at all times according to good engineering practices, with the exception of activities to mitigate emergency conditions. [§2105.03; IP #0058-I026a, V.G.2.ab §2103.12.a.2.D]

c. The permittee may swap out the existing baghouse with an identical unit (the same air volume and efficiency) periodically to prevent corrosion, and will notify the Department at least 10 days prior to make a replacement. [§2103.12.a.2.D]

~PERMIT SHIELD IN EFFECT~

M. Pilot Plant

Process Description: Pilot Plant operations (controlled sources) – reactor, neutralizer, Funda filter
Facility ID: S155
Max. Design Rate: Various
Capacity: Reactor – 50 gal
Raw Materials: Hydrocarbon resin
Control Device: Carbon bed

1. Restrictions:

a. The permittee shall not operate or allow to be operated the following equipment unless all emissions from the equipment are routed to the Carbon Bed: reactor, neutralizer, and Funda filter. [IP #0058-I024, V.A.1.a; §2103.12.a.2.D]

b. The Carbon Bed shall be properly operated and maintained according to good engineering practices and manufacturer's recommendations at all times while treating process emissions. [IP #0058-I024, V.A.1.b; §2103.12.a.2.D]

c. Emissions from the Carbon Bed shall not exceed the following at any time: [IP #0058-I024, V.A.1.c; §2103.12.a.2.D]

Table V-M-1: Pilot Plant Emissions Limits

Pollutant	Hourly Emission Limit lb/hr	Annual Emission Limit ton/yr*
VOC	0.49	2.2
HAP	0.49	2.2

* A year is defined as any consecutive 12-month period.

2. Testing Requirements:

The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Site Level Condition Article XXI §2108.02. [§2103.12.h.1]

3. Monitoring Requirements:

a. The permittee shall install, operate, and maintain a colorimetric indicator to monitor the performance of the Carbon Bed. When the pilot plant is operating, the indicator shall be monitored daily through visual inspection to detect a change in color. When a color change is detected, the canister shall be replaced within 24 hours. [IP #0058-I024, V.A.3.a; §2103.12.a.2.D; §2103.12.i]

b. The permittee shall monitor inlet coolant temperature for reactor's condenser and Funda filter/neutralizer's condenser continuously at least once every 15 minutes during operation. [IP #0058-I024, V.A.3.b; §2103.12.a.2.D; §2103.12.i]

4. Record Keeping Requirements:

a. The permittee shall keep and maintain sufficient records to demonstrate compliance with the requirements of this permit. Such records shall clearly demonstrate that all applicable requirements are met. [IP #0058-I024, V.A.4.a; §2103.12.a.2.D; §2103.12.j]

b. The permittee shall keep and maintain records of monthly and twelve-month moving VOC and HAP emissions to demonstrate compliance with condition V.M.1.c above. [IP #0058-I024, V.A.4.b; §2103.12.a.2.D; §2103.12.j]

c. The permittee shall keep and maintain the following data on-site for these operations: [IP #0058-I024, V.A.4.c; §2103.12.a.2.D; §2103.12.j]
1) All records of monitoring required by V.M.3 above.
2) Records of operation, inspection, calibration, maintenance and/or replacement of process vessels or control equipment.
3) Stack test protocols and reports.
4) Manufacturer's specifications when this information is available.

d. The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance. [IP #0058-I024, V.A.4.d; §2103.12.a.2.D; §2103.12.h.5.B]

e. All records required under this section shall be maintained by the permittee for a period of five years following the date of such record. [IP #0058-I024, V.A.4.e; §2103.12.a.2.D; §2103.12.j.2]

5. Reporting Requirements:

a. The permittee shall submit semi-annual reports to the Department in accordance with General Condition III.15 above. The reports shall contain all non-compliance information required to be recorded by V.M.4.d above for the time period of the report [IP #0058-I024, V.A.5.a; §2103.12.a.2.D; §2103.12.k]

b. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 above, if appropriate. [IP #0058-I024, V.A.5.b; §2103.12.a.2.D; §2103.12.k]

6. Work Practice Standard:

None except as provided elsewhere.

~PERMIT SHIELD IN EFFECT~

N. Wastewater Treatment Plant

Process Description: Wastewater Treatment Plant
Design Rate: 47,304,000 gal/yr
Raw Materials: Facility wastewater
Control Device: Carbon bed

1. Restrictions:

a. The maximum rate for Wastewater Treatment Plant shall not exceed 47,304,000 gallons per year. [IP #0058-I025, V.A.1.a; §2103.12.a.2.D]

b. The permittee shall not operate or allow to be operated the following equipment unless all emissions from the equipment are routed to the Carbon Bed: tanks T-701A & T-701B, oil sump, acid sump, dissolved air flotation tank, raw sump, and final sump. [IP #0058-I025, V.A.1.b; §2103.12.a.2.D]

c. The Carbon Bed shall be properly operated and maintained according to good engineering practices and manufacturer's recommendations at all times while treating process emissions. [IP #0058-I025, V.A.1.b; §2103.12.a.2.D]

d. Emissions from Wastewater Treatment Plant shall not exceed the following at any time: [IP #0058-I025, V.A.1.c; §2103.12.a.2.D]

Table V-N-1: Wastewater Treatment Plant Emissions Limits

Pollutant	Hourly Emission Limit lb/hr	Annual Emission Limit ton/yr*
VOC	10.02	24.68
HAP	9.3	22.91
Styrene	1.3	3.17
Toluene	7.9	19.36

* A year is defined as any consecutive 12-month period.

2. Testing Requirements:

The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Article XXI §2108.02. [§2103.12.h.1]

3. Monitoring Requirements:

a. The permittee shall install, operate, and maintain a colorimetric indicator to monitor the performance of the Carbon Bed. The indicator shall be monitored daily through visual inspection to detect a change in color. When a color change is detected, the canister shall be replaced within 24 hours. [IP #0058-I025, V.A.3.a; §2103.12.a.2.D; §2103.12.i]

b. The permittee shall monitor temperature for condensers E-701-3 and E-713-2 continuously at least once every 15 minutes [IP #0058-I025, V.A.3.b; §2103.12.a.2.D; §2103.12.i]

4. Record Keeping Requirements:

a. The permittee shall keep and maintain sufficient records to demonstrate compliance with the requirements of this permit. Such records shall clearly demonstrate that all applicable requirements are met. [IP #0058-I025, V.A.4.a; §2103.12.a.2.D; §2103.12.j]

b. The permittee shall keep and maintain records of throughput for Wastewater Treatment Plant monthly and twelve months period. [IP #0058-I025, V.A.4.b; §2103.12.a.2.D; §2103.12.j]

c. The permittee shall keep and maintain records of monthly and twelve-month moving VOC and HAP emissions to demonstrate compliance with condition V.N.1.d above. [IP #0058-I025, V.A.4.c; §2103.12.a.2.D; §2103.12.j]

d. The permittee shall keep and maintain the following data on-site for these operations: [IP #0058-I025, V.A.4.d; §2103.12.a.2.D; §2103.12.j]
1) All records of monitoring required by V.N.3 above.
2) Records of operation, inspection, calibration, maintenance and/or replacement of process vessels or control equipment.
3) Stack test protocols and reports.
4) Manufacturer's specifications when this information is available.

e. The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance. [IP #0058-I025, V.A.4.e; §2103.12.a.2.D; §2103.12.h.5.B]

f. All records required under this section shall be maintained by the permittee for a period of five years following the date of such record. [IP #0058-I025, V.A.4.f; §2103.12.a.2.D; §2103.12.j.2]

5. Reporting Requirements:

a. The permittee shall submit semi-annual reports to the Department in accordance with General Condition III.15 above. The reports shall contain all required information for the time period of the report: [IP #0058-I025, V.A.5.a; §2103.12.a.2.D; §2103.12.k]
4) Monthly and 12-month data required to be recorded by condition V.N.4.b above; and
5) Non-compliance information required to be recorded by V.N.4.e above. [§2103.12.k]

b. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 above, if appropriate. [IP #0058-I025, V.A.5.b; §2103.12.a.2.D; §2103.12.k]

6. Work Practice Standard:

a. The permittee shall do the following for Wastewater Treatment Plant (Bioaeration tank, tanks 702A, 702B, and 702C) and associated equipment: [IP #0058-I025, V.A.6.a; IP #0058-I026a, V.I.1.a; §2103.12.a.2.D; §2105.03]
1) Perform regular maintenance in accordance with the manufacturer's or the operator's maintenance procedures;
2) Keep records of any maintenance; and
3) Keep a copy of either the manufacturer's or the operator's maintenance procedures.

b. The Wastewater Treatment Plant (Bioaeration tank, tanks 702A, 702B, and 702C) shall be properly operated and maintained at all times according to good engineering practices, with the exception of activities to mitigate emergency conditions. [IP #0058-I025, V.A.6.b; IP #0058-I026a, V.I.1.b; §2103.12.a.2.D; §2105.03]

c. The permittee shall maintain and implement the Preventive Maintenance and Operations (PMO) Plan submitted to and approved by the Department. The permittee shall maintain the original approved PMO Plan and all subsequent revisions for a period of five years and have them available for inspection. [IP #0058-I025, V.A.6.c; §2103.12.a.2.D]

~PERMIT SHIELD IN EFFECT~

VI. MISCELLANEOUS

A. Cooling Towers (C5 Unit, MP Poly, WW Poly, Hydro Unit, LTC Unit, Pilot Plant)

Process Description: Cooling Towers
Capacity: 1,700 gpm (J-1000-5); 1,870 gpm (J-1200-1); 4,300 gpm (J-1000-1); 686 gpm (J-4020-1); 2500 gpm (J-1001-1); 1,000 gpm (J-4060-1); 400 gpm (J-4005-1); 375 gpm (J-101-1); 1,200 gpm (J-645); 2,800 gpm (J-4030-1); 400 gpm (J-125-1/J-400-1)
Raw Materials: Municipal make-up water
Control Device: Uncontrolled

1. Restrictions:

a. The cooling towers shall use municipal water at all times. [IP #0058-I011f, VI.A.1.a; IP #0058-I016b, VI.A.1.a; IP #0058-I018a, VI.A.1.a; IP #0058-I023a, VI.A.1.a; IP #0058-I027a, VI.A.1.a; §2103.12.a.2.D]

b. The permittee shall operate and maintain the cooling towers in accordance with the manufacturers' specification and good engineering practices. [IP #0058-I011f, VI.A.1.b; IP #0058-I016b, VI.A.1.b; IP #0058-I018a, VI.A.1.b; IP #0058-I023a, VI.A.1.b; IP #0058-I027a, VI.A.1.a; §2103.12.a.2.D]

c. Emissions due to operation of Cooling Towers shall not exceed the following at any time [IP #0058-I011f, VI.A.1.c; IP #0058-I016b, VI.A.1.c; IP #0058-I018a, VI.A.1.c; IP #0058-I023a, VI.A.1.c; IP #0058-I027a, VI.A.1.c; §2103.12.a.2.D]

Table VI-A-1: Cooling Tower Emissions Limits

Process	Cooling Tower ID	PM Emissions (lbs/hr)	PM Annual Emissions (tons/year)[1]
C5 Unit	J-1000-5 & J-1200-1	0.51	2.23
C5 Unit	J-1000-1 & J-4020-1	0.71	3.11
MP Poly	J-1001-1	0.38	1.67
WW Poly	J-4060-1	0.14	0.62
Hydro Unit	J-4005-1	0.06	0.25
LTC Unit	J-101-1, J-645, & J-4030-1	0.66	2.88
Pilot Plant	J-125-1/J-400-1	0.06	0.26
Total		2.01	11.02

[1] A year is defined as any 12 consecutive months.

d. The permittee shall keep records of the recirculation rate all times for the cooling towers. [IP #0058-I011f, VI.A.1.d; IP #0058-I016b, VI.A.1.d; IP #0058-I018a, VI.A.1.d; IP #0058-I023a, VI.A.1.d; IP #0058-I027a, VI.A.1.d; §2103.12.a.2.D]

~PERMIT SHIELD IN EFFECT~

B. Boilers BU-1, BU-2, BU-3, and BU-4

Process Description: Four Unilux water-tube boilers BU-1, BU-2, BU-3, and BU-4; each model ZF 1800HS
Max. Design: 18.6 MMBTU/hr each
Raw Materials: Natural gas
Control Device(s): Ultra Low NO_X burners

1. Restrictions:

a. Only natural gas shall be combusted in the boilers. [IP #0058-I020, V.A.1.a; §2103.12.a.2.D]

b. Heat input shall be limited to 18.6 MMBtu/hr for each boiler based on the higher heating value of the fuel being combusted. [IP #0058-I020, V.A.1.b; §2103.12.a.2.D]

c. Emissions of particulate matter shall not exceed 0.008 lb/MMBtu. [IP #0058-I020, V.A.1.c; §2103.12.a.2.D]

d. Emissions of nitrogen oxides from each boiler shall not exceed 20 ppmvd at 3% O2. [IP #0058-I020, V.A.1.d; §2103.12.a.2.D]

e. Each boiler shall be properly operated and maintained according to manufacturer's specifications. The manufacturer's specification and operation and maintenance manuals shall be kept on site at all times. [IP #0058-I020, V.A.1.e; §2103.12.a.2.D; §2105.03]

f. Emissions from BU-1, BU-2, BU-3 and BU-4 shall not exceed the following at any time [IP #0058-I020, V.A.1.f; §2103.12.a.2.D]:

Table VI-B-1: Boiler Emissions Limits

Pollutant	One boiler		Four boilers		
	lbs/hr	tons/yr[1]	lbs/hr	tons/yr[1]	
PM	0.14	0.61	0.56	2.44	
PM_{10}	0.14	0.61	0.56	2.44	
$PM_{2.5}$	0.14	0.61	0.56	2.44	
SO_X	0.01	0.05	0.04	0.20	
NO_X	0.44	1.92	1.76	7.68	
VOC	0.10	0.44	0.40	1.76	
CO	0.67	2.96	2.68	11.84	
CO_2	2,188	9,584	8,752	38,336	

[1] A year is defined as any 12 consecutive months.

2. Testing Requirements:

The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Article XXI §2108.02. [IP #0058-I020, V.A.2; §2103.12.a.2.D; §2103.12.h.1.]

3. Monitoring Requirements:

The permittee shall install and maintain the necessary meter(s) to determine and to record the monthly amount of natural gas combusted in each boiler. [IP #0058-I020, V.A.3; §2103.12.a.2.D; §2103.12(i)]

4. Record Keeping Requirements:

a. The permittee shall keep and maintain the following records: [IP #0058-I020, V.A.4.a; §2103.12.a.2.D; §60.48c(g); §2103.12.j]
   1) Monthly amount of natural gas combusted in each boiler;
   2) Cold starts (date, time, and duration of each occurrence);
   3) Records of operation, maintenance, inspection, calibration, and/or replacement of equipment.

b. All records shall be retained by the facility for at least five (5) years. These records shall be made available to the Department upon request for inspection and/or copying. [IP #0058-I020, V.A.4.b; §2103.12.a.2.D; §2103.12.j.2]

5. Reporting Requirements:

a. The permittee shall report the following information to the Department semiannually in accordance with General Condition III.15 above. [IP #0058-I020, V.A.5.a; §2103.12.a.2.D; §60.48c(e); §2103.12.k]

b. The semiannual report shall include the following information: [IP #0058-I020, V.A.5.b; §2103.12.a.2.D; §60.48c(e); §2103.12.k]
   1) Calendar dates covered in the reporting period;
   2) Monthly amount of fuel combusted;
   3) Cold start information;
   4) Reasons for any noncompliance with the emission standards.

c. Until terminated by written notice from the Department, the requirement for the permittee to report cold starts 24 hours in advance in accordance with §2108.01.d is waived and the permittee may report all cold starts in the semiannual compliance report required under condition VI.B.5.a above. [IP #0058-I020, V.A.5.c; §2103.12.a.2.D; §2103.12(k); §2108.01(d)]

d. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 above, if appropriate.

6. Work Practice Standard:

a. Boilers BU-1, BU-2, BU-3 and BU-4 shall be: [IP #0058-I020, V.A.6; §2103.12.a.2.D]
   1) Operated in such a manner as not to cause air pollution;
   2) Operated and maintained in a manner consistent with good operating and maintenance practices.
   3) Operated and maintained in accordance with the manufacturer's specifications and the applicable terms and conditions of this permit.

~PERMIT SHIELD IN EFFECT~

C. Boiler #5

Facility ID: B-5 Boiler
Max. Design Rate: 38.0 MMBtu/hr
Primary Fuel: Natural Gas
Secondary Fuel: none
Control Device(s): none

1. Restrictions:

a. Only natural gas shall be combusted in the boiler. [§2103.12.a.2.B]

b. Heat input shall be limited to 38.0 MMBtu/hr based on the higher heating value of the fuel being combusted. [§2103.12.a.2.B]

c. Emissions of particulate matter shall not exceed 0.008 lb/MMBtu. [§2103.12.a.2.B]

d. The boiler shall be properly operated and maintained according to manufacturer's specifications. The manufacturer's specification and operation and maintenance manuals shall be kept on site at all times. [§2103.12.a.2.B; §2105.03]

e. Emissions from Boiler B-5 shall not exceed the following at any time: [§2103.12.a.2.B; §2104.02.a.1.A]

Table VI-C-1: Boiler No. 5 Emission Limits

Pollutant	Boiler #5	
	lbs/hr	tons/yr[1]
PM (PM_{10}, $PM_{2.5}$)	0.07	0.31
SO_X	0.02	0.10
NO_X	3.73	16.32
VOC	0.21	0.897
CO	3.13	13.71

[1] A year is defined as any consecutive 12-month period.

2. Testing Requirements:

The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Article XXI §2108.02. [§2103.12.a.2.B; §2103.12.h.1.]

3. Monitoring Requirements:

The permittee shall install and maintain the necessary meter(s) to determine and to record the monthly amount of natural gas combusted in each boiler. [§2103.12.a.2.B; §2103.12(i)]

4. Record Keeping Requirements:

a. The permittee shall keep and maintain the following records: [§2103.12.a.2.B; §2103.12.j]
1) Monthly amount of natural gas combusted in the boiler;
2) Cold starts (date, time, and duration of each occurrence);
3) Records of operation, maintenance, inspection, calibration, and/or replacement of equipment.

b. All records shall be retained by the facility for at least five (5) years. These records shall be made available to the Department upon request for inspection and/or copying. [§2103.12.a.2.B; §2103.12.j.2]

5. Reporting Requirements:

a. The permittee shall report the following information to the Department semiannually in accordance with General Condition III.15 above. [§2103.12.a.2.B; §2103.12.k]
1) Calendar dates covered in the reporting period;
2) Monthly amount of fuel combusted;
3) Cold start information;
4) Reasons for any noncompliance with the emission standards.

b. Until terminated by written notice from the Department, the requirement for the permittee to report cold starts 24 hours in advance in accordance with §2108.01.d is waived and the permittee may report all cold starts in the semiannual compliance report required under condition VI.C.5.a above. [§2103.12.a.2.B; §2103.12(k); §2108.01(d)]

c. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 above, if appropriate. [§2103.12.a.2.B; §2103.12.k.1]

6. Work Practice Standards:

a. The permittee shall do the following for the B-5 Boiler: [§2105.03]
1) Perform regular maintenance considering the manufacturer's or the operator's maintenance procedures;
2) Keep records of any maintenance; and
3) Keep a copy of either the manufacturer's or the operator's maintenance procedures.

b. Boiler No. 5 shall be properly operated and maintained at all times according to good engineering practices, with the exception of activities to mitigate emergency conditions. [§2105.03]

~PERMIT SHIELD IN EFFECT~

D. Emergency Generator

Process Description: Back-up power Cummins model QSL9-G5 emergency diesel generator
Facility ID: Boiler house emergency generator
Max. Design Rate: 250 kWe (399 HP)
Fuel: Diesel

1. Restrictions:

a. The generator shall combust only diesel fuel meeting 40 CFR §80.510(c) with a maximum allowable sulfur content of 15 ppm, by weight, and a minimum cetane index of 40 or maximum aromatic content of 35 volume percent. [IP #0058-I020, V.B.1.a; §2103.12.a.2.D; §2105.03; 40 CFR §60.4207]

b. The generator shall not be operated for more than 500 hours in any 12-month period. [IP #0058-I020, V.B.1.b; §2103.12.a.2.D; §2105.03]

c. Diesel fuel consumption shall be limited to 19.2 gallons/hour and 9,600 gallons/year.[IP #0058-I020, V.B.1.c; §2103.12.a.2.D; §2105.03]

d. The generator shall be properly operated and maintained according to manufacturer's specifications. The manufacturer's specification and operation and maintenance manuals shall be kept on site at all times. [IP #0058-I020, V.B.1.d; §2103.12.a.2.D; §2105.03]

e. The generator shall be fired only during emergency conditions after loss of power or when loss of power is reasonably anticipated and as defined in Article XXI and for a maximum of 100 hours per year for maintenance checks and readiness testing. The Department may grant additional maintenance time upon written request. [IP #0058-I020, V.B.1.c; §2103.12.a.2.D; §2105.03; §60.4243(d)]

f. Emissions from the diesel generator shall not exceed the following at any time. [IP #0058-I020, V.B.1.f; §2103.12.a.2.D]

Table VI-D-1: Emergency Generator Emissions Limits

Pollutant	Generator	
	lbs/hr	tons/yr[1]
PM	0.02	0.01
PM_{10}	0.02	0.01
$PM_{2.5}$	0.02	0.01
SO_X	0.11	0.03
NO_X	2.92	0.73
VOC	0.04	0.01
CO	0.18	0.05
CO_2e	432	108

[1] A year is defined as any consecutive 12-month period.

2. Testing Requirements:

The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Article XXI §2108.02. [IP #0058-I020, V.B.2; §2103.12.a.2.D]

3. Monitoring Requirements:

The emergency generator shall be equipped with a non-resettable totaling meter to monitor and record the hours of operation. [IP #0058-I020, V.B.3; §2103.12.a.2.D]

4. Record Keeping Requirements:

a. The permittee shall keep and maintain the following data for the generator: [IP #0058-I020, V.B.4.a; §2103.12.a.2.D; §2103.12(j); 40 CFR §60.4209, §60.4211, §60.4214]
   1) Cold starts (date, time and duration of each occurrence);
   2) Total operating hours (monthly and 12-month) as recorded by non-resettable hour meter on the generator with reason for operation; and
   3) Records of operation, maintenance, inspection, calibration and/or replacement of combustion equipment.

b. Records of diesel fuel certifications from fuel suppliers shall be maintained per shipment. Certifications shall include the name of the supplier and a statement from the supplier that the fuel complies with ASTM D975 “Standard Specifications for Diesel Fuel Oils”. [IP #0058-I020, V.B.4.b; §2103.12.a.2.D; §2103.12(j)]

c. The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance.[IP #0058-I020, V.B.4.c; §2103.12.a.2.D; §2103.12(j)]

d. All records shall be retained by the facility for at least five (5) years. These records shall be made available to the Department upon request for inspection and/or copying. [IP #0058-I020, V.B.4.d; §2103.12.a.2.D]

5. Reporting Requirements:

a. The permittee shall report the following information to the Department in accordance with General Condition III.15 above. The reports shall contain all required information for the time period of the report: [IP #0058-I020, V.B.5.a; §2103.12.a.2.D; §2103.12(k)]

   1) Monthly and 12-month data required to be recorded by condition VI.D.4.a above;
   2) Cold start information;
   3) Non-compliance information required to be recorded by condition VI.D.4.c above; and
   4) Fuel oil certifications and a statement from the permittee that the record of fuel supplier certifications represents all the fuel oil used during the reporting period.

b. Until terminated by written notice from the Department, the requirement for the permittee to report cold starts 24 hours in advance in accordance with §2108.01.d is waived and the permittee may report all cold starts in accordance with condition VI.D.5.a above. [IP #0058-I020, V.B.5.b; §2103.12.a.2.D; §2103.12(k)]

c. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 above if appropriate. [IP #0058-I020, V.B.5.c; §2103.12.a.2.D; §2103.12(k)]

d. The permittee shall submit copies of all requests, reports, applications, submittals, and other communications to both EPA and the Department. [IP #0058-I020, V.B.5.d; §2103.12.a.2.D]

6. Work Practice Standard

None except as provided elsewhere.

~PERMIT SHIELD IN EFFECT~

7. #2 LTC and #4 LTC Heaters and C-5 Hot Oil Furnace

Process Description: LTC Heaters and C-5 Hot Oil Furnace
Facility ID: #2 LTC and #4 LTC Heaters and B-3000 (C-5 Hot Oil Furnace)
Max. Design: 8.8 MM BTU/hr, 10 MM BTU/hr and 10.33 MM BTU/hr respectively
Raw Materials: Natural gas
Control Device(s): None

8. Restrictions:

a. Only natural gas shall be combusted in the heaters and furnace. [IP #0058-I011f, V.C.1.a; IP #0058-I016b, V.B.1.a §2103.12.a.2.D]

b. Heat input shall be limited to 8.8 MMBtu/hr for the #2 LTC heater, 10 MMBtu/hr for the #4 LTC heater, and 10.33 MMBtu/hr for the C-5 Hot Oil furnace based on the higher heating value of the fuel being combusted. [IP #0058-I011f, V.C.1.b; IP #0058-I016b, V.B.1.b; §2103.12.a.2.D]

c. Emissions of particulate matter shall not exceed 0.008 lb/MMBtu. [IP #0058-I011f, V.C.1.c; IP #0058-I016b, V.B.1.c; §2103.12.a.2.D; §2104.02.a.1]

d. Heaters and furnace shall be properly operated and maintained according to manufacturer's specifications. The manufacturer's specification and operation and maintenance manuals shall be kept on site at all times. [IP #0058-I011f, V.C.1.d; IP #0058-I016b, V.B.1.d; §2103.12.a.2.D]

e. Emissions from the heaters and furnace shall not exceed the following at any time: [IP #0058-I011f, V.C.1.e; IP #0058-I016b, V.B.1.e; §2103.12.a.2.D]

Table VI-7-1: #2 & #4 LTC Heater and C-5 Hot Oil Heater Emissions Limits

Pollutant	#2 LTC Heater		#4 LTC Heater		C-5 Hot Oil Heater	
	lbs/hr	tons/yr[1]	lbs/hr	tons/yr[1]	lbs/hr	tons/yr[1]
PM	0.079	0.34	0.087	0.38	0.09	0.40
SO_X	0.006	0.03	0.007	0.03	0.09	0.03
NO_X	1.035	4.53	1.150	5.04	0.09	5.20
CO	0.869	3.81	0.966	4.23	0.007	4.37
VOC	0.057	0.25	0.063	0.28	1.19	0.29
HAPs	0.019	0.08	0.022	0.09	0.07	0.29

[1] A year is defined as any consecutive 12-month period.

9. Testing Requirements:

The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Article XXI §2108.02. [IP #0058-I011f, V.C.2; IP #0058-I016b, V.B.2; §2103.12.a.2.D]

10. Monitoring Requirements:

The permittee shall install and maintain the natural gas meter to measure and to record the monthly amount of natural gas combusted in furnace . [IP #0058-I011f, V.C.3; IP #0058-I016b, V.B.3; §2103.12.a.2.D]

11. Record Keeping Requirements:

a. The permittee shall keep and maintain the following records: [IP #0058-I011f, V.C.4.a; IP #0058-I016b, V.B.4.a; §2103.12.a.2.D]

1) Monthly amount of natural gas combusted in the furnace;
2) Records of operation, maintenance, inspection, calibration, and/or replacement of equipment.

b. All records shall be retained by the facility for at least five (5) years. These records shall be made available to the Department upon request for inspection and/or copying. [IP #0058-I011f, V.C.4.b; IP #0058-I016b, V.B.4.b; §2103.12.a.2.D]

12. Reporting Requirements:

a. The permittee shall report the following information to the Department semiannually in accordance with General Condition III.15 above. [IP #0058-I011f, V.C.5.a; IP #0058-I016b, V.B.5.a; §2103.12.a.2.D]

b. The semiannual report shall include the following information: [IP #0058-I011f, V.C.5.b; IP #0058-I016b, V.B.5.b; §2103.12.a.2.D]

1) Calendar dates covered in the reporting period;
2) Monthly amount of fuel combusted;
3) Reasons for any noncompliance with the emission standards.

c. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 above, if appropriate. [IP #0058-I011f, V.C.5.c; IP #0058-I016b, V.B.5.c; §2103.12.a.2.D]

13. Work Practice Standard:

a. The C-6 Hot Oil furnace shall be: [IP #0058-I011f, V.C.6.a; §2103.12.a.2.D]
1) Operated in such a manner as not to cause air pollution;
2) Operated and maintained in a manner consistent with good operating and maintenance practices.
3) Operated and maintained in accordance with the manufacturer's specifications and the applicable terms and conditions of this permit.

~PERMIT SHIELD IN EFFECT~

E. Sources of Minor Significance

The facility maintains the following sources of minor significance:

Table VI-E-1: Sources of Minor Significance

I.D.	SOURCE DESCRIPTION	CONTROL DEVICE(S)	MAXIMUM CAPACITY	FUEL/RAW MATERIAL	STACK I.D.
Emulsion Unit					
T-301-1	Emulsion Kettle #1	None	1,000 gal	Resin Blends	S291
T-302-1	Emulsion Kettle #2	None	1,000 gal	Resin Blends	S292
T-403-1	Storage vessel	None	2,200 gal	Water	None
T-403-3	Storage vessel	None	2,200 gal	Water	None
M-500-1, M-500-2	Mixing unit	None	NA	Emulsion product	None
T-783	Storage Tank	None	11,400 gal	Rosin	S160
T-200-1	Storage tank	None	1,000 gal	Water condensate	S284
T-201-1	Storage tank	None	1,000 gal	Water condensate	S284
T-766	Storage tank	None	800 gal	Surfactant	S288
T-782	Storage tank	None	7,000 gal	Resin/Rosin	S290
T-761	Storage tank	None	10,000 gal	Heavy distillate	S283
T-773	Storage tank	None	2,500 gal	Crude tall oil	S289
T-402-3	Storage tank	None	17 gal	29% ammonium hydroxide	S161
T-411-1	Storage tank	None	500 gal	Surfactant	NA
T-408-1	Storage tank	None	500 gal	Surfactant	NA
T-407-1	Storage tank	None	500 gal	Surfactant	NA
T-405-1	Storage tank	None	500 gal	Surfactant	NA
T-406-1	Storage tank	None	500 gal	Surfactant	NA
T-412-1	Storage tank	None	500 gal	Surfactant	NA
T-401-1	Storage tank	None	80 gal	45% potassium hydroxide	None
T-R-1-A	Storage tank	None	17,600 gal	Crude tall oil	S187
T-775	Storage tank	None	8,768 gal	Emulsion waste	S287
T-605-1	Blend tank #5	None	20,000 gal	Bulk dispersion	S401
T-606-1	Blend tank #6	None	20,000 gal	Bulk dispersion	S400

I.D.	SOURCE DESCRIPTION	CONTROL DEVICE(S)	MAXIMUM CAPACITY	FUEL/RAW MATERIAL	STACK I.D.
T-504-1	Blend tank #4	None	5,000 gal	Bulk dispersion	S162
T-503-1	Blend tank #3	None	5,000 gal	Bulk dispersion	
T-502-1	Blend tank #2	None	6,000 gal	Bulk dispersion	
T-501-1	Blend tank #1	None	6,000 gal	Bulk dispersion	
Storage Tanks (Minor significance)					
T-35	Storage tank	None	169,000 gal	Various solvent or stormwater	S075
T-78	Storage tank	None	169,000 gal	Recovered oil	S232
T-4	Storage tank	None	88,128 gal	Coproduct fuel (JSOL)	S190
T-151	Storage tank	None	1,504,044 gal	Coproduct fuel (JSOL)	S236
T-2	Storage tank	None	169,205 gal	Stormwater	S189
T-9	Storage tank	None	110,159 gal	C5 Ammonia water	S194
T-12	Storage tank	None	110,159 gal	Stormwater	S197
T-13	Storage tank	None	110,159 gal	Stormwater	S198
T-14	Storage tank	None	110,159 gal	C5 Ammonia water	S199
T-15	Storage tank	None	110,159 gal	C5 Ammonia water	S200
T-16	Storage tank	None	110,159 gal	C5 Ammonia water	S201
T-27	Storage tank	None	16,257 gal	Hazardous Waste	S211
T-150	Storage tank	None	1,504,044 gal	C5 Ammonia water/PMR water	S235
T-160	Storage tank	None	158,630 gal	Stormwater	-
T-208	Storage tank	None	25,381 gal	Hazardous waste	S244
T-250	Storage tank	None	30,457 gal	Deluge water	S246
T-251	Storage tank	None	30,457 gal	Deluge water	S247
T-252	Storage tank	None	30,457 gal	Styrene or AMS	S248
T-254	Storage tank	None	15,275 gal	C5 API Discharge water (reserved for storm weather conditions)	S249
T-257	Storage tank	None	15,275 gal	C5 API Discharge water (reserved for storm weather conditions)	S252
T-261	Storage tank	None	20,728 gal	C5 Ammonia water	S256
T-262	Storage tank	None	20,080 gal	C5 Ammonia water	S038

I.D.	SOURCE DESCRIPTION	CONTROL DEVICE(S)	MAXIMUM CAPACITY	FUEL/RAW MATERIAL	STACK I.D.
T-263	Storage tank	None	20,080 gal	C5 API Discharge water	S257
T-264	Storage tank	None	20,080 gal	C5 API Discharge water	S258
T-265	Storage tank	None	20,080 gal	Hazardous Waste	S259
T-382	Storage tank	None	19,625 gal	Therminol	S271
T-408	Storage tank	None	9,776 gal	Anhydrous ammonia	NA
T-510	Storage tank	None	100,000 gal	Isobutylene	NA
T-513	Storage tank	None	3,714 gal	40/60 Ethylene Glycol/Water	S275
T-514	Storage tank	None	3,714 gal	40/60 Ethylene Glycol/Water	S276
T-762	Storage tank	None		Steam condensate	S284
T-763	Storage tank	None		Steam condensate	S285
T-2004-1 (T-278)	Storage tank	None		40/60 Ethylene Glycol/Water	S260
T-7065-1	Storage tank	None		40/60 Ethylene Glycol/Water	
T-703-3	Storage tank	None		40/60 Ethylene Glycol/Water	
T-105-2	Storage tank	None		40/60 Ethylene Glycol/Water	
T-801-4	Storage tank	None		8% Soda ash in water	
T-401-1	Storage tank	None		8% Soda ash in water	
Miscellaneous Sources					
NA	Roadways	None	NA	NA	NA
NA	Barges	None	NA	NA	NA
NA	Degreasers	None	NA	NA	NA

1. Restrictions:

a. The permittee shall properly maintain and operate the Emulsion Unit Operation, Barges, Degreasers, and Storage Tanks according to good engineering and air pollution control practices at all times while these processes are emitting VOCs. [§2103.12.a.2.D]

2. Record Keeping Requirements:

a. The permittee shall record the following information for Tanks listed in above Table for Storage tanks (minor significant). Such records shall provide sufficient data and calculations to clearly demonstrate that the applicable requirements are being met, and shall include but not be limited to the following: [§2103.12.a.2.D]

1) Type, amount, and period of storage of each liquid stored (each addition, monthly and 12-month);
2) Total yearly throughput in each tank;
3) Maximum true vapor pressure of each liquid as stored (monthly);
4) Date and reason for each tank cleaning (monthly, 12-month summary);
5) Results of all inspections performed on the tank.

b. All records required under this section shall be maintained by the permittee for a period of five years following the date of such record. [§2103.12.a.2.D; §2103.12.j.2]

~PERMIT SHIELD IN EFFECT~

F. Leak Detection and Repair (LDAR)

1. Restrictions

a. The permittee shall comply with the requirements 40 CFR Part 63, Subpart UU – National Emission Standards for Equipment Leaks – Control Level 2 for equipment leaks in all equipment in organic HAP service, except as specified in §63.2480(b). The processes applicable to these regulations are: C5 Unit, LTC Unit, MP Poly Unit, WW Poly Unit, Hydrogenation Unit, and Emulsion Unit. If the permittee elects to use a different compliance option in Table 6.1 of Subpart FFFF, the permittee shall notify the Department no later than 30 days prior to the change. [§2103.12.a; §2104.08; §63.2450(a); §63.2480(a); 63 Subpart FFFF Table 6.1.a; §129.99]

b. The permittee shall identify all equipment subject to Leak Detection and Repair (LDAR) in accordance with §63.1022 of Subpart UU. [§2103.12.a; §2104.08; §63.2480(a); §63.1022(a); §129.99]

2. Monitoring Requirements:

a. The permittee shall monitor regulated equipment as specified in condition VI.F.1.a above. [§2103.12.i; §2104.08; §63.2480(a)]

b. *Leaking equipment identification and records*. [§2103.12.i; §2104.08; §63.2480(a); §63.1023(e); §129.99]
   1) When each leak is detected pursuant to the monitoring specified in §63.1023(a) in accordance with condition VI.F.2.a above, a weatherproof and readily visible identification, shall be attached to the leaking equipment.
   2) When each leak is detected, the permittee shall record the information specified in VI.F.3.b below.

c. The permittee shall repair each leak detected as soon as practical, but not later than 15 calendar days after it is detected, except as provided in §§63.1024(d) and (e). A first attempt at repair as defined in this subpart shall be made no later than 5 calendar days after the leak is detected. [§2103.12.i; §2104.08; §63.2480(a); §63.1024(a); §129.99]

3. Record Keeping Requirements:

a. The permittee shall keep each applicable record required by 40 CFR Part 63, Subpart A and in referenced Subparts F, G, SS, and UU. [§2103.12.j; §2104.08; §63.2525(a); §129.100]

b. For each leak detected, the following information shall be recorded: [§63.2480(a); §63.1024(f); §129.100]

   1) The date of first attempt to repair the leak.
   2) The date of successful repair of the leak.
   3) Maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A at the time the leak is successfully repaired or determined to be nonrepairable.
   4) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak as specified in conditions VI.F.3.b.4)a) and b) below:

      a) The permittee may develop a written procedure that identifies the conditions that justify a

delay of repair. The written procedures may be included as part of the startup, shutdown, and malfunction plan or may be part of a separate document that is maintained at the plant site. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.

b) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked on-site before depletion and the reason for depletion.

5) Dates of shutdowns that occur while the equipment is unrepaired.

c. The permittee shall keep records of the number and types of components subject to LDAR, as required under condition VI.F.1.b above. [§2103.12.j; §2104.08; §63.2480(a); §63.1022; §129.100]

d. The permittee shall keep specific equipment leak records according to §63.1038 of Subpart UU. [§2103.12.j; §2104.08; §63.2480(a); §63.1038(c); §129.100]

e. The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance. [§2103.12.j]

f. All records required under this section shall be maintained by the permittee for a period of five years following the date of such record. [§2103.12.a.2.D; §2103.12.j.2]

4. Reporting Requirements:

a. The permittee shall report the following LDAR information in the semiannual report required under General Condition III.15 above: [§2103.12.k; §2104.08; §63.2480(a); §63.1039(b); §129.100]

1) For the following equipment, report in a summary format by equipment type, the number of components for which leaks were detected and for valves, pumps and connectors show the percent leakers, and the total number of components monitored. Also include the number of leaking components that were not repaired as required by condition VI.F.2.c above, and for valves and connectors, identify the number of components that are determined to be nonrepairable.

a) Valves in gas and vapor service and in light liquid service pursuant to §63.1025(b) and (c) of Subpart UU.
b) Pumps in light liquid service pursuant to §63.1026(b) and (c) of Subpart UU.
c) Connectors in gas and vapor service and in light liquid service pursuant to §63.1027(b) and (c) of Subpart UU.
d) Agitators in gas and vapor service and in light liquid service pursuant to §63.1028(c) of Subpart UU.
e) Compressors pursuant to §63.1031(d) of Subpart UU.

2) Where any delay of repair is utilized pursuant to condition VI.F.2.c above, report that delay of repair has occurred and report the number of instances of delay of repair.

3) If applicable, report the valve subgrouping information specified in §63.1025(b)(4)(iv).

4) For pressure relief devices in gas and vapor service pursuant to §63.1030(b) and for compressors pursuant to §63.1031(f) that are to be operated at a leak detection instrument reading of less than 500 parts per million, report the results of all monitoring to show compliance conducted within the semiannual reporting period.

5) Report, if applicable, the initiation of a monthly monitoring program for valves pursuant to §63.1025(b)(3)(i).

6) Report, if applicable, the initiation of a quality improvement program for pumps pursuant to §63.1035.

7) Where the alternative means of emissions limitation for batch processes is utilized, report the information listed in §63.1036(f).

VII. ALTERNATIVE OPERATING SCENARIOS

No alternative operating scenarios exist for this facility.

VIII. EMISSIONS LIMITATIONS SUMMARY

The annual emission limitations for the Synthomer Jefferson Hills LLC facility are summarized in the following table:

TABLE VIII-1: Emission Limitations Summary

POLLUTANT	ANNUAL EMISSION LIMIT (tons/year)*
Particulate Matter	32.49
Particulate Matter <10 µm (PM_{10})	23.31
Particulate Matter <2.5 µm ($PM_{2.5}$)	20.29
Nitrogen Oxides (NO_X)	65.74
Sulfur Oxides (SO_X)	0.79
Carbon Monoxide (CO)	38.42
Volatile Organic Compounds (VOC)	246.75
Hazardous Air Pollutants (HAP)	47.96
Toluene	31.71

* A year is defined as any consecutive 12-month period.