Iowa Department of Natural Resources
Title V Operating Permit

Name of Permitted Facility: Equistar Chemicals, LP
Facility Location: 3400 Anamosa Road, Clinton, IA 52732
Air Quality Operating Permit Number: 04-TV-008R3
Expiration Date: 7/20/2028

Permit Renewal Application Deadline: 1/20/2028

EIQ Number: 92-4291
Facility File Number: 23-01-004

Responsible Official
Name: Joseph Hoinkis
Title: Site Manager
Mailing Address: 3400 Anamosa Road, Clinton, IA 52732
Phone #: (563) 244-2466

Permit Contact Person for the Facility
Name: Jaci Moore
Title: Principal Environmental Engineer
Mailing Address: 3400 Anamosa Road, Clinton, IA 52732
Phone #: (563) 244-2570

This permit is issued in accordance with 567 Iowa Administrative Code Chapter 22, and is issued subject to the terms and conditions contained in this permit.

For the Director of the Department of Natural Resources

Marnie Stein

7/21/2023

Marnie Stein, Supervisor of Air Operating Permits Section — Date

Table of Contents

Abbreviations

acfm.....actual cubic feet per minute
CFR.....Code of Federal Regulation
CE .....control equipment
CEM.....continuous emission monitor
^{o}F.....degrees Fahrenheit
EIQ.....emissions inventory questionnaire
EP.....emission point
EU .....emission unit
gr./dscf .....grains per dry standard cubic foot
IAC.....Iowa Administrative Code
DNR .....Iowa Department of Natural Resources
MVAC.....motor vehicle air conditioner
NAICS.....North American Industry Classification System
NSPS .....New Source Performance Standard
NESHAP .....National Emission Standards for Hazardous Air Pollutants
ppmv .....parts per million by volume
ppmw.....parts per million by weight
lb./hr .....pounds per hour
lb./MMBtu .....pounds per million British thermal units
SCC .....Source Classification Codes
scfm.....standard cubic feet per minute
SIC .....Standard Industrial Classification
TPY .....tons per year
USEPA.....United States Environmental Protection Agency

Pollutants
PM.....particulate matter
PM_{10} .....particulate matter ten microns or less in diameter
$PM_{2.5}$ .....particulate matter two and one half microns or less in diameter
SO_2 .....sulfur dioxide
NO_x .....nitrogen oxides
VOC .....volatile organic compound
CO .....carbon monoxide
HAP.....hazardous air pollutant

I. Facility Description and Equipment List

Facility Name: Equistar Chemicals, LP
Permit Number: 04-TV-008R3

Facility Description: Industrial Organic Chemicals/Plastics, Resins (SIC 2869/2821)

Equipment List

Emission Point Number	Emission Unit Number	Emission Unit Description	DNR Construction Permit
		Ethylene Plant	
EP001-P	EP001-U	LB-0101A A-Furnace	11-A-723
EP002-P	EP002-U	LB-0101B B-Furnace	11-A-042
EP003-P	EP003-U	LB-0101C C-Furnace	11-A-043
EP004-P	EP004-U	LB-0101D D-Furnace	08-A-245-S1
EP005-P	EP005-U	LB-0101E E-Furnace	08-A-246-S1
EP006-P	EP006-U	LB-0101F F-Furnace	11-A-044
EP007-P	EP007-U	LB-0101G G-Furnace	11-A-045
EP008-P	EP008-U	LB-0101H H-Furnace	11-A-046
EP009-P	EP009-U	LB-0101I I-Furnace	11-A-047
EP010-P	EP010-U	LB-0101J J-Furnace	11-A-048
EP011-P	EP011-U	LB-107A K-Furnace	None
EP012-P	EP012-U	LB-107B L-Furnace	None
EP013-P	EP013-U	LB-0120 M-Furnace	89-A-030-S1
EP014-P	EP014-U	B-0103 Gas Drier	None
EP015E-P	EP015-U	LB-0102A A-Boiler	17-A-542
EP015W-P	EP015-U	LB-0102A A-Boiler	89-A-028-S1
EP016E-P	EP016-U	LB-0102B B-Boiler	17-A-543
EP016W-P	EP016-U	LB-0102B B-Boiler	89-A-029-S1
EP020H-P	EP020H-U	U-2202 Cooling Tower	None
EP020I-P	EP020I-U	U-2202 Cooling Tower	None
EP020J-P	EP020J-U	U-2202 Cooling Tower	None
EP020K-P	EP020K-U	UJ-2210 Cooling Tower	None
EP020L-P	EP020L-U	UJ-2210 Cooling Tower	None
EP020M-P	EP020M-U	UJ-2210 Cooling Tower	None
EP020N-P	EP020N-U	UJ-2210 Cooling Tower	None
EP020O-P	EP020O-U	UJ-2210 Cooling Tower	None
EP020P-P	EP020P-U	UJ-2210 Cooling Tower	None
EP020Q-P	EP020Q-U	UJ-2210 Cooling Tower	None
EP020R-P	EP020R-U	UJ-2210 Cooling Tower	None
EP020S-P	EP020S-U	UJ-2210 Cooling Tower	None
EP020T-P	EP020T-U	UJ-2210 Cooling Tower	None
EP020U-P	EP020U-U	UJ-2210 Cooling Tower	None
EP020V-P	EP020V-U	UJ-2210 Cooling Tower	None
EP021-P	EP021-U	Fugitive Emission: Ethylene Plant	None
EP022-P	EP022C-U	Fugitive Emission: Residual Oil Truck Loading	None
EP022-P	EP022D-U	Fugitive Emission: DAC Rail Car Loading	None
EP023-P	EP023-U	F-2105 DAC Tank	None
EP025-P	EP025-U	F-2147 DAC Tank	None

Emission Point Number	Emission Unit Number	Emission Unit Description	DNR Construction Permit
EP026-P	EP026-U	F-2139 Wash Oil Tank	None
EP046-P	EP046-U	F-144 Wash Oil Day Tank	None
EP031-P	EP031-U	Cold Vent Header	None
EP033-P	AH001-U	H-110 Analyze House	00-A-911-S8
	EP033B-U	Emergency Vent Gases	
	EP033C-U	Diglycolamine (DGA) Unit	
	EP033D-U	F1119 Cold Vent KO Pot	
	EP037-U	H-120 Ethylene Analyzer House	
	EP047-U	H-107B Ethylene Analyzer House	
	EP048-U	H-108 Ethylene Analyzer House	
	EP049-U	H-112 Ethylene Analyzer House	
	EP050-U	H-115 Process Analyzer House	
	EP091A-U	TK0111: 48" Vessel Propane Skid	
	EP091B-U	TK0112: 48" Vessel Propane Skid	
	EP091C-U	TK0113: 36" Vessel Propane Skid	
	EP092-U	Railcar Loading/Unloading	
	HD203-U	D0909A Hexene Treatment Tower	
	HD204-U	D0909B Hexene Treatment Tower	
	LD001-U	F 2134A Vinyl Acetate Storage Tank	
	LD002-U	F 2134B Vinyl Acetate Storage Tank	
	LD011-U	F 785 Waste VA & Mineral Spirits Storage Tank	
EP034-P	EP034-U	J-2204D Fire Water Pump Diesel Engine	None
EP035-P	EP035-U	J-2204E Fire Water Pump Diesel Engine	None
EP036-P	EP036-U	J-2204F Fire Water Pump Diesel Engine	None
EP038-P	EP038A-U	D102A Acetylene Converter Regen	None
	EP038B-U	D102B Acetylene Converter Regen	
	EP038C-U	D102C Acetylene Converter Regen	
	EP038D-U	D104A Methylacetylene Converter Regen	
	EP038E-U	D104B Methylacetylene Converter Regen	
	EP038F-U	D105 Acetylene Converter Regen	
EP040-P	EP040-U	B-0107 Regeneration Gas Heater	97-A-804-S1
EP041-P	EP041-U	Plant Incidental Releases	None
EP042N-P	EP042-U	J-0102 Propylene Refrigeration Compressor	None
EP042S-P			None
EP043N-P	EP043-U	J-0103 Ethylene Refrigeration Compressor	None
EP043S-P			None
EP044E-P	EP044-U	J-0104 Ethylene Refrigeration Compressor	None
EP044W-P			None
EP045-P	EP045-U	Temporary Smokeless Flare	None
EP051-P	EP051-U	Fugitive Emission: E-118 Quench Water Stripper Blowdown	None
EP052-P	EP052-U	Fugitive Emission: E-129 Caustic Stripper Blowdown	None
EP055-P	EP055-U	Fugitive Emission: F-2450 Equalization & Neutralization Tank	None
EP056-P	EP056-U	Fugitive Emission: F-2451 Rapid Mix Tank	None
EP057-P	EP057-U	Fugitive Emission: F-2452 Flocculation Tank	None
EP058-P	EP058-U	Fugitive Emission: F-2453 Dissolved Air Flotation Tank	None
EP059-P	EP001-U	A Furnace Decoke	11-A-724-S1
EP060-P	EP002-U	B Furnace Decoke	11-A-049-S1
EP061-P	EP003-U	C Furnace Decoke	11-A-050-S1
EP062-P	EP004-U	D Furnace Decoke	08-A-247-S2
EP063-P	EP005-U	E Furnace Decoke	08-A-248-S2
EP064-P	EP006-U	F Furnace Decoke	11-A-051-S1

Emission Point Number	Emission Unit Number	Emission Unit Description	DNR Construction Permit
EP065-P	EP007-U	G Furnace Decoke	11-A-052-S1
EP066-P	EP008-U	H Furnace Decoke	11-A-053-S1
EP067-P	EP009-U	I Furnace Decoke	11-A-054-S1
EP068-P	EP010-U	J Furnace Decoke	11-A-055-S1
EP069N-P	EP011-U	K Furnace Decoke	18-A-378
EP069S-P			18-A-379
EP070N-P	EP012-U	L Furnace Decoke	18-A-380
EP070S-P			18-A-381
EP071N-P	EP013-U	M Furnace Decoke	18-A-382-S1
EP071S-P			18-A-383-S1
EP089-P	EP001-U	A Furnace Decoke	18-A-384-S1
	EP002-U	B Furnace Decoke	
	EP003-U	C Furnace Decoke	
	EP004-U	D Furnace Decoke	
	EP005-U	E Furnace Decoke	
	EP006-U	F Furnace Decoke	
	EP007-U	G Furnace Decoke	
	EP008-U	H Furnace Decoke	
	EP009-U	I Furnace Decoke	
	EP010-U	J Furnace Decoke	
	EP011-U	K Furnace Decoke	
	EP012-U	L Furnace Decoke	
	EP013-U	M Furnace Decoke	
EP090-P	EP001-U	A Furnace Decoke	18-A-385-S1
	EP002-U	B Furnace Decoke	
	EP003-U	C Furnace Decoke	
	EP004-U	D Furnace Decoke	
	EP005-U	E Furnace Decoke	
	EP006-U	F Furnace Decoke	
	EP007-U	G Furnace Decoke	
	EP008-U	H Furnace Decoke	
	EP009-U	I Furnace Decoke	
	EP010-U	J Furnace Decoke	
	EP011-U	K Furnace Decoke	
	EP012-U	L Furnace Decoke	
	EP013-U	M Furnace Decoke	
EP072-P	EP072-U	Maintenance Paint Booth	10-A-371
EP074A-P	EP074-U	F-2103 Mixed C4 Sphere- (RV)	None
EP074B-P			None
EP075-P	EP075-U	F1116 Spent Caustic Tank	None
EP076-P	EP076-U	F 0143 Ethanol Storage Tank- Closed Loop System	None
EP077-P	EP077-U	F 0151N Ethanol Storage Tank- Closed Loop System	None
EP078-P	EP078-U	F 0145R1 Fuel Oil Mix Tank	None
EP079-P	EP079-U	F 0176 Contaminated Lube Storage Tank	None
EP080-P	EP080-U	F 0169 Process Additive Storage Tank	None
EP081-P	EP081-U	Process Additive Storage Tote	None
EP082-P	EP082-U	Process Additive Storage Tote	None
EP083A/B-P	EP083A/B-U	Process Additive Storage Totes (2 Totes in Series)	None
EP084-P	EP084-U	F 2150A Plant Gasoline Storage Tank	None
EP085-P	EP085-U	F 2150B Plant Diesel Storage Tank	None
EP086-P	EP086-U	Process Additive Storage Tote	None

Emission Point Number	Emission Unit Number	Emission Unit Description	DNR Construction Permit
EP087-P	EP087-U	Process Additive Storage Tote	None
EP088-P	EP088-U	Process Additive Storage Tote	None
WW001-P	WW001-U	F-2400 Equalization/Neutralization Tank	20-A-255-S1
	WW002-U	F-2404 Rapid Mix Tank	
	WW003-U	F-2405 Flocculation Tank	
	WW004-U	F-2417 DAF Tank	
	WW005-U	F-2428 BioFeed Tank	
	WW006-U	F-2429A Bioreactor Tank 1	
	WW007-U	F-2429B Bioreactor Tank 2	
	WW008-U	F-2430A Clarifier 1	
	WW009-U	F-2430B Clarifier 2	
	WW010-U	F-2446 Sludge Tank	
	WW011-U	F-2412 Thickener	
	WW012-U	L-2460 Filter Press	
WW002-P	WW013-U	Polishing Pond	20-A-256
EP073-P	EP073-U	WWTP Lift Station	13-A-336

High Density Polyethylene Production Lines

HD001A-P	HD001A-U	PF-4 Analyzer House	None
HD001B-P	HD001B-U	PF-1, PF-2, and PF-3 Analyzer House	None
HD002N-P	HD002-U	C-0316 Gas1 (D-0307) Activator Jacket Heater	None
HD002S-P			None
HD004-P	HD004-U	F-0401A PF-1 Rundown Bin	None
HD005-P	HD005-U	F-0401B PF-1 Rundown Bin	None
HD006-P	HD006-U	F-0401C PF-1 Rundown Bin	None
HD007-P	HD007-U	F-0401D PF-1 Rundown Bin	None
HD008N-P	HD008A-U	F-0411C PF-3 Rundown Bin	94-A-110-S1
	HD008B-U	F-0411D PF-3 Rundown Bin	
	HD008C-U	F-0431C PF-2 Rundown Bin	
	HD008D-U	F-0431D PF-2 Rundown Bin	
HD008S-P	HD008E-U	F-0411A PF-3 Rundown Bin	94-A-109-S1
	HD008F-U	F-0411B PF-3 Rundown Bin	
	HD008G-U	F-0431A PF-2 Rundown Bin	
	HD008H-U	F-0431B PF-2 Rundown Bin	
HD009N-P	HD009A-U	F-0439A PF-4 Rundown Bin	93-A-158-S4
	HD009B-U	F-0439B PF-4 Rundown Bin	
	HD009C-U	F-0439C PF-4 Rundown Bin	
	HD009D-U	F-0439D PF-4 Rundown Bin	
HD009S-P	HD009E-U	F-0439E PF-4 Rundown Bin	93-A-157-S4
	HD009F-U	F-0439F PF-4 Rundown Bin	
	HD009G-U	F-0439G PF-4 Rundown Bin	
	HD009H-U	F-0439H PF-4 Rundown Bin	
HD010A-P	HD010a-U	F-0415A J-Line Feed Bin	18-A-054
HD010B-P			18-A-055
HD011A-P	HD011a-U	F-0415B J-Line Feed Bin	18-A-056
HD011B-P			18-A-057
HD012A-P	HD012a-U	F-0421A A-Line Feed Bin	18-A-058
HD012B-P			18-A-059
HD013A-P	HD013a-U	F-0421B B-Line Feed Bin	18-A-060
HD013B-P			18-A-061
HD014A-P	HD014a-U	F-0422A A-Line Feed Bin	18-A-062

Emission Point Number	Emission Unit Number	Emission Unit Description	DNR Construction Permit
HD014B-P			18-A-063
HD015A-P	HD015a-U	F-0422B B-Line Feed Bin	18-A-064
HD015B-P			18-A-065
HD018-P	HD018-U	F-0462 F-Line Feed Bin	89-A-065-S2
HD018B-P			18-A-066
HD019-P	HD019-U	F-0463 F-Line Feed Bin	07-A-1190-S1
HD019B-P			18-A-067
HD020-P	HD020-U	F-0918 PF-4 Surge Hopper	07-A-1182-S3
HD021-P	HD021-U	J-0303A PF-1 Recycle Compressor	None
HD022-P	HD022-U	J-0303B PF-1 Recycle Compressor	None
HD027-P	HD027-U	J-0603 PF-2/3 Recycle Compressor	None
HD028-P	HD028-U	J-0604 PF-2/3 Recycle Compressor	None
HD029-P	HD029-U	J-0605 PF-2/3 Recycle Compressor	None
HD033-P	HD033-U	J-0623 IC4 Recovery Compressor	None
HD036-P	HD036-U	J-0908A PF-4 Recycle Compressor	None
HD037-P	HD037-U	J-0908B PF-4 Recycle Compressor	None
HD038-P	HD038-U	J-0908C PF-4 Recycle Compressor	None
HD039-P	HD039-U	J-0301 PF-1 Reactor Pump	None
HD040-P	HD040-U	J-0601 PF-3 Reactor Pump	None
HD041-P	HD041-U	J-0602 PF-2 Reactor Pump	None
HD042-P	HD042-U	J-0903 PF-4 Reactor Pump	None
HD044-P	HD044-U	L-0603 PF-3 Purge Conveyor	None
HD145-P		L-0603 PF-3 Purge Conveyor RV	None
HD180-P		L-0603 PF-3 Purge Conveyor Fugitive	None
HD045-P	HD045-U	L-0604 PF-2 Purge Conveyor	None
HD146-P		L-0604 PF-2 Purge Conveyor RV	None
HD181-P		L-0604 PF-2 Purge Conveyor Fugitive	None
HD117-P	HD117-U	L-0918 PF-4 Purge Conveyor	None
HD178-P		L-0918 PF-4 Purge Conveyor RV	None
HD182-P		L-0918 PF-4 Purge Conveyor Fugitive	None
HD047-P	HD047-U	Fugitive Emission: VF-0432A PF-3 Surge Bin	None
HD048-P	HD048-U	Fugitive Emission: VF-0432B PF-2 Surge Bin	None
HD049A-P	HD049A-U	D0307 Gas1 Catalyst Activator	03-A-1013-S1
HD049C-P	HD049C-U	D0310 Electric Catalyst Activator	08-A-442-S1
HD050A-P	HD050A1-U	L0420A Mixer	19-A-054
	HD050A2-U	V0426A Batch Weigh Scale	
HD050B-P	HD050B1-U	L0420B Mixer	19-A-055
	HD050B2-U	V0426B Batch Weigh Scale	
HD050C-P	HD050C-U	L-0470 F Line Conveyor & Dust Collector	89-A-070-S2
HD050D-P	HD050D-U	L-0410 J-Line Dust Collector	03-A-1014-S1
HD051-P	HD051-U	J-1402 Additive Vacuum System	03-A-1015-S1
HD052-P	HD052-U	F-0402A PF Storage Bin	None
HD053-P	HD053-U	F-0402B PF Storage Bin	10-A-379-S1
HD054-P	HD054-U	F-0402C PF Storage Bin	10-A-380-S1
HD055-P	HD055-U	F-0402D PF Storage Bin	10-A-381-S1
HD056-P	HD056-U	F-0402E PF Storage Bin	10-A-382-S1
HD057-P	HD057-U	F-0432A PF Storage Bin	None
HD058-P	HD058-U	F-0432B PF Storage Bin	None
HD059-P	HD059-U	F-0432C PF Storage Bin	None
HD060-P	HD060-U	F-0432D PF Storage Bin	None
HD061-P	HD061-U	F-0432E PF Storage Bin	None
HD062-P	HD062-U	F-0412A PF Storage Bin	10-A-383-S2

Emission Point Number	Emission Unit Number	Emission Unit Description	DNR Construction Permit
HD063-P	HD063-U	F-0412B PF Storage Bin	10-A-384-S2
HD064-P	HD064-U	F-0412C PF Storage Bin	10-A-385-S2
HD065-P	HD065-U	F-0412D PF Storage Bin	10-A-386-S2
HD066-P	HD066-U	F-0412E PF Storage Bin	10-A-387-S2
HD067-P	HD067-U	F-0412F PF Storage Bin	78-A-074
HD068-P	HD068-U	F-0412G PF Storage Bin	78-A-074
HD069-P	HD069-U	F-0412H PF Storage Bin	10-A-388-S1
HD070-P	HD070-U	F-0412J PF Storage Bin	10-A-389-S1
HD071-P	HD071-U	F-0412K PF Storage Bin	10-A-390-S2
HD072-P	HD072-U	F-0404A Plexar Storage/Feed Bin	80-A-075
HD073-P	HD073-U	F-0404B Plexar Storage/Feed Bin	80-A-076
HD074-P	HD074-U	F-0404C Plexar Rundown Bin	None
HD075-P	HD075-U	F-0444A Pellet Blender	None
HD076-P	HD076-U	F-0444B Pellet Blender	None
HD077-P	HD077-U	F-0444C Pellet Blender	89-A-068-S3
HD078-P	HD078-U	F-0444D Pellet Blender	07-A-1191-S2
HD079-P	HD079-U	F-0444E Pellet Blender	07-A-1192-S2
HD080-P	HD080-U	F-0444F Pellet Blender	07-A-1193-S2
HD081-P	HD081-U	F-0441A Pellet Blender	None
HD082-P	HD082-U	F-0441B Pellet Blender	None
HD083-P	HD083-U	F-0445 Pellet Blender	None
HD084-P	HD084-U	F-0437A Pellet Blender	89-A-067-S3
HD085-P	HD085-U	F-0437B Pellet Blender	07-A-1183-S2
HD086-P	HD086-U	F-0437C Pellet Blender	07-A-1184-S2
HD087-P	HD087-U	F-0437D Pellet Blender	07-A-1185-S2
HD088-P	HD088-U	F-0437E Pellet Blender	07-A-1186-S2
HD089-P	HD089-U	F-0437F Pellet Blender	07-A-1187-S2
HD090-P	HD090-U	F-0437G Pellet Blender	07-A-1188-S2
HD091-P	HD091-U	F-0437H Pellet Blender	07-A-1189-S2
HD092-P	HD092-U	F-0443A Pellet Storage Bin	None
HD093-P	HD093-U	F-0443B Pellet Storage Bin	None
HD094-P	HD094-U	F-0443C Pellet Storage Bin	None
HD095-P	HD095-U	F-0443D Pellet Storage Bin	None
HD096-P	HD096-U	F-0443E Pellet Storage Bin	None
HD097-P	HD097-U	F-0443F Pellet Storage Bin	None
HD098-P	HD098-U	F-0443G Pellet Storage Bin	None
HD099-P	HD099-U	F-0443H Pellet Storage Bin	None
HD100-P	HD100-U	F-0443J Pellet Storage Bin	None
HD101-P	HD101-U	F-0443K Pellet Storage Bin	None
HD102-P	HD102-U	F-0443L Pellet Storage Bin	None
HD103-P	HD103-U	F-0443M Pellet Blending Silo	None
HD104-U	HD104-U	F-0447A Divert Quad Bin	None
HD105-P	HD105-U	F-0447B Divert Quad Bin	None
HD106-P	HD106-U	F-0447C Divert Quad Bin	None
HD107-P	HD107-U	F-0447D Divert Quad Bin	None
HD109-P	HD109-U	F-0438A Divert Quad Bin	None
HD110-P	HD110-U	F-0438B Divert Quad Bin	None
HD111-P	HD111-U	F-0438C Divert Quad Bin	None
HD112-P	HD112-U	F-0438D Divert Quad Bin	None
HD113-P	HD113-U	F-0442A Divert Quad Bin	None
HD114-P	HD114-U	F-0442B Divert Quad Bin	None
HD115-P	HD115-U	F-0442C Divert Quad Bin	None

Emission Point Number	Emission Unit Number	Emission Unit Description	DNR Construction Permit
HD116-P	HD116-U	F-0442D Divert Quad Bin	None
HD108-P	HD108-U	Fugitive Emission: High Density Unit	None
HD118-P	HD118-U	Fugitive Emission: F-0425 Plexar Maleic Anhydride Tank	None
HD119-P	HD119-U	L-0428A A-line Pellet Dryer	None
HD120-P	HD120-U	L-0428B B-line Pellet Dryer	None
HD121-P	HD121-U	L-1409 F-line Spin Dryer	89-A-066-S3
HD122-P	HD122-U	L-0413 J-line Spin Dryer	89-A-069-S3
HD123-P	HD123-U	L-0406A Plexar Graft Dryer	None
HD124-P	HD124-U	L-0477 D-line Pellet Dryer	None
HD125-P	HD125-U	L-0487 E-line Pellet Dryer	None
HD126-P	HD126-U	F-0455 E-Line Feed Bin	None
HD127-P	HD127-U	F-0456 E-Line Feed Bin	None
HD128-P	HD128-U	F-0464 D-Line Feed Bin	None
HD129-P	HD129-U	F-0465 D-Line Feed Bin	None
HD130A -P	HD130-U	F-0498 E-Line Additive Bin	03-A-1016
HD130B-P			03-A-1017
HD132A -P	HD132-U	F-0497 D-Line Additive Bin	03-A-1018
HD132B-P			03-A-1019
HD134-P	HD134-U	L-400 Plexar Extruder	None
HD135-P	HD135A -U	F-0410A Quality Control Bin	03-A-1020
	HD135B-U	F-0410B Quality Control Bin	
HD136-P	HD136-U	F-0408 Plexar Weigh Hopper	80-A-077
HD141-P	HD141-U	DB-0910 Gas 2 (D-0910) Activator Jacket Heater	99-A-422
HD142-P	HD142-U	DL-910 Gas 2 Activator Filter	90-A-406-S4
HD143-P		F-929 Gas 2 Activator Coalescing Filter	01-A-585
HD149-P	HD149-U	Fugitive Emission: L-301 PF-1 Dryer	None
HD150-P	HD150-U	Fugitive Emission: L-602 PF-2 Dryer	None
HD151-P	HD151-U	Fugitive Emission: L-601 PF-3 Dryer	None
HD152-P	HD152-U	Fugitive Emission: L-0917 PF-4 Dryer	None
HD153-P	HD153-U	Fugitive Emission: F-0303 PF-1 Slide Valves	None
HD154-P	HD154-U	Fugitive Emission: F-602 PF-2 Slide Valves	None
HD155-P	HD155-U	Fugitive Emission: F-0601 PF-3 Slide Valves	None
HD156-P	HD156-U	Fugitive Emission: F-0909 PF-4 Slide Valves	None
HD157-P	HD157-U	Fugitive Emission: L-0918 PF-4 Slide Valve	None
HD158-P	HD158-U	Fugitive Emission: J-0330 PF-1 Purge Conveyor Blower	None
HD159-P	HD159-U	Fugitive Emission: J-0628B PF-2 Purge Conveyor Blower	None
HD160-P	HD160-U	Fugitive Emission: J-0628A PF-3 Purge Conveyor Blower	None
HD161-P	HD161-U	Fugitive Emission: J-0906 PF-4 Purge Conveyor Blower	None
HD162-P	HD162-U	Fugitive Emission: PF-1 Dryer V-Ball Valves	None
HD163-P	HD163-U	Fugitive Emission: PF-2 Dryer V-Ball Valves	None
HD164-P	HD164-U	Fugitive Emission: PF-3 Dryer V-Ball Valves	None
HD165-P	HD165-U	Fugitive Emission: PF-4 Dryer V-Ball Valves	None
HD176-P	HD176-U	Fugitive Emission: F-314 PF-1,2, 3 Dump Tanks Slide Valves	None
HD177-P	HD177-U	Fugitive Emission: F-915 PF-4 Dump Tank Slide Valves	None
HD166-P	HD166-U	HDPE Vacuum System Bag filter	11-A-290-S1
HD167-P	HD167-U	MAH Neutralization Tank	11-A-557
HD168-P	HD168-U	J1431 Powder Vacuum Blower	None
HD171-P	HD171-U	J1401 Powder Vacuum Blower	None
HD172-P	HD172-U	J0409 Powder Vacuum Blower	None
HD173-P	HD173-U	J0406A Pellet Vacuum Blower	None
HD174-P	HD174-U	J0406B Pellet Vacuum Blower	None
HD175-P	HD175-U	J0406C Pellet Vacuum Blower	None

Emission Point Number	Emission Unit Number	Emission Unit Description	DNR Construction Permit
HD183-P	HD183A-U	D301 PF1 Loop Reactor	16-A-383
	HD183B-U	F303 PF1 Flash Tank	
	HD183C-U	L0301 PF1 Dryer	
	HD183-U	L0302 Purge Column	
HD184A-P	HD184-U	F-1442A PF-3 Rundown Bin	17-A-570
HD184B-P			17-A-571-S1
HD185A-P	HD185-U	F-1442B PF-3 Rundown Bin	17-A-572
HD185B-P			17-A-573-S1
HD186A-P	HD186-U	F-1442C PF-3 Rundown Bin	17-A-574
HD186B-P			17-A-575-S1
HD187A-P	HD187-U	F-1442D PF-2 Rundown Bin	17-A-576
HD187B-P			17-A-577-S1
HD188A-P	HD188-U	F-1442E PF-2 Rundown Bin	17-A-578
HD188B-P			17-A-579-S1
HD189A-P	HD189-U	F-1442F PF-2 Rundown Bin (HD189-U)	17-A-580
HD189B-P			17-A-581-S1
HD190A-P	HD190-U	F-1442G PF-1/2/3 Rundown Bin (HD190-U)	17-A-582
HD190B-P			17-A-583-S1
HD191A-P	HD191-U	F-1442H PF-1/2/3 Rundown Bin	17-A-584
HD191B-P			17-A-585-S1
HD192A-P	HD192-U	F-1442I PF-1/2/3 Rundown Bin	17-A-586
HD192B-P			17-A-587-S1
HD193A-P	HD193-U	F-1442J PF-1/2/3 Rundown Bin	17-A-588
HD193B-P			17-A-589-S1
HD194A-P	HD194-U	F-1442K PF-1/2/3 Rundown Bin	17-A-590
HD194B-P			17-A-591-S1
HD195A-P	HD195-U	F-1442L PF-1/2/3 Rundown Bin	17-A-592
HD195B-P			17-A-593-S1
HD196A-P	HD196-U	F-1442M PF-1 Rundown Bin	17-A-594
HD196B-P			17-A-595-S1
HD197A-P	HD197-U	F-1442N PF-1 Rundown Bin	17-A-596
HD197B-P			17-A-597-S1
HD198A-P	HD198-U	F-1442O PF-1 Rundown Bin	17-A-598
HD198B-P			17-A-599-S1
HD199A-P	HD199-U	F-1442P PF-1/2/3 Rundown Bin	17-A-600
HD199B-P			17-A-601-S1
HD200-P	HD200-U	J-1444A Product Transfer System	17-A-602
HD201-P	HD201-U	J-1444B Product Transfer System	17-A-603
HD202-P	HD202-U	J-1444C Product Transfer System	17-A-604

Low Density Polyethylene Production Lines

LD005E-P	LD005-U	D-0201 LD-1 Reactor (Depressure Emissions)	97-A-807
LD005W-P		D-0201 LD-1 Reactor (Rupture Disc Emissions)	97-A-808
LD006N-P	LD006-U	D-0702A LD-2A Reactor (Rupture Disc Emissions)	None
LD006S-P			None
LD006W-P		D-0702A LD-2A Reactor (Depressure Emissions)	None
LD007N-P	LD007-U	D-0702B LD-2B Reactor (Rupture Disc Emissions)	None
LD007S-P			None
LD007W-P		D-0702B LD-2B Reactor (Depressure Emissions)	None
LD008E-P	LD008-U	D-0801 LD-3 Reactor (Rupture Disc Emissions)	97-A-647-S2
LD008W-P			97-A-649-S2
LD008S-P		D-0801 LD-3 Reactor (Depressure Emissions)	97-A-648-S2
LD012-P	LD012-U	F-0739 Non-VA Mineral Spirits Storage Tank	None
LD013-P	LD013-U	F-0751 VA Storage Tank	None
LD014-P	LD014-U	L-0207A LD-1 "A" Spin Dryer	97-A-809-S2
LD015-P	LD015-U	L-0207B LD-1 "B" Spin Dryer	97-A-810-S2
LD016-P	LD016-U	L-0210 LD-1 "C" Spin Dryer	97-A-811-S3
LD017A-P	LD017A-U	LD-2A Dewatering Bin	94-A-137
LD017B-P	LD017B-U	L-0738A LD-2A Spin Dryer	94-A-138-S2
LD018A-P	LD018A-U	LD-2B Dewatering Bin	94-A-111
LD018B-P	LD018B-U	L-0738B LD-2B Spin Dryer	94-A-112-S2
LD019-P	LD019-U	L-0838 LD-3 Dewatering Bin & Spin Dryer	97-A-650-P4
LD020-P	LD020-U	F-0451A LD-1 Rundown Blender	97-A-812
LD021-P	LD021-U	F-0451B LD-1 Rundown Blender	97-A-813
LD022-P	LD022-U	F-0451C LD-1 Rundown Blender	97-A-814
LD023-P	LD023-U	F-0451D LD-1 Rundown Blender	97-A-815
LD024-P	LD024-U	F-0451E LD-1 Rundown Blender	97-A-816
LD025-P	LD025-U	F-0451F LD-1 Rundown Blender	97-A-817
LD026-P	LD026-U	F-0457A LD-2B Rundown Blender	None
LD027-P	LD027-U	F-0457B LD-2A Rundown Blender	None
LD028-P	LD028-U	F-0457C LD-2A Rundown Blender	None
LD029-P	LD029-U	F-0457D LD-2A Rundown Blender	None
LD030-P	LD030-U	F-0457E LD-2B Rundown Blender	None
LD031-P	LD031-U	F-0457F LD-2B Rundown Blender	None
LD032-P	LD032-U	F-0457G LD-2 Spare Blender	None
LD033-P	LD033-U	F-0457H LD-2 Spare Blender	None
LD034-P	LD034-U	F-0457J LD-2 Spare Blender	None
LD035-P	LD035-U	F-0458A E Line Rundown Blender	None
LD036-P	LD036-U	F-0458B E Line Rundown Blender	None
LD037-P	LD037-U	F-0458C E Line Rundown Blender	None
LD038-P	LD038-U	F-0458D D Line Rundown Blender	None
LD039-P	LD039-U	F-0458E D Line Rundown Blender	None
LD040-P	LD040-U	F-0458F D Line Rundown Blender	None
LD041-P	LD041-U	F-0459A LD-2/3 Rundown Storage Bin	97-A-685-S2
LD042-P	LD042-U	F-0459B LD-2/3 Rundown Storage Bin	97-A-686-S2
LD043-P	LD043-U	F-0459C LD-2/3 Rundown Storage Bin	97-A-687-S2
LD044-P	LD044-U	F-0459D LD-2/3 Rundown Storage Bin	97-A-688-S2
LD045-P	LD045-U	F-0459E LD-3 Rundown Blender	97-A-689-S2
LD046-P	LD046-U	F-0459F LD-3 Rundown Blender	97-A-690-S2
LD047-P	LD047-U	F-0459G LD-3 Rundown Blender	97-A-691-S2
LD048-P	LD048-U	F-0459H LD-3 Rundown Blender	97-A-692-S2
LD049-P	LD049-U	F-0459J LD-3 Rundown Blender	97-A-693-S2
LD050-P	LD050-U	F-0459K LD-3 Rundown Blender	97-A-694-S2
LD051-P	LD051-U	F-0459L LD-2/3 Rundown Storage Bin	97-A-695-S2

LD052-P	LD052-U	F-0459M LD-2/3 Rundown Storage Bin	97-A-696-S2
LD053-P	LD053-U	F-0459N LD-2/3 Rundown Storage Bin	97-A-697-S2
LD054-P	LD054-U	F-0459P LD-2/3 Rundown Storage Bin	97-A-698-S2
LD055-P	LD055-U	F-0459Q LD-2/3 Rundown Storage Bin	97-A-699-S2
LD056-P	LD056-U	F-0459R LD-2/3 Rundown Storage Bin	97-A-700-S2
LD057-P	LD057-U	F-0459S LD-2/3 Rundown Storage Bin	97-A-701-S2
LD058-P	LD058-U	F-0459T LD-2/3 Rundown Storage Bin	97-A-702-S2
LD059-P	LD059-U	F-0459U LD-2/3 Rundown Storage Bin	97-A-703-S2
LD060-P	LD060-U	F-0453A LD-1 Storage Bin	97-A-818
LD061-P	LD061-U	F-0453B LD-1 Storage Bin	97-A-819
LD062-P	LD062-U	F-0453C LD-1 Blending Silo	97-A-820
LD063-P	LD063-U	F-0453D Finishing Storage Bin	None
LD064-P	LD064-U	F-0453E Finishing Storage Bin	None
LD065-P	LD065-U	F-0453F LD-1 Storage Bin	97-A-821
LD066-P	LD066-U	F-0453G LD-1 Storage Bin	97-A-822
LD067-P	LD067-U	F-0453H LD-1 Storage Bin	97-A-823
LD068-P	LD068-U	F-0453J Finishing Storage Bin	None
LD069-P	LD069-U	F-0453K Finishing Storage Bin	None
LD070-P	LD070-U	F-0453L LD-1 Storage Bin	97-A-824
LD071-P	LD071-U	F-0453M LD-1 Storage Bin	97-A-825
LD072-P	LD072-U	F-0453N LD-1 Storage Bin	97-A-826
LD073-P	LD073-U	F-0453P LD-1 Storage Bin	97-A-827
LD074-P	LD074-U	F-0453Q LD-1 Storage Bin	97-A-828
LD075-P	LD075-U	F-0453R LD-1 Storage Bin	97-A-829
LD076-P	LD076-U	F-0453S LD-1 Storage Bin	97-A-830
LD077-P	LD077-U	F-0454A LD-1 Storage Bin	97-A-831
LD078-P	LD078-U	F-0454B LD-1 Storage Bin	97-A-832
LD079-P	LD079-U	F-0454C LD-1 Storage Bin	97-A-833
LD080-P	LD080-U	F-0454D LD-1 Storage Bin	97-A-834
LD081-P	LD081-U	F-0454E LD-1 Storage Bin	97-A-835
LD082-P	LD082-U	F-0454F LD-1 Storage Bin	97-A-836
LD083-P	LD083-U	Low Density Unit Fugitives	None
LD084-P	LD084-U	F-0452A LD-1 Quad Storage Bin	97-A-837
LD085-P	LD085-U	F-0452B LD-1 Quad Storage Bin	97-A-838
LD086-P	LD086-U	F-0452C LD-1 Quad Storage Bin	97-A-839
LD087-P	LD087-U	F-0452D LD-1 Quad Storage Bin	97-A-840
LD088-P	LD088-U	F-0452E LD-1 Quad Storage Bin	97-A-841
LD089-P	LD089-U	F-0452F LD-1 Quad Storage Bin	97-A-842
LD090-P	LD090-U	F-0452G LD-1 Quad Storage Bin	97-A-843
LD091-P	LD091-U	F-0452H LD-1 Quad Storage Bin	97-A-844
LD092-P	LD092-U	F-0452J LD-2/3 Quad Storage Bin	97-A-651-S2
LD093-P	LD093-U	F-0452K LD-2/3 Quad Storage Bin	97-A-652-S2
LD094-P	LD094-U	F-0452L LD-2/3 Quad Storage Bin	97-A-653-S2
LD095-P	LD095-U	F-0452M LD-2/3 Quad Storage Bin	97-A-654-S2
LD096-P	LD096A-U	J-0201A LD-1 "A" Make Up Compressor	97-A-845
LD096-P	LD096B-U	J-0202A LD-1 "A" Purge Compressor	97-A-846
LD097-P	LD097A-U	J-0201B LD-1 "B" Make Up Compressor	97-A-847
LD097-P	LD097B-U	J-0202B LD-1 "B" Purge Compressor	97-A-848
LD098-P	LD098-U	J-0202C LD-1 Purge Booster Compressor	97-A-849
LD099-P	LD099-U	J-0203A LD-1 "A" Recycle Compressor	97-A-850
LD100-P	LD100-U	J-0203B LD-1 "B" Recycle Compressor	97-A-851
LD101-P	LD101-U	J-0204A LD-1 "A" Hyper Compressor	97-A-852
LD102-P	LD102-U	J-0204B LD-1 "B" Hyper Compressor	97-A-853
LD103-P	LD103-U	J-0223 LD-1 Recycle Compressor	97-A-854
LD104-P	LD104-U	J-0224 LD-1 Hyper Compressor	97-A-855

LD105-P	LD105A-U	J-0701A LD-2A Primary/Flash Gas Compressor	None
	LD105B-U	F-0701A LD-2A Make Up Gas Suction Drum	None
	LD105C-U	F-0705A LD-2A Purge Compressor Suction Drum	None
	LD105D-U	F-0755A LD-2A Purge Gas Knockout Drum	None
	LD105E-U	F-0709A LD-2A Flash Gas 3rd St. Knockout Drum	None
	LD105F-U	F-0708A LD-2A Flash Gas 2nd St. Knockout Drum	None
	LD105G-U	F-0707A LD-2A Flash Gas 1st St. Knockout Drum	None
LD105A-P	LD105H-U	J-0701A LD-2A Primary Compressor Leak Gas	None
	LD105I-U	J-0701A LD-2A Primary Compressor 2nd St	None
	LD105J-U	J-0702A Secondary Compressor Leak Gas	None
LD106-P	LD106A-U	J-0701B LD-2B Primary/Flash Gas Compressor	None
	LD106B-U	F-0701B LD-2B Make Up Gas Suction Drum	None
	LD106C-U	F-0705B LD-2B Purge Compressor Suction Drum	None
	LD106D-U	F-0755B LD-2B Purge Gas Knockout Drum	None
	LD106E-U	F-0709B LD-2B Flash Gas 3rd St. Knockout Drum	None
	LD106F-U	F-0708B LD-2B Flash Gas 2nd St. Knockout Drum	None
	LD106G-U	F-0707B LD-2B Flash Gas 1st St. Knockout Drum	None
LD106A-P	LD106H-U	J-0701B LD-2B Primary Compressor Leak Gas	None
	LD106I-U	J-0701B LD-2B Primary Compressor 2nd St	None
	LD106J-U	J-0702B Secondary Compressor Leak Gas	None
LD107-P	LD107-U	J-0702A LD-2A Secondary Compressor	None
LD108-P	LD108-U	J-0702B LD-2B Secondary Compressor	None
LD109-P	LD109A-U	J-0801 LD-3 Primary/Flash Gas Compressor	97-A-655-S2
	LD109B-U	J-0802 LD-3 Secondary Compressor	97-A-655-S2
LD109A-P	LD109C-U	F-0809 LD-3 Flash Gas 3rd St. Knockout Drum	None
	LD109D-U	F-0801 LD-3 Make up Gas Suction Drum	None
	LD109E-U	J-0820 LD-3 Modifier Pump	None
LD109B-P	LD109F-U	F-0805 LD-3 Flash Gas Suction Drum	None
	LD109G-U	J-0801 LD3 Primary Compressor Second Stage	None
	LD109H-U	F-0807 LD-3 Flash gas 1st St. Knockout Drum	None
	LD109I-U	F-0808 LD-3 Flash Gas 2nd St. Knockout Drum	None
	LD109J-U	J-0801 LD-3 Primary Compressor Leak Gas	None
	LD109K-U	J-0802 LD-3 Secondary Compressor Leak Gas	None
LD110-P	LD110-U	LD-1 Wax Works	97-A-856
LD111-P	LD111-U	LD-2A Wax Works	None
LD112-P	LD112-U	LD-2B Wax Works	None
LD113-P	LD113-U	LD-3 Wax Works	97-A-656-S2
LD114-P	LD114A-U	F-0201 LD-1 Make-Up Gas Suction Drum	97-A-857
LD114-P	LD114B-U	F-0205 LD-1 Purge Compressor Suction Drum	97-A-858
LD115-P	LD115-U	F-0220 LD-1 High Pressure Separator (Dump Valve)	97-A-859
LD115A-P		F-0220 LD-1 High Pressure Separator (RV)	None
LD116-P	LD116-U	F-0703A LD-2A High Pressure Separator (Dump Valve)	None
LD116A-P		F-0703A LD-2A High Pressure Separator (RV)	None
LD116B-P		F-0703A LD-2A High Pressure Separator (RV)	None
LD117-P	LD117-U	F-0703B LD-2B High Pressure Separator (Dump Valve)	None
LD117A-P		F-0703B LD-2B High Pressure Separator (RV)	None
LD117B-P		F-0703B LD-2B High Pressure Separator (RV)	None
LD118-P	LD118-U	F-0704A LD-2A Low Pressure Separator (Dump Valve)	None
LD118A-P		F-0704A LD-2A Low Pressure Separator (RV)	None
LD119-P	LD119-U	F-0704B LD-2B Low Pressure Separator (Dump Valve)	None
LD119A-P		F-0704B LD-2B Low Pressure Separator (RV)	None
LD120-P	LD120-U	F-0803 LD-3 High Pressure Separator (Dump Valve)	97-A-657-S2
LD120A-P		F-0803 LD-3 High Pressure Separator (RV)	None
LD120B-P		F-0803 LD-3 High Pressure Separator (RV)	None
LD121-P	LD121-U	F-0804 LD-3 Low Pressure Separator (Dump Valve)	97-A-658-S2

LD121A-P		F-0804 LD-3 Low Pressure Separator (RV)	None
LD124-P	LD124-U	F-0231A LD-1 Low Pressure Separator (Dump Valve)	None
LD124A-P		F-0231A LD-1 Low Pressure Separator (RV)	None
LD125-P	LD125-U	F-0231B LD-1 Low Pressure Separator (Dump Valve)	None
LD125A-P		F-0231B LD-1 Low Pressure Separator (RV)	None
LD126-P	LD126-U	F-0232 LD-1 Low Pressure Separator (Dump Valve)	None
LD126A-P		F-0232 LD-1 Low Pressure Separator (RV)	None
LD127-P	LD127-U	H207 Analyzer House	03-A-405 to 03-A-408
LD128-P	LD128-U	H706 Analyzer House	03-A-409 to 03-A-411
LD129-P	LD129-U	Maintenance Activities	None
LD130-P	LD130-U	L829 Extruder Seals	None

Product Packaging and Shipping

PP005-P	PP005-U	L-0501 HDPE Old Hopper Car Elutriator	16-A-365
PP006-P	PP006-U	L-0551 LDPE Old Hopper Car Elutriator	16-A-366
PP007-P	PP007-U	L-0597 LDPE Old Hopper Car Scalperator	None
PP008-P	PP008-U	L-0503 HDPE Old Hopper Car Scalperator	17-A-715
PP011-P	PP011-U	L-0502 HDPE New Hopper Car Elutriator	79-A-102-S1
PP012-P	PP012-U	L-0509 HDPE New Hopper Car Scalperator	13-A-255-S1
PP013-P	PP013-U	L-0557 LDPE New Hopper Car Scalperator	13-A-256-S1
PP014-P	PP014-U	L-0559 LDPE New Hopper Car Elutriator	13-A-257
PP017-P	PP017-U	L-0589A LDPE New Hopper Car Deduster	98-A-599
PP020-P	PP020-U	F-0504 HDPE North Powder Feed Bin	None
PP021-P	PP021-U	F-0505 HDPE South Powder Feed Bin	None
PP022-P	PP022-U	F-0508 PEX Boxing Line	08-A-659-S1

Engines

ENG01-P	ENG01-U	Diesel Air Compressor at Contractor Pad	NA
ENG02-P	ENG02-U	Diesel Air Compressor at M Furnace	NA
ENG03-P	ENG03-U	Diesel Pump at J160	NA

Insignificant Activities Equipment List

Insignificant Emission Unit Number	Insignificant Emission Unit Description
WH001-U	Welding Hoods (5)
PC001-U	Parts Cleaner (3)
SV001-U	Sewer Vents (10)
PB001-U	Poly Burning
BH001-U	Building Heaters (30) 3.5 MMBtu/hr or 15,330 MMBtu/yr
SF001-U	Solvent Flushing
LH001-U	Lab Hoods (9)
VB001-U	J-0503 K-Tron Purge Vacuum Blower
VB002-U	J-0510 HD Reclaim Vacuum Blower
VB003-U	J-0503 Car washing Reclaim Vacuum Blower
VB004-U	FJ-0346 Catalyst Activation Blower
VB005-U	Catalyst Activation Vacuum Blower
TK001-U	F 0336- Catalyst contact tank
TK002-U	F 0337- Catalyst contact tank
TK003-U	F 0725- Lubricating Oil
TK004-U	F 0726- Lubricating Oil
TK005-U	F 0727- Lubricating Oil

Insignificant Emission Unit Number	Insignificant Emission Unit Description
TK006-U	Fire Training Grounds – gasoline storage (3 150-gal tanks)
TK007-U	F 0142R-Diglycolamine
TK008-U	F 0147 Elementary Neutralization
TK009-U	F 0164 – 50% Sodium Hydroxide
TK010-U	F 0175 Lubricating Oil
TK011-U	Additive Storage Tank
TK012-U	Additive Storage Tank
TK013-U	Additive Storage Tank
TK014-U	Additive Storage Tank
TK015-U	Additive Storage Tank
TK016-U	F 2108 Mineral Spirits
TK017-U	F 2110 Mineral Spirits
TK018-U	F 2117 Mineral Spirits
TK019-U	F 2204 Sulfuric Acid
TK020-U	L 2252 Additive Tank
TK021-U	L 2253 Additive Tank
TK022-U	Bleach
TK023-U	Additive Storage Tank
TK024-U	Additive Storage Tank
TK025-U	Additive Storage Tank
TK026-U	F 2415 Calcium Oxide Slurry
TK027-U	F 2419 Sulfuric Acid Tank
TK028-U	J2204 D- #2 Diesel Fuel Storage Tank
TK029-U	J2204 E- #2 Diesel Fuel Storage Tank
TK030-U	J2204 F- #2 Diesel Fuel Storage Tank
ENG04-U	Cummins Generator (Portable)

*Vapor pressures for the tanks (TK001-U through TK030-U) listed above have a vapor pressure <0.35psi.

Insignificant Activities Equipment List (Small Unit Exemption)[(1)]

Insignificant Emission Unit Number	Insignificant Emission Unit Description
PP018-U	L-0528 HDPE North Powder Loading
PP019-U	L-0529 HDPE South Powder Loading

[(1)]Emission Units qualify for Small Unit Exemption under 567 AIC 22.1(2) "w". Records shall be kept in accordance with 567 IAC 22.1(2) "w" (3)

II. Plant-Wide Conditions

Facility Name: Equistar Chemicals, LP
Permit Number: 04-TV-008R3
Permit conditions are established in accord with 567 Iowa Administrative Code rule 22.108

Permit Duration
The term of this permit is: Five Years from permit issuance
Commencing on: 7/21/2023
Ending on: 7/20/2028
Amendments, modifications and reopenings of the permit shall be obtained in accordance with 567 Iowa Administrative Code rules 22.110 - 22.114. Permits may be suspended, terminated, or revoked as specified in 567 Iowa Administrative Code Rules 22.115.

Emission Limits
Unless specified otherwise in the Source Specific Conditions, the following limitations and supporting regulations apply to all emission points at this plant:

Opacity (visible emissions): 40% opacity
Authority for Requirement: 567 IAC 23.3(2)"d"

Sulfur Dioxide (SO_2): 500 parts per million by volume
Authority for Requirement: 567 IAC 23.3(3)"e"

Particulate Matter:
No person shall cause or allow the emission of particulate matter from any source in excess of the emission standards specified in this chapter, except as provided in 567 – Chapter 24. For sources constructed, modified or reconstructed on or after July 21, 1999, the emission of particulate matter from any process shall not exceed an emission standard of 0.1 grain per dry standard cubic foot of exhaust gas, except as provided in 567 – 21.2(455B), 23.1(455B), 23.4(455B) and 567 – Chapter 24.

For sources constructed, modified or reconstructed prior to July 21, 1999, the emission of particulate matter from any process shall not exceed the amount determined from Table I, or amount specified in a permit if based on an emission standard of 0.1 grain per standard cubic foot of exhaust gas or established from standards provided in 23.1(455B) and 23.4(455B).
Authority for Requirement: 567 IAC 23.3(2)"a"

Fugitive Dust: Attainment and Unclassified Areas - No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered repaired or demolished, with the exception of farming operations or dust generated by ordinary travel on unpaved public roads, without taking reasonable precautions to prevent particulate matter in quantities sufficient to create a nuisance, as defined in Iowa Code section 657.1, from becoming airborne. All persons, with the above exceptions, shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate. The highway authority shall be responsible for taking corrective action in those cases where said authority has received complaints of or has actual knowledge of dust conditions which require abatement pursuant to this subrule. Reasonable precautions may include, but not limited to, the following procedures.

1. Use, where practical, of water or chemicals for control of dusts in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land.
2. Application of suitable materials, such as but not limited to asphalt, oil, water or chemicals on unpaved roads, material stockpiles, race tracks and other surfaces which can give rise to airborne dusts.
3. Installation and use of containment or control equipment, to enclose or otherwise limit the emissions resulting from the handling and transfer of dusty materials, such as but not limited to grain, fertilizers or limestone.
4. Covering at all times when in motion, open-bodied vehicles transporting materials likely to give rise to airborne dusts.
5. Prompt removal of earth or other material from paved streets or to which earth or other material has been transported by trucking or earth-moving equipment, erosion by water or other means.

Authority for Requirement: 567 IAC 23.3(2)"c"

III. Emission Point-Specific Conditions

Facility Name: Equistar Chemicals, LP
Permit Number: 04-TV-008R3

Part A. Ethylene Plant

Emission Point ID Numbers: EP001-P through EP013-P (Furnaces)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity MMBtu/hr	DNR Construction Permit
EP001-P	EP001-U	LB-0101A A-Furnace	Nonsulfured Natural Gas/ Fuel Gas	HHV: 100	11-A-723
EP002-P	EP002-U	LB-0101B B-Furnace	Nonsulfured Natural Gas/ Fuel Gas	HHV: 100	11-A-042
EP003-P	EP003-U	LB-0101C C-Furnace	Nonsulfured Natural Gas/ Fuel Gas	HHV: 100	11-A-043
EP004-P	EP004-U	LB-0101D D-Furnace	Nonsulfured Natural Gas/ Fuel Gas	HHV: 100	08-A-245-S1
EP005-P	EP005-U	LB-0101E E-Furnace	Nonsulfured Natural Gas/ Fuel Gas	HHV: 100	08-A-246-S1
EP006-P	EP006-U	LB-0101F F-Furnace	Nonsulfured Natural Gas/ Fuel Gas	HHV: 100	11-A-044
EP007-P	EP007-U	LB-0101G G-Furnace	Nonsulfured Natural Gas/ Fuel Gas	HHV: 100	11-A-045
EP008-P	EP008-U	LB-0101H H-Furnace	Nonsulfured Natural Gas/ Fuel Gas	HHV: 100	11-A-046
EP009-P	EP009-U	LB-0101I I-Furnace	Nonsulfured Natural Gas/ Fuel Gas	HHV: 100	11-A-047
EP010-P	EP010-U	LB-0101J J-Furnace	Nonsulfured Natural Gas/ Fuel Gas	HHV: 100	11-A-048
EP011-P	EP011-U	LB-0107A K-Furnace	Nonsulfured Natural Gas/ Fuel Gas	HHV: 160	None
EP012-P	EP012-U	LB-107B L-Furnace	Nonsulfured Natural Gas/ Fuel Gas	HHV: 160	None
EP013-P	EP013-U	M Furnace	Nonsulfured Natural Gas/ Fuel Gas	190	89-A-030-S1

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from each emission points shall not exceed the levels specified below.

EP	EU	Opacity[4]	PM	PM_{10} lb/hr.	SO_2 ppmv[6]	DNR Construction Permit
EP001-P	EP001-U	40%[1]	0.8 lb/MMbtu [5] 0.1 gr/dscf	0.75	500	11-A-723
EP002-P	EP002-U	40%[2]	0.8 lb/MMbtu [5] 0.1 gr/dscf	0.6	500	11-A-042
EP003-P	EP003-U	40%[2]	0.8 lb/MMbtu [5] 0.1 gr/dscf	0.6	500	11-A-043
EP004-P	EP004-U	40%[3]	0.8 lb/MMbtu [5] 0.1 gr/dscf	--	500	08-A-245-S1
EP005-P	EP005-U	40%[3]	0.8 lb/MMbtu [5] 0.1 gr/dscf	--	500	08-A-246-S1
EP006-P	EP006-U	40%[2]	0.8 lb/MMbtu [5] 0.1 gr/dscf	0.6	500	11-A-044
EP007-P	EP007-U	40%[2]	0.8 lb/MMbtu [5] 0.1 gr/dscf	0.6	500	11-A-045
EP008-P	EP008-U	40%[2]	0.8 lb/MMbtu [5] 0.1 gr/dscf	0.6	500	11-A-046
EP009-P	EP009-U	40%[2]	0.8 lb/MMbtu [5] 0.1 gr/dscf	0.6	500	11-A-047
EP010-P	EP010-U	40%[2]	0.8 lb/MMbtu [5] 0.1 gr/dscf	0.6	500	11-A-048
EP011-P	EP011-U	40%	0.8 lb/MMbtu [5] 0.1 gr/dscf	--	500	None
EP012-P	EP012-U	40%	0.8 lb/MMbtu [5] 0.1 gr/dscf	--	500	None
EP013-P	EP013-U	40%	1.06 (lb/hr) 0.1 gr/dscf 0.8 lb/MMbtu [5]	0.78	500	89-A-030-S1

[1] An exceedance of the indicator opacity of "no visible emissions" or "No VE" will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

[2] If visible emissions are observed, the owner/operator shall promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

[3] An exceedance of the indicator opacity of 25% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Reference for Authority

[4] 567 IAC 23.3(2)"d"

[5] 567 IAC 23.3(2)"b"(1)

[6] 567 IAC 23.3(3)"e"

Operational Limits & Recordkeeping Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

EU001-U through EU003-U and EU006-U through EU010-U

Operating limits for these emission units shall be:

1. These emission units are limited to firing on natural gas or onsite generated fuel gas.

Authority for Requirement: DNR Construction Permits 11-A-723, 11-A-042, 11-A-043, 11-A-044, 11-A-045, 11-A-046, 11-A-047, 11-A-048

EU004-U through EU005-U

Operating limits for these emission units shall be:

1. These emission units are limited to firing on natural gas, hydrogen, or onsite generated fuel gas.

Authority for Requirement: DNR Construction Permits 08-A-245-S1 and 08-A-246-S1

EU011-U through EU013-U

These emission units have no operational limits at this time.

NSPS and NESHAP Applicability:

These emission units are subject to 40 CFR 63 Subpart YY – National Emission Standards for Hazardous Air Pollutants: Generic Maximum Achievable Control Technology.

Authority for Requirement: 567 IAC 23.1(4)"ay"
40 CFR 63 Subpart YY

Emission Point Characteristics

These emission points shall conform to the specifications listed below.

EP001-P, EP004-P, EP005-P

Stack Height, (ft, from the ground): 84
Stack Opening, (inches, dia.): 48
Exhaust Flow Rate (scfm): 18,000
Exhaust Temperature (°F): 220
Discharge Style: Vertical Unobstructed

Authority for Requirement: DNR Construction Permits 11-A-723, 08-A-245-S1, 08-A-246-S1

EP002-P, EP003-P, EP006-P, EP007-P, EP008-P, EP009-P, EP0010-P,

Stack Height, (ft, from the ground): 84
Stack Opening, (inches, dia.): 48
Exhaust Flow Rate (scfm): 18,250
Exhaust Temperature (°F): 210
Discharge Style: Vertical Unobstructed

Authority for Requirement: DNR Construction Permits 11-A-042, 11-A-043, 11-A-044, 11-A-045, 11-A-046, 11-A-047, 11-A-048

EP013-P
Stack Height, (ft, from the ground): 85
Stack Opening, (inches, dia.): 66.6
Exhaust Flow Rate (scfm): 30,000
Exhaust Temperature (°F): 280
Discharge Style: Vertical Unobstructed
Authority for Requirement: DNR Construction Permits 89-A-30-S1

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP014-P

Associated Equipment

Emission Unit vented through this Emission Point: EP014-U
Emission Unit Description: B-0103 Gas Dryer
Raw Material/Fuel: Nonsulfured Natural Gas/Fuel Gas
Rated Capacity: 8 MMBtu/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%
Authority for Requirement: 567 IAC 23.3(2) "d"

Particulate Matter (PM)
Emission Limit(s): 0.1 gr/dscf
Authority for Requirement: 567 IAC 23.3(2) "a"

Pollutant: Sulfur Dioxide (SO_2)
Emission Limit(s): 500 ppmv
Authority for Requirement: 567 IAC 23.3(3) "e"

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits
No operating limits are required at this time.

Reporting and Recordkeeping
All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

NSPS and NESHAP Applicability
This emission point is subject to 40 CFR 63 Subpart DDDDD – National Emission Standards for Industrial, Commercial and Institutional Boilers and Process Heaters
Authority for Requirement: 40 CFR 63 Subpart DDDDD

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: EP015-P through EP016W-P (Boilers)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity MMBtu/hr	DNR Construction Permit
EP015E-P	EP015-U	LB-0102A A-Boiler	Nonsulfured Natural Gas/ Fuel Gas	450	17-A-542
EP015W-P					89-A-028-S1
EP016E-P	EP016-U	LB-0102B B-Boiler	Nonsulfured Natural Gas/ Fuel Gas	450	17-A-543
EP016W-P					89-A-029-S1

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from each emission point shall not exceed the levels specified below.

EP	EU	Opacity[(2)]	PM	SO_2 ppmv[(4)]	NO_x	DNR Construction Permit
EP015E-P	EP015-U	40%[(1)]	0.8 lb/MMBtu[(5)]	500	135.0 lb/hr	17-A-542
EP015W-P		40%[(1)]		500		89-A-028-S1
EP016E-P	EP016-U	40%[(1)]	0.8 lb/MMBtu[(5)]	500	135.0 lb/hr	17-A-543
EP016W-P		40%[(1)]		500		89-A-029-S1

[(1)]An exceedance of the indicator no visible emissions will require the owner or operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the Department may require additional proof to demonstrate compliance (e.g., stack testing).

Reference for Authority

[(2)]567 IAC 23.3(2)"d"
[(3)]567 IAC 23.3(2)"a"
[(4)]567 IAC 23.3(3)"e"
[(5)]567 IAC 23.3(2)"b"

Operational Limits & Recordkeeping Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Unless specified by a federal regulation, all records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner.

The operating requirements and associated recordkeeping for this permit shall be:

1. LB-0102A A Boiler (EU-015-U) and LB-0102B Boiler B (EU-016-U) shall combust a fuel mixture containing the majority of Hydrogen/Methane/Ethane/Propane with trace amounts of other hydrocarbons only.
2. The owner or operator shall not use more than 4,009,607 MMBTU/year of fuel combined in LB-0102A A Boiler (EU-015-U) and LB-0102B B Boiler (EU-016-U) once construction is completed on LB-0102B B Boiler (EU-016-U). The owner or operator shall maintain the following records while LB-0102A A Boiler (EU-015-U) and LB-0102B B Boiler (EU-016-U) are operating:
   A. Record and calculate the heating value for each calendar day in MMBtu/Scf for LB-0102A A Boiler (EU-015-U) and LB-0102B B Boiler (EU-016-U).
   B. Record the amount of fuel combusted in LB-0102A A Boiler (EU-015-U) and LB-0102B B Boiler (EU-016-U) for each calendar day in Scf.
   C. Calculate and record the heat input in LB-0102A A Boiler (EU-015-U) and LB-0102B B Boiler (EU-016-U) for each calendar day, in MMBtu.
   D. The owner or operator shall determine the heat input for LB-0102A A Boiler (EU-015-U) and LB-0102B B Boiler (EU-016-U) by multiplying the heating value (MMBtu/Scf) by the amount of fuel combusted in LB-0102A A Boiler (EU-015-U) (Scf) or LB-0102B B Boiler (EU-016-U) (Scf), accordingly, for each calendar day.
   E. Sum the total heat input for each calendar day on a monthly basis for LB-0102A A Boiler (EU-015-U) and LB-0102B B Boiler (EU-016-U) combined in MMBtu.
   F. Rolling 12-month period shall be calculated and record for the heat input for LB-0102A A Boiler (EU-015-U) and LB-0102B B Boiler (EU-016-U) combined in MMBTU.

Authority for Requirement: DNR Construction Permit 17-A-542, 89-A-028-S1, 17-A-543, and 89-A-029-S1

NSPS & NESHAP Applicability:

These emission points are subject to 40 CFR 63 Subpart DDDDD – Industrial, Commercial and Institutional Boilers and Process Heaters

Authority for Requirement: 40 CFR 63 DDDDD
567 IAC 23.1(4)"dd"

Emission Point Characteristics (EP015W/E-P AND EP016W/E-P)
The emission points shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 130
Stack Opening, (inches): 96
Exhaust Flow Rate (scfm): 60,000
Exhaust Temperature (^{0}F): 500
Discharge Style: Vertical, Unobstructed
Authority for Requirement: DNR Construction Permit 17-A-542, 89-A-028-S1, 17-A-543, and 89-A-029-S1

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: EP020H-P through EP020V-P (Cooling Towers)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity MMgal/hr	DNR Construction Permit
EP020H-P	EP020H-U	U-2202 Cooling Tower	Cooling Water	0.66	None
EP020I-P	EP020I-U	U-2202 Cooling Tower	Cooling Water	0.66	None
EP020J-P	EP020J-U	U-2202 Cooling Tower	Cooling Water	0.66	None
EP020K-P	EP020K-U	UJ-2210 Cooling Tower	Cooling Water	0.385	None
EP020L-P	EP020L-U	UJ-2210 Cooling Tower	Cooling Water	0.385	None
EP020M-P	EP020M-U	UJ-2210 Cooling Tower	Cooling Water	0.385	None
EP020N-P	EP020N-U	UJ-2210 Cooling Tower	Cooling Water	0.385	None
EP020O-P	EP020O-U	UJ-2210 Cooling Tower	Cooling Water	0.385	None
EP020P-P	EP020P-U	UJ-2210 Cooling Tower	Cooling Water	0.385	None
EP020Q-P	EP020Q-U	UJ-2210 Cooling Tower	Cooling Water	0.385	None
EP020R-P	EP020R-U	UJ-2210 Cooling Tower	Cooling Water	0.385	None
EP020S-P	EP020S-U	UJ-2210 Cooling Tower	Cooling Water	0.385	None
EP020T-P	EP020T-U	UJ-2210 Cooling Tower	Cooling Water	0.385	None
EP020U-P	EP020U-U	UJ-2210 Cooling Tower	Cooling Water	0.385	None
EP020V-P	EP020V-U	UJ-2210 Cooling Tower	Cooling Water	0.385	None

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from each emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%
Authority for Requirement: 567 IAC 23.3(2) "d"

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr/dscf
Authority for Requirement: 567 IAC 23.3(2) "a"

Operational Limits & Recordkeeping Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Unless specified by a federal regulation, all records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner.

NSPS & NESHAP Applicability:

These cooling towers are subject to NESHAP Subpart XX – National Emission Standards for Ethylene Manufacturing Process Units: Heat Exchange Systems and Waste Operations and NESHAP Subpart YY - National Emission Standards for Hazardous Air Pollutants for Source Categories: Generic Maximum Achievable Control Technology Standards.

1. The permittee must comply with the heat exchange system monitoring, leak detection and repair, record keeping and reporting requirements in 40 CFR 63.1085.
2. The permittee must comply with the requirements for continuous butadiene waste streams in 40 CFR 63.1095(a), and the requirements for benzene waste streams in 40 CFR 63.1095(b).
3. Compliance date, initial notification, SSM plan, and notification of compliance status are the same as those for 40 CFR 63 Subpart YY.

Authority for Requirement: 567 IAC 23.1(4) "ax"
567 IAC 23.1(4) "ay"
40 CFR 63 Subpart XX
40 CFR 63 Subpart YY

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP021-P (Fugitive)

Associated Equipment

Emission Unit vented through this Emission Point: EP021-U
Emission Unit Description: Ethylene Unit Fugitive
Raw Material/Fuel: Process Gas
Rated Capacity: 8,760 hr/yr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

No emission limits are required at this time.

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Unless specified by a federal regulation, all records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner.

Fugitive emission sources containing HAPs that are reported under EP021-U are subject to the following:

1. NESHAP Part 61 Subpart J – Equipment Leaks (Fugitive Emission Sources) of Benzene[(1)]
2. NESHAP Part 61 Subpart V – National Emission Standard for Equipment Leaks (Fugitive Emission Sources)[(1)].
3. NESHAP Part 61 Subpart FF Requirements – National Emission Standard for Benzene Waste Operations[(2)].
4. NESHAP Part 63 Subpart SS – National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process.
5. NESHAP Part 63 Subpart UU – National Emission Standards for Equipment Leaks – Control Level 2 Standards.
6. NESHAP Part 63 Subpart YY – National Emission Standards for Hazardous Air Pollutants for Source Categories: Generic Maximum Achievable Control Technology Standards.
7. NESHAP Part 63 Subpart FFFF – National Emission Standards for Hazardous Air Pollutants for Miscellaneous Organic Chemical Manufacturing.

[(1)] Per 40 CFR 63.1100(g)(4), affected units that are subject to Part 61 Subparts J, V and Part 63 Subpart YY are required only to comply with the equipment leak requirements of Part 63 Subpart YY.
[(2)] Per 40 CFR §63.1100(g)(6)(ii), compliance with 40 CFR §63.1103(e) of Part 63 Subpart YY shall constitute compliance with the Benzene Waste Operations NESHAP (40 CFR Part 61Subpart FF) for waste streams that are subject to both the control requirements of §63.1103(e)(3) for ethylene production sources and the control requirements of 40 CFR Part 61 Subpart FF.

Authority for Requirement: 567 IAC 23.1(3) “f”, “g”, “n” and 567 IAC 23.1(4)"as", "au", "ay", and "cf"
40 CFR 61 Subpart J, V, FF
40 CFR 63 Subpart SS, UU, YY and FFFF

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP022-P (Fugitive Emissions)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity	Construction Permit
EP022-P	EP022C-U	Residual Oil Truck Loading (F 199)	Residual Oil	10 ton/hr	None
	EP022D-U	Fugitive Emissions: DAC Rail Car Loading	Aromatic Compounds	18,360 gal/hr	None

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Emission limits are not required at this time.

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Unless specified by a federal regulation, all records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner.

This emission point is subject to 40 CFR Part 61 Subpart BB – National Emission Standard for Benzene Emissions from Benzene Transfer Operations. Because the facility loads only liquid containing less than 70 weight-percent benzene, the facility is exempted from the requirements of this subpart except the recordkeeping and reporting requirements in §61.305(i).

1. The facility shall comply with the recordkeeping and reporting requirements in 40 CFR 61.305(i).

Authority for Requirement: 40 CFR 61 Subpart BB
567 IAC 23.1(3) "m"

NSPS and NESHAP Applicability
This emission point is subject to the following:

1. 40 CFR Part 61 Subpart BB – National Emission Standard for Benzene Emissions from Benzene Transfer Operations.
2. 40 CFR Part 63 Subpart SS – National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process.
3. 40 CFR Part 63 Subpart UU – National Emission Standards for Equipment Leaks – Control Level 2 Standards.
4. 40 CFR Part 63 Subpart YY – National Emission Standards for Hazardous Air Pollutants for Source Categories: Generic Maximum Achievable Control Technology Standards.

Authority for Requirement: 567 IAC 23.1(3) "m"
567 IAC 23.1(4) "as", "au", "ay"
40 CFR 61 Subpart BB
40 CFR 63 Subparts, SS, UU, YY

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: EP023-P and EP025-P (DAC Tanks)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
EP023-P	EP023-U	F-2105 DAC Tank	Internal Floating Roof	Aromatic Compounds	18,360 gal/hr	None
EP025-P	EP025-U	F-2147 DAC Tank	Internal Floating Roof	Aromatic Compounds	18,360 gal/hr	None

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from these emission points shall not exceed the levels specified below.

Emission limits are not required at this time.

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Unless specified by a federal regulation, all records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner.

NSPS and NESHAP Applicability
These emission points are subject to the following:
1. 40 CFR 61 Subpart Y – National Emission Standard for Benzene Emissions from Benzene Storage Vessels.
2. 40 CFR 61 Subpart BB – National Emission Standards for Benzene Emissions from Benzene Transfer Operations – Recordkeeping and reporting requirements in § 61.305(i).
3. 40 CFR 63 Subpart UU – National Emission Standards for Equipment Leaks – Control Level 2 Standards.
4. 40 CFR 63 Subpart WW – National Emission Standards for Storage Vessels (Tanks) Control Level 2.
5. 40 CFR 63 Subpart YY – National Emission Standards for Hazardous Air Pollutants: Generic Maximum Achievable Control Technology.

Authority for Requirement: 567 IAC 23.1(3) "l", "m"
567 IAC 23.1(4) "au", "aw", "ay"
40 CFR 61 Subparts Y, BB
40 CFR 63 Subparts UU, WW, YY

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: EP026-P and EP046-P (Wash Oil Tanks)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity	DNR Construction Permit
EP026-P	EP026-U	F-2139 Wash Oil Tank	Wash Oil	120 gal/hr	None
EP046-P	EP046-U	F-144 Wash Oil Day Tank	Wash Oil	120 gal/hr	None

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from these emission points shall not exceed the levels specified below.

Emission limits are not required at this time.

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Unless specified by a federal regulation, all records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner.

Operating Limits are not required at this time.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP031-P

Associated Equipment

Emission Unit vented through this Emission Point: EP031-U
Emission Unit Description: Cold Vent Heater
Raw Material/Fuel: Emergency Vent Gases
Rated Capacity: 150,000 lb. VOC/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Emission limits are not required at this time.

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Unless specified by a federal regulation, all records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner.

Operational limits are not required at this time.

NSPS and NESHAP Applicability:
This emission unit is subject to 40 CFR 63 Subpart YY – National Emission Standards for Hazardous Air Pollutants: Generic Maximum Achievable Control Technology.
Authority for Requirement: 567 IAC 23.1(4)"ay"
40 CFR 63 Subpart YY

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP033-P (Facility Flare)

Associated Equipment

Associated Emission Unit ID Numbers: See the table below
Emissions Control Equipment ID Number: EP033CE1
Emissions Control Equipment Description: Stream Assisted Flare
Continuous Emissions Monitors ID Numbers: None

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity	DNR Construction Permit
EP033-P	AH001-U	H-110 Analyzer House	Process Gas	400 cc/minute combined flow	00-A-911-S8
	EP033B-U	Emergency Vent Gases*	Waste Gas	4,600 MMBTU/hr	
	EP033C-U	Diglycolamine (DGA) Unit	DGA	45 gal/min	
	EP033D-U	F 1119 Cold Vent KO Pot	Process gas	8,500 gallons	
	EP037-U	H-120 Ethylene Analyzer House	Process Gases	920 lb/yr	
	EP047-U	H-107B Ethylene Analyzer House	Process Gases	3,750 lb/yr	
	EP048-U	H-108 Ethylene Analyzer House	Process Gas	8.73 lb/hr	
	EP049-U	Ethylene: General Process Analyzer (H112)	Process Gas	1.08 lb/hr	
	EP050-U	Etheylene: General Process Analyzer (H 115)	Process Gas	1 lb/hr	
	EP091A-U	TK0111: 48” Vessel (125 cu.ft.)	Process Gas	50,000 lb/hr	
	EP091B-U	TK0112: 48” Vessel (125 cu.ft.)	Process Gas	50,000 lb/hr	
	EP091C-U	TK0113: 36” Vessel (50 cu.ft.)	Process Gas	50,000 lb/hr	
	EP092-U	Railcar Loading/Unloading	Hexane Vinyl Acetate, DAC, Wash, Oil, Ethylene, Propylene	3,500 lb/hr vapors	
	HD203-U	D0909A Hexene Treatment Tower	Hexene	1,100 lb/hr	
	HD204-U	D0909B Hexene Treatment Tower	Hexene	1,100 lb/hr	
	LD001-U	F 2134A Vinyl Acetate Storage Tank	Vinyl Acetate	25,445 gallons	
	LD002-U	F 2134B Vinyl Acetate Storage Tank	Vinyl Acetate	25,445 gallons	
	LD011-U	F 785 Waste VA & Mineral Spirits Storage Tank	Vinyl Acetate	9,518 gallons	

*Includes emission from EP078-U and EP079-U under normal operation.

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%[(1)]
Authority for Requirement: DNR Construction Permit 00-A-911-S8
567 IAC 23.3(2) "d"

[(1)]An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr/dscf
Authority for Requirement: DNR Construction Permit 00-A-911-S8
567 IAC 23.3(2) "a"

Pollutant: Sulfur Dioxide (SO_2)
Emission Limit(s): 30.05 tons/yr[(2)], 500 ppmv
Authority for Requirement: DNR Construction Permit 00-A-911-S8
567 IAC 23.3(3)

[(2)] Contribution of DGA unit alone to previously grandfathered plant flare.

Operational Limits & Recordkeeping Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Unless specified by a federal regulation, all records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner.

The operating requirements and associated recordkeeping for this permit shall be:

1. The feedstock treated by the DGA unit (EP033C-U) shall be tested for sulfur content a minimum of once per month.
2. The owner or operator shall vent all emissions from the VA Tanks (LD001-U, LD002-U, and LD011-U) through a closed vent system to the flare, as required in 40 CFR 63.2470 (a). Periods of planned routine maintenance, during which the control system does not meet the requirements of Table 4 of Subpart FFFF, shall not exceed 240 hours per year (40 CFR 63.2470(d)).
3. The owner or operator shall keep documents available, such as P&ID drawings or a list of units, which identify the units that are part of the Emergency Vent Gases (EU EP033B-U) onsite, and shall not remove any of said units from the control device unless the units are no longer operable.
4. The owner or operator shall calculate on a monthly basis the amount of sulfur dioxide emitted from the DGA unit (EP033C-U). This calculation shall be based on the sulfur content of the incoming feedstock and the amount of feedstock used, and shall assume that all the sulfur from the DGA unit is converted to SO_2 at the flare.

5. The owner or operator shall follow the applicable reporting requirements of 40 CFR 63.2520 and recordkeeping requirements of 40 CFR 63.2525.
6. The owner or operator shall not conduct more than 24 "service outages" per vessel (EP091A-U, EP091B-U, or EP091C-U) per rolling 12-month period where material is vented through EP033CE1 (facility flare).
7. The owner or operator shall record the number of "service outages" for each vessel (EP091A-U, EP091B-U, or P091C-U) each month and calculate a rolling 12-month total for each vessel (EP091A-U, EP091B-U, and P091C-U).
8. Per 567 IAC 33.3(18)"f"(1), prior to beginning actual construction of the project (Project Number 19-079) the owner or operator shall document and maintain a record of the following:
   A. A description of the project (Project Number 19-079),
   B. Identification of the emission unit(s) whose emissions of a regulated NSR pollutant could be affected by the project (Project Number 19-079), and
   C. A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions (BAE), the projected actual emissions (PAE), the amount of emissions excluded under paragraph "3" of the definition of *"projected actual emissions"* in subrule 33.3(1), an explanation describing why such amount was excluded, and any netting analysis if applicable.
9. Per 567 IAC 33.3(18)"f"(4), the owner or operator shall:
   A. Monitor the emissions of $PM_{2.5}$ as a result of the project (Project Number 19-079) that is emitted by any emissions unit identified in Permit Condition 8B.
   B. Calculate the annual emissions of $PM_{2.5}$, in tons per year on a calendar-year basis, for a period of five (5) **[NOTE: ten (10) if there is an increase in capacity]** years following resumption of regular operations and maintain a record of regular operations after the change.
10. The owner or operator shall comply with the requirements found in Appendix C of this Permit.
11. Per 567 IAC 33.3(18)"f"(5), the owner or operator shall retain a written record containing the information required in Permit Condition 9 of this permit for a period of ten (10) years after the project (Project Number 19-079) is completed.
12. Per 567 IAC 33.3(18)"g", the owner or operator shall make the information required to be documented and maintained pursuant to 567 IAC 33.3(18)"f" available for review upon request for inspection by the Department or the general public pursuant to the requirements for Title V operating permits contained in 567 IAC 22.107(6).

NSPS and NESHAP Applicability

The VA Tanks (LD001-U, LD002-U, & LD011-U) are subject to Subpart FFFF of the National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing (NESHAP).

Authority for Requirement: DNR Construction Permit 00-A-911-S8
567 IAC 23.1(4)"cf"

This emission point is also subject to the following:

1. 40 CFR 63 Subpart A - General Provisions (63.1 – 63.15)
2. 40 CFR Part 61 Subpart FF – National Emission Standards for Benzene Waste Operations
3. 40 CFR Part 63 Subpart SS – National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process
4. 40 CFR Part 63 Subpart UU – National Emission Standards for Equipment Leaks – Control Level 2 Standards
5. 40 CFR Part 63 Subpart YY – National Emission Standards for Hazardous Air Pollutants for Source Categories: Generic Maximum Achievable Control Technology Standards
6. 40 CFR 63 Subpart FFFF – National Emission Standards for Hazardous Air Pollutants for Miscellaneous Organic Chemical Manufacturing (63.2430 – 63.2550)

Authority for Requirement: 567 IAC 23.1(4)
567 IAC 23.1(3) "n"
567 IAC 23.1(4)"as", "au", "ay", and "cf"
40 CFR 63 Subpart A
40 CFR 61 Subpart FF
40 CFR 63 Subpart SS, UU, YY and FFFF

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 210*
Stack Opening, (inches, dia.): 42
Exhaust Flow Rate (scfm): 2,000
Exhaust Temperature (°F): 1,580
Discharge Style: Vertical Unobstructed
Authority for Requirement: DNR Construction Permit 00-A-911-S8

*Actual stack height determined when developing reports for the consent decree. Construction permit modification is not necessary at this time since the value is greater than permitted height of 199ft but not more than 125% of permitted value.

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: EP034-P through EP036-P (Fire Water Pump Diesel Engines)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity MMBtu/hr	DNR Construction Permit
EP034-P	EP034-U	J-2204D Fire Water Pump Diesel Engine	Diesel Fuel	15.62	None
EP035-P	EP035-U	J-2204E Fire Water Pump Diesel Engine	Diesel Fuel	15.62	None
EP036-P	EP036-U	J-2204F Fire Water Pump Diesel Engine	Diesel Fuel	15.62	None

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from each emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%
Authority for Requirement: 567 IAC 23.3(2) "d"

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr/dscf
Authority for Requirement: 567 IAC 23.3(2) "d"

Pollutant: Sulfur Dioxide (SO2)
Emission Limit(s): 2.5 lb/MMBtu
Authority for Requirement: 567 IAC 23.3(3) "b"(2)

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits
1. No person shall allow, cause or permit the combustion of number 1 or number 2 fuel oil exceeding a sulfur content of 0.5 percent by weight.

Authority for Requirement: 567 IAC 23.3(3)"b"(1)

Reporting and Recordkeeping
All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.
1. The facility shall monitor the percent of sulfur by weight in the fuel oil as delivered or purchase only EPA certified fuel oil. The documentation may be vendor supplied or facility generated.

Authority for Requirement: 567 IAC 22.108(3)

NSPS and NESHAP Applicability

These emergency engines are subject to 40 CFR 63 Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE). According to 40 CFR 63.6590(a)(1)(ii) these compression ignition emergency engines, located at a major source, are existing stationary RICE as they were constructed prior to June 12, 2006.

Operation and Maintenance Requirements 40 CFR 63.6602, 63.6625, 63.6640 and Tables 2c and 6 to Subpart ZZZZ

1. Change oil and filter every 500 hours of operation or annually, whichever comes first. (See 63.6625(i) for the oil analysis option to extend time frame of requirements.)
2. Inspect air cleaner every 1000 hours of operation or annually, whichever comes first, and replace as necessary.
3. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.
4. Operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
5. Install a non-resettable hour meter if one is not already installed.
6. Minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.

Operating Limits 40 CFR 63.6640(f)

1. Any operation other than emergency operation, maintenance and testing and operation in non-emergency situations (up to) 50 hours per year is prohibited.
2. There is no time limit on the use of emergency stationary RICE in emergency situations.
3. You may operate your emergency stationary RICE up to 100 combined hours per calendar year for maintenance checks and readiness testing. See 40 CFR 63.6640(f)(2) for additional information and restrictions.
4. You may operate your emergency stationary RICE up to 50 hours per calendar year for non-emergency situations, but those 50 hours are counted toward the 100 hours of maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

Recordkeeping Requirements 40 CFR 63.6655

1. Keep records of the maintenance conducted on the stationary RICE.
2. Keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. Document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. See 40 CFR 63.6655(f) for additional information.

Notification and Reporting Requirements 40 CFR 63.6645, 63.6650 and Table 2c to Subpart ZZZZ

1. An initial notification is not required per 40 CFR 63.6645(a)(5).
2. A report may be required for failure to perform the work practice requirements on the schedule required in Table 2c. (See Footnote 1 of Table 2c for more information.)

Authority for Requirement: 567 IAC 23.1(4)"cz"
40 CFR Part 63 Subpart ZZZZ

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP038-P (F-0154 Knockout Drum)

Associated Equipment

Associated Emission Unit ID Numbers: See the table below
Emissions Control Equipment ID Number: EP038CE1
Emissions Control Equipment Description: Knockout Drum
Continuous Emissions Monitors ID Numbers: None

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity	DNR Construction Permit
EP038-P	EP038A-U	D102A Acetylene Converter Regen	Coke, Air, Steam	NA	None
	EP038B-U	D102B Acetylene Converter Regen			
	EP038C-U	D102C Acetylene Converter Regen			
	EP038D-U	D104A Methylacetylene Converter Regen			
	EP038E-U	D104B Methylacetylene Converter Regen			
	EP038F-U	D105 Acetylene Converter Regen			

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Emission limits are not required at this time.

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required at this time.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP040-P

Associated Equipment

Emission Unit vented through this Emission Point: EP040-U
Emission Unit Description: B-0107 Regeneration Gas Heater
Raw Material/Fuel: Stream, Air and Natural Gas
Rated Capacity: 1.75 MMBtu/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 20% [(1)]
Authority for Requirement: DNR Construction Permit 97-A-804-S1
567 IAC 23.3(2) "d"

[(1)] If visible emissions are observed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Particulate Matter (PM)
Emission Limit(s): 0.1 gr/dscf
Authority for Requirement: DNR Construction Permit 97-A-804-S1
567 IAC 23.3(2) "a"

Pollutant: Sulfur Dioxide (SO_2)
Emission Limit(s): 500 ppmv
Authority for Requirement: DNR Construction Permit 97-A-804-S1
567 IAC 23.3(3) "e"

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits
1. The fuel used by the 3.2* MMBtu/hr regeneration gas heater is limited to pipeline quality natural gas.

*All facility records indicate the heater is 1.75MMBtu/hr.

Reporting and Recordkeeping
All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

The owner or operator of the equipment shall maintain the following records:
1. The type of fuel used for the 3.2 MMBtu/hr regeneration gas heater.

Authority for Requirement: DNR Construction Permit 97-A-804-S1

NSPS and NESHAP Applicability
This emission point is subject to 40 CFR 63 Subpart DDDDD – National Emission Standards for Industrial, Commercial and Institutional Boilers and Process Heaters
Authority for Requirement: 40 CFR 63 Subpart DDDDD

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height, (from the ground): 22'7"
Stack Opening, (inches, dia.): 10
Exhaust Flow Rate (acfm): 1,500
Exhaust Temperature (°F): 1,250
Discharge Style: N/A
Authority for Requirement: DNR Construction Permit 97-A-804-S1

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP041-P

Associated Equipment

Emission Unit vented through this Emission Point: EP041-U
Emission Unit Description: Plant Incidental Releases
Raw Material/Fuel: Process Gases
Rated Capacity: NA

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Emission limits are not required at this time.

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required at this time.

NSPS and NESHAP Applicability
This emission point is subject to:
1. 40 CFR Part 61 Subpart FF – National Emission Standards for Benzene Waste Operations
2. 40 CFR Part 63 Subpart UU – National Emission Standards for Equipment Leaks – Control Level 2 Standards
3. 40 CFR Part 63 Subpart YY – National Emission Standards for Hazardous Air Pollutants for Source Categories: Generic Maximum Achievable Control Technology Standards
4. 40 CFR Part 63 Subpart FFFF – National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing

Authority for Requirement: 567 IAC 23.1(3)"n"
567 IAC 23.1(4)"au", "ay", and "cf"
40 CFR 61 Subpart FF
40 CFR 63 Subparts UU, YY, and FFFF

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: EP042N-P through EP044W-P (Refrigeration Compressors)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity	DNR Construction Permit
EP042N-P EP042S-P	EP042-U	J-0102 Propylene Refrigeration Compressor	Propylene	1,050,000 lb/hr	None
EP043N-P EP043S-P	EP043-U	J-0103 Ethylene Refrigeration Compressor	Ethylene	150,000 lb/hr	None
EP044E-P EP044W-P	EP044-U	J-0104 Ethylene Refrigeration Compressor	Ethylene	250,000 lb/hr	None

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from these emission points shall not exceed the levels specified below.

Emission limits are not required at this time.

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required at this time.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP045-P

Associated Equipment

Emission Unit vented through this Emission Point: EP045-U
Emission Unit Description: Temporary Smokeless Flare
Raw Material/Fuel: Ethylene
Rated Capacity: 54.11 MMBtu/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Emission limits are not required at this time.

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required at this time.

NSPS and NESHAP Applicability
This emission point is subject to:
1. 40 CFR Part 61 Subpart FF – National Emission Standards for Benzene Waste Operations
2. 40 CFR Part 63 Subpart SS - National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process
3. 40 CFR Part 63 Subpart UU – National Emission Standards for Equipment Leaks – Control Level 2 Standards
4. 40 CFR Part 63 Subpart YY – National Emission Standards for Hazardous Air Pollutants for Source Categories: Generic Maximum Achievable Control Technology Standards
5. 40 CFR Part 63 Subpart FFFF – National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing

Authority for Requirement: 567 IAC 23.1(3)"n"
567 IAC 23.1(4)"au", "ay", and "cf"
40 CFR 61 Subpart FF
40 CFR 63 Subparts UU, YY, and FFFF

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: EP051-P and EP052-P (Fugitive)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity lb/hr	DNR Construction Permit
EP051-P	EP051-U	Fugitive Emissions: E-118 Quench Water Stripper Blowdown	Wastewater	200,160	None
EP052-P	EP052-U	Fugitive Emissions: E-129 Caustic Stripper Blowdown	Wastewater	15,012	None

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from these emission point shall not exceed the levels specified below.

Emission limits are not required at this time.

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

NESHAP Part 61 Subpart FF Requirements

1. The facility shall determine the total annual benzene quantity from facility waste in compliance with 40 CFR §61.355(a)(1), (a)(2), (a)(6), (b), and (c).
2. Because the total annual benzene quantity from facility waste is equal to or greater than 11 tpy, the facility should comply with 40 CFR 61.355(a)(3) by complying with the control requirements of 40 CFR §61.342(c), (d), or (e), §61.346, §61.348 and record keeping and requirements of 40 CFR §61.356 and §61.357. However, per 40 CFR §61.342(c)(2), a waste stream is exempt from the control requirements provided that the facility demonstrates initially and, thereafter, at least once per year that the flow-weighted annual average benzene concentration for the waste stream is less than 10 ppmw as determined by the procedures specified in §61.355(c)(2) or §61.355(c)(3).

Authority for Requirement: 40 CFR 63 Subpart FF
567 IAC 23.1(4)"n"

NSPS and NESHAP Applicability
EP051-P and EP052-P are subject to:

1. NESHAP Part 61 Subpart SS – National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and routing to a fuel gas system or a process.

Authority for Requirement: 567 IAC 23.1(4)"as"
40 CFR 63 Subpart SS

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: EP055-P through EP058-P (Waste Water Treatment Tanks)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity gal/hr	DNR Construction Permit
EP055-P	EP055-U	Fugitive Emissions: F-2450 Equalization & Neutralization Tank	Wastewater	90,000	None
EP056-P	EP056-U	Fugitive Emissions: F-2451 Rapid Mix Tank	Wastewater	90,000	None
EP057-P	EP057-U	Fugitive Emissions: F-2452 Flocculation Tank	Wastewater	90,000	None
EP058-P	EP058-U	Fugitive Emissions: F-2453 Dissolved Air Flotation Tank	Wastewater	90,000	None

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified below.

Emission limits are not required at this time.

Operational Limits & Recordkeeping Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required at this time.

NSPS and NESHAP Applicability:

These units are subject to the following:

1. 40 CFR 63 Subpart GGGGG—National Emission Standards for Hazardous Air Pollutants: Site Remediation.

   As per 40 CFR §63.7881(c), your site remediation activities are not subject to the requirements of this subpart, except for the recordkeeping requirements in this paragraph, provided that you meet the requirements specified in paragraphs (c)(1) through (c)(3) of this section.

   A. You determine that the total quantity of the HAP listed in Table 1 to this subpart that is contained in the remediation material excavated, extracted, pumped, or otherwise removed during all of the site remediations conducted at your facility is less than 1 megagram (Mg) annually. This exemption applies the 1 Mg limit on a facility-wide, annual basis, and there is no restriction to the number of site remediations that can be conducted during this period.

   B. The owner or operator must prepare and maintain at your facility written documentation to support your determination that the total HAP quantity in your remediation materials for the year is less than 1 Mg. The documentation must include a description of your methodology and data used for determining the total HAP content of the remediation material.

Authority for Requirement: 567 IAC 23.1(3)"dg"
40 CFR 63 Subpart GGGGG

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: EP059-P through EP071S-P, EP089, & EP090, (Furnace Decoking)

Associated Equipment
Control Equipment: Decoke Cyclone: EP089CE1(EP089-P) and EP090CE1(EP090CE1)

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity (lb decoke /hr)*	DNR Construction Permit
EP059-P	EP001-U	A Furnace Decoke	Air and Steam	$1.14x10^{-4}$	11-A-724-S1
EP060-P	EP002-U	B Furnace Decoke	Air and Steam	$1.14x10^{-4}$	11-A-049-S1
EP061-P	EP003-U	C Furnace Decoke	Air and Steam	$1.14x10^{-4}$	11-A-050-S1
EP062-P	EP004-U	D Furnace Decoke	Air and Steam	$1.14x10^{-4}$	08-A-247-S2
EP063-P	EP005-U	E Furnace Decoke	Air and Steam	$1.14x10^{-4}$	08-A-248-S2
EP064-P	EP006-U	F Furnace Decoke	Air and Steam	$1.14x10^{-4}$	11-A-051-S1
EP065-P	EP007-U	G Furnace Decoke	Air and Steam	$1.14x10^{-4}$	11-A-052-S1
EP066-P	EP008-U	H Furnace Decoke	Air and Steam	$1.14x10^{-4}$	11-A-053-S1
EP067-P	EP009-U	I Furnace Decoke	Air and Steam	$1.14x10^{-4}$	11-A-054-S1
EP068-P	EP010-U	J Furnace Decoke	Air and Steam	$1.14x10^{-4}$	11-A-055-S1
EP069N-P	EP011-U	K Furnace Decoke	Air and Steam	$1.14x10^{-4}$	18-A-378
EP069S-P		K Furnace Decoke	Air and Steam		18-A-379
EP070N-P	EP012-U	L Furnace Decoke	Air and Steam	$1.14x10^{-4}$	18-A-380
EP070S-P		L Furnace Decoke	Air and Steam		18-A-381
EP071N-P	EP013-U	M Furnace Decoke	Air and Steam	$1.14x10^{-4}$	18-A-382-S1
EP071S-P		M Furnace Decoke	Air and Steam		18-A-383-S1
EP089-P	EP001-U EP002-U EP003-U EP004-U EP005-U EP006-U EP007-U EP008-U EP009-U EP010-U EP011-U EP012-U EP013-U	A Furnace Decoke B Furnace Decoke C Furnace Decoke D Furnace Decoke E Furnace Decoke F Furnace Decoke G Furnace Decoke H Furnace Decoke I Furnace Decoke J Furnace Decoke K Furnace Decoke L Furnace Decoke M Furnace Decoke	Air and Steam	$1.14x10^{-4}$ (per furnace)	18-A-384-S1
EP090-P	EP001-U EP002-U EP003-U EP004-U EP005-U EP006-U EP007-U EP008-U EP009-U EP010-U EP011-U EP012-U EP013-U	A Furnace Decoke B Furnace Decoke C Furnace Decoke D Furnace Decoke E Furnace Decoke F Furnace Decoke G Furnace Decoke H Furnace Decoke I Furnace Decoke J Furnace Decoke K Furnace Decoke L Furnace Decoke M Furnace Decoke	Air and Steam	$1.14x10^{-4}$ (per furnace)	18-A-385-S1

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from each emission point shall not exceed the levels specified below.

EP	EU	Opacity	PM gr./dscf	PM_{10} lb/hr	SO_2 (ppm_v)	Authority for Requirement
EP059-P	EP001-U	40%[(1)]	0.1	0.25	NA	567 IAC 23.3(2)"a" 567 IAC 23.3(2)"d" DNR Construction Permit 11-A-724-S1
EP060-P	EP002-U	40%[(1)]	0.1	0.2	NA	567 IAC 23.3(2)"a" 567 IAC 23.3(2)"d" DNR Construction Permit 11-A-049-S1
EP061-P	EP003-U	40%[(1)]	0.1	0.2	NA	567 IAC 23.3(2)"a" 567 IAC 23.3(2)"d" DNR Construction Permit 11-A-050-S1
EP062-P	EP004-U	40%[(1)]	0.1	NA	NA	567 IAC 23.3(2)"a" 567 IAC 23.3(2)"d" DNR Construction Permit 08-A-247-S2
EP063-P	EP005-U	40%[(1)]	0.1	NA	NA	567 IAC 23.3(2)"a" 567 IAC 23.3(2)"d" DNR Construction Permit 08-A-248-S2
EP064-P	EP006-U	40%[(1)]	0.1	0.2	NA	567 IAC 23.3(2)"a" 567 IAC 23.3(2)"d" DNR Construction Permit 11-A-051-S1
EP065-P	EP007-U	40%[(1)]	0.1	0.2	NA	567 IAC 23.3(2)"a" 567 IAC 23.3(2)"d" DNR Construction Permit 11-A-052-S1
EP066-P	EP008-U	40%[(1)]	0.1	0.2	NA	567 IAC 23.3(2)"a" 567 IAC 23.3(2)"d" DNR Construction Permit 11-A-053-S1
EP067-P	EP009-U	40%[(1)]	0.1	0.2	NA	567 IAC 23.3(2)"a" 567 IAC 23.3(2)"d" DNR Construction Permit 11-A-054-S1
EP068-P	EP010-U	40%[(1)]	0.1	0.2	NA	567 IAC 23.3(2)"a" 567 IAC 23.3(2)"d" DNR Construction Permit 11-A-055-S1
EP069N-P	EP011-U	40%[(1)]	0.1	NA	NA	567 IAC 23.3(2)"d" 567 IAC 23.3(2)"a" DNR Construction Permit 18-A-378
EP069S-P		40%[(1)]	0.1	NA	NA	567 IAC 23.3(2)"a" 567 IAC 23.3(2)"d" DNR Construction Permit 18-A-379
EP070N-P	EP012-U	40%[(1)]	0.1	NA	NA	567 IAC 23.3(2)"a" 567 IAC 23.3(2)"d" DNR Construction Permit 18-A-380
EP070S-P		40%[(1)]	0.1	NA	NA	567 IAC 23.3(2)"a" 567 IAC 23.3(2)"d" DNR Construction Permit 18-A-381

[(1)]An exceedance of the indicator opacity of "No Visible Emissions" will require the owner or operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the Department may require additional proof to demonstrate compliance (e.g., stack testing).

EP	EU	Opacity	PM gr./dscf	PM_{10} lb/hr	SO_2 (ppm_v)	Authority for Requirement
EP071N-P	EP013-U	40%[(1)]	0.1	NA	NA	567 IAC 23.3(2)"d" 567 IAC 23.3(2)"a" DNR Construction Permit 18-A-382-S1
EP071S-P		40%[(1)]	0.1	NA	NA	567 IAC 23.3(2)"a" 567 IAC 23.3(2)"d" DNR Construction Permit 18-A-383-S1
EP089-P	EP001-U EP002-U EP003-U EP004-U EP005-U EP006-U EP007-U EP008-U EP009-U EP010-U EP011-U EP012-U EP013-U	40%[(1)]	0.1 0.10 lb/hr	0.1	NA	567 IAC 23.3(2)"a" 567 IAC 23.3(2)"d" DNR Construction Permit 18-A-384-S1
EP090-P	EP001-U EP002-U EP003-U EP004-U EP005-U EP006-U EP007-U EP008-U EP009-U EP010-U EP011-U EP012-U EP013-U	40%[(1)]	0.1 0.10 lb/hr	0.1	NA	567 IAC 23.3(2)"a" 567 IAC 23.3(2)"d" DNR Construction Permit 18-A-385-S1

[(1)]An exceedance of the indicator opacity of "No Visible Emissions" will require the owner or operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the Department may require additional proof to demonstrate compliance (e.g., stack testing).

Operational Limits & Recordkeeping Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Unless specified by a federal regulation, all records as required by these permits shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner.

The facility is subject to the monitoring / operation conditions found in 40 CFR 63.1103(e)(7) & (8). The compliance date for the NESHAP requirements is July 6, 2023.

Decoking standards for ethylene cracking furnaces.

1. Beginning no later than the compliance dates specified in 40 CFR § 63.1102(c), the owner or operator must comply with paragraph (1) of this condition and also use at least two of the control measures specified in paragraphs (2) through (5) of this condition to minimize coke combustion emissions from the decoking of the radiant tube(s) in each ethylene cracking furnace.
   A. During normal operations, conduct daily inspections of the firebox burners and repair all burners that are impinging on the radiant tube(s) as soon as practical, but not later than 1 calendar day after the flame impingement is found. The owner or operator may delay burner repair beyond 1 calendar day using the procedures specified in paragraphs (e)(7)(i)(A) and (B) of this section provided the repair cannot be completed during normal operations, the burner cannot be shutdown without significantly impacting the furnace heat distribution and firing rate, and action is taken to reduce flame impingement as much as possible during continued operation. An inspection may include, but is not limited to: visual inspection of the radiant tube(s) for localized bright spots (this may be confirmed with a temperature gun), use of luminescent powders injected into the burner to illuminate the flame pattern, or identifying continued localized coke build-up that causes short runtimes between decoking cycles. A repair may include, but is not limited to: Taking the burner out of service, replacing the burner, adjusting the alignment of the burner, adjusting burner configuration, making burner air corrections, repairing a malfunction of the fuel liquid removal equipment, or adding insulation around the radiant tube(s).
      i. If a shutdown for repair would cause greater emissions than the potential emissions from delaying repair, repair must be completed following the next planned decoking operation (and before returning the ethylene cracking furnace back to normal operations) or during the next ethylene cracking furnace complete shutdown (when the ethylene cracking furnace firebox is taken completely offline), whichever is earlier.
      ii. If a shutdown for repair would cause lower emissions than the potential emissions from delaying repair, then shutdown of the ethylene cracking furnace must immediately commence and the repair must be completed before returning the ethylene cracking furnace back to normal operations.
   B. During decoking operations, beginning before the expected end of the air-in decoke time, continuously monitor (or use a gas detection tube or equivalent sample technique every three hours to monitor) the CO_2 concentration in the combined decoke effluent downstream of the last component being decoked for an indication that the coke combustion in the ethylene cracking furnace radiant tube(s) is complete. The owner or operator must immediately initiate procedures to stop the coke combustion once the CO_2 concentration at the outlet consistently reaches a level that indicates combustion of coke is complete and site decoke completion assurance procedures have been concluded.
   C. During decoking operations, continuously monitor the temperature at the radiant tube(s)

outlet when air is being introduced to ensure the coke combustion occurring inside the radiant tube(s) is not so aggressive (i.e., too hot) that it damages either the radiant tube(s) or ethylene cracking furnace isolation valve(s). The owner or operator must immediately initiate procedures to reduce the temperature at the radiant tube(s) outlet once the temperature reaches a level that indicates combustion of coke inside the radiant tube(s) is too aggressive.

D. After decoking, but before returning the ethylene cracking furnace back to normal operations, verify that decoke air is no longer being added.

E. After decoking, but before returning the ethylene cracking furnace back to normal operations and/or during normal operations, inject materials into the steam or feed to reduce coke formation inside the radiant tube(s) during normal operation.

Ethylene cracking furnace isolation valve inspections.

2. Beginning no later than the compliance dates specified in 40 CFR § 63.1102(c), the owner or operator must conduct ethylene cracking furnace isolation valve inspections as specified in paragraphs (1) and 2) of this condition.

   A. Prior to decoking operation, inspect the applicable ethylene cracking furnace isolation valve(s) to confirm that the radiant tube(s) being decoked is completely isolated from the ethylene production process so that no emissions generated from decoking operations are sent to the ethylene production process. If poor isolation is identified, then the owner or operator must rectify the isolation issue prior to continuing decoking operations to prevent leaks into the ethylene production process.

   B. Prior to returning the ethylene cracking furnace to normal operations after a decoking operation, inspect the applicable ethylene cracking furnace isolation valve(s) to confirm that the radiant tube(s) that was decoked is completely isolated from the decoking pot or furnace firebox such that no emissions are sent from the radiant tube(s) to the decoking pot or furnace firebox once the ethylene cracking furnace returns to normal operation. If poor isolation is identified, then the owner or operator must rectify the isolation issue prior to continuing normal operations to prevent product from escaping to the atmosphere through the decoking pot or furnace firebox.

Authority for Requirement: DNR Construction Permits: 18-A-382-S1, 18-A-385-S1, 18-A-384-S1, 18-A-385-S1, and 89-A-030-S1
567 IAC 23.1(4)"ay
40 CFR 63 Subparts YY

Emission Point Characteristics

The emission points listed shall conform to the specifications listed below.

EP ID	Stack Height, Feet	Discharge Style	Stack Opening, inches	Stack Temperature, °F	Exhaust Flowrate, ACFM
EP059-P EP060-P EP061-P EP062-P EP063-P EP064-P EP065-P EP066-P EP067-P EP068-P	71	Vertical Unobstructed	4	480	5500
EP069N-P EP069S-P	36.5	Vertical Unobstructed	4	375	3390
EP070N-P EP070S-P	48	Vertical Unobstructed	4	375	3390
EP071N-P EP071S-P	17.83	Vertical Unobstructed	8	200	20,000
EP089-P	110	Vertical Unobstructed	14	200	20,000
EP090-P	110	Vertical Unobstructed	20	200	20,000

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP072-P

Associated Equipment

Associated Emission Unit ID Numbers: EP072-U
Emissions Control Equipment ID Number: EP072CE1
Emissions Control Equipment Description: Dry Filters

Emission Unit vented through this Emission Point: EP072-U
Emission Unit Description: Maintenance Paint Booth
Raw Material/Fuel: Paint
Rated Capacity: 5,000 gallons/yr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.
Pollutant: Opacity
Emission Limit(s): 40%[(1)]
Authority for Requirement: DNR Construction Permit 10-A-371
567 IAC 23.3(2) "d"

[(1)] An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Particulate Matter (PM)
Emission Limit(s): 0.01 gr/dscf
Authority for Requirement: DNR Construction Permit 10-A-371
567 IAC 23.4(14)

Pollutant: Particulate Matter (PM_{10})
Emission Limit(s): 0.6 lb/hr
Authority for Requirement: DNR Construction Permit 10-A-371

Operational Limits & Recordkeeping Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits

1. The amount of paint, solvent and reducer used in this booth shall not exceed 5000 gallons per 12-month rolling period.
2. The VOC content of any paint, solvent or reducer used in this booth shall not exceed 7.0 pounds per gallon.
3. This booth shall be used for janitorial, building and facility maintenance operations only.
4. Maintain the booth and control equipment according to the manufacturer's specifications.

Reporting and Recordkeeping
All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

The owner or operator of the equipment shall maintain the following records:
1. Record the amount of paint, solvent and reducer used in this booth, in gallons. Calculate and record the monthly and 12-month rolling totals.
2. Maintain SDS sheets showing the VOC and HAP content of each paint, solvent and reducer used in this booth.
3. Maintain a record of all maintenance activities performed on this booth and control equipment.

Authority for Requirement: DNR Construction Permit 10-A-371

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height, (from the ground): 28
Stack Opening, (inches, dia.): 34
Exhaust Flow Rate (scfm): 13,965
Exhaust Temperature (°F): 70
Discharge Style: Vertical Obstructed
Authority for Requirement: DNR Construction Permit 10-A-371

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required?	**Yes** ☒ **No** ☐
Facility Maintained Operation & Maintenance Plan Required?	**Yes** ☐ **No** ☒
Compliance Assurance Monitoring (CAM) Plan Required?	**Yes** ☐ **No** ☒

Paint Booth Agency Operation & Maintenance Plan

Weekly

- Inspect the paint booth system for conditions that reduce the operating efficiency of the collection system. This will include a visual inspection of the condition of the filter material.
- Maintain a written record of the observation and any action resulting from the inspection.

Record Keeping and Reporting

Maintenance and inspection records will be kept for five years and available upon request.

Quality Control

- The filter equipment will be operated and maintained according to the manufacturer's recommendations.

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: EP074A-P and EP074B-P

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity	DNR Construction Permit
EP074A-P	EP074-U	F-2103 Mixed C4 Sphere – (RV)	Aromatic Compounds	NA	None
EP074B-P					

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from these emission points shall not exceed the levels specified below.

Emission limits are not required at this time.

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating limits are not required at this time.

NSPS and NESHAP Applicability
These emission points are subject to 40 CFR 63 Subpart YY – National Emission Standards for Hazardous Air Pollutants: Generic Maximum Achievable Control Technology
Authority for Requirement: 567 IAC 23.1(4) "ay"
40 CFR 63 Subpart YY

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP075-P

Associated Equipment

Associated Emission Unit ID Number: EP075-U
Emissions Control Equipment ID Number: EP075CE1
Emissions Control Equipment Description: Carbon Filter

Emission Unit vented through this Emission Point: EP075-U
Emission Unit Description: F1116 Spent Caustic Tank
Raw Material/Fuel: Aromatic Compounds
Rated Capacity: 840 gal/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Emission limits are not required at this time.

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating limits are not required at this time.

NSPS and NESHAP Applicability
This emission point is subject to 40 CFR 61 Subpart FF – National Emission Standard for Benzene Waste Operations
Authority for Requirement: 567 IAC 23.1(3)"n"
40 CFR 61 Subpart FF

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: EP076-P and EP0077-P (Ethanol Storage Tanks)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity	DNR Construction Permit
EP076-P	EP076-U	F 0143 Ethanol Storage Tank- Closed Loop System	Ethanol	NA	None
EP077-P	EP077-U	F 0151N Ethanol Storage Tank- Closed Loop System	Ethanol	NA	None

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from these emission points shall not exceed the levels specified below.

Emission limits are not required at this time.

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating limits are not required at this time.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: EP078-P and EP079-P

Associated Equipment

Associated Emission Unit ID Numbers: See Table Below
Emissions Control Equipment ID Number: EP078CE1, EP079CE1
Emissions Control Equipment Description: Carbon Canister

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity	DNR Construction Permit
EP078-P	EP078-U	F 0145R1 Fuel Oil Mix Fixed Roof Tank	Residual Oil	40 gal/hr	None
EP079-P	EP079-U	F 0176 Contaminated Lube Fixed Roof Storage Tank	Lubricating Oil	10 gal/hr	None

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from these emission points shall not exceed the levels specified below.

Emission limits are not required at this time.

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating limits are not required at this time.

NSPS and NESHAP Applicability
EP078-P is subject to the following:
1. 40 CFR Part 61 Subpart FF – National Emission Standards for Benzene Waste Operations
2. 40 CFR 63 Subpart UU – National Emission Standards for Equipment Leaks – Control Level 2 Standards
3. 40 CFR 63 Subpart YY – National Emission Standards for Hazardous Air Pollutants: Generic Maximum Achievable Control Technology.

EP079-P is subject to 40 CFR Part 61 Subpart FF – National Emission Standards for Benzene Waste Operations.
Authority for Requirement: 567 IAC 23.1 (3)"n"
567 IAC 23.1(4) "au", "ay"
40 CFR 61 Subpart FF
40 CFR 63 Subpart UU, YY

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: EP080-P through EP088-P (Storage Vessels)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity (gallons)	DNR Construction Permit
EP080-P	EP080-U	F169 Process Additive Fixed Roof Storage Tank	Process Additives	1500	None
EP081-P	EP081-U	Process Additive Storage Tote	Process Additives	400	None
EP082-P	EP082-U	Process Additive Storage Tote	Process Additives	400	None
EP083A/B-P	EP083A/B-U	Process Additive Storage Totes (2 Totes in Series)	Process Additives	800 (2 400-gallon)	None
EP084-P	EP084-U	F2150A Plant Gasoline Fixed Roof Storage Tank	Gasoline	2000	None
EP085-P	EP085-U	F2150B Plant Diesel Fixed Roof Storage Tank	Diesel Fuel	2000	None
EP086-P	EP086-P	Process Additive Storage Tote	Aromatic Compounds	400	None
EP087-P	EP087-U	Process Additive Storage Tote	Aromatic Compounds	400	None
EP088-P	EP088-U	Process Additive Storage Tote	Process Additives	400	None

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from these emission points shall not exceed the levels specified below.

Emission limits are not required at this time.

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating limits are not required at this time.

NSPS and NESHAP Applicability
EP080-P, EP081-P, EP083A/B-P, EP086-P, EP087-P, & EP088-P: These emission points are subject to the following:

1. 40 CFR 63 Subpart UU – National Emission Standards for Equipment Leaks – Control Level 2 Standards
2. 40 CFR 63 Subpart YY – National Emission Standards for Hazardous Air Pollutants: Generic Maximum Achievable Control Technology.

Authority for Requirement: 567 IAC 23.1(4) "au", "ay"
40 CFR 63 Subpart UU, YY

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: WW001-P and WW002-P (Wastewater Treatment System)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity (gallons)	DNR Construction Permit
WW001-P	WW001-U	F-2400 Equalization/ Neutralization Tank	Wastewater	500,000	20-A-255-S1
	WW002-U	F-2404 Rapid Mix Tank		8,300	
	WW003-U	F-2405 Flocculation Tank		13,410	
	WW004-U	F-2417 DAF Tank		15,000	
	WW005-U	F-2428 BioFeed Tank		9,300	
	WW006-U	F-2429A Bioreactor Tank 1		480,000	
	WW007-U	F-2429B Bioreactor Tank 2		480,000	
	WW008-U	F-2430A Clarifier 1		310,000	
	WW009-U	F-2430B Clarifier 2		310,000	
	WW010-U	F-2446 Sludge Tank		75,000	
	WW011-U	F-2412 Thickener		10,000	
	WW012-U	L-2460 Filter Press		600	
WW002-P	WW013-U	Polishing Pond		5,700,000	20-A-256

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified below.

Pollutant: Volatile Organic Compounds (VOC)
Emission Limit(s): Waste streams with benzene concentrations >10ppmv shall not exceed 2.0 Mg/yr (2.2 tons/yr)
Authority for Requirement: DNR Construction Permit 20-A-255-S1, 20-A-256
567 IAC 23.1(3)"n"
40 CFR 61 FF

Operational Limits & Recordkeeping Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Unless specified by a federal regulation, all records as required by these permits shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner.

1. The total annual benzene quantity in all waste streams entering the wastewater treatment plant having a benzene concentration greater than 10 ppm_w shall not exceed 2.0 Mg/yr, as per 40 CFR §61.342(c)(3).
   A. The owner or operator shall calculate and record the total annual benzene quantity of the waste streams listed in Condition 1.
   B. The owner or operator shall maintain a list of waste streams entering the WWTP.
2. Unless exempted under §61.342(c)(3), the flow-weighted annual average benzene concentration for waste streams entering the WWTP via the lift station shall be less than 10

ppm_w. The owner or operator shall determine flow-weighted annual average benzene concentration using the following procedures:

A. As per 40 CFR §61.355(c)(2), process knowledge of the waste stream, or
B. As per 40 CFR §61.355(c)(3), measurements of the benzene concentration in the waste stream.

3. The owner or operator shall follow the applicable standards of NESHAP Subpart FF - National Emission Standard for Benzene Waste Operations (40 CFR §61.340 – 40 CFR §61.359).
4. The owner or operator shall keep all records as required by NESHAP Subpart FF - National Emission Standard for Benzene Waste Operations (40 CFR §61.340 – 40 CFR §61.359).

Authority for Requirement: DNR Construction Permit 20-A-255-S1, 20-A-256
567 IAC 23.1(3)"n"
40 CFR 61 FF

NSPS and NESHAP Applicability

These emission points are subject to the following:

1. 40 CFR 61 Subpart FF – National Emission Standard for Benzene Waste Operations
2. 40 CFR 63 Subpart YY – National Emission Standards for Hazardous Air Pollutants: Generic Maximum Achievable Control Technology.
3. 40 CFR 63 Subpart GGGGG—National Emission Standards for Hazardous Air Pollutants: Site Remediation.

   As per 40 CFR §63.7881(c), your site remediation activities are not subject to the requirements of this subpart, except for the recordkeeping requirements in this paragraph, provided that you meet the requirements specified in paragraphs (c)(1) through (c)(3) of this section.

   C. You determine that the total quantity of the HAP listed in Table 1 to this subpart that is contained in the remediation material excavated, extracted, pumped, or otherwise removed during all of the site remediations conducted at your facility is less than 1 megagram (Mg) annually. This exemption applies the 1 Mg limit on a facility-wide, annual basis, and there is no restriction to the number of site remediations that can be conducted during this period.
   D. The owner or operator must prepare and maintain at your facility written documentation to support your determination that the total HAP quantity in your remediation materials for the year is less than 1 Mg. The documentation must include a description of your methodology and data used for determining the total HAP content of the remediation material.

Authority for Requirement: 567 IAC 23.1(3)"n"
567 IAC 23.1(4) "ay"
567 IAC 23.1(3)"dg"
40 CFR 61 Subpart FF
40 CFR 63 Subpart YY
40 CFR 63 Subpart GGGGG

Compliance Demonstration

1. As per 40 CFR §61.355(c)(2) and §61.355(c)(3), the owner or operator shall have determined the flow-weighted annual average benzene concentration in any waste stream entering the WWTP, that does not use exemption allowed under 40 CFR §61.342(c)(3)(ii) (i.e., the total annual benzene quantity in all waste streams chosen for exemption does not exceed 2.0 Mg/yr (2.2 tpy)).

Authority for Requirement: DNR Construction Permit 20-A-255-S1, 20-A-256
567 IAC 23.1(3)"n"
40 CFR 61 FF

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP073-P

Associated Equipment

Emission Unit vented through this Emission Point: EP073-U
Emission Unit Description: Wastewater Treatment Plant (WWTP) Lift Station
Raw Material/Fuel: Wastewater
Rated Capacity: 90,000 gallons/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Emission limits are not required at this time.

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits
1. The owner or operator shall follow the applicable standards of NESHAP Subpart FF (40 CFR §61.340 – 40 CFR §61.359).

Reporting and Recordkeeping
All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

The owner or operator of the equipment shall maintain the following records:
1. The owner or operator shall keep all records as required by NESHAP Subpart FF (40 CFR §61.340 – 40 CFR §61.359).

Authority for Requirement: DNR Construction Permit 13-A-336
567 IAC 23.1 (3)"n"
40 CFR 61 Subpart FF

NSPS and NESHAP Applicability
This unit is subject to the following:
1. 40 CFR 63 Subpart GGGGG—National Emission Standards for Hazardous Air Pollutants: Site Remediation.
   As per §63.7881(c). Your site remediation activities are not subject to the requirements of this subpart, except for the recordkeeping requirements in this paragraph, provided that you meet the requirements specified in paragraphs (c)(1) through (c)(3) of this section.
   E. You determine that the total quantity of the HAP listed in Table 1 to this subpart that is contained in the remediation material excavated, extracted, pumped, or otherwise removed during all of the site remediations conducted at your facility is less than 1 megagram (Mg) annually. This exemption applies the 1 Mg limit on a facility-wide, annual basis, and there is no restriction to the number of site remediations that can be conducted during this period.

F. The owner or operator must prepare and maintain at your facility written documentation to support your determination that the total HAP quantity in your remediation materials for the year is less than 1 Mg. The documentation must include a description of your methodology and data used for determining the total HAP content of the remediation material.

Authority for Requirement: 567 IAC 23.1(3)"dg"
40 CFR 63 Subpart GGGGG

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (from the ground): 6.8
Stack Opening, (inches, dia.): 13
Exhaust Flow Rate (scfm): 800
Exhaust Temperature (°F): 90
Discharge Style: Vertical Obstructed
Authority for Requirement: DNR Construction Permit 13-A-336

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Part B. High Density Polyethylene Product Lines

Emission Point ID Number: HD001A-P and HD001B-P (Analyzer Houses)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity (lb/hr VOC emission rate)	DNR Construction Permit
HD001A-P	HD001A-U	PF-4 Analyzer House	Isobutane	0.015 lb/hr	None
HD001B-P	HD001B-U	PF-1, PF-2, and PF-3 Analyzer House	Isobutane	0.030 lb/hr	None

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from these emission points shall not exceed the levels specified below.

Emission limits are not required at this time.

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required at this time.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: HD002N-P and HD002S-P

Associated Equipment

Emission Unit vented through this Emission Point: HD002-U
Emission Unit Description: C-0316 Gas1 (D-0307) Activator Jacket Heater
Raw Material/Fuel: Nonsulfured Natural Gas
Rated Capacity: 10 MMBtu/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from each emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%
Authority for Requirement: 567 IAC 23.3(2) "d"

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.8 lb/MMBtu
Authority for Requirement: 567 IAC 23.3(2) "b"

Pollutant: Sulfur Dioxide (SO_2)
Emission Limit(s): 500 ppmv
Authority for Requirement: 567 IAC 23.3(3)"e"

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required at this time.

NSPS and NESHAP Applicability
This emission point is subject to 40 CFR 63 Subpart DDDDD – National Emission Standards for Industrial, Commercial and Institutional Boilers and Process Heaters
Authority for Requirement: 40 CFR 63 Subpart DDDDD

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: HD004-P through HD009S-P (Rundown Bins)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	EU Description	Raw Material	Rated Capacity lb/hr	Control Equipment		DNR Construction Permit
HD004-P	HD004-U	F-0401A PF-1 Rundown Bin	Polyethylene Powder	25,000	HD004CE1 Cyclone		None
HD005-P	HD005-U	F-0401B PF-1 Rundown Bin	Polyethylene Powder	25,000	HD005CE1 Cyclone		None
HD006-P	HD006-U	F-0401C PF-1 Rundown Bin	Polyethylene Powder	25,000	HD006CE1 Cyclone		None
HD007-P	HD007-U	F-0401D PF-1 Rundown Bin	Polyethylene Powder	25,000	HD007CE1 Cyclone		None
HD008N-P	HD008A-U	F-0411C PF-3 Rundown Bin	Polyethylene Powder	13,500	HD008CE3 Cyclone	HD008CE1 Baghouse	94-A-110-S1
	HD008B-U	F-0411D PF-3 Rundown Bin	Polyethylene Powder	13,500	HD008CE4 Cyclone		
	HD008C-U	F-0431C PF-2 Rundown Bin	Polyethylene Powder	13,500	HD008CE5 Cyclone		
	HD008D-U	F-0431D PF-2 Rundown Bin	Polyethylene Powder	13,500	HD008CE6 Cyclone		
HD008S-P	HD008E-U	F-0411A PF-3 Rundown Bin	Polyethylene Powder	13,500	HD008CE7 Cyclone	HD008CE2 Baghouse	94-A-109-S1
	HD008F-U	F-0411B PF-3 Rundown Bin	Polyethylene Powder	13,500	HD008CE8 Cyclone		
	HD008G-U	F-0431A PF-2 Rundown Bin	Polyethylene Powder	13,500	HD008CE9 Cyclone		
	HD008H-U	F-0431B PF-2 Rundown Bin	Polyethylene Powder	13,500	HD008CE10 Cyclone		
HD009N-P	HD009A-U	F-0439A PF-4 Rundown Bin	Polyethylene Powder	35,000	HD009CE3 Cyclone	HD009CE1 Baghouse	93-A-158-S4
	HD009B-U	F-0439B PF-4 Rundown Bin	Polyethylene Powder	35,000	HD009CE4 Cyclone		
	HD009C-U	F-0439C PF-4 Rundown Bin	Polyethylene Powder	35,000	HD009CE5 Cyclone		
	HD009D-U	F-0439D PF-4 Rundown Bin	Polyethylene Powder	35,000	HD009CE6 Cyclone		
HD009S-P	HD009E-U	F-0439E PF-4 Rundown Bin	Polyethylene Powder	35,000	HD009CE7 Cyclone	HD009CE2 Baghouse	93-A-157-S4
	HD009F-U	F-0439F PF-4 Rundown Bin	Polyethylene Powder	35,000	HD009CE8 Cyclone		
	HD009G-U	F-0439G PF-4 Rundown Bin	Polyethylene Powder	35,000	HD009CE9 Cyclone		
	HD009H-U	F-0439H PF-4 Rundown Bin	Polyethylene Powder	35,000	HD009CE10 Cyclone		

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified below.

EP	EU	Opacity	PM	PM_{10}	VOC	Authority of Requirement
HD004-P	HD004-U	40%	22.27 lb/hr[(2)]	N/A	NA	567 IAC 23.3(2)"d" 567 IAC 23.3(2)"a"(2)
HD005-P	HD005-U	40%	22.27 lb/hr[(2)]	N/A	NA	567 IAC 23.3(2)"d" 567 IAC 23.3(2)"a"(2)
HD006-P	HD006-U	40%	22.27 lb/hr[(2)]	N/A	NA	567 IAC 23.3(2)"d" 567 IAC 23.3(2)"a"(2)
HD007-P	HD007-U	40%	22.27 lb/hr[(2)]	N/A	NA	567 IAC 23.3(2)"d" 567 IAC 23.3(2)"a"(2)
HD008N-P	HD008A-U HD008B-U HD008C-U HD008D-U	40%[(1)]	0.30 lb/hr 0.1 gr/dscf	0.30 lb/hr	NA	567 IAC 23.3(2)"d" 567 IAC 23.3(2)"a" DNR Construction Permit 94-A-110-S1
HD008S-P	HD008E-U HD008F-U HD008G-U HD008H-U	40%[(1)]	0.30 lb/hr 0.1 gr/dscf	0.30 lb/hr	NA	567 IAC 23.3(2)"d" 567 IAC 23.3(2)"a" DNR Construction Permit 94-A-109-S1
HD009N-P	HD009A-U HD009B-U HD009C-U HD009D-U	40%[(1)]	0.30 lb/hr 0.1 gr/dscf	0.30 lb/hr	2,047 lb/MM lb[(3)]	567 IAC 23.3(2)"d" 567 IAC 23.3(2)"a" DNR Construction Permit 93-A-158-S4
HD009S-P	HD009E-U HD009F-U HD009G-U HD009H-U	40%[(1)]	0.30 lb/hr 0.1 gr/dscf	0.30 lb/hr	2,047 lb/MM lb[(3)]	567 IAC 23.3(2)"d" 567 IAC 23.3(2)"a" DNR Construction Permit 93-A-157-S4

[(1)] An exceedance of the indicator opacity of "10%" will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).
[(2)] Based on a process weight rate of 25,000 lb/hr.
[(3)] Emission limit units are in pounds of VOC per million pounds of polymer processed. This emission limit is sum of the emission rates for EP HD009N-P or EP HD009S-P and EP HD020-P.

Operational Limits & Recordkeeping Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Unless specified by a federal regulation, all records as required by these permits shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner.

Operating Limits

HD004-P through HD007-P

Operating limits are not required at this time.

HD008N-P and HD008S-P:

Operating limits are not required at this time.

HD009N-P and HD009S-P:

1. The maximum amount of High-Density Polyethylene (HDPE) produced on this line shall not exceed 35,000 pounds per hour (lb/hr). For purposes of determining the production rate of this line (PF-4 Reactor), the facility shall track production through the PF-4 Surge Hopper (EP HD020-P).
   A. The facility shall record the date and the amount of HDPE produced on this line (PF-4 Reactor) on an hourly basis for that day.
   B. For the purposes of determining the hourly production rate, the facility (plant number 23-01-004) may record the following:
      i. The date;
      ii. The amount of material produced during the day;
      iii. The hours of operation for the process line; and,
      iv. Divide the production for the day by the hours of operation for the day.

2. The maximum amount of High-Density Polyethylene (HDPE) produced on this line shall not exceed 286,900,000 pounds twelve-month rolling period. For purposes of determining the production rate of this line (PF-4 Reactor), the facility shall track production through the PF-4 Surge Hopper (EP HD020-P).
   A. The facility shall calculate and record the total amount of HDPE produced on this line (PF-4 Reactor) per month (in pounds); and,
   B. The facility shall monthly calculate and record the 12-month rolling total amount of HDPE produced on this line (PF-4 Reactor).

Authority for Requirement: DNR Construction Permits 93-A-158-S4, 93-A-157-S4

Emission Point Characteristics

These emission points shall conform to the specifications listed below.

EP	Stack Height (ft, above ground)	Stack Opening (inches)	Exhaust Flow Rate (scfm)	Exhaust Temperature (°F)	Discharge Type	Con. Permit
HD008N-P	18	8x8	2,400	160	Horizontal	94-A-110-S1
HD008S-P	18	8x8	2,400	160	Horizontal	94-A-109-S1
HD009N-P	18	8×8	1,500	90	Horizontal	93-A-158-S4
HD009S-P	18	8×8	1,500	90	Horizontal	93-A-157-S4

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☒ **No** ☐

Required for HD008CE1, HD008CE2, HD009CE1, HD009CE2

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: HD010A-P through HD019B-P (Feed Bins)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity lb/hr	Control Equipment*	DNR Construction Permit
HD010A-P	HD010a-U	F-0415A J-line Feed Bin	Polyethylene Powder	45,000 lb/hr	HD010CE2	18-A-054
HD010B-P				45,000 lb/hr	HD010CE3	18-A-055
HD011A-P	HD011a-U	F-0415B J-line Feed Bin		45,000 lb/hr	HD011CE2	18-A-056
HD011B-P				45,000 lb/hr	HD011CE3	18-A-057
HD012A-P	HD012a-U	F-0421A A-line Feed Bin		45,000 lb/hr	HD012CE2	18-A-058
HD012B-P				45,000 lb/hr	HD012CE3	18-A-059
HD013A-P	HD013a-U	F-0421B B-line Feed Bin		45,000 lb/hr	HD013CE2	18-A-060
HD013B-P				45,000 lb/hr	HD013CE3	18-A-061
HD014A-P	HD014a-U	F-0422A A-line Feed Bin		45,000 lb/hr	HD014CE2	18-A-062
HD014B-P				45,000 lb/hr	HD014CE3	18-A-063
HD015A-P	HD015a-U	F-0422B B-line Feed Bin		45,000 lb/hr	HD015CE2	18-A-064
HD015B-P				45,000 lb/hr	HD015CE3	18-A-065
HD018-P	HD018-U	F-0462 F-line Feed Bin		65,000 lb/hr	HD018CE2	89-A-065-S2
HD018B-P				45,000 lb/hr	HD018CE3	18-A-066
HD019-P	HD019-U	F-0463 F-line Feed Bin		45,000 lb/hr	HD019CE2	07-A-1190-S1
HD019B-P				45,000 lb/hr	HD019CE3	18-A-067

* Bin Vent Filters

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified below.

EP	EU	Opacity(1)	PM	PM_{10}	Authority for Requirement
HD010A-P	HD010a-U	40%	0.14 lb/hr, 0.1 gr/dscf	0.14 lb/hr	DNR Construction Permit 18-A-054 567 IAC 23.3(2)"a" 567 IAC 23.3(2)"d"
HD010B-P	HD010a-U	40%	0.01 lb/hr, 0.1 gr/dscf	0.01 lb/hr	DNR Construction Permit 18-A-055 567 IAC 23.3(2)"a" 567 IAC 23.3(2)"d"
HD011A-P	HD011a-U	40%	0.14 lb/hr, 0.1 gr/dscf	0.14 lb/hr	DNR Construction Permit 18-A-056 567 IAC 23.3(2)"a" 567 IAC 23.3(2)"d"
HD011B-P	HD011a-U	40%	0.01 lb/hr, 0.1 gr/dscf	0.01 lb/hr	DNR Construction Permit 18-A-057 567 IAC 23.3(2)"a" 567 IAC 23.3(2)"d"
HD012A-P	HD012a-U	40%	0.14 lb/hr, 0.1 gr/dscf	0.14 lb/hr	DNR Construction Permit 18-A-058 567 IAC 23.3(2)"a" 567 IAC 23.3(2)"d"
HD012B-P	HD012a-U	40%	0.01 lb/hr, 0.1 gr/dscf	0.01 lb/hr	DNR Construction Permit 18-A-059 567 IAC 23.3(2)"a" 567 IAC 23.3(2)"d"
HD013A-P	HD013a-U	40%	0.14 lb/hr, 0.1 gr/dscf	0.14 lb/hr	DNR Construction Permit 18-A-060 567 IAC 23.3(2)"a" 567 IAC 23.3(2)"d"

EP	EU	Opacity[(1)]	PM	PM_{10}	Authority for Requirement
HD013B-P	HD013a-U	40%	0.01 lb/hr, 0.1 gr/dscf	0.01 lb/hr	DNR Construction Permit 18-A-061 567 IAC 23.3(2)"a" 567 IAC 23.3(2)"d"
HD014A-P	HD014a-U	40%	0.14 lb/hr, 0.1 gr/dscf	0.14 lb/hr	DNR Construction Permit 18-A-062 567 IAC 23.3(2)"a" 567 IAC 23.3(2)"d"
HD014B-P	HD014a-U	40%	0.01 lb/hr, 0.1 gr/dscf	0.01 lb/hr	DNR Construction Permit 18-A-063 567 IAC 23.3(2)"a" 567 IAC 23.3(2)"d"
HD015A-P	HD015a-U	40%	0.14 lb/hr, 0.1 gr/dscf	0.14 lb/hr	DNR Construction Permit 18-A-064 567 IAC 23.3(2)"a" 567 IAC 23.3(2)"d"
HD015B-P	HD015a-U	40%	0.01 lb/hr, 0.1 gr/dscf	0.01 lb/hr	DNR Construction Permit 18-A-065 567 IAC 23.3(2)"a" 567 IAC 23.3(2)"d"
HD018-P	HD018-U	40%	1.49 lb/hr, 0.1 gr/dscf	0.15 lb/hr	DNR Construction Permit 89-A-065-S2 567 IAC 23.3(2)"a" 567 IAC 23.3(2)"d"
HD018B-P	HD018-U	40%	0.01 lb/hr, 0.1 gr/dscf	0.01 lb/hr	DNR Construction Permit 18-A-066 567 IAC 23.3(2)"a" 567 IAC 23.3(2)"d"
HD019-P	HD019-U	40%	1.49 lb/hr, 0.1 gr/dscf	0.15 lb/hr	DNR Construction Permit 07-A-1190-S1 567 IAC 23.3(2)"a" 567 IAC 23.3(2)"d"
HD019B-P	HD019-U	40%	0.01 lb/hr, 0.1 gr/dscf	0.01 lb/hr	DNR Construction Permit 18-A-067 567 IAC 23.3(2)"a" 567 IAC 23.3(2)"d"

[(1)] An exceedance of the indicator opacity of "10%" will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Operational Limits & Recordkeeping Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Unless specified by a federal regulation, all records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner.

HD010-P through HD015-P, HD018B-P, and HD019B-P

1. The facility shall maintain a log of all maintenance and inspection activities performed on each piece of control equipment. This log shall include, but is not limited to:
   A. The date and time any inspection and/or maintenance was performed on the emission unit and/or control equipment;
   B. Any issue(s) identified during the inspection and the date each issue(s) was resolved; and,
   C. Any issue(s) addressed during the maintenance activities and the date each issue(s) was resolved.

Authority for Requirement: Refer to DNR Construction Permits included in the Associated Equipment List above.

HD018-P, HD018B-P, HD019-P, and HD019B-P only

1. The facility shall follow the applicable standards of NSPS Subpart DDD, 40 CFR 60.560 through 60.566.

Authority for Requirement DNR Construction Permits 89-A-065-S2, 18-A-066, 07-A-1190-S1, and 18-A-067
567 IAC 23.1(2)"mmm"
40 CFR 60 Subpart DDD

HD018-P and HD019-P only

1. The maximum amount of HDPE processed through emission units, HD018-U and HD019-U, combined shall not exceed 223,000,000 pounds per twelve month rolling period.
2. The facility shall record the amount of HDPE processed through emission units, HD018-U and HD019-U, on a monthly basis, and calculate and record the twelve month rolling total for each month of operation
3. The owner or operator shall inspect and maintain the control equipment (Filter Recievers HD018CE2 & HD019CE2) according to the facility's (Plant No. 23-01-004) operation and maintenance plan.
   A. The owner or operator shall keep a log of all maintenance and inspection activities performed on the control equipment. This log shall include, but is not limited to:
      i. The date and time any inspection and/or maintenance was performed on the control equipment;
      ii. Any issues identified during the inspection;
      iii. Any issues addressed during the maintenance activities; and,
      iv. Identification of the staff member performing the maintenance or inspection.

Authority for Requirement: DNR Construction Permits 89-A-065-S2 and 07-A-1190-S1

Emission Point Characteristics

These emission points shall conform to the specifications listed below.

EP	Stack Height (ft, above ground)	Stack Opening (inches)	Exhaust Flow Rate (scfm)	Exhaust Temp.(°F)	Discharge Type	Con. Permit
HD010A-P	121	8	1600	120 (maximum)	Horizontal	18-A-054
HD010B-P	112	3	75	120 (maximum)	Horizontal	18-A-055
HD011A-P	112	8	1600	120 (maximum)	Horizontal	18-A-056
HD011B-P	112	3	75	120 (maximum)	Horizontal	18-A-057
HD012A-P	121	8	1600	120 (maximum)	Horizontal	18-A-058
HD012B-P	103	3	75	120 (maximum)	Horizontal	18-A-059
HD013A-P	121	8	1600	120 (maximum)	Horizontal	18-A-060
HD013B-P	103	3	75	120 (maximum)	Horizontal	18-A-061
HD014A-P	112	8	1600	120 (maximum)	Horizontal	18-A-062
HD014B-P	103	3	75	120 (maximum)	Horizontal	18-A-063
HD015A-P	112	8	1600	120 (maximum)	Horizontal	18-A-064
HD015B-P	103	3	75	120 (maximum)	Horizontal	18-A-065
HD018-P	105	10 x 30	1,550	Ambient	Downward	89-A-065-S2
HD018B-P	93	3	75	120 (maximum)	Horizontal	18-A-066
HD019-P	105	10 x 30	1,550	Ambient	Downward	07-A-1190-S1
HD019B-P	93	3	75	120 (maximum)	Horizontal	18-A-067

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☒ **No** ☐

Required for HD010CE2, HD011CE2, HD012CE2, HD013CE2, HD014CE2, HD015CE2

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☒ **No** ☐

Required for HD018CE2, HD019CE2,

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.

The data pertaining to the plan shall be maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: HD020-P

Associated Equipment

Emission Unit vented through this Emission Point: HD020-U
Emission Unit Description: F-0918 PF-4 Surge Hopper
Raw Material/Fuel: Polyethylene Powder
Rated Capacity: 35,000 lb/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%[(1)]
Authority for Requirement: DNR Construction Permit 07-A-1182-S3
567 IAC 23.3(2) "a"

[(1)]An exceedance of the indicator opacity of "10%" will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM)
Emission Limit(s): 1.75 lb/hr
Authority for Requirement: DNR Construction Permit 07-A-1182-S3

Pollutant: Particulate Matter (PM_{10})
Emission Limit(s): 0.10 lb/hr
Authority for Requirement: DNR Construction Permit 07-A-1182-S3

Pollutant: Volatile Organic Compounds (VOC)
Emission Limit(s): 2,047 lb/MMlb[(2)]
Authority for Requirement: DNR Construction Permit 07-A-1182-S3
[(2)] Emission limit units are in pounds of VOC per million pounds of polymer processed. This emission limit is sum of the emission rates for EP HD009N-P or EP HD009S-P and EP HD020-P.

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits
1. The maximum amount of High Density Polyethylene (HDPE) produced on this line shall not exceed 35,000 pounds per hour (lb/hr). For purposes of determining the production rate of this line (PF-4 Reactor), the facility shall track production through the PF-4 Surge Hopper (EP HD020-P).
2. The maximum amount of High Density Polyethylene (HDPE) produced on this line shall not exceed 286,900,000 pounds twelve-month rolling period. For purposes of determining the production rate of this line (PF-4 Reactor), the facility shall track production through the PF-4 Surge Hopper (EP HD020-P).

Reporting and Recordkeeping
All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

1. The facility shall record the date and the amount of HDPE produced on this line (PF-4 Reactor) on an hourly basis for that day.
2. For the purposes of determining the hourly production rate, the facility (plant number 23-01-004) may record the following:
   A. The date;
   B. The amount of material produced during the day;
   C. The hours of operation for the process line; and,
   D. Divide the production for the day by the hours of operation for the day.
3. The facility shall calculate and record the total amount of HDPE produced on this line (PF-4 Reactor) per month (in pounds); and,
4. The facility shall monthly calculate and record the 12-month rolling total amount of HDPE produced on this line (PF-4 Reactor).

Authority for Requirement: DNR Construction Permit 07-A-1182-S3

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 8
Stack Opening, (inches, dia.): 8
Exhaust Flow Rate (scfm): 65
Exhaust Temperature (°F): 135
Discharge Style: Unobstructed Vertical
Authority for Requirement: DNR Construction Permit 07-A-1182-S3

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: HD021-P and HD038-P (Recycle Compressors)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity	DNR Construction Permit
HD021-P	HD021-U	J-0303A PF-1 Recycle Compressor	Isobutane	410,681 gal/hr	None
HD022-P	HD022-U	J-0303B PF-1 Recycle Compressor	Isobutane	410,681 gal/hr	None
HD027-P	HD027-U	J-0603 PF-2/3 Recycle Compressor	Isobutane	407,090 gal/hr	None
HD028-P	HD028-U	J-0604 PF-2/3 Recycle Compressor	Isobutane	407,090 gal/hr	None
HD029-P	HD029-U	J-0605 PF-2/3 Recycle Compressor	Isobutane	407,090 gal/hr	None
HD033-P	HD033-U	J-0623 IC4 Recovery Compressor	Isobutane	86,176 gal/hr	None
HD036-P	HD036-U	J-0908A PF-4 Recycle Compressor	Isobutane	62.2 MMgal/hr	None
HD037-P	HD037-U	J-0908B PF-4 Recycle Compressor	Isobutane	62.2 MMgal/hr	None
HD038-P	HD038-U	J-0908C PF-4 Recycle Compressor	Isobutane	62.2 MMgal/hr	None

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from these emission points shall not exceed the levels specified below.

Emission limits are not required at this time.

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirement listed below.

Operational limits are not required at this time.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: HD039-P through HD042-P (Reactor Pumps)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity MMgal/hr	DNR Construction Permit
HD039-P	HD039-U	J-0301 PF-1 Reactor Pump	Isobutane, Ethylene	1.404	None
HD040-P	HD040-U	J-0601 PF-3 Reactor Pump	Isobutane, Ethylene	1.404	None
HD041-P	HD041-U	J-0602 PF-2 Reactor Pump	Isobutane, Ethylene	1.404	None
HD042-P	HD042-U	J-0903 PF-4 Reactor Pump	Isobutane, Ethylene	2.034	None

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from these emission points shall not exceed the levels specified below.

Emission limits are not required at this time.

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required at this time.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: HD044-P, HD145-P, HD180-P, HD045-P, HD146-P, HD181-P, HD117-P, HD178-P, HD182-P (Purge Conveyor)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity	DNR Construction Permit
HD044-P	HD044-U	L-0603 PF-3 Purge Conveyor	Purge Gas	175 lb/hr	None
HD145-P		L-0603 PF-3 Purge Conveyor RD	Purge Gas		None
HD180-P		L-0603 PF-3 Purge Conveyor Fugitive	Puge Gas	1 equp-leak-hr/hr	None
HD045-P	HD045-U	L-0604 PF-2 Purge Conveyor	Purge Gas	182 lb/hr	None
HD146-P		L-0604 PF-2 Purge Conveyor RD	Purge Gas		None
HD181-P		L-0604 PF-2 Purge Conveyor Fugitive	Purge Gas	1 equp-leak-hr/hr	None
HD117-P	HD117-U	L-0918 PF-4 Purge Conveyor	Purge Gas	534 lb/hr	None
HD178-P		L-0918 PF-4 Purge Conveyor RD	Purge Gas		None
HD182-P		L-0918 PF-4 Purge Conveyor Fugitive	Purge Gas	1 equp-leak-hr/hr	None

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from these emission points shall not exceed the levels specified below.

Emission limits are not required at this time.

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required at this time.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: HD047-P and HD048-P (Surge Bins)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity lb/hr	DNR Construction Permit
HD047-P	HD047-U	Fugitive Emission: VF-0432A PF-3 Surge Bin	Polyethylene Powder	14,000	None
HD048-P	HD048-U	Fugitive Emission: VF-0432B PF-2 Surge Bin	Polyethylene Powder	14,000	None

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from these emission points shall not exceed the levels specified below.

Emission limits are not required at this time.

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required at this time.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: HD049A-P and HD049C-P (Catalyst Activators)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	EU Description	Raw Material	Rated Capacity lb/hr	Control Equipment	DNR Construction Permit
HD049A-P	HD049A-U	D0307 Gas1 Catalyst Activator	Catalyst	13.80	HD049CE1 Baghouse	03-A-1013-S1
HD049C-P	HD049C-U	D0310 Electric Catalyst Activator	Catalyst	15	HD049CE2 Baghouse	08-A-442-S1

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from these emission points shall not exceed the levels specified below.

HD049A-P:
Pollutant: Opacity
Emission Limit(s): 40%(1)
Authority for Requirement: DNR Construction Permit 03-A-1013-S1
567 IAC 23. 3(2) "d"
(1) An exceedance of the indicator opacity of 10% will require the owner or operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the Department may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr/dscf
Authority for Requirement: DNR Construction Permit 03-A-1013-S1
567 IAC 23. 3(2) "a"

HD049C-P:
Pollutant: Opacity
Emission Limit(s): 40%(1)
Authority for Requirement: DNR Construction Permit 08-A-442-S1
567 IAC 23.3(2) "d"
(1)An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.02 lb/hr; 0.1 gr/dscf
Authority for Requirement: DNR Construction Permit 08-A-442-S1
567 IAC 23.3(2) "a"

Pollutant: VOC
Emission Limit(s): 13.14 ton/yr
Authority for Requirement: DNR Construction Permit 08-A-442-S1

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Control equipment parameters:
1. The control equipment shall be inspected and maintained according to the manufacture's operation and maintenance plan.

Reporting & Record keeping:
Records shall be kept on site for at least five years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner.

1. The owner or operator shall keep records of control equipment inspections and maintenance.

Authority for Requirement: DNR Construction Permit 03-A-1013-S1 & 08-A-442-S1

Emission Point Characteristics
Each emission point shall conform to the specifications listed below.

Stack Height, (ft, from ground): 20
Stack Opening (diameter, inches): 3
Exhaust Flow Rate (scfm): 60
Exhaust Temperature (°F): 150
Discharge Style: Horizontal
Authority for Requirement: DNR Construction Permit 03-A-1013-S1 and 08-A-442-S1

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: HD050A-P and HD050B-P (Dust Collector)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity lb/hr	Control Equipment	DNR Construction Permit
HD050A-P	HD050A1-U	L0420A Mixer	Polyethylene Powder	9,000	HD050ACE1: Baghouse	19-A-054
	HD050A2-U	V0426A Batch Weigh Scale	Polyethylene Powder	9,000		
HD050B-P	HD050B1-U	L0420B Mixer	Polyethylene Powder	9,000	HD050BCE1: Baghouse	19-A-055
	HD050B2-U	V0426B Batch Weigh Scale	Polyethylene Powder	9,000		

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from each emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%[(1)]
Authority for Requirement: DNR Construction Permits 19-A-054 & 19-A-055
567 IAC 23. 3(2) "d"

[(1)] An exceedance of the indicator opacity of 10% will require the owner or operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the Department may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr/dscf
Authority for Requirement: DNR Construction Permits 19-A-054 & 19-A-055
567 IAC 23. 3(2) "a"

Operational Limits & Recordkeeping Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Unless specified by a federal regulation, all records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner.

The operating requirements and associated recordkeeping for this permit shall be:

1. The owner or operator shall inspect and maintain the control equipment (HD050ACE1 and HD050BCE1) according to the facility's (Plant No. 23-01-004) operation and maintenance plan.
   A. The owner or operator shall keep a log of all maintenance and inspection activities performed on the control equipment. This log shall include, but is not limited to:
      i. The date and time any inspection and/or maintenance was performed on the control equipment;

ii. Any issues identified during the inspection;
iii. Any issues addressed during the maintenance activities; and,
iv. Identification of the staff member performing the maintenance or inspection.

Authority for Requirement: DNR Construction Permits 19-A-054 and 19-A-055

Emission Point Characteristics

Each emission point shall conform to the specifications listed below.

Stack Height, (ft, from ground): 62
Stack Opening (diameter, inches): 8
Exhaust Flow Rate (scfm): 1050
Exhaust Temperature (°F): 70
Discharge Style: Horizontal
Authority for Requirement: DNR Construction Permit 19-A-054 and 19-A-055

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☒ **No** ☐

Required for for HD050ACE1 & HD050BCE1

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: HD050C-P and HD050D-P

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity lb/hr	Control Equipment	DNR Construction Permit
HD050C-P	HD050C-U	L-0470 F Line Conveyor & Dust Collector	Polyethylene Powder	30,000	HD050CCE1: Baghouse	89-A-070-S2
HD050D-P	HD050D-U	L-0410 J-Line Dust Collector	Polyethylene Powder	31,500	HD050DCE1: Baghouse	03-A-1014-S1

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified below.

EP	EU	Opacity	PM	PM_{10}	Authority of Requirement
HD050C-P	HD050C-U	40%(1)	0.324 lb/hr 0.1 gr/dscf	0.03 lb/hr	567 IAC 23.3(2) "d" 567 IAC 23.3(2)"a"
HD050D-P	HD050D-U	40%(1)	0.1 gr/dscf	NA	567 IAC 23.3(2) "d" 567 IAC 23.3(2)"a"

(1) An exceedance of the indicator opacity of "10%" will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Operational Limits & Recordkeeping Requirements

Unless specified by a federal regulation, all records as required by this permit shall be kept on-site for a minimum of five(5) years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner.

HD050C-P:

1. The facility shall follow the applicable standards of NSPS Subpart DDD, 40 CFR 60.560 through 60.566.
2. The owner or operator shall inspect and maintain the control equipment (HD050-CE) according to the facility's (Plant No. 23-01-004) operation and maintenance plan.
   A. The owner or operator shall keep a log of all maintenance and inspection activities performed on the control equipment. This log shall include, but is not limited to:
      i. The date and time any inspection and/or maintenance was performed on the control equipment;
      ii. Any issues identified during the inspection;
      iii. Any issues addressed during the maintenance activities; and,
      iv. Identification of the staff member performing the maintenance or inspection.

Authority for Requirement: DNR Construction Permit 89-A-070-S2
567 IAC 23.1(2) "mmm"
40 CFR 60 Subpart DDD

HD050D-P:

1. The maximum amount of High Density Polyethylene (HDPE) produced on this line shall not exceed 31,500 pounds per hour.
2. The facility shall follow the applicable standards of NSPS Subpart DDD, 40 CFR 60.560 through 60.566.
3. The facility shall record on a daily basis, the amount of HDPE produced on this line on an hourly basis. For purposes of determining the hourly production rate the facility may record the amount of material produced during a calendar day and divide by the number of hours the process line was in operation.
4. Retain manufacturer/vendor provided information (i.e., Safety Data Sheets (SDS), technical data sheets, etc.) of all materials used in the affected operations.
5. The facility shall keep records as required in NSPS Subpart DDD, 40 CFR 60.560 through 60.566.

Authority for Requirement: DNR Construction Permit 89-A-070-S2
567 IAC 23.1(2) "mmm"
40 CFR 60 Subpart DDD

Emission Point Characteristics

These emission points shall conform to the specifications listed below.

Stack Characteristics	**HD050C-P**	**HD050D-P**
Stack Height, (ft, from the ground)	27	22
Stack Opening (diameter, inches)	10	6
Exhaust Flow Rate (scfm)	120	120
Exhaust Temperature (°F)	150	200
Discharge Style	Horizontal	Horizontal
Authority for Requirement:	DNR Construction Permit 89-A-070-S2	DNR Construction Permit 03-A-1014-S1

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☒ **No** ☐

Required for HD050DCE1

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☒ **No** ☐

Required for HD050CCE1

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.

The data pertaining to the plan shall be maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: HD051-P

Associated Equipment

Emission Unit vented through this Emission Point: HD051-U
Emission Unit Description: J-1402 Additive Vacuum System
Raw Material/Fuel: Additives
Rated Capacity: 160 lb/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%[(1)]
Authority for Requirement: DNR Construction Permit 03-A-1015-S1
567 IAC 23.3(2) "d"

[(1)]An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr/dscf
Authority for Requirement: DNR Construction Permit 03-A-1015-S1
567 IAC 23.3(2) "a"

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Reporting and Recordkeeping
All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

1. The facility shall follow the applicable standards of NSPS Subpart DDD, 40 CFR 60.560 through 60.566.

Authority for Requirement: DNR Construction Permit 03-A-1015-S1
567 IAC 23.1(2)"mmm"
40 CFR 60 Subpart DDDD

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 7
Stack Opening, (inches, dia.): 4
Exhaust Flow Rate (scfm): 220
Exhaust Temperature (°F): 150
Discharge Style: Horizontal
Authority for Requirement: DNR Construction Permit 03-A-1015-S1

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: HD052-P through HD071-P (Storage Bins)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity lb/hr	Control Equipment	DNR Construction Permit
HD052-P	HD052-U	F-0402A PF Storage Bin	Polyethylene Powder	30,000	HD052CE1 Cyclone	None
HD053-P	HD053-U	F-0402B PF Storage Bin	Polyethylene Powder	30,000	HD053CE1 Baghouse	10-A-379-S1
HD054-P	HD054-U	F-0402C PF Storage Bin	Polyethylene Powder	30,000	HD054CE1 Baghouse	10-A-380-S1
HD055-P	HD055-U	F-0402D PF Storage Bin	Polyethylene Powder	30,000	HD055CE1 Baghouse	10-A-381-S1
HD056-P	HD056-U	F-0402E PF Storage Bin	Polyethylene Powder	30,000	HD056CE1 Baghouse	10-A-382-S1
HD057-P	HD057-U	F-0432A PF Storage Bin	Polyethylene Powder	30,000	HD057CE1 Cyclone	None
HD058-P	HD058-U	F-0432B PF Storage Bin	Polyethylene Powder	30,000	HD058CE1 Cyclone	None
HD059-P	HD059-U	F-0432C PF Storage Bin	Polyethylene Powder	30,000	HD059CE1 Cyclone	None
HD060-P	HD060-U	F-0432D PF Storage Bin	Polyethylene Powder	30,000	HD060CE1 Cyclone	None
HD061-P	HD061-U	F-0432E PF Storage Bin	Polyethylene Powder	30,000	HD061CE1 Cyclone	None
HD062-P	HD062-U	F-0412A PF Storage Bin	Polyethylene Powder	30,000	HD062CE1 Cyclone	10-A-383-S2
HD063-P	HD063-U	F-0412B PF Storage Bin	Polyethylene Powder	30,000	HD063CE1 Cyclone	10-A-384-S2
HD064-P	HD064-U	F-0412C PF Storage Bin	Polyethylene Powder	30,000	HD064CE1 Cyclone	10-A-385-S2
HD065-P	HD065-U	F-0412D PF Storage Bin	Polyethylene Powder	30,000	HD065CE1 Cyclone	10-A-386-S2
HD066-P	HD066-U	F-0412E PF Storage Bin	Polyethylene Powder	30,000	HD066CE1 Cyclone	10-A-387-S2
HD067-P	HD067-U	F-0412F PF Storage Bin	Polyethylene Powder	30,000	HD067CE1 Cyclone	78-A-074
HD068-P	HD068-U	F-0412G PF Storage Bin	Polyethylene Powder	30,000	HD068CE1 Cyclone	78-A-074
HD069-P	HD069-U	F-0412H PF Storage Bin	Polyethylene Powder	30,000	HD069CE1 Baghouse	10-A-388-S1
HD070-P	HD070-U	F-0412J PF Storage Bin	Polyethylene Powder	30,000	HD070CE1 Baghouse	10-A-389-S1
HD071-P	HD071-U	F-0412K PF Storage Bin	Polyethylene Powder	30,000	HD071CE1 Cyclone	10-A-390-S2

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified below.

EP	EU	Opacity	PM	PM10	VOC	Authority of Requirement
HD052-P	HD052-U	40%	25.16 lb/hr[3]	None	None	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a"
HD053-P	HD053-U	40%[1]	0.13 lb/hr 0.1 gr/dscf	0.039 lb/hr	0.32 lb/hr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 10-A-379-S1
HD054-P	HD054-U	40%[1]	0.13 lb/hr 0.1 gr/dscf	0.039 lb/hr	0.32 lb/hr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 10-A-380-S1
HD055-P	HD055-U	40%[1]	0.13 lb/hr 0.1 gr/dscf	0.039 lb/hr	0.32 lb/hr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 10-A-381-S1
HD056-P	HD056-U	40%[1]	0.13 lb/hr 0.1 gr/dscf	0.039 lb/hr	0.32 lb/hr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 10-A-382-S1
HD057-P	HD057-U	40%	25.16 lb/hr[3]	None	None	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a"
HD058-P	HD058-U	40%	25.16 lb/hr[3]	None	None	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a"
HD059-P	HD059-U	40%	25.16 lb/hr[3]	None	None	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a"
HD060-P	HD060-U	40%	25.16 lb/hr[3]	None	None	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a"
HD061-P	HD061-U	40%	25.16 lb/hr[3]	None	None	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a"
HD062-P	HD062-U	40%[2]	25.2 lb/hr	3.30 lb/hr	None	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 10-A-383-S2
HD063-P	HD063-U	40%[2]	25.2 lb/hr	3.30 lb/hr	None	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 10-A-384-S2
HD064-P	HD064-U	40%[2]	25.2 lb/hr	3.30 lb/hr	None	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 10-A-385-S2
HD065-P	HD065-U	40%[2]	25.2 lb/hr	3.30 lb/hr	None	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 10-A-386-S2
HD066-P	HD066-U	40%[2]	25.2 lb/hr	3.30 lb/hr	None	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 10-A-387-S2
HD067-P	HD067-U	40%	25.16 lb/hr[3]	None	None	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a"

EP	EU	Opacity	PM	PM10	VOC	Authority of Requirement
						DNR Construction Permit 78-A-074
HD068-P	HD068-U	40%	25.16 lb/hr[3]	None	None	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 78-A-074
HD069-P	HD069-U	40%[1]	0.13 lb/hr 0.1 gr/dscf	0.039 lb/hr	0.32 lb/hr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 10-A-388-S1
HD070-P	HD070-U	40%[1]	0.13 lb/hr 0.1 gr/dscf	0.039 lb/hr	0.32 lb/hr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 10-A-389-S1
HD071-P	HD071-U	40%[2]	25.2 lb/hr	3.30 lb/hr	None	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 10-A-390-S2

[1] An exceedance of the indicator opacity of *"no visible emissions (No VE)"* will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

[2] An exceedance of the indicator opacity of 25% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

[3] PM emission limit of 25.16 lb/hr was based on the process weights for these units using the formulas in 567 IAC 23.3(2) "a" (2).

Operational Limits & Recordkeeping Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits

HD053-P, HD054-P, HD055-P, HD056-P, HD069-P, HD070-P:

Operating limits for this emission unit shall be:

1. There shall not be more than four (4) transfer blowers for filling the storage silos.
2. The control equipment shall be maintained per manufacturer's recommendations

HD062-P, HD063-P, HD064-P, HD065-P, HD066-P, HD071-P:

Operating limits for this emission unit shall be:

1. No more than two (2) storage silos shall be used for emission units HD062-U through HD066-U and HD071-U at one time. These total transfer time of these emission units shall not exceed 8,727 hours per twelve (12) month rolling period.
2. The control equipment shall be maintained per manufacturer's recommendations.

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

HD053-P, HD054-P, HD055-P, HD056-P, HD065-P, HD066-P, HD069-P, HD070-P:

1. The owner or operator shall keep a record of the number of transfer blowers that fill the storage bins.
2. The owner or operator shall keep records of all maintenance conducted on the control equipment.

HD062-P, HD063-P, HD064-P, HD065-P, HD066-P, HD071-P:

1. The owner or operator shall keep a record of the number of transfer blowers that fill the storage bins.
2. The owner or operator shall record on a monthly basis the total transfer time for emission units HD062-U through HD066-U and HD071-U. In addition, the owner or operator shall calculate and record the rolling twelve (12) month totals.
3. The owner or operator shall keep records of all maintenance conducted on the control equipment.

Authority for Requirement: Refer to DNR Construction Permits included in the Associated Equipment List above.

Emission Point Characteristics

These emission points shall conform to the specifications listed below.

Emission Point	Stack Height, (ft, from the ground)	Stack Opening (in)	Exhaust Flow Rate (scfm)	Exhaust Temperature (°F)	Discharge Style	DNR Construction Permit
HD053-P	44	10×14	1,500	100	Horizontal	10-A-379-S1
HD054-P	44	10×14	1,500	100	Horizontal	10-A-380-S1
HD055-P	44	10×14	1,500	100	Horizontal	10-A-381-S1
HD056-P	44	10×14	1,500	100	Horizontal	10-A-382-S1
HD062-P	44	10×14	1,500	100	Horizontal	10-A-383-S2
HD063-P	44	8 (dia.)	1,500	100	Horizontal	10-A-384-S2
HD064-P	44	8 (dia.)	1,500	100	Horizontal	10-A-385-S2
HD065-P	44	8 (dia.)	1,500	100	Horizontal	10-A-386-S2
HD066-P	44	8 (dia.)	1,500	100	Horizontal	10-A-387-S2
HD069-P	44	10×14	1,500	100	Horizontal	10-A-388-S1
HD070-P	44	10×14	1,500	100	Horizontal	10-A-389-S1
HD071-P	44	8 (dia.)	1,500	100	Horizontal	10-A-390-S2

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☒ **No** ☐

Facility O&M plans are required for all baghouses and cyclones.

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.

The data pertaining to the plan shall be maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: HD072-P and HD073-P (Storage/Feed Bins)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	EU Description	Raw Material	Rated Capacity	Control Equipment	DNR Construction Permit
HD072-P	HD072-U	F-0404A Plexar Storage/Feed Bin	Polyethylene Powder	500 lb/hr	HD072CE1 Cyclone	80-A-075
HD073-P	HD073-U	F-0404B Plexar Storage/Feed Bin	Polyethylene Powder	500 lb/hr	HD073CE1 Cyclone	80-A-076
HD074-P	HD074-U	F-0404C Plexar Rundown Bin	Polyethylene Powder	500 lb/hr	NA	None

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from each emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%
Authority for Requirement: 567 IAC 23.3(2) "d"

Pollutant: Particulate Matter (PM)
Emission Limit(s): 1.62 lb/hr [(1)]
Authority for Requirement: 567 IAC 23.3(2) "a"
[(1)] PM emission limit of 1.62 lb/hr was based on the process weights for these units using the formulas in 567 IAC 23.3(2) "a"(2).

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required at this time.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: HD075-P through HD091-P (Pellet Blenders)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	EU Description	Raw Material	Rated Capacity lb/hr	DNR Construction Permit
HD075-P	HD075-U	F-0444A Pellet Blender	Polyethylene Pellets	9,000	None
HD076-P	HD076-U	F-0444B Pellet Blender	Polyethylene Pellets	9,000	None
HD077-P	HD077-U	F-0444C Pellet Blender	Polyethylene Pellets	30,000	89-A-068-S3
HD078-P	HD078-U	F-0444D Pellet Blender	Polyethylene Pellets	30,000	07-A-1191-S2
HD079-P	HD079-U	F-0444E Pellet Blender	Polyethylene Pellets	30,000	07-A-1192-S2
HD080-P	HD080-U	F-0444F Pellet Blender	Polyethylene Pellets	30,000	07-A-1193-S2
HD081-P	HD081-U	F-0441A Pellet Blender	Polyethylene Pellets	9,000	None
HD082-P	HD082-U	F-0441B Pellet Blender	Polyethylene Pellets	9,000	None
HD083-P	HD083-U	F-0445 Pellet Blender	Polyethylene Pellets	9,000	None
HD084-P	HD084-U	F-0437A Pellet Blender	Polyethylene Pellets	31,500	89-A-067-S3
HD085-P	HD085-U	F-0437B Pellet Blender	Polyethylene Pellets	31,500	07-A-1183-S2
HD086-P	HD086-U	F-0437C Pellet Blender	Polyethylene Pellets	31,500	07-A-1184-S2
HD087-P	HD087-U	F-0437D Pellet Blender	Polyethylene Pellets	31,500	07-A-1185-S2
HD088-P	HD088-U	F-0437E Pellet Blender	Polyethylene Pellets	31,500	07-A-1186-S2
HD089-P	HD089-U	F-0437F Pellet Blender	Polyethylene Pellets	31,500	07-A-1187-S2
HD090-P	HD090-U	F-0437G Pellet Blender	Polyethylene Pellets	31,500	07-A-1188-S2
HD091-P	HD091-U	F-0437H Pellet Blender	Polyethylene Pellets	31,500	07-A-1189-S2

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified below.

EP	EU	Opacity	PM	PM10	VOC	Authority of Requirement
HD075-P	HD075-U	40%	11.23 lb/hr(3)	NA	NA	567 IAC 23.3 (2) "d" 567 IAC 23.3(2)"a"(2)
HD076-P	HD076-U	40%	11.23 lb/hr(3)	NA	NA	567 IAC 23.3 (2) "d" 567 IAC 23.3(2)"a"(2)
HD077-P	HD077-U	40%(1)	2.19 lb/hr	0.06 lb/hr	NA	567 IAC 23.3 (2) "d" 567 IAC 23.3 (2) "a"(2) DNR Construction Permit 89-A-068-S3
HD078-P	HD078-U	40%(1)	2.19 lb/hr	0.06 lb/hr	NA	567 IAC 23.3 (2) "d" 567 IAC 23.3 (2) "a"(2) DNR Construction Permit 07-A-1191-S2
HD079-P	HD079-U	40%(1)	2.19 lb/hr	0.06 lb/hr	NA	567 IAC 23.3 (2) "d" 567 IAC 23.3 (2) "a"(2) DNR Construction Permit 07-A-1192-S2
HD080-P	HD080-U	40%(1)	2.19 lb/hr	0.06 lb/hr	NA	567 IAC 23.3 (2) "d" 567 IAC 23.3 (2) "a"(2) DNR Construction Permit 07-A-1193-S2

EP	EU	Opacity	PM	PM10	VOC	Authority of Requirement
HD081-P	HD081-U	40%	11.23 lb/hr[3]	NA	NA	567 IAC 23.3 (2) "d" 567 IAC 23.3(2)"a"(2)
HD082-P	HD082-U	40%	11.23 lb/hr[3]	NA	NA	567 IAC 23.3 (2) "d" 567 IAC 23.3(2)"a"(2)
HD083-P	HD083-U	40%	11.23 lb/hr[3]	NA	NA	567 IAC 23.3 (2) "d" 567 IAC 23.3(2)"a"(2)
HD084-P	HD084-U	40%[2]	2.71 lb/hr	0.080 lb/hr	$1.3x10^{-6}$ lb/lb	567 IAC 23.3 (2) "d" 567 IAC 23.3 (2) "a"(2) DNR Construction Permit 89-A-067-S3
HD085-P	HD085-U	40%[2]	2.71 lb/hr	0.080 lb/hr	$1.3x10^{-6}$ lb/lb	567 IAC 23.3 (2) "d" 567 IAC 23.3 (2) "a"(2) DNR Construction Permit 07-A-1183-S2
HD086-P	HD086-U	40%[2]	2.71 lb/hr	0.080 lb/hr	$1.3x10^{-6}$ lb/lb	567 IAC 23.3 (2) "d" 567 IAC 23.3 (2) "a"(2) DNR Construction Permit 07-A-1184-S2
HD087-P	HD087-U	40%[2]	2.71 lb/hr	0.080 lb/hr	$1.3x10^{-6}$ lb/lb	567 IAC 23.3 (2) "d" 567 IAC 23.3 (2) "a"(2) DNR Construction Permit 07-A-1185-S2
HD088-P	HD088-U	40%[2]	2.71 lb/hr	0.080 lb/hr	$1.3x10^{-6}$ lb/lb	567 IAC 23.3 (2) "d" 567 IAC 23.3 (2) "a"(2) DNR Construction Permit 07-A-1186-S2
HD089-P	HD089-U	40%[2]	2.71 lb/hr	0.080 lb/hr	$1.3x10^{-6}$ lb/lb	567 IAC 23.3 (2) "d" 567 IAC 23.3 (2) "a"(2) DNR Construction Permit 07-A-1187-S2
HD090-P	HD090-U	40%[2]	2.71 lb/hr	0.080 lb/hr	$1.3x10^{-6}$ lb/lb	567 IAC 23.3 (2) "d" 567 IAC 23.3 (2) "a"(2) DNR Construction Permit 07-A-1188-S2
HD091-P	HD091-U	40%[2]	2.71 lb/hr	0.080 lb/hr	$1.3x10^{-6}$ lb/lb	567 IAC 23.3 (2) "d" 567 IAC 23.3 (2) "a"(2) DNR Construction Permit 07-A-1189-S2

[1]An exceedance of the indicator opacity of "25%" will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).
[2]An exceedance of the indicator opacity of "10%" will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).
[3]PM emission limit of 11.23 lb/hr was based on the process weights for these units using the formulas in 567 IAC 23.3(2) "a" (2).

Operational Limits & Recordkeeping Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits

HD075-P, HD076-P, HD081-P, HD082-P, and HD083-P:

Operating limits are not required at this time.

HD084-P through HD091-P:

1. The maximum amount of High Density Polyethylene (HDPE) produced on this line shall not exceed 31,500 pounds per hour (lb/hr). For purposes of determining the production rate of this line, the facility shall track production through the J-line Spin Dryer (EP HD122-P).

Authority for Requirement: Refer to DNR Construction Permits included in the Associated Equipment table above.

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

HD075-P, HD076-P, HD081-P, HD082-P, and HD083-P:

Operating limits are not required at this time.

HD077-P, HD078-P, HD079-P, and HD080-P:

1. The facility shall follow the applicable standards of NSPS Subpart DDD, 40 CFR 60.560 through 60.566.

Authority for Requirement: Refer to DNR Construction Permits included in the Associated Equipment table above.
567 IAC 23.1(2)"mmm"
40 CFR 60 Subpart DDD

HD084-P through HD091-P:

1. The date and the amount of HDPE produced on this line on an hourly basis for the day. For purposes of determining the hourly production rate, the facility (plant number 23-01-004) may record:
   A. The date,
   B. The amount of material produced during the day,
   C. The hours of operation for the process line, and
   D. Divide the production for the day by the hours of operation for the day.

Authority for Requirement: Refer to DNR Construction Permits included in the Associated Equipment table above.

Emission Point Characteristics

These emission points shall conform to the specifications listed below.

Emission Point	Stack Height, (ft, from the ground)	Stack Opening (inches)	Exhaust Flow Rate (scfm)	Exhaust Temperature (°F)	Discharge Style	DNR Construction Permit
HD077-P	76	16x15	1,500	100	Horizontal	89-A-068-S3
HD078-P	76	16x15	1,500	100	Horizontal	07-A-1191-S2
HD079-P	76	16x15	1,500	100	Horizontal	07-A-1192-S2
HD080-P	76	16x15	1,500	100	Horizontal	07-A-1193-S2
HD084-P	76	10 (dia)	1,500	100	Downward	89-A-067-S3
HD085-P	76	10 (dia)	1,500	100	Downward	07-A-1183-S2
HD086-P	76	10 (dia)	1,500	100	Downward	07-A-1184-S2
HD087-P	76	10 (dia)	1,500	100	Downward	07-A-1185-S2
HD088-P	76	10 (dia)	1,500	100	Downward	07-A-1186-S2
HD089-P	76	10 (dia)	1,500	100	Downward	07-A-1187-S2
HD090-P	76	10 (dia)	1,500	100	Downward	07-A-1188-S2
HD091-P	76	10 (dia)	1,500	100	Downward	07-A-1189-S2

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: HD092-P through HD103-P (Pellet Storage Bins and Silo)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	EU Description	Raw Material	Rated Capacity lb/hr	DNR Construction Permit
HD092-P	HD092-U	F-0443A Pellet Storage Bin	Polyethylene Pellet	60,000	None
HD093-P	HD093-U	F-0443B Pellet Storage Bin	Polyethylene Pellet	60,000	None
HD094-P	HD094-U	F-0443C Pellet Storage Bin	Polyethylene Pellet	60,000	None
HD095-P	HD095-U	F-0443D Pellet Storage Bin	Polyethylene Pellet	60,000	None
HD096-P	HD096-U	F-0443E Pellet Storage Bin	Polyethylene Pellet	60,000	None
HD097-P	HD097-U	F-0443F Pellet Storage Bin	Polyethylene Pellet	60,000	None
HD098-P	HD098-U	F-0443G Pellet Storage Bin	Polyethylene Pellet	60,000	None
HD099-P	HD099-U	F-0443H Pellet Storage Bin	Polyethylene Pellet	60,000	None
HD100-P	HD100-U	F-0443J Pellet Storage Bin	Polyethylene Pellet	60,000	None
HD101-P	HD101-U	F-0443K Pellet Storage Bin	Polyethylene Pellet	60,000	None
HD102-P	HD102-U	F-0443L Pellet Storage Bin	Polyethylene Pellet	60,000	None
HD103-P	HD103-U	F-0443M Pellet Blending Silo	Polyethylene Pellet	60,000	None

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from each emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%
Authority for Requirement: 567 IAC 23.3(2) "d"

Pollutant: Particulate Matter (PM)
Emission Limit(s): 40.04 lb/hr [(1)]
Authority for Requirement: 567 IAC 23.3(2)"a"(2)
[(1)] PM emission limit of 40.04lb/hr was based on the process weights for these units using the formulas in 567 IAC 23.3(2) "a" (2).

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required at this time.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: HD104-P through HD107-P (Divert Quad Bin)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity lb/hr	DNR Construction Permit
HD104-P	HD104-U	F-0447A Divert Quad Bin	Polyethylene Pellet	31,500	None
HD105-P	HD105-U	F-0447B Divert Quad Bin	Polyethylene Pellet	31,500	None
HD106-P	HD106-U	F-0447C Divert Quad Bin	Polyethylene Pellet	31,500	None
HD107-P	HD107-U	F-0447D Divert Quad Bin	Polyethylene Pellet	31,500	None
HD109-P	HD109-U	F-0438A Divert Quad Bin	Polyethylene Pellets	31,500	None
HD110-P	HD110-U	F-0438B Divert Quad Bin	Polyethylene Pellets	31,500	None
HD111-P	HD111-U	F-0438C Divert Quad Bin	Polyethylene Pellets	31,500	None
HD112-P	HD112-U	F-0438D Divert Quad Bin	Polyethylene Pellets	31,500	None
HD113-P	HD113-U	F-0442A Divert Quad Bin	Polyethylene Pellets	31,500	None
HD114-P	HD114-U	F-0442B Divert Quad Bin	Polyethylene Pellets	31,500	None
HD115-P	HD115-U	F-0442C Divert Quad Bin	Polyethylene Pellets	31,500	None
HD116-P	HD116-U	F-0442D Divert Quad Bin	Polyethylene Pellets	31,500	None

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from each emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%
Authority for Requirement: 567 IAC 23.3(2) "d"

Pollutant: Particulate Matter (PM)
Emission Limit(s): 26.00 lb/hr
Authority for Requirement: 567 IAC 23.3(2)"a"(2)
(1) PM emission limit was based on the process weights for these units using the formulas in 567 IAC 23.3(2) "a"

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required at this time.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: HD108-P

Associated Equipment

Emission Unit vented through this Emission Point: HD108-U
Emission Unit Description: High Density Polyethylene Fugitive
Raw Material/Fuel: Isobutane
Rated Capacity: 8760 hr/yr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Emission limits are not required at this time.

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required at this time.

NSPS and NESHAP Applicability
This emission point is subject to 40 CFR 63 Subpart FFFF – National Emission Standards for Hazardous Air Pollutants for Miscellaneous Organic Chemical Manufacturing
Authority for Requirement: 567 IAC 23.1(3)"cf"
40 CFR 63 Subpart FFFF

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: HD118-P

Associated Equipment

Emission Unit vented through this Emission Point: HD118-U
Emission Unit Description: F-0425 Plexar Maleic Anhydride Tank
Raw Material/Fuel: Unreacted Monomer
Rated Capacity: 7043 lb/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Emission limits are not required at this time.

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required at this time.

NSPS and NESHAP Applicability
This emission point is subject to 40 CFR 63 Subpart FFFF – National Emission Standards for Hazardous Air Pollutants for Miscellaneous Organic Chemical Manufacturing
Authority for Requirement: 567 IAC 23.1(3)"cf"
40 CFR 63 Subpart FFFF

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbersa: HD119-P through HD125-P (Dryers)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	EU Description	Raw Material	Rated Capacity lb/hr	DNR Construction Permit
HD119-P	HD119-U	L-0428A A-line Pellet Dryer	Polyethylene Pellets	9,000	None
HD120-P	HD120-U	L-0428B B-line Pellet Dryer	Polyethylene Pellets	9,000	None
HD121-P	HD121-U	L-1409 F-line Spin Dryer	Polyethylene Pellets	30,000	89-A-066-S3
HD122-P	HD122-U	L-0413 J-line Spin Dryer	Polyethylene Pellets	31,500	89-A-069-S3
HD123-P	HD123-U	L-0406A Plexar Graft Dryer	Polyethylene Pellets	500	None
HD124-P	HD124-U	L-0477 D-line Pellet Dryer	Polyethylene Pellets	7,000	None
HD125-P	HD125-U	L-0487 E-line Pellet Dryer	Polyethylene Pellets	7,000	None

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified below.

EP	EU	Opacity	PM	PM10	VOC	Authority of Requirement
HD119-P	HD119-U	40%	11.23 lb/hr(2)	NA	NA	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a"(2)
HD120-P	HD120-U	40%	11.23 lb/hr(2)	NA	NA	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a"(2)
HD121-P	HD121-U	40%(1)	2.19 lb/hr 0.1 gr/dscf	0.64 lb/hr	NA	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 89-A-066-S3
HD122-P	HD122-U	40%(1)	2.19 lb/hr	0.64 lb/hr	1.551×10^{-5} lb/lb	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 89-A-069-S3
HD123-P	HD123-U	40%	1.62 lb/hr(2)	NA	NA	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a"(2)
HD124-P	HD124-U	40%	9.49 lb/hr(2)	NA	NA	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a"(2)
HD125-P	HD125-U	40%	9.49 lb/hr(2)	NA	NA	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a"(2)

(1) An exceedance of the indicator opacity of "10%" will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).
(2) PM emission limits of 11.23 lb/hr, 1.62 lb/hr, and 9.49 lb/hr were based on the process weights for these units using the formulas in 567 IAC 23.3(2) "a" (2).

Operational Limits & Recordkeeping Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits

HD119-P, HD120-P, HD123-P, HD124-P, and HD125-P:

Operating limits are not required at this time.

HD122-P:

1. The maximum amount of High Density Polyethylene (HDPE) produced on this line shall not exceed 31,500 pounds per hour (lb/hr). For purposes of determining the production rate of this line, the facility shall track production through the J-line Spin Dryer (EP HD122-P).

Authority for Requirement: DNR Construction Permit 89-A-069-S3

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

HD119-P, HD120-P, HD123-P, HD124-P, and HD125-P:

Report and recordkeeping are not required at this time.

HD121-P:

1. The facility shall follow the applicable standards of NSPS Subpart DDD, 40 CFR 60.560 through 60.566.

Authority for Requirement: DNR Construction Permit 89-A-066-S3
567 IAC 23.1(2)"mmm"
40 CFR 60 Subpart DDD

HD122-P:

1. The date and the amount of HDPE produced on this line on an hourly basis for the day. For purposes of determining the hourly production rate, the facility (plant number 23-01-004) may record:
   A. The date,
   B. The amount of material produced during the day,
   C. The hours of operation for the process line, and
   D. Divide the production for the day by the hours of operation for the day.

Authority for Requirement: DNR Construction Permit 89-A-069-S3

Emission Point Characteristics

These emission points shall conform to the specifications listed below.

Stack Characteristics	HD121-P	HD122-P
Stack Height, (ft, from the ground)	50	40
Stack Opening (diameter, inches)	12	20
Exhaust Flow Rate (scfm)	2,050	1,200
Exhaust Temperature (°F)	160	140
Discharge Style	Horizontal	Vertical Unobstructed
Authority for Requirement:	DNR Construction Permit 89-A-066-S3	DNR Construction Permit 89-A-069-S3

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: HD126-P through HD129-P (Feed Bins)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity lb/hr	DNR Construction Permit
HD126-P	HD126-U	F-0455 E-Line Feed Bin	Polyethylene Pellets	7,000	None
HD127-P	HD127-U	F-0456 E-Line Feed Bin	Polyethylene Pellets	7,000	None
HD128-P	HD128-U	F-0464 D-Line Feed Bin	Polyethylene Pellets	7,000	None
HD129-P	HD129-U	F-0465 D-Line Feed Bin	Polyethylene Pellets	7,000	None

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from each emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%
Authority for Requirement: 567 IAC 23.3(2) "d"

Pollutant: Particulate Matter (PM)
Emission Limit(s): 9.49 lb/hr [(1)]
Authority for Requirement: 567 IAC 23.3(2)"a"(2)
[(1)] PM emission limit of 9.49lb/hr was based on the process weights for these units using the formulas in 567 IAC 23.3(2)"a"(2).

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required at this time.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: HD130-P and HD132-P (Additive Bins)

Associated Equipment

EP=Emission Point, EU=Emission Unit, CE=Control Equipment

EP	EU	EU Description	Raw Material	Rated Capacity lb/hr	CE	DNR Construction Permit
HD130A-P	HD130-U	F-0498 E-Line Feed Bin	Polyethylene Pellets, Additives	7,000	HD130CE1 Cyclone	03-A-1016
HD130B-P			Polyethylene Pellets, Additives		None	03-A-1017
HD132A-P	HD132-U	F-0497 D-Line Feed Bin	Polyethylene Pellets, Additives	7,000	HD132CE1 Cyclone	03-A-1018
HD132B-P			Polyethylene Pellets, Additives		None	03-A-1019

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified below.

EP	EU	Opacity	PM	PM10	Authority of Requirement
HD130A-P	HD130-U	40%	1.2 lb/hr	0.1 lb/hr	567 IAC 23.3(2)"d" 567 IAC 23.3(2)"a" DNR Construction Permit 03-A-1016
HD130B-P		40%	1.2 lb/hr	0.1 lb/hr	567 IAC 23.3(2)"d" 567 IAC 23.3(2)"a" DNR Construction Permit 03-A-1017
HD132A-P	HD132-U	40%	1.2 lb/hr	0.1 lb/hr	567 IAC 23.3(2)"d" 567 IAC 23.3(2)"a" DNR Construction Permit 03-A-1018
HD132B-P		40%	1.2 lb/hr	0.1 lb/hr	567 IAC 23.3(2)"d" 567 IAC 23.3(2)"a" DNR Construction Permit 03-A-1019

Operational Limits & Recordkeeping Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required at this time.

Emission Point Characteristics

These emission points shall conform to the specifications listed below.

Emission Point	Stack Height (ft, from the ground)	Stack Opening (inch)	Exhaust Flow Rate (scfm)	Exhaust Temperature (°F)	Discharge Style	DNR Construction Permit
HD130A-P	100	6 (dia.)	360	115	Vertical Obstructed	03-A-1016
HD130B-P	100	16×16	360	115	Downward	03-A-1017
HD132A-P	100	6 (dia.)	360	115	Vertical Obstructed	03-A-1018
HD132B-P	100	16×16	360	115	Downward	03-A-1019

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: HD134-P

Associated Equipment

Emission Unit vented through this Emission Point: HD134-U
Emission Unit Description: L-400 Plexar Extruder
Raw Material/Fuel: Polyethylene
Rated Capacity: 500 lb/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%
Authority for Requirement: 567 IAC 23.3(2) "d"

Pollutant: Particulate Matter (PM)
Emission Limit(s): 1.62 lb/hr [(1)]
Authority for Requirement: 567 IAC 23.3(2) "a"
[(1)] PM emission limit of 1.62 lb/hr was based on the process weights for these units using the formulas in 567 IAC 23.3(2)"a"(2).

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required at this time.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: HD135-P (Quality Control Bin)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity	DNR Construction Permit
HD135-P	HD135A-U	F-0410A Quality Control Bin	Polyethylene Pellets	500 lb/hr	03-A-1020
	HD135B-U	F-0410B Quality Control Bin	Polyethylene Pellets	500 lb/hr	

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40% [(1)]
Authority for Requirement: DNR Construction Permit 03-A-1020
567 IAC 23.3(2) "d"

[(1)]An exceedance of the indicator opacity of 25% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr/dscf
Authority for Requirement: DNR Construction Permit 03-A-1020
567 IAC 23.3(2) "a"

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required at this time.

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 22
Stack Opening, (inches, dia.): 2
Exhaust Flow Rate (scfm): 330
Exhaust Temperature (°F): 120
Discharge Style: Horizontal
Authority for Requirement: DNR Construction Permit 03-A-1020

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: HD136-P

Associated Equipment

Emission Unit vented through this Emission Point: HD136-U
Emission Unit Description: F-0408 Plexar Weigh Hopper
Emissions Control Equipment ID Number: HD136CE1
Emissions Control Equipment Description: Cyclone
Raw Material/Fuel: Polyethylene Powder
Rated Capacity: 500 lb/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%
Authority for Requirement: 567 IAC 23.3(2) "d"

Pollutant: Particulate Matter (PM)
Emission Limit(s): 1.62 lb/hr [(1)]
Authority for Requirement: DNR Construction Permit 80-A-077
567 IAC 23.3(2)"a"

[(1)]PM emission limit of 1.62 lb/hr was based on the process weights for these units using the formulas in 567 IAC 23.3(2) "a" (2).

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required at this time.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: HD141-P through HD143-P (Activator Jacket Heater and Activator)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	EU Description	Raw Material	Rated Capacity	Control Equipment	DNR Construction Permit
HD141-P	HD141-U	DB-0910 Gas 2 (D-0910) Activator Jacket Heater	Nonsulfured Natural Gas	5 MMBtu/hr	None	99-A-422
HD142-P	HD142-U	F-0926 Gas 2 Activator	Catalyst	19.52 lb/hr	HD142CE1 Internal Filter	90-A-406-S4
HD143-P		L-0931 Gas 2 Activator	Catalyst	19.52 lb/hr	HD143CE1 Coalescing Filter	01-A-585

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified below.

EP	Opacity	PM	SO_2	VOC	Total HAP	Authority of Requirement
HD141-P	40%(1)	0.8 lb/MMBtu	500 ppmv	NA	NA	567 IAC 23.3 (2) "d" 567 IAC 23.3(2) "b" (1) 567 IAC 23.3 (3) "e" DNR Construction Permit 99-A-422
HD142-P	40%(2)	0.1 gr/dscf	NA	39.3 lb/hr(3)	9.4 lb/hr(3)	567 IAC 23.3 (2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 90-A-406-S4
HD143-P	40%(2)	0.1 gr/dscf	NA			567 IAC 23.3 (2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 01-A-585

(1) If an opacity of 25% or greater is observed other than at startup, shutdown or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.
(2) An exceedance of the indicator opacity of 25% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).
(3) Total over units that exhaust through stacks permitted as 90-A-406-S4 (HD142-P) and 01-A-585 (HD143-P).

Operational Limits & Recordkeeping Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits

HD141-P:

1. The source shall be limited to combusting natural gas only.

Authority for Requirement: DNR Construction Permit 99-A-422

HD142-P & HD143-P:

1. Catalysts processed shall have a maximum HAP content of 0.11 lb HAP/lb catalyst, and a maximum VOC content of 0.46 lb VOC/lb catalyst.
2. The source that vents through the stacks permitted as 90-A-406-S4 and 01-A-585 shall use no more than 171,000 lb catalyst per twelve-month rolling period.

Authority for Requirement: DNR Construction Permit 90-A-406-S4 and 01-A-585

HD142-P Only

1. HD142-P (90-A-406-S4) shall not be used for venting emissions when activating "wire and cable" catalysts.

Authority for Requirement: DNR Construction Permit 90-A-406-S4

HD143-P Only

1. Emissions from this source shall be vented through EP HD143-P (01-A-585) when activating any "wire and cable" catalysts.

Authority for Requirement: DNR Construction Permit 01-A-585

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

HD141-P:

Reporting and recordkeeping are not required at this time.

HD142-P and HD143-P:

1. The owner or operator shall keep a record of the amount of catalyst processed, and update the twelve-month rolling total on a monthly basis.
2. The owner or operator shall keep records of the type of catalysts used in the activator, which shall include information on the lbs VOC/lbs catalyst and the lbs HAP/lbs catalyst, along with information as to whether it is a "wire and cable" catalyst or not.
3. For each batch of catalyst activated, the owner or operator shall record the type of catalyst and the emission point it is vented through.

Authority for Requirement: DNR Construction Permit 90-A-406-S4 and 01-A-585

NSPS and NESHAP Applicability
HD141-U is subject to 40 CFR 63 Subpart DDDDD- National Emission Standards for Industrial, Commercial and Institutional Boilers and Process Heaters.
Authority for Requirement: 40 CFR 63 Subpart DDDDD

Emission Point Characteristics
These emission points shall conform to the specifications listed below.

Emission Point	Stack Height (ft, from the ground)	Stack Opening (dia. inch)	Exhaust Flow Rate (scfm)	Exhaust Temperature (°F)	Discharge Style	DNR Construction Permit
HD141-P	61.8	34.375	2,300	1,202	Horizontal	99-A-422
HD142-P	30	3	250	100	Obstructed Vertical	90-A-406-S4
HD143-P	29	4	250	100	Obstructed Vertical	01-A-585

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☒ **No** ☐
Required for HD142CE1 and HD143CE1

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.

The data pertaining to the plan shall be maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: HD149-P through HD165-P, HD176, and HD177 (Fugitives from Equipment Leaks)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	EU Description (Fugitives)	Raw Material	Rated Capacity Equip-Leak-hr/hr	DNR Construction Permit
HD149-P	HD149-U	L-301 PF-1 Dryer	Polyethylene Powder	4	None
HD150-P	HD150-U	L-602 PF-2 Dryer	Polyethylene Powder	4	None
HD151-P	HD151-U	L-601 PF-3 Dryer	Polyethylene Powder	4	None
HD152-P	HD152-U	L-0917 PF-4 Dryer	Polyethylene Powder	4	None
HD153-P	HD153-U	F-0303 PF-1 Slide Valves	Polyethylene Powder	2	None
HD154-P	HD154-U	F-602 PF-2 Slide Valves	Polyethylene Powder	2	None
HD155-P	HD155-U	F-0601 PF-3 Slide Valves	Polyethylene Powder	2	None
HD156-P	HD156-U	F-0909 PF-4 Slide Valves	Polyethylene Powder	2	None
HD157-P	HD157-U	L-0918 PF-4 Slide Valve	Polyethylene Powder	1	None
HD158-P	HD158-U	J-0330 PF-1 Purge Conveyor Blower	Polyethylene Powder	1	None
HD159-P	HD159-U	J-0628B PF-2 Purge Conveyor Blower	Polyethylene Powder	1	None
HD160-P	HD160-U	J-0628A PF-3 Purge Conveyor Blower	Polyethylene Powder	1	None
HD161-P	HD161-U	J-0906 PF-4 Purge Conveyor Blower	Polyethylene Powder	1	None
HD162-P	HD162-U	PF-1 Dryer V-ball valves	Polyethylene Powder	2	None
HD163-P	HD163-U	PF-2 Dryer V-ball valves	Polyethylene Powder	2	None
HD164-P	HD164-U	PF-3 Dryer V-ball valves	Polyethylene Powder	2	None
HD165-P	HD165-U	PF-4 Dryer V-ball valves	Polyethylene Powder	2	None
HD176-P	HD176-U	F-314 PF1, 2, 3 Dump Tanks Slide Value	Polyethylene Powder	1	None
HD177-P	HD177-U	F-915 PF4 Dump Tank Slide Valve	Polyethylene Powder	1	None

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified below.

Emission limits are not required at this time.

Operational Limits & Recordkeeping Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required at this time.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: HD166-P

Associated Equipment

Emission Unit vented through this Emission Point: HD166-U
Emission Unit Description: HDPE Vacuum System
Emissions Control Equipment ID Number: HD166CE1
Emissions Control Equipment Description: Pulse Jet Baghouse
Raw Material/Fuel: Polyethylene Powder
Rated Capacity: 30,000 lb/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%[(1)]
Authority for Requirement: DNR Construction Permit 11-A-290-S1
567 IAC 23.3(2)"d"

[(1)] An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.11 lb/hr, 0.1 gr/dscf
Authority for Requirement: DNR Construction Permit 11-A-290-S1
567 IAC 23.3(2)"a"

Pollutant: PM_{10}
Emission Limit(s): 0.11 lb/hr
Authority for Requirement: DNR Construction Permit 11-A-290-S1

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits:
Operating limits for this emission unit shall be:
1. The owner or operator shall inspect and maintain the control equipment according to manufacturer's specifications.
2. This unit is limited to a maximum of 2,000 hours per twelve month rolling period of operation.

Reporting and Recordkeeping:
All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

1. The owner or operator shall keep records of control equipment inspections and maintenance.
2. The owner or operator shall record the hours of operation of this unit, and update the twelve month rolling total on a monthly basis.

Authority for Requirement: DNR Construction Permit 11-A-290-S1

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 7
Stack Opening, (inches, dia.): 18
Exhaust Flow Rate (scfm): 1,225
Exhaust Temperature (°F): 70
Discharge Style: Vertical Unobstructed
Authority for Requirement: DNR Construction Permit 11-A-290-S1

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: HD167-P

Associated Equipment

Emission Unit vented through this Emission Point: HD167-U
Emission Unit Description: Maleic Anhydride Neutralization Tank 1,500 Gallons
Raw Material/Fuel: MAH
Rated Capacity: 150 gal/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%[(1)]
Authority for Requirement: DNR Construction Permit 11-A-557
567 IAC 23.3(2)"d"

[(1)] An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits:
Operating limits for this emission unit shall be:
1. The owner or operator shall follow the applicable limits in Subpart FFFF, 40 CFR 63.2430 through 63.2550.

Reporting and Recordkeeping:
All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.
1. The owner or operator shall follow the applicable notification, recordkeeping and reporting requirements of Subpart FFFF, 40 CFR 63.2515 through 63.2525.

Authority for Requirement: DNR Construction Permit 11-A-557
567 IAC 23.1(4)"cf"
40 CFR 63 Subpart FFFF

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 20
Stack Opening, (inches, dia.): 3
Exhaust Flow Rate (scfm): Natural Draft
Exhaust Temperature (°F): 140
Discharge Style: Horizontal
Authority for Requirement: DNR Construction Permit 11-A-557

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: HD168-P through HD175-P

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	EU Description	Raw Material	Rated Capacity lb/hr	Control Equipment	DNR Construction Permit
HD168-P	HD168-U	J1431-Powder Vacuum Blower	Polyethylene Powder	60,000	HD168CE1 Filter Receiver	None
HD171-P	HD171-U	J1401-Powder Vacuum Blower	Polyethylene Powder	60,000	HD171CE1 Filter Receiver	None
HD172-P	HD172-U	J0409-Powder Vacuum Blower	Polyethylene Powder	60,000	HD172CE1 Filter Receiver	None
HD173-P	HD173-U	J0406A-Pellet Vacuum Blower	Polyethylene Powder	60,000	HD173CE1 Filter Receiver	None
HD174-P	HD174-U	J0406B-Pellet Vacuum Blower	Polyethylene Powder	60,000	HD174CE1 Filter Receiver	None
HD175-P	HD175-U	J0406C-Pellet Vacuum Blower	Polyethylene Powder	60,000	HD175CE1 Filter Receiver	None

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from each emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%
Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr/dscf
Authority for Requirement: 567 IAC 23.3(2)"a"

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

There are no operational limits or recordkeeping requirements for these emission points at this time.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☒ **No** ☐

Required for HD168CE1, HD171CE1, HD172CE1, HD173CE1, HD174CE1, HD175CE1

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.

The data pertaining to the plan shall be maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: HD183-P

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	EU Description	Raw Material	Rated Capacity lb/hr	Control Equipment	DNR Construction Permit
HD183-P	HD183A-U	D301 PF1 Loop Reactor	Polyethylene Powder	25,000 lb/hr	HD183CE1 Bin Vent Filter	16-A-383
	HD183B-U	F303 PF1 Flash Tank	Polyethylene Powder	12'x12' tall with 60° cone bottom		
	HD183C-U	L0301 PF1 Dryer	Polyethylene Powder/ Process Gas	340,000 MMBtu/hr		
	HD183D-U	L0302 Purge Column	Polyethylene Powder	25,000 lb/hr		

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%(1)
Authority for Requirement: DNR Construction Permit 16-A-383
567 IAC 23.3(2)"d"

(1)An exceedance of the indicator opacity of no visible emissions will require the owner or operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the Department may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1gr/dscf
Authority for Requirement: DNR Construction Permit 16-A-383
567 IAC 23.3(2)"d"

Operational Limits & Recordkeeping Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Unless specified by a federal regulation, all records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner.

The operating requirements and associated recordkeeping for this permit shall be:

1. Per 567 IAC 33.3(18)"f"(1), prior to beginning actual construction of the project (Project Number 16-331) the owner or operator shall document and maintain a record of the following:
   A. A description of the project (Project Number 16-331),
   B. Identification of the emission unit(s) whose emissions of a regulated NSR pollutant could be affected by the project (Project Number 16-331), and
   C. A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions (BAE), the projected actual emissions (PAE), the amount of emissions excluded under paragraph "3" of the definition of "projected actual emissions" in subrule 33.3(1), an explanation describing why such amount was excluded, and any netting analysis if applicable.
2. Per 567 IAC 33.3(18)"f"(4), the owner or operator shall:
   A. Monitor the emission of any regulated NSR pollutant that could increase as a result of the project that is emitted by any emissions unit identified in the following list:

Emission Unit No.	Unit Description
HD001B-U	PF-1, PF-2, and PF-3 Analyzer House
HD002-U	C-0316 Gas1 (D-0307) Activator Jacket Heater
HD002-U	C-0316 Gas1(D-0307) Activator Jacket Heater
HD004-U	F-0401A PF-1 Rundown Bin
HD005-U	F-0401B PF-1 Rundown Bin
HD006-U	F-0401C PF-1 Rundown Bin
HD007-U	F-0401D PF-1 Rundown Bin
HD012-U	F-0421A A-line Feed Bin
HD014-U	F-0422A A-line Feed Bin
HD016-U	F-0423A A-line Feed Bin
HD021-U	J-0303A PF-1 Recycle Compressor
HD022-U	J-0303B PF-1 Recycle Compressor
HD021-U/HD022-U	J-303A/B PF-1 Recycle Compressors
HD029-U	PF-2/3 Recycle Compressors
HD033-U	J-0623 IC4 Recovery Compressor
HD033-U	J-0623 IC4 Recovery Compressor
HD039-U	J-0301 PF-1 Reactor Pump
HD049A-U	D0307 GAS1 Cataylst Activator
HD049C-U	D0310 Electric1 Cataylst Activator
HD050A-U	L-0426A A-Line Dust Collector
HD052-U	F-0402A PF Storage Bin

Emission Unit No.	Unit Description
HD092-U	F-0443A Pellet Storage Bin
HD093-U	F-0443B Pellet Storage Bin
HD094-U	F-0443C Pellet Storage Bin
HD095-U	F-0443D Pellet Storage Bin
HD096-U	F-0443E Pellet Storage Bin
HD097-U	F-0443F Pellet Storage Bin
HD098-U	F-0443G Pellet Storage Bin
HD099-U	F-0443H Pellet Storage Bin
HD100-U	F-0443J Pellet Storage Bin
HD101-U	F-0443K Pellet Storage Bin
HD102-U	F-0443L Pellet Storage Bin
HD103-U	F-0443M Pellet Blending Silo
HD104-U	F-0447A Divert Quad Bin
HD105-U	F-0447B Divert Quad Bin
HD106-U	F-0447C Divert Quad Bin
HD107-U	F-0447D Divert Quad Bin
HD108-U	High Density Fugitives
HD118-U	F-0425 Plexar Maleic Anhydride Tank
HD119-U	L-0428A A-line Pellet Dryer
HD123-U	L-0406A Plexar Graft Dryer
HD134-U	L-4001 Plexar Extruder

Emission Unit No.	Unit Description
HD053-U	F-0402B PF Storage Bin
HD054-U	F-0402C PF Storage Bin
HD055-U	F-0402D PF Storage Bin
HD056-U	F-0402E PF Storage Bin
HD057-U	F-0432A PF Storage Bin
HD058-U	F-0432B PF Storage Bin
HD059-U	F-0432C PF Storage Bin
HD060-U	F-0432D PF Storage Bin
HD061-U	F-0432E PF Storage Bin
HD062-U	F-0412A PF Storage Bin
HD063-U	F-0412B PF Storage Bin
HD064-U	F-0412C PF Storage Bin
HD065-U	F-0412D PF Storage Bin
HD066-U	F-0412E PF Storage Bin
HD067-U	F-0412F PF Storage Bin
HD068-U	F-0412G PF Storage Bin
HD069-U	F-0412H PF Storage Bin
HD070-U	F-0412J PF Storage Bin
HD071-U	F-0412K PF Storage Bin
HD072-U	F-0404A Plexar Storage/Feed Bin
HD073-U	F-0404B Plexar Storage/Feed Bin
HD074-U	F-0404C Plexar Rundown Bin
HD075-U	F-0444A Pellet Blender
HD076-U	F-0444B Pellet Blender
HD081-U	F-0441A Pellet Blender
HD082-U	F-0441B Pellet Blender
HD083-U	F-0445 Pellet Blender

Emission Unit No.	Unit Description
HD135A-U	F-0410A Quality Control Bin
HD135B-U	F-0410B Quality Control Bin
HD136-U	F-0408 Plexar Weigh Hopper
HD149-U	L-301 PF-1 Dryer
HD153-U	F-0303 PF-1 Slide Valves (2)
HD158-U	J-0330 PF-1Blower
HD162-U	KV33107AB PF-1 Dryer V-ball valves
HD169-U	J 408- Powder Vacuum Blower
HD170-U	J 418- Powder Vacuum Blower
HD171-U	J 1401- Powder Vacuum Blower
HD172-U	J 409- Powder Vacuum Blower
HD173-U	J406A- Pellet Vacuum Blower
HD174-U	J406B- Pellet Vacuum Blower
HD175-U	J406C- Pellet Vacuum Blower
HD176-U	F-314 PF1,2, 3 Dump Tanks Slide Valve
HD183A-U	D0301 PF1 Loop Reactor
HD183B-U	F303 PF1 Flash Tank
HD183C-U	L0301 PF1 Dryer
HD183-U	L 0302PF1 Purge Column
PP005-U	L-0501 HDPE Old Hopper Car Elutriator
PP008-U	L-0503 HDPE Old Hopper Car Scalperator
PP011-U	L-0502 HDPE New Hopper Car Elutriator
PP012-U	L-0509 HDPE New Hopper Car Scalperator
PP018-U	L-0528 HDPE North Powder Loading Dust Collector
PP019-U	L-0529 HDPE South Powder Loading Dust Collector
PP020-U	F-0504 HDPE North Powder Feed Bin
PP021-U	F-0505 HDPE South Powder Feed Bin

B. Calculate the annual emissions, in tons per year on a calendar-year basis, for a period of ten (10) years following resumption of regular operations and maintain a record of regular operations after the change.

3. Per 567 IAC 33.3(18)"f"(5), the owner or operator shall retain a written record containing the information required in Condition 1 and 2 of this permit for a period of ten (10) years after the project (Project Number 16-331) is completed.
4. Per 567 IAC 33.3(18)"g", the owner or operator shall make the information required to be documented and maintained pursuant to 567 IAC 33.3(18)"f" available for review upon request for inspection by the Department or the general public pursuant to the requirements for Title V operating permits contained in 567 IAC 22.107(6).
5. The owner or operator shall maintain onsite a copy of the most recent VOC performance test conducted on emission point HD183-P.
6. The owner or operator shall inspect and maintain the control equipment according to the manufacture's operation and maintenance plan.

7. The owner or operator shall keep records of all control equipment inspections and maintenance.

Authority for Requirement: DNR Construction Permit 16-A-383

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 10'9"
Stack Opening, (inches, dia.): 6
Exhaust Flow Rate (scfm): 100
Exhaust Temperature (°F): 140
Discharge Style: Horizontal
Authority for Requirement: DNR Construction Permit 16-A-383

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☒ **No** ☐

Required for HD183CE1.

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.

The data pertaining to the plan shall be maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: HD184A-P through HD-202P (Rundown Bins)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	EU Description	Raw Material	Rated Capacity	Control Equipment	DNR Construction Permit
HD184A-P	HD184-U	F-1442A PF-3 Rundown Bin	Polyethylene	10,800 ft^3	Filter Receiver (HD184CE1)	17-A-570
HD184B-P					Bin Vent Filters (HD184CE2)	17-A-571-S1
HD185A-P	HD185-U	F-1442B PF-3 Rundown Bin	Polyethylene	10,800 ft^3	Filter Receiver (HD185CE1)	17-A-572
HD185B-P					Bin Vent Filters (HD185CE2)	17-A-573-S1
HD186A-P	HD186-U	F-1442C PF-3 Rundown Bin	Polyethylene	10,800 ft^3	Filter Receiver (HD186CE1)	17-A-574
HD186B-P					Bin Vent Filters (HD186CE2)	17-A-575-S1
HD187A-P	HD187-U	F-1442D PF-2 Rundown Bin	Polyethylene	10,800 ft^3	Filter Receiver (HD187CE1)	17-A-576
HD187B-P					Bin Vent Filters (HD187CE2)	17-A-577-S1
HD188A-P	HD188-U	F-1442E PF-2 Rundown Bin	Polyethylene	10,800 ft^3	Filter Receiver (HD188CE1)	17-A-578
HD188B-P					Bin Vent Filters (HD188CE2)	17-A-579-S1
HD189A-P	HD189-U	F-1442F PF-2 Rundown Bin	Polyethylene	10,800 ft^3	Filter Receiver (HD189CE1)	17-A-580
HD189B-P					Bin Vent Filters (HD189CE2)	17-A-581-S1
HD190A-P	HD190-U	F-1442G PF-1/2/3 Rundown Bin	Polyethylene	10,800 ft^3	Filter Receiver (HD190CE1)	17-A-582
HD190B-P					Bin Vent Filters (HD190CE2)	17-A-583-S1
HD191A-P	HD191-U	F-1442H PF-1/2/3 Rundown Bin	Polyethylene	10,800 ft^3	Filter Receiver (HD191CE1)	17-A-584
HD191B-P					Bin Vent Filters (HD191CE2)	17-A-585-S1
HD192A-P	HD192-U	F-1442I PF-1/2/3 Rundown Bin	Polyethylene	10,800 ft^3	Filter Receiver (HD192CE1)	17-A-586
HD192B-P					Bin Vent Filters (HD192CE2)	17-A-587-S1
HD193A-P	HD193-U	F-1442J PF-1/2/3 Rundown Bin	Polyethylene	10,800 ft^3	Filter Receiver (HD193CE1)	17-A-588
HD193B-P					Bin Vent Filters (HD193CE2)	17-A-589-S1
HD194A-P	HD194-U	F-1442K PF-1/2/3 Rundown Bin	Polyethylene	10,800 ft^3	Filter Receiver (HD194CE1)	17-A-590
HD194B-P					Bin Vent Filters (HD194CE2)	17-A-591-S1

EP	EU	EU Description	Raw Material	Rated Capacity	Control Equipment	DNR Construction Permit
HD195A-P	HD195-U	F-1442L PF-1/2/3 Rundown Bin	Polyethylene	10,800 ft^3	Filter Receiver (HD195CE1)	17-A-592
HD195B-P					Bin Vent Filters (HD195CE2)	17-A-593-S1
HD196A-P	HD196-U	F-1442M PF-1 Rundown Bin	Polyethylene	10,800 ft^3	Filter Receiver (HD196CE1)	17-A-594
HD196B-P					Bin Vent Filters (HD196CE2)	17-A-595-S1
HD197A-P	HD197-U	F-1442N PF-1 Rundown Bin	Polyethylene	10,800 ft^3	Filter Receiver (HD197CE1)	17-A-596
HD197B-P					Bin Vent Filters (HD197CE2)	17-A-597-S1
HD198A-P	HD198-U	F-1442O PF-1 Rundown Bin	Polyethylene	10,800 ft^3	Filter Receiver (HD198CE1)	17-A-598
HD198B-P					Bin Vent Filters (HD198CE2)	17-A-599-S1
HD199A-P	HD199-U	F-1442P PF-1/2/3 Rundown Bin	Polyethylene	10,800 ft^3	Filter Receiver (HD199CE1)	17-A-600
HD199B-P					Bin Vent Filters (HD199CE2)	17-A-601-S1
HD200-P	HD200-U	J-1444A Powder Vacuum Blower	Polyethylene Powder	60,000 lb/hr	HD200CE1 Filter Receiver	17-A-602
HD201-P	HD201-U	J-1444B Powder Vacuum Blower	Polyethylene Powder	60,000 lb/hr	HD201CE1 Filter Receiver	17-A-603
HD202-P	HD202-U	J-1444C Powder Vacuum Blower	Polyethylene Powder	60,000 lb/hr	HD202CE1 Filter Receiver	17-A-604

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified below.

EP	EU	Opacity[2]	PM[3] lb/hr, gr/dscf	PM_{10} lb/hr	DNR Construction Permit
HD184A-P	HD184-U	40%[1]	0.05, 0.1	0.05	17-A-570
HD184B-P	HD184-U	40%[1]	0.01, 0.1	0.01	17-A-571-S1
HD185A-P	HD185-U	40%[1]	0.05, 0.1	0.05	17-A-572
HD185B-P	HD185-U	40%[1]	0.01, 0.1	0.01	17-A-573-S1
HD186A-P	HD186-U	40%[1]	0.05, 0.1	0.05	17-A-574
HD186B-P	HD186-U	40%[1]	0.01, 0.1	0.01	17-A-575-S1
HD187A-P	HD187-U	40%[1]	0.05, 0.1	0.05	17-A-576
HD187B-P	HD187-U	40%[1]	0.01, 0.1	0.01	17-A-577-S1
HD188A-P	HD188-U	40%[1]	0.05, 0.1	0.05	17-A-578
HD188B-P	HD188-U	40%[1]	0.01, 0.1	0.01	17-A-579-S1
HD189A-P	HD189-U	40%[1]	0.05, 0.1	0.05	17-A-580
HD189B-P	HD189-U	40%[1]	0.01, 0.1	0.01	17-A-581-S1
HD190A-P	HD190-U	40%[1]	0.05, 0.1	0.05	17-A-582
HD190B-P	HD190-U	40%[1]	0.01, 0.1	0.01	17-A-583-S1
HD191A-P	HD191-U	40%[1]	0.05, 0.1	0.05	17-A-584
HD191B-P	HD191-U	40%[1]	0.01, 0.1	0.01	17-A-585-S1
HD192A-P	HD192-U	40%[1]	0.05, 0.1	0.05	17-A-586
HD192B-P	HD192-U	40%[1]	0.01, 0.1	0.01	17-A-587-S1
HD193A-P	HD193-U	40%[1]	0.05, 0.1	0.05	17-A-588
HD193B-P	HD193-U	40%[1]	0.01, 0.1	0.01	17-A-589-S1
HD194A-P	HD194-U	40%[1]	0.05, 0.1	0.05	17-A-590
HD194B-P	HD194-U	40%[1]	0.01, 0.1	0.01	17-A-591-S1
HD195A-P	HD195-U	40%[1]	0.05, 0.1	0.05	17-A-592
HD195B-P	HD195-U	40%[1]	0.01, 0.1	0.01	17-A-593-S1
HD196A-P	HD196-U	40%[1]	0.05, 0.1	0.05	17-A-594
HD196B-P	HD196-U	40%[1]	0.01, 0.1	0.01	17-A-595-S1
HD197A-P	HD197-U	40%[1]	0.05, 0.1	0.05	17-A-596
HD197B-P	HD197-U	40%[1]	0.01, 0.1	0.01	17-A-597-S1
HD198A-P	HD198-U	40%[1]	0.05, 0.1	0.05	17-A-598
HD198B-P	HD198-U	40%[1]	0.01, 0.1	0.01	17-A-599-S1
HD199A-P	HD199-U	40%[1]	0.05, 0.1	0.05	17-A-600
HD199B-P	HD199-U	40%[1]	0.01, 0.1	0.01	17-A-601-S1
HD200-P	HD200-U	40%[1]	0.23, 0.1	0.23	17-A-602
HD201-P	HD201-U	40%[1]	0.23, 0.1	0.23	17-A-603
HD202-P	HD202-U	40%[1]	0.23, 0.1	0.23	17-A-604

[1] An exceedance of the indicator opacity of "10%" will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).
[2] Authority for Requirement: 567 IAC 23.3(2)"d"
[3] Authority for Requirement: 567 IAC 23.3(2)"a"

Operational Limits & Recordkeeping Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. Unless specified by a federal regulation, all records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner.

The facility shall maintain a log of all maintenance and inspection activities performed on the control equipment(1). This log shall include, but is not limited to:

A. The date and time any inspection and/or maintenance was performed on the emission unit and/or control equipment;
B. Any issue(s) identified during the inspection and the date each issue(s) was resolved; and,
C. Any issue(s) addressed during the maintenance activities and the date each issue(s) was resolved.

(1) Refer to Control Equipment included in the Associated Equipment List above.

Authority for Requirement: Refer to DNR Construction Permits included in the Associated Equipment table above.

Emission Point Characteristics

These emission points shall conform to the specifications listed below.

EP	Stack Height (ft, above ground)	Stack Opening (inches)	Exhaust Flow Rate (scfm)	Exhaust Temperature (°F)	Discharge Type	DNR Construction Permit
HD184A-P	110	6	567	Ambient	Horizontal	17-A-570
HD184B-P	102	3	100	Ambient	Horizontal	17-A-571-S1
HD185A-P	110	6	567	Ambient	Horizontal	17-A-572
HD185B-P	102	3	100	Ambient	Horizontal	17-A-573-S1
HD186A-P	110	6	567	Ambient	Horizontal	17-A-574
HD186B-P	102	3	100	Ambient	Horizontal	17-A-575-S1
HD187A-P	110	6	567	Ambient	Horizontal	17-A-576
HD187B-P	102	3	100	Ambient	Horizontal	17-A-577-S1
HD188A-P	110	6	567	Ambient	Horizontal	17-A-578
HD188B-P	102	3	100	Ambient	Horizontal	17-A-579-S1
HD189A-P	110	6	567	Ambient	Horizontal	17-A-580
HD189B-P	102	3	100	Ambient	Horizontal	17-A-581-S1
HD190A-P	110	6	567	Ambient	Horizontal	17-A-582
HD190B-P	102	3	100	Ambient	Horizontal	17-A-583-S1
HD191A-P	110	6	567	Ambient	Horizontal	17-A-584
HD191B-P	102	3	100	Ambient	Horizontal	17-A-585-S1
HD192A-P	110	6	567	Ambient	Horizontal	17-A-586
HD192B-P	102	3	100	Ambient	Horizontal	17-A-587-S1
HD193A-P	102	3	100	Ambient	Horizontal	17-A-588
HD193B-P	102	3	100	Ambient	Horizontal	17-A-589-S1
HD194A-P	102	3	100	Ambient	Horizontal	17-A-590
HD194B-P	102	3	100	Ambient	Horizontal	17-A-591-S1
HD195A-P	102	3	100	Ambient	Horizontal	17-A-592
HD195B-P	102	3	100	Ambient	Horizontal	17-A-593-S1
HD196A-P	102	3	100	Ambient	Horizontal	17-A-594
HD196B-P	102	3	100	Ambient	Horizontal	17-A-595-S1
HD197A-P	102	3	100	Ambient	Horizontal	17-A-596
HD197B-P	102	3	100	Ambient	Horizontal	17-A-597-S1
HD198A-P	110	6	567	Ambient	Horizontal	17-A-598
HD198B-P	102	3	100	Ambient	Horizontal	17-A-599-S1
HD199A-P	110	6	567	Ambient	Horizontal	17-A-600
HD199B-P	102	3	100	Ambient	Horizontal	17-A-601-S1
HD200-P	11	10	2640	Ambient	Horizontal	17-A-602
HD201-P	11	10	2640	Ambient	Horizontal	17-A-603
HD202-P	11	10	2640	Ambient	Horizontal	17-A-604

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

One representative stack test may be completed for all three units.

Stack Testing: HD200-P through HD202-P

Pollutant – PM
Stack Test to be Completed by (date) – 7/20/2025
Test Method - 40 CFR 60, Appendix A, Method 5
40 CFR 51 Appendix M Method 202
Authority for Requirement – 567IAC 22.108(3)

Pollutant –PM_{10}
Stack Test to be Completed by (date) – 7/20/2025
Test Method - 40 CFR 51, Appendix M, 201A with 202
Authority for Requirement – 567IAC 22.108(3)

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☒ **No** ☐

Required for HD200CE1, HD201CE1, and HD202CE1

Authority for Requirement: 567 IAC 22.108(3)

Part C. Low Density Polyethylene Product Lines

Emission Point ID Numbers: LD005-P through LD008-P (Reactors)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	EU Description	Raw Material	Rated Capacity	DNR Construction Permit
LD005E-P	LD005-U	D-0201 LD-1 Reactor (Depressure Emissions)	Ethylene	NA	97-A-807
LD005W-P		D-0201 LD-1 Reactor (Rupture Disc Emissions)	Ethylene	NA	97-A-808
LD006N-P	LD006-U	D-0702A LD-2A Reactor (North Rupture Disc Emissions)	Ethylene	NA	None
LD006S-P		D-0702A LD-2A Reactor (South Rupture Disc Emissions)	Ethylene	NA	None
LD006W-P		D-0702A LD-2A Reactor (Depressure Emissions)	Ethylene	NA	None
LD007N-P	LD007-U	D-0702B LD-2B Reactor (North Rupture Disc Emissions)	Ethylene	NA	None
LD007S-P		D-0702B LD-2B Reactor (South Rupture Disc Emissions)	Ethylene	NA	None
LD007W-P		D-0702B LD-2B Reactor (Depressure Emissions)	Ethylene	NA	None
LD008E-P	LD008-U	D-0801 LD-3 Reactor (East Rupture Disc Emissions)	Ethylene	22,500 lb/hr	97-A-647-S2
LD008S-P		D-0801 LD-3 Reactor (Depressure Emissions)	Ethylene	22,500 lb/hr	97-A-648-S2
LD008W-P		D-0801 LD-3 Reactor (West Rupture Disc Emissions)	Ethylene	22,500 lb/hr	97-A-649-S2

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified below.

EP	EU	Opacity	PM	PM10	VOC	Authority for Requirement
LD005E-P	LD005-U	NA	NA	NA	3.77 ton/yr	DNR Construction Permit 97-A-807
LD005W-P		40%	3.20 lb/hr.[3], 0.03 ton/yr	NA	0.7 ton/yr	567 IAC 23.3(2)"d" 567 IAC 23.3(2)"a"(2) DNR Construction Permit 97-A-808
LD006N-P	LD006-U	40%	1.34 lb/hr.[4]	NA	NA	567 IAC 23.3(2)"d" 567 IAC 23.3(2)"a"(2)
LD006S-P		40%	1.34 lb/hr.[4]	NA	NA	567 IAC 23.3(2)"d" 567 IAC 23.3(2)"a"(2)

EP	EU	Opacity	PM	PM10	VOC	Authority for Requirement
LD006W-P		NA	NA	NA	NA	NA
LD007N-P	LD007-U	40%	1.34 lb/hr.[4]	NA	NA	567 IAC 23.3(2)"d" 567 IAC 23.3(2)"a"(2)
LD007S-P		40%	1.34 lb/hr.[4]	NA	NA	567 IAC 23.3(2)"d" 567 IAC 23.3(2)"a"(2)
LD007W-P		NA	NA	NA	NA	NA
LD008E-P	LD008-U	40%[1]	47.5 lb/decomp	2.75 ton/yr.[2]	106.7 ton/yr.[2], 2.0 lb/ton of product[5]	567 IAC 23.3(2) "d" 567 IAC 23.3(2)"a" DNR Construction Permit 97-A-647-S2
LD008S-P		40%[1]	47.5 lb/decomp			567 IAC 23.3(2) "d" 567 IAC 23.3(2)"a" DNR Construction Permit 97-A-648-S2
LD008W-P		40%[1]	47.5 lb/decomp			567 IAC 23.3(2) "d" 567 IAC 23.3(2)"a"(2) DNR Construction Permit 97-A-649-S2

[1] An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).
[2] Limit for the total emissions from LD-3 Line.
[3] Based on process weight of 1,377 lb/hr.
[4] Based on process weight of 376 lb/hr.
[5] This limit does not apply to malfunction and emergency release.

Operational Limits & Recordkeeping Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits

LD005E-P through LD007W-P:

Operating limits are not required at this time.

LD008E-P, LD008S-P, and LD008W-P:

1. The amount of LDPE produced in the LD-3 line shall not exceed 197,100,000 pounds per 12-month rolling period.
2. Nitrogen shall be used to purge LD008S-P.

Authority for Requirement: DNR Construction Permits 97-A-647-S2, 97-A-648-S2, & 97-A-649-S2

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

LD005E-P through LD007W-P:

Reporting and recordkeeping are not required at this time.

LD008E-P, LD008S-P, and LD008W-P:

1. Record the amount of LDPE produced in the LD-3 line, in pounds. Calculate and record monthly and 12-month rolling totals.

Authority for Requirement: DNR Construction Permits 97-A-647-S2, 97-A-648-S2, & 97-A-649-S2
567 IAC 22.108 (4)

Emission Point Characteristics

These emission points shall conform to the specifications listed below.

Emission Point	Stack Height (ft, from the ground)	Stack Opening (dia. inch)	Exhaust Flow Rate	Exhaust Temperature (°F)	Discharge Style	DNR Construction Permit
LD005E-P	70	4	NA	Variable	NA	97-A-807
LD005W-P	75	24	63.6 acfm	-10	NA	97-A-808
LD008E-P	100	30	63.6 scfm	-10	Vertical Unobstructed	97-A-647-S2
LD008S-P	90	16	63.6 scfm	Variable	Vertical Unobstructed	97-A-648-S2
LD008W-P	100	30	64.0 scfm	-10	Vertical Unobstructed	97-A-649-S2

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: LD012-P

Associated Equipment

Emission Unit vented through this Emission Point: LD012-U
Emission Unit Description: F-0739 Tank
Raw Material/Fuel: Mineral Spirits
Rated Capacity: 46 Gal/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

There are no emission limits at this time.

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required at this time.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: LD013-P

Associated Equipment

Emission Unit vented through this Emission Point: LD013-U
Emission Unit Description: F-0751 VA Storage Tank
Raw Material/Fuel: Vinyl Acetate
Rated Capacity: 600 gal/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Emission limits are not required at this time.

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.
Operational limits are not required at this time.

NSPS and NESHAP Applicability
This emission point is subject to NESHAP Part 63 Subpart FFFF – National Emission Standards for Hazardous Air Pollutants for Miscellaneous Organic Chemical Manufacturing.
Authority for Requirement: 567 IAC 23.1(4)"cf"
40 CFR 63 Subpart FFFF

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: LD014-P through LD016-P (Spin Dryers)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	EU Description	Raw Material	Rated Capacity lb/hr	DNR Construction Permit
LD014-P	LD014-U	L-0207A LD-1 "A" Spin Dryer	Polyethylene Pellets	12,500	97-A-809-S2
LD015-P	LD015-U	L-0207B LD-1 "B" Spin Dryer	Polyethylene Pellets	12,500	97-A-810-S2
LD016-P	LD016-U	L-0210 LD-1 "C" Spin Dryer	Polyethylene Pellets	15,000	97-A-811-S3

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified below.

EP	EU	Opacity	PM	PM10	VOC	Authority of Requirement
LD014-P	LD014-U	40%(1)	1.1 lb/hr 5.0 ton/yr 0.1 gr/dscf	0.312 lb/hr 1.37 ton/yr	0.6 lb/hr 2.63 ton/yr	567 IAC 23.3 (2) "d" 567 IAC 23.3 (2) "a" DNR Construction Permit 97-A-809-S2
LD015-P	LD015-U	40%(1)	1.1 lb/hr 5.0 ton/yr 0.1 gr/dscf	0.312 lb/hr 1.37 ton/yr	0.6 lb/hr 2.63 ton/yr	567 IAC 23.3 (2) "d" 567 IAC 23.3 (2) "a" DNR Construction Permit 97-A-810-S2
LD016-P	LD016-U	40%(2)	1.1 lb/hr 0.1 gr/dscf	0.375 lb/hr	0.6 lb/hr	567 IAC 23.3 (2) "d" 567 IAC 23.3 (2) "a" DNR Construction Permit 97-A-811-S3

(1) An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

(2) An exceedance of the indicator opacity of *"no visible emissions (No VE)"* will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Operational Limits & Recordkeeping Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required at this time.

Emission Point Characteristics

These emission points shall conform to the specifications listed below.

Emission Point	Stack Height (ft, from the ground)	Stack Opening (inch)	Exhaust Flow Rate (scfm)	Exhaust Temperature (°F)	Discharge Style	DNR Construction Permit
LD014-P	25	8×10	2,901	88	Vertical Unobstructed	97-A-809-S2
LD015-P	25	8×10	2,901	88	Vertical Unobstructed	97-A-810-S2
LD016-P	25	8×10	3,400	88	Vertical Unobstructed	97-A-811-S3

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: LD017A-P through LD019-P (Bins and Spin Dryers)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	EU Description	Raw Material	Rated Capacity lb/hr	DNR Construction Permit
LD017A-P	LD017A-U	LD-2A Dewatering Bin	Polyethylene Pellets	9,000	94-A-137
LD017B-P	LD017B-U	L-0738A LD-2A Spin Dryer	Polyethylene Pellets	9,000	94-A-138-S2
LD018A-P	LD018A-U	LD-2B Dewatering Bin	Polyethylene Pellets	9,000	94-A-111
LD018B-P	LD018B-U	L-0738B LD-2B Spin Dryer	Polyethylene Pellets	9,000	94-A-112-S2
LD019-P	LD019-U	L-0838 LD-3 Dewatering Bin & Spin Dryer	Polyethylene Pellets	22,500	97-A-650-P4

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified below.

EP	EU	Opacity	PM	PM10	VOC	Authority of Requirement
LD017A-P	LD017A-U	40%	11.23 lb/hr	NA	0.3 lb/hr 1.3 ton/yr	567 IAC 23.3 (2) "d" 567 IAC 23.3 (2) "a"(2) DNR Construction Permit 94-A-137
LD017B-P	LD017B-U	40%(1)	1.84 lb/hr 0.1 gr/dscf	0.225 lb/hr	0.6 lb/hr	567 IAC 23.3 (2) "d" 567 IAC 23.3 (2) "a" DNR Construction Permit 94-A-138-S2
LD018A-P	LD018A-U	40%	11.23 lb/hr	NA	0.3 lb/hr 1.3 ton/yr	567 IAC 23.3 (2) "d" 567 IAC 23.3 (2) "a"(2) DNR Construction Permit 94-A-111
LD018B-P	LD018B-U	40%(1)	1.84 lb/hr 0.1 gr/dscf	0.225 lb/hr	0.6 lb/hr	567 IAC 23.3 (2) "d" 567 IAC 23.3 (2) "a" DNR Construction Permit 94-A-112-S2
LD019-P	LD019-U	40%(2)	1.47 lb/hr	2.75 ton/yr(3)	106.7 ton/yr(3) 98.55 ton/yr (BACT) 2.0 lb/ton of product(4)	567 IAC 23.3 (2) "d" 567 IAC 23.3 (2) "a" DNR Construction Permit 97-A-650-P4

(1) An exceedance of the indicator opacity of *"no visible emissions (No VE)"* will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

(2) An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).
(3) Limit for the total emissions from LD-3 Line.
(4) Does not apply to malfunctions and emergency releases.

Operational Limits & Recordkeeping Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits

LD017A-P through LD018B-P:

Operating limits are not required at this time.

LD019-P:

1. The amount of LDPE produced in the LD-3 line shall not exceed 197,100, 000 pounds per 12-month rolling period.

Authority for Requirement: DNR Construction Permit 97-A-650-P4

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

LD017A-P through LD018B-P:

Operating limits are not required at this time.

LD019-P:

1. Record the amount of LDPE produced in the LD-3 line, in pounds. Calculate and record monthly and 12-month rolling totals.

Authority for Requirement: DNR Construction Permit 97-A-650-P4

NSPS and NESHAP Applicability

LD017B-P and LD018B-P:

These emission units are subject to NESHAP Subpart FFFF – National Emission Standard for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing.

Authority for Requirement: DNR Construction Permit 94-A-138-S2, 94-S-112-S2
567 IAC 23.1(4)"cf"
40 CFR 63 Subpart FFFF

Emission Point Characteristics

These emission points shall conform to the specifications listed below.

Emission Point	Stack Height (ft, from the ground)	Stack Opening (dia. inch)	Exhaust Flow Rate (scfm)	Exhaust Temperature (°F)	Discharge Style	DNR Construction Permit
LD017A-P	32	7	250	85	NA*	94-A-137
LD017B-P	33	12	2,100	90	Vertical Unobstructed	94-A-138-S2
LD018A-P	32	7	250	85	NA*	94-A-111
LD018B-P	33	12	2,100	90	Vertical Unobstructed	94-A-112-S2
LD019-P	55	10	700	130	Vertical Unobstructed	97-A-650-P4

*The facility has identified this stack as downward.

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: LD020-P through LD025-P (F-451 Rundown Blenders)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity lb/hr	DNR Construction Permit
LD020-P	LD020-U	F-0451A LD-1 Rundown Blender	Polyethylene Pellets	38,400	97-A-812
LD021-P	LD021-U	F-0451B LD-1 Rundown Blender	Polyethylene Pellets	38,400	97-A-813
LD022-P	LD022-U	F-0451C LD-1 Rundown Blender	Polyethylene Pellets	38,400	97-A-814
LD023-P	LD023-U	F-0451D LD-1 Rundown Blender	Polyethylene Pellets	38,400	97-A-815
LD024-P	LD024-U	F-0451E LD-1 Rundown Blender	Polyethylene Pellets	38,400	97-A-816
LD025-P	LD025-U	F-0451F LD-1 Rundown Blender	Polyethylene Pellets	38,400	97-A-817

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from each emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%
Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: Particulate Matter
Emission Limit(s): 29.69 lb/hr.[(1)], 3.6 ton/yr.
Authority for Requirement: DNR Construction Permits 97-A-812, 97-A-813, 97-A-814, 97-A-815, 97-A-816, & 97-A-817
567C 23.3(2)"a"(2)

[(1)] PM emission limit of 29.69 lb/hr was based on the process weights for these units using the formulas in 567 IAC 23.3(2) "a" (2).

Pollutant: PM_{10}
Emission Limit(s): 0.3 tons/yr.
Authority for Requirement: DNR Construction Permits 97-A-812, 97-A-813, 97-A-814, 97-A-815, 97-A-816, & 97-A-817

Pollutant: Volatile Organic Compounds (VOC's)
Emission Limit(s): 21.9 ton/yr.
Authority for Requirement: DNR Construction Permits 97-A-812, 97-A-813, 97-A-814, 97-A-815, 97-A-816, & 97-A-817

Operational Limits & Recordkeeping Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required.

Emission Point Characteristics

Each emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 85
Stack Opening, (inches): 16 x 16
Exhaust Flow Rate (acfm): 3,000
Exhaust Temperature (°F): 115
Discharge Style: NA
Authority for Requirement: DNR Construction Permits 97-A-812, 97-A-813, 97-A-814, 97-A-815, 97-A-816, & 97-A-817

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: LD026-P through LD034-P (F-457 Rundown Blenders and Spare Blenders)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity lb/hr	DNR Construction Permit
LD026-P	LD026-U	F-0457A LD-2B Rundown Blender	Polyethylene Pellets	9,000	None
LD027-P	LD027-U	F-0457B LD-2A Rundown Blender	Polyethylene Pellets	9,000	None
LD028-P	LD028-U	F-0457C LD-2A Rundown Blender	Polyethylene Pellets	9,000	None
LD029-P	LD029-U	F-0457D LD-2A Rundown Blender	Polyethylene Pellets	9,000	None
LD030-P	LD030-U	F-0457E LD-2B Rundown Blender	Polyethylene Pellets	9,000	None
LD031-P	LD031-U	F-0457F LD-2B Rundown Blender	Polyethylene Pellets	9,000	None
LD032-P	LD032-U	F-0457G LD-2 Spare Blender	Polyethylene Pellets	9,000	None
LD033-P	LD033-U	F-0457H LD-2 Spare Blender	Polyethylene Pellets	9,000	None
LD034-P	LD034-U	F-0457J LD-2 Spare Blender	Polyethylene Pellets	9,000	None

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from each emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%
Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: Particulate Matter
Emission Limit(s): 11.23 lb/hr.[(1)]
Authority for Requirement: 567 IAC 23.3(2)"a"(2)
[(1)] PM emission limit of 11.23 lb/hr was based on the process weights for these units using the formulas in 567 IAC 23.3(2) "a" (2).

Operational Limits & Recordkeeping Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required at this time.

NSPS and NESHAP Applicability

These emission units are considered to be Group 2 batch process vents by definition under 40 CFR 63 Subpart FFFF – National Emission Standards for Hazardous Air Pollutants for Miscellaneous Organic Chemical Manufacturing.

Authority for Requirement: 567 IAC 23.1(4)"cf"
40 CFR 63 Subpart FFFF

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: LD035-P through LD040-P (F-0458 Rundown Blenders)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity lb/hr	DNR Construction Permit
LD035-P	LD035-U	F-0458A E Line Rundown Blender	Polyethylene Pellets	9,000	None
LD036-P	LD036-U	F-0458B E Line Rundown Blender	Polyethylene Pellets	9,000	None
LD037-P	LD037-U	F-0458C E Line Rundown Blender	Polyethylene Pellets	9,000	None
LD038-P	LD038-U	F-0458D D Line Rundown Blender	Polyethylene Pellets	9,000	None
LD039-P	LD039-U	F-0458E D Line Rundown Blender	Polyethylene Pellets	9,000	None
LD040-P	LD040-U	F-0458F D Line Rundown Blender	Polyethylene Pellets	9,000	None

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from each emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%
Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: Particulate Matter
Emission Limit(s): 11.23 lb/hr.[(1)]
Authority for Requirement: 567 IAC 23.3(2)"a"(2)
[(1)] PM emission limit of 11.23 lb/hr was based on the process weights for these units using the formulas in 567 IAC 23.3(2) "a" (2).

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required at this time.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: LD041-P through LD059-P (LD2A, LD2B and LD3 Silos)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity lb/hr	DNR Construction Permit
LD041-P	LD041-U	F-0459A LD-2/3 Rundown Storage Bin	Polyethylene Pellets	22,500	97-A-685-S2
LD042-P	LD042-U	F-0459B LD-2/3 Rundown Storage Bin	Polyethylene Pellets	22,500	97-A-686-S2
LD043-P	LD043-U	F-0459C LD-2/3 Rundown Storage Bin	Polyethylene Pellets	22,500	97-A-687-S2
LD044-P	LD044-U	F-0459D LD-2/3 Rundown Storage Bin	Polyethylene Pellets	22,500	97-A-688-S2
LD045-P	LD045-U	F-0459E LD-3 Rundown Blender	Polyethylene Pellets	22,500	97-A-689-S2
LD046-P	LD046-U	F-0459F LD-3 Rundown Blender	Polyethylene Pellets	22,500	97-A-690-S2
LD047-P	LD047-U	F-0459G LD-3 Rundown Blender	Polyethylene Pellets	22,500	97-A-691-S2
LD048-P	LD048-U	F-0459H LD-3 Rundown Blender	Polyethylene Pellets	22,500	97-A-692-S2
LD049-P	LD049-U	F-0459J LD-3 Rundown Blender	Polyethylene Pellets	22,500	97-A-693-S2
LD050-P	LD050-U	F-0459K LD-3 Rundown Blender	Polyethylene Pellets	22,500	97-A-694-S2
LD051-P	LD051-U	F-0459L LD-2/3 Rundown Storage Bin	Polyethylene Pellets	22,500	97-A-695-S2
LD052-P	LD052-U	F-0459M LD-2/3 Rundown Storage Bin	Polyethylene Pellets	22,500	97-A-696-S2
LD053-P	LD053-U	F-0459N LD-2/3 Rundown Storage Bin	Polyethylene Pellets	22,500	97-A-697-S2
LD054-P	LD054-U	F-0459P LD-2/3 Rundown Storage Bin	Polyethylene Pellets	22,500	97-A-698-S2
LD055-P	LD055-U	F-0459Q LD-2/3 Rundown Storage Bin	Polyethylene Pellets	22,500	97-A-699-S2
LD056-P	LD056-U	F-0459R LD-2/3 Rundown Storage Bin	Polyethylene Pellets	22,500	97-A-700-S2
LD057-P	LD057-U	F-0459S LD-2/3 Rundown Storage Bin	Polyethylene Pellets	22,500	97-A-701-S2
LD058-P	LD058-U	F-0459T LD-2/3 Rundown Storage Bin	Polyethylene Pellets	22,500	97-A-702-S2
LD059-P	LD059-U	F-0459U LD-2/3 Rundown Storage Bin	Polyethylene Pellets	22,500	97-A-703-S2

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from each emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%[(1)]
Authority for Requirement: DNR Construction Permits 97-A-685-S2 through 97-A-703-S2
567 IAC 23.3(2)"d"

[(1)] An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.022 gr/dscf.
Authority for Requirement: DNR Construction Permits 97-A-685-S2 through 97-A-703-S2
567 IAC 23.3(2)"a"

Pollutant: PM_{10}
Emission Limit(s): 2.75 tons/yr.[(2)]
Authority for Requirement: DNR Construction Permits 97-A-685-S2 through 97-A-703-S2

Pollutant: Volatile Organic Compounds (VOC)
Emission Limit(s): 106.7 ton/yr.[(2)], 2.0 lb/ton of product[(3)]
Authority for Requirement: DNR Construction Permits 97-A-685-S2 through 97-A-703-S2

[(2)] Limit for the total emissions from LD-3 Line.
[(3)] Does not apply to malfunctions and emergency releases.

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits:

A. The amount of LDPE produced in the LD-3 line shall not exceed 197,100,000 pounds per 12-month rolling period.

Reporting and Recordkeeping:
All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

A. Record the amount of LDPE produced in the LD-3 line, in pounds. Calculate and record monthly and 12-month rolling totals.

Authority for Requirement: DNR Construction Permits 97-A-685-S2 through 97-A-703-S2

Emission Point Characteristics

These emission points shall conform to the specifications listed below.

Emission Point	Stack Height (ft, from the ground)	Stack Opening (dia. inch)	Exhaust Flow Rate (scfm)	Exhaust Temperature (°F)	Discharge Style	DNR Construction Permit
LD041-P	75	16×16	1,500	110	Downward	97-A-685-S2
LD042-P	75	16×16	1,500	110	Downward	97-A-686-S2
LD043-P	75	16×16	1,500	110	Downward	97-A-687-S2
LD044-P	75	16×16	1,500	110	Downward	97-A-688-S2
LD045-P	75	16×16	2,654	115	Downward	97-A-689-S2
LD046-P	75	16×16	2,654	115	Downward	97-A-690-S2
LD047-P	75	16×16	2,654	115	Downward	97-A-691-S2
LD048-P	75	16×16	2,654	115	Downward	97-A-692-S2
LD049-P	75	16×16	2,654	115	Downward	97-A-693-S2
LD050-P	75	16×16	2,654	115	Downward	97-A-694-S2
LD051-P	75	16×16	1,500	110	Downward	97-A-695-S2
LD052-P	75	16×16	1,500	110	Downward	97-A-696-S2
LD053-P	75	16×16	1,500	110	Downward	97-A-697-S2
LD054-P	75	16×16	1,500	110	Downward	97-A-698-S2
LD055-P	75	16×16	1,500	110	Downward	97-A-699-S2
LD056-P	75	16×16	1,500	110	Downward	97-A-700-S2
LD057-P	75	16×16	1,500	110	Downward	97-A-701-S2
LD058-P	75	16×16	1,500	110	Downward	97-A-702-S2
LD059-P	75	16×16	1,500	110	Downward	97-A-703-S2

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: LD060-P through LD091-P (F-0453, F-0454 Storage Bins, F-0452 Quad Storage Bins, and Blending Silo)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity lb/hr	DNR Construction Permit
LD060-P	LD060-U	F-0453A LD-1 Storage Bin	Polyethylene Pellets	60,000	97-A-818
LD061-P	LD061-U	F-0453B LD-1 Storage Bin	Polyethylene Pellets	60,000	97-A-819
LD062-P	LD062-U	F-0453C LD-1 Blending Silo	Polyethylene Pellets	60,000	97-A-820
LD063-P	LD063-U	F-0453D Finishing Storage Bin	Polyethylene Pellets	60,000	None
LD064-P	LD064-U	F-0453E Finishing Storage Bin	Polyethylene Pellets	60,000	None
LD065-P	LD065-U	F-0453F LD-1 Storage Bin	Polyethylene Pellets	60,000	97-A-821
LD066-P	LD066-U	F-0453G LD-1 Storage Bin	Polyethylene Pellets	60,000	97-A-822
LD067-P	LD067-U	F-0453H LD-1 Storage Bin	Polyethylene Pellets	60,000	97-A-823
LD068-P	LD068-U	F-0453J Finishing Storage Bin	Polyethylene Pellets	60,000	None
LD069-P	LD069-U	F-0453K Finishing Storage Bin	Polyethylene Pellets	60,000	None
LD070-P	LD070-U	F-0453L LD-1 Storage Bin	Polyethylene Pellets	60,000	97-A-824
LD071-P	LD071-U	F-0453M LD-1 Storage Bin	Polyethylene Pellets	60,000	97-A-825
LD072-P	LD072-U	F-0453N LD-1 Storage Bin	Polyethylene Pellets	60,000	97-A-826
LD073-P	LD073-U	F-0453P LD-1 Storage Bin	Polyethylene Pellets	60,000	97-A-827
LD074-P	LD074-U	F-0453Q LD-1 Storage Bin	Polyethylene Pellets	60,000	97-A-828
LD075-P	LD075-U	F-0453R LD-1 Storage Bin	Polyethylene Pellets	60,000	97-A-829
LD076-P	LD076-U	F-0453S LD-1 Storage Bin	Polyethylene Pellets	60,000	97-A-830
LD077-P	LD077-U	F-0454A LD-1 Storage Bin	Polyethylene Pellets	60,000	97-A-831
LD078-P	LD078-U	F-0454B LD-1 Storage Bin	Polyethylene Pellets	60,000	97-A-832
LD079-P	LD079-U	F-0454C LD-1 Storage Bin	Polyethylene Pellets	60,000	97-A-833
LD080-P	LD080-U	F-0454D LD-1 Storage Bin	Polyethylene Pellets	60,000	97-A-834
LD081-P	LD081-U	F-0454E LD-1 Storage Bin	Polyethylene Pellets	60,000	97-A-835
LD082-P	LD082-U	F-0454F LD-1 Storage Bin	Polyethylene Pellets	60,000	97-A-836
LD084-P	LD084-U	F-0452A LD-1 Quad Storage Bin	Polyethylene Pellet	60,000	97-A-837
LD085-P	LD085-U	F-0452B LD-1 Quad Storage Bin	Polyethylene Pellet	60,000	97-A-838
LD086-P	LD086-U	F-0452C LD-1 Quad Storage Bin	Polyethylene Pellet	60,000	97-A-839
LD087-P	LD087-U	F-0452D LD-1 Quad Storage Bin	Polyethylene Pellet	60,000	97-A-840
LD088-P	LD088-U	F-0452E LD-1 Quad Storage Bin	Polyethylene Pellet	60,000	97-A-841
LD089-P	LD089-U	F-0452F LD-1 Quad Storage Bin	Polyethylene Pellet	60,000	97-A-842
LD090-P	LD090-U	F-0452G LD-1 Quad Storage Bin	Polyethylene Pellet	60,000	97-A-843
LD091-P	LD091-U	F-0452H LD-1 Quad Storage Bin	Polyethylene Pellet	60,000	97-A-844

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified below.

EP	EU	Opacity	PM	PM10	VOC	Authority of Requirement
LD060-P	LD060-U	40%	40.04 lb/hr(1) 0.7 ton/yr	0.1 ton/yr	0.1 ton/yr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-818
LD061-P	LD061-U	40%	40.04 lb/hr(1) 0.7 ton/yr	0.1 ton/yr	0.1 ton/yr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-819
LD062-P	LD062-U	40%	40.04 lb/hr(1) 0.7 ton/yr	0.1 ton/yr	0.1 ton/yr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-820
LD063-P	LD063-U	40%	40.04 lb/hr(1)	NA	NA	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a"
LD064-P	LD064-U	40%	40.04 lb/hr(1)	NA	NA	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a"
LD065-P	LD065-U	40%	40.04 lb/hr(1) 0.7 ton/yr	0.1 ton/yr	0.1 ton/yr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-821
LD066-P	LD066-U	40%	40.04 lb/hr(1) 0.7 ton/yr	0.1 ton/yr	0.1 ton/yr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-822
LD067-P	LD067-U	40%	40.04 lb/hr(1) 0.7 ton/yr	0.1 ton/yr	0.1 ton/yr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-823
LD068-P	LD068-U	40%	40.04 lb/hr(1)	NA	NA	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a"
LD069-P	LD069-U	40%	40.04 lb/hr(1)	NA	NA	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a"
LD070-P	LD070-U	40%	40.04 lb/hr(1) 0.7 ton/yr	0.1 ton/yr	0.1 ton/yr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-824
LD071-P	LD071-U	40%	40.04 lb/hr(1) 0.7 ton/yr	0.1 ton/yr	0.1 ton/yr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-825
LD072-P	LD072-U	40%	40.04 lb/hr(1) 0.7 ton/yr	0.1 ton/yr	0.1 ton/yr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-826
LD073-P	LD073-U	40%	40.04 lb/hr(1) 0.7 ton/yr	0.1 ton/yr	0.1 ton/yr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-827
LD074-P	LD074-U	40%	40.04 lb/hr(1) 0.7 ton/yr	0.1 ton/yr	0.1 ton/yr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-828
LD075-P	LD075-U	40%	40.04 lb/hr(1) 0.7 ton/yr	0.1 ton/yr	0.1 ton/yr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-829
LD076-P	LD076-U	40%	40.04 lb/hr(1) 0.7 ton/yr	0.1 ton/yr	0.1 ton/yr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-830

EP	EU	Opacity	PM	PM10	VOC	Authority of Requirement
LD077-P	LD077-U	40%	40.04 lb/hr[(1)] 0.7 ton/yr	0.1 ton/yr	0.1 ton/yr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-831
LD078-P	LD078-U	40%	40.04 lb/hr[(1)] 0.7 ton/yr	0.1 ton/yr	0.1 ton/yr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-832
LD079-P	LD079-U	40%	40.04 lb/hr[(1)] 0.7 ton/yr	0.1 ton/yr	0.1 ton/yr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-833
LD080-P	LD080-U	40%	40.04 lb/hr[(1)] 0.7 ton/yr	0.1 ton/yr	0.1 ton/yr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-834
LD081-P	LD081-U	40%	40.04 lb/hr[(1)] 0.7 ton/yr	0.1 ton/yr	0.1 ton/yr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-835
LD082-P	LD082-U	40%	40.04 lb/hr[(1)] 0.7 ton/yr	0.1 ton/yr	0.1 ton/yr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-836
LD084-P	LD084-U	40%	40.04 lb/hr[(3)] 0.2 ton/yr	0.1 ton/yr	0.1 ton/yr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-837
LD085-P	LD085-U	40%	40.04 lb/hr[(3)] 0.2 ton/yr	0.1 ton/yr	0.1 ton/yr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-838
LD086-P	LD086-U	40%	40.04 lb/hr[(3)] 0.2 ton/yr	0.1 ton/yr	0.1 ton/yr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-839
LD087-P	LD087-U	40%	40.04 lb/hr[(3)] 0.2 ton/yr	0.1 ton/yr	0.1 ton/yr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-840
LD088-P	LD088-U	40%	40.04 lb/hr[(3)] 0.2 ton/yr	0.1 ton/yr	0.1 ton/yr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-841
LD089-P	LD089-U	40%	40.04 lb/hr[(3)] 0.2 ton/yr	0.1 ton/yr	0.1 ton/yr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-842
LD090-P	LD090-U	40%	40.04 lb/hr[(3)] 0.2 ton/yr	0.1 ton/yr	0.1 ton/yr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-843
LD091-P	LD091-U	40%	40.04 lb/hr[(3)] 0.2 ton/yr	0.1 ton/yr	0.1 ton/yr	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-844

[(1)] PM emission limit of 40.04 lb/hr was based on the process weights for these units using the formulas in 567 IAC 23.3(2) "a" (2).

Operational Limits & Recordkeeping Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required at this time.

Emission Point Characteristics

These emission points shall conform to the specifications listed below.

Emission Point	Stack Height (ft, from the ground)	Stack Opening (dia. inch)	Exhaust Flow Rate (acfm)	Exhaust Temperature (°F)	Discharge Style	DNR Construction Permit
LD060-P	75	16×16	1,500	110	NA	97-A-818
LD061-P	75	16×16	1,500	110	NA	97-A-819
LD062-P	75	16×16	1,500	110	NA	97-A-820
LD065-P	75	16×16	1,500	110	NA	97-A-821
LD066-P	75	16×16	1,500	110	NA	97-A-822
LD067-P	75	16×16	1,500	110	NA	97-A-823
LD070-P	75	16×16	1,500	110	NA	97-A-824
LD071-P	75	16×16	1,500	110	NA	97-A-825
LD072-P	75	16×16	1,500	110	NA	97-A-826
LD073-P	75	16×16	1,500	110	NA	97-A-827
LD074-P	75	16×16	1,500	110	NA	97-A-828
LD075-P	75	16×16	1,500	110	NA	97-A-829
LD076-P	75	16×16	1,500	110	NA	97-A-830
LD077-P	75	16×16	1,500	110	NA	97-A-831
LD078-P	75	16×16	1,500	110	NA	97-A-832
LD079-P	75	16×16	1,500	110	NA	97-A-833
LD080-P	75	16×16	1,500	110	NA	97-A-834
LD081-P	75	16×16	1,500	110	NA	97-A-835
LD082-P	75	16×16	1,500	110	NA	97-A-836
LD084-P	75	16×16	500	110	NA	97-A-837
LD085-P	75	16×16	500	110	NA	97-A-838
LD086-P	75	16×16	500	110	NA	97-A-839
LD087-P	75	16×16	500	110	NA	97-A-840
LD088-P	75	16×16	500	110	NA	97-A-841
LD089-P	75	16×16	500	110	NA	97-A-842
LD090-P	75	16×16	500	110	NA	97-A-843
LD091-P	75	16×16	500	110	NA	97-A-844

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: LD083-P (Fugitive)

Associated Equipment

Emission Unit vented through this Emission Point: LD083-U
Emission Unit Description: Low Density Unit Fugitives
Raw Material/Fuel: Ethylene
Rated Capacity: 8760 hr/yr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Emission limits are not required at this time.

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required at this time.

NSPS and NESHAP Applicability
This emission unit is subject to 40 CFR 63 Subpart FFFF – National Emission Standards for Hazardous Air Pollutants for Miscellaneous Organic Chemical Manufacturing.
Authority for Requirement: 567 IAC 23.1(3) "cf"
40 CFR 63 Subpart FFFF

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: LD092-P through LD095-P (F-0452 Quad Storage Bins)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity lb/hr	DNR Construction Permit
LD092-P	LD092-U	F-0452J LD-2/3 Quad Storage Bin	Polyethylene Pellet	22,500	97-A-651-S2
LD093-P	LD093-U	F-0452K LD-2/3 Quad Storage Bin	Polyethylene Pellet	22,500	97-A-652-S2
LD094-P	LD094-U	F-0452L LD-2/3 Quad Storage Bin	Polyethylene Pellet	22,500	97-A-653-S2
LD095-P	LD095-U	F-0452M LD-2/3 Quad Storage Bin	Polyethylene Pellet	22,500	97-A-654-S2

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified below.

EP	EU	Opacity	PM	PM10	VOC	Authority of Requirement
LD092-P	LD092-U	40%(1)	0.022 gr/scf	2.75 ton/yr(2)	106.7 ton/yr(2) 2 lb/ton product(4)	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-651-S2
LD093-P	LD093-U	40%(1)	0.022 gr/scf			567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-652-S2
LD094-P	LD094-U	40%(1)	0.022 gr/scf			567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-653-S2
LD095-P	LD095-U	40%(1)	0.022 gr/scf			567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-654-S2

(1) An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).
(2) Limit for the total emissions from LD-3 Line.
(3) PM emission limit of 40.04 lb/hr was based on the process weights for these units using the formulas in 567 IAC 23.3(2) "a" (2).
(4) Does not apply to malfunctions and emergency releases.

Operational Limits & Recordkeeping Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

LD092-P through LD095-P:

1. The amount of LDPE produced in the LD-3 line shall not exceed 197,100,000 pounds per 12-month rolling period.

Authority for Requirement: DNR Construction Permits 97-A-651-S2, 97-A-652-S2, 97-A-653-S2, & 97-A-654-S2

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

LD092-P through LD095-P:

1. Record the amount of LDPE produced in the LD-3 line, in pounds. Calculate and record monthly and 12-month rolling totals.

Authority for Requirement: DNR Construction Permits 97-A-651-S2, 97-A-652-S2, 97-A-653-S2, & 97-A-654-S2

Emission Point Characteristics

These emission points shall conform to the specifications listed below.

Emission Point	Stack Height (ft, from the ground)	Stack Opening (inch)	Exhaust Flow Rate (scfm)	Exhaust Temperature (°F)	Discharge Style	DNR Construction Permit
LD092-P	75	16×16	500	110	Downward	97-A-651-S2
LD093-P	75	16×16	500	110	Downward	97-A-652-S2
LD094-P	75	16×16	500	110	Downward	97-A-653-S2
LD095-P	75	16×16	500	110	Downward	97-A-654-S2

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: LD096-P through LD109B-P (Compressors and Drums)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	EU Description	Raw Material	Rated Capacity	DNR Construction Permit
LD096-P	LD096A-U	J-0201A LD-1 "A" Make Up Compressor	Ethylene	NA	97-A-845
	LD096B-U	J-0202A LD-1 "A" Purge Compressor	Ethylene		97-A-846
LD097-P	LD097A-U	J-0201B LD-1 "B" Make Up Compressor	Ethylene	NA	97-A-847
	LD097B-U	J-0202B LD-1 "B" Purge Compressor	Ethylene		97-A-848
LD098-P	LD098-U	J-0202C LD-1 Purge Booster Compressor	Ethylene	NA	97-A-849
LD099-P	LD099-U	J-0203A LD-1 "A" Recycle Compressor	Ethylene	NA	97-A-850
LD100-P	LD100-U	J-0203B LD-1 "B" Recycle Compressor	Ethylene	NA	97-A-851
LD101-P	LD101-U	J-0204A LD-1 "A" Hyper Compressor	Ethylene	NA	97-A-852
LD102-P	LD102-U	J-0204B LD-1 "B" Hyper Compressor	Ethylene	NA	97-A-853
LD103-P	LD103-U	J-0223 LD-1 Recycle Compressor	Ethylene	NA	97-A-854
LD104-P	LD104-U	J-0224 LD-1 Hyper Compressor	Ethylene	NA	97-A-855
LD105-P	LD105A-U	J-0701A LD-2A Primary/Flash Gas Compressor	Ethylene	NA	None
	LD105B-U	F-0701A LD-2A Make Up Gas Suction Drum	Ethylene	NA	None
	LD105C-U	F-0705A LD-2A Purge Compressor Suction Drum	Ethylene	NA	None
	LD105D-U	F-0755A LD-2A Purge Gas Knockout Drum	Ethylene	NA	None
	LD105E-U	F-0709A LD-2A Flash Gas 3rd St. Knockout Drum	Ethylene	NA	None
	LD105F-U	F-0708A LD-2A Flash Gas 2nd St. Knockout Drum	Ethylene	NA	None
	LD105G-U	F-0707A LD-2A Flash Gas 1st St. Knockout Drum	Ethylene	NA	None
LD105A-P	LD105H-U	J-0701A LD-2A Primary Compressor Leak Gas	Ethylene	NA	None
	LD105I-U	J-0701A LD-2A Primary Compressor	Ethylene	NA	None
	LD105J-U	J-0702A Secondary Compressor Leak Gas	Ethylene	NA	None

EP	EU	EU Description	Raw Material	Rated Capacity	DNR Construction Permit
LD106-P	LD106A-U	J-0701B LD-2B Primary/Flash Gas Compressor	Ethylene	NA	None
	LD106B-U	F-0701B LD-2B Make Up Gas Suction Drum	Ethylene	NA	None
	LD106C-U	F-0705B LD-2B Purge compressor Suction Drum	Ethylene	NA	None
	LD106D-U	F-0755B LD-2B Purge Gas Knockout Drum	Ethylene	NA	None
	LD106E-U	F-0709B LD-2B Flash Gas 3rd St. Knockout Drum	Ethylene	NA	None
	LD106F-U	F-0708B LD-2B Flash Gas 2nd St. Knockout Drum	Ethylene	NA	None
	LD106G-U	F-0707B LD-2B Flash Gas 1st St. Knockout Drum	Ethylene	NA	None
LD106A-P	LD106H-U	J-0701B LD-2B Primary Compressor Leak Gas	Ethylene	NA	None
	LD106I-U	J-0701B LD-2B Primary Compressor	Ethylene	NA	None
	LD106J-U	J-0702B Secondary Compressor Leak Gas	Ethylene	NA	None
LD107-P	LD107-U	J-0702A LD-2A Secondary Compressor	Ethylene	NA	None
LD108-P	LD108-U	J-0702B LD-2B Secondary Compressor	Ethylene	NA	None
LD109-P	LD109A-U	J-0801 LD-3 Primary/Flash Gas Compressor	Ethylene	30,000 lb/hr	97-A-655-S2
	LD109B-U	J-0802 LD-3 Secondary Compressor	Ethylene	108,000 lb/hr	
LD109A-P	LD109C-U	F-0809 LD-3 Flash Gas 3rd St. Knockout Drum	Ethylene	NA	None
	LD109D-U	F-0801 LD-3 Make up Gas Suction Drum	Ethylene	NA	None
	LD109E-U	J-0820 LD-3 Modifier Pump	Ethylene	NA	None
LD109B-P	LD109F-U	F-0805 LD-3 Flash Gas Suction Drum	Ethylene	NA	None
	LD109G-U	J-0801 LD-3 Primary Compressor 2nd stage	Ethylene	NA	None
	LD109H-U	F-0807 LD-3 Flash gas 1st St. Knockout Drum	Ethylene	NA	None
	LD109I-U	F-0808 LD-3 Flash Gas 2nd St. Knockout Drum	Ethylene	NA	None
	LD109J-U	J-0801 LD-3 Primary Compressor Leak Gas	Ethylene	NA	None
	LD109K-U	J-0802 LD-3 Secondary Compressor Leak Gas	Ethylene	NA	None

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified below.

EP	EU	Opacity	PM	PM_{10}	VOC	Authority of Requirement
LD096-P	LD096A-U	NA	NA	NA	0.1 ton/yr	DNR Construction Permit 97-A-845
	LD096B-U	NA	NA	NA	0.1 ton/yr	DNR Construction Permit 97-A-846
LD097-P	LD097A-U	NA	NA	NA	0.1 ton/yr	DNR Construction Permit 97-A-847
	LD097B-U	NA	NA	NA	0.1 ton/yr	DNR Construction Permit 97-A-848
LD098-P	LD098-U	NA	NA	NA	0.2 ton/yr	DNR Construction Permit 97-A-849
LD099-P	LD099-U	NA	NA	NA	0.1 ton/yr	DNR Construction Permit 97-A-850
LD100-P	LD100-U	NA	NA	NA	0.1 ton/yr	DNR Construction Permit 97-A-851
LD101-P	LD101-U	NA	NA	NA	3.4 ton/yr	DNR Construction Permit 97-A-852
LD102-P	LD102-U	NA	NA	NA	3.4 ton/yr	DNR Construction Permit 97-A-853
LD103-P	LD103-U	NA	NA	NA	0.1 ton/yr	DNR Construction Permit 97-A-854
LD104-P	LD104-U	NA	NA	NA	3.4 ton/yr	DNR Construction Permit 97-A-855
LD105-P	LD105A-U	NA	NA	NA	NA	None
	LD105B-U	NA	NA	NA	NA	None
	LD105C-U	NA	NA	NA	NA	None
	LD105D-U	NA	NA	NA	NA	None
	LD105E-U	NA	NA	NA	NA	None
	LD105F-U	NA	NA	NA	NA	None
	LD105G-U	NA	NA	NA	NA	None
LD105A-P	LD105H-U	NA	NA	NA	NA	None
	LD105I-U	NA	NA	NA	NA	None
	LD105J-U	NA	NA	NA	NA	None
LD106-P	LD106A-U	NA	NA	NA	NA	None
	LD106B-U	NA	NA	NA	NA	None
	LD106C-U	NA	NA	NA	NA	None
	LD106D-U	NA	NA	NA	NA	None
	LD106E-U	NA	NA	NA	NA	None
	LD106F-U	NA	NA	NA	NA	None
	LD106G-U	NA	NA	NA	NA	None
LD106A-P	LD106H-U	NA	NA	NA	NA	None
	LD106I-U	NA	NA	NA	NA	None
	LD106J-U	NA	NA	NA	NA	None
LD107-P	LD107-U	NA	NA	NA	NA	None
LD108-P	LD108-U	NA	NA	NA	NA	None
LD109-P	LD109A-U	40%[1]	0.022 gr/dscf	2.75 ton/yr[2]	106.7 ton/yr[2] 2 lb/ton product[3]	567 IAC 23.3 (2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-655-S2
	LD109B-U					
LD109A-P	LD109C-U	NA	NA	NA	NA	None
	LD109D-U	NA	NA	NA	NA	None
	LD109E-U	NA	NA	NA	NA	None
LD109B-P	LD109F-U	NA	NA	NA	NA	None
	LD109G-U	NA	NA	NA	NA	None
	LD109H-U	NA	NA	NA	NA	None
	LD109I-U	NA	NA	NA	NA	None
	LD109J-U	NA	NA	NA	NA	None
	LD109K-U	NA	NA	NA	NA	None

(1) An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).
(2) Limit for the total emissions from LD-3 Line.
(3) Does not apply to malfunctions and emergency releases.

Operational Limits & Recordkeeping Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits

LD096-P through LD108-P, LD109A and LD109B:

Operating limits are not required at this time.

LD109-P:

1. The amount of LDPE produced in the LD-3 line shall not exceed 197,100,000 pounds per 12-month rolling period.

Authority for Requirement: DNR Construction Permit 97-A-655-S2

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

LD096-P through LD108-P, LD109A and LD109B:

Reporting and Recordkeeping are not required at this time.

LD109-P:

1. Record the amount of LDPE produced in the LD-3 line, in pounds. Calculate and record monthly and 12-month rolling totals.

Authority for Requirement: DNR Construction Permit 97-A-655-S2

Emission Point Characteristics

These emission points shall conform to the specifications listed below.

Emission Point	Emission Unit	Stack Height (ft, from the ground)	Stack Opening (dia. inch)	Exhaust Flow Rate (scfm)	Exhaust Temperature (°F)	Discharge Style	DNR Construction Permit
LD096-P	LD096A-U	40	3	Variable	Variable	NA	97-A-845
	LD096B-U	40	3	Variable	Variable	NA	97-A-846
LD097-P	LD097A-U	40	3	Variable	Variable	NA	97-A-847
	LD097B-U	40	3	Variable	Variable	NA	97-A-848
LD098-P	LD098-U	40	6	Variable	Variable	NA	97-A-849
LD099-P	LD099-U	45	6	Variable	Variable	NA	97-A-850
LD100-P	LD100-U	32	1.5	Variable	Variable	NA	97-A-851
LD101-P	LD101-U	50	1.5	Variable	Variable	NA	97-A-852
LD102-P	LD102-U	50	1.5	Variable	Variable	NA	97-A-853
LD103-P	LD103-U	45	1.5	Variable	Variable	NA	97-A-854
LD104-P	LD104-U	50	1.5	Variable	Variable	NA	97-A-855
LD109-P	LD109A-U	55	12	Variable	Variable	Vertical Unobstructed	97-A-655-S2
	LD109B-U						

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: LD110-P through LD113-P (Wax Works)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity lb/hr	DNR Construction Permit
LD110-P	LD110-U	LD-1 Wax Works	Ethylene	500	97-A-856
LD111-P	LD111-U	LD-2A Wax Works	Ethylene	NA	None
LD112-P	LD112-U	LD-2B Wax Works	Ethylene	NA	None
LD113-P	LD113-U	LD-3 Wax Works	Ethylene	1296	97-A-656-S2

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified below.

EP	EU	Opacity	PM	PM10	VOC	Authority of Requirement
LD110-P	LD110-U	NA	NA	NA	5.7 ton/yr	DNR Construction Permit 97-A-856
LD111-P	LD111-U	NA	NA	NA	NA	NA
LD112-P	LD112-U	NA	NA	NA	NA	NA
LD113-P	LD113-U	40%(1)	0.022 gr/scf	2.75 ton/yr(2)	106.7 ton/yr(2) 2 lb/ton product (3)	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-656-S2

(1) An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).
(2) Limit for the total emissions from LD-3 Line.
(3) Does not apply to malfunctions and emergency releases.

Operational Limits & Recordkeeping Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits

LD110-P through LD112-P:

Operating Limits are not required at this time.

LD113-P:

1. The amount of LDPE produced in the LD-3 line shall not exceed 197,100,000 pounds per 12-month rolling period.

Authority for Requirement: DNR Construction Permit 97-A-656-S2

Reporting and Recordkeeping
All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

LD110-P through LD112-P:
Reporting and Recordkeeping are not required at this time.

LD113-P:
1. Record the amount of LDPE produced in the LD-3 line, in pounds. Calculate and record monthly and 12-month rolling totals.

Authority for Requirement: DNR Construction Permit 97-A-656-S2

NESHAP
LD111-U & LD112-U: These emission units are subject to 40 CFR 63 Subpart FFFF – National Emission Standards for Hazardous Air Pollutants for Miscellaneous Organic Chemical Manufacturing.
Authority for Requirement: 567 IAC 23.1(3) "cf"
40 CFR 63 Subpart FFFF

Emission Point Characteristics
These emission points shall conform to the specifications listed below.

Emission Point	Stack Height (ft, from the ground)	Stack Opening (dia. inch)	Exhaust Flow Rate (scfm)	Exhaust Temperature (°F)	Discharge Style	DNR Construction Permit
LD110-P	65	2.0	Variable	Variable	NA	97-A-856
LD113-P	30	1.5	Variable	Variable	Vertical Unobstructed	97-A-656-S2

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: LD114-P through LD121A-P (Low Pressure Separators)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity lb/hr	DNR Construction Permit
LD114-P	LD114A-U	F-0201 LD-1 Make-Up Gas Suction Drum	Ethylene	102	97-A-857
	LD114B-U	F-0205 LD-1 Purge Compressor Suction Drum	Ethylene	102	97-A-858
LD115-P	LD115-U	F-0220 LD-1 High Pressure Separator dump valve	Ethylene	3,550	97-A-859
LD115A-P		F-0220 LD-1 High Pressure Separator RV	Ethylene	3,550	None
LD116-P	LD116-U	F-0703A LD-2A High Pressure Separator dump valve	Ethylene	4,410	None
LD116A/B-P		F-0703A LD-2A High Pressure Separator RV	Ethylene	4,410	None
LD117-P	LD117-U	F-0703B LD-2B High Pressure Separator dump valve	Ethylene	4,410	None
LD117A/B-P		F-0703B LD-2B High Pressure Separator RV	Ethylene	4,410	None
LD118-P	LD118-U	F-0704A LD-2A Low Pressure Separator dump valve	Ethylene	4,410	None
LD118A-P		F-0704A LD-2A Low Pressure Separator RV	Ethylene	4,410	None
LD119-P	LD119-U	F-0704B LD-2B Low Pressure Separator dump valve	Ethylene	4,410	None
LD119A-P		F-0704B LD-2B Low Pressure Separator RV	Ethylene	4,410	None
LD120-P	LD120-U	F-0803 LD-3 High Pressure Separator dump valve	Ethylene	22,500	97-A-657-S2
LD120A/B-P		F-0803 LD-3 High Pressure Separator RV	Ethylene	22,500	None
LD121-P	LD121-U	F-0804 LD-3 Low Pressure Separator dump valve	Ethylene	22,500	97-A-658-S2
LD121A-P		F-0804 LD-3 Low Pressure Separator RV	Ethylene	22,500	None

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified below.

EP	EU	Opacity	PM	PM10	VOC	Authority of Requirement
LD114-P	LD114A-U	NA	NA	NA	0.1 ton/yr	DNR Construction Permit 97-A-857
	LD114B-U	NA	NA	NA	0.1 ton/yr	DNR Construction Permit 97-A-858
LD115-P	LD115-U	NA	NA	NA	1.8 ton/yr	DNR Construction Permit 97-A-859
LD115A-P	LD115-U	NA	NA	NA	NA	NA
LD116-P	LD116-U	NA	NA	NA	NA	NA
LD116A&B-P		NA	NA	NA	NA	NA
LD117-P	LD117-U	NA	NA	NA	NA	NA
LD117A&B-P		NA	NA	NA	NA	NA
LD118-P	LD118-U	NA	NA	NA	NA	NA
LD118A-P		NA	NA	NA	NA	NA
LD119-P	LD119-U	NA	NA	NA	NA	NA
LD119A-P		NA	NA	NA	NA	NA
LD120-P	LD120-U	40%(1)	0.022 gr/scf	2.75 ton/yr(2)	106.7 ton/yr(2) 2 lb/ton product (3)	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-657-S2
LD120A&B-P		NA	NA	NA	NA	NA
LD121-P	LD121-U	40%(1)	0.022 gr/scf	2.75 ton/yr(2)	106.7 ton/yr(2) 2 lb/ton product (3)	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 97-A-658-S2
LD121A-P		NA	NA	NA	NA	NA

(1) An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).
(2) Limit for the total emissions from LD-3 Line.
(3) Does not apply to malfunctions and emergency releases.

Operational Limits & Recordkeeping Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits

LD114-P through LD119A-P, LD120A&B-P, and LD-121A-P:

Operating limits are not required at this time.

LD120-P and LD121-P:

1. The amount of LDPE produced in the LD-3 line shall not exceed 197,100,000 pounds per 12-month rolling period.

Authority for Requirement: DNR Construction Permits 97-A-657-S2 & 97-A-658-S2

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

LD114-P through LD119A-P, LD120A&B-P, and LD-121A-P:

Reporting and Recordkeeping are not required at this time.

LD120-P and LD121-P:

1. Record the amount of LDPE produced in the LD-3 line, in pounds. Calculate and record monthly and 12-month rolling totals.

Authority for Requirement: DNR Construction Permit 97-A-657-S2 & 97-A-658-S2

Emission Point Characteristics

These emission points shall conform to the specifications listed below.

Emission Point	Emission Unit	Stack Height (ft, from the ground)	Stack Opening (dia. inch)	Exhaust Flow Rate (scfm)	Exhaust Temp. (°F)	Discharge Style	DNR Construction Permit
LD114-P	LD114A-U	40	4	Variable	Variable	NA	97-A-857
	LD114B-U	40	4	Variable	Variable	NA	97-A-858
LD115-P	LD115-U	65	2	Variable	Variable	NA	97-A-859
LD120-P	LD120-U	30	1.5	Variable	Variable	Vertical Unobstructed	97-A-657-S2
LD121-P	LD121-U	65	3	Variable	Variable	Vertical Unobstructed	97-A-658-S2

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: LD124-P through LD126As-P (Low Pressure Separators)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity lb/hr	DNR Construction Permit
LD124-P	LD124-U	F-0231A LD-1 Low Pressure Separator dump valve	Ethylene	500	None
LD124A-P	LD124-U	F-0231A LD-1 Low Pressure Separator RV	Ethylene	500	None
LD125-P	LD125-U	F-0231B LD-1 Low Pressure Separator dump valve	Ethylene	500	None
LD125A-P	LD125-U	F-0231B LD-1 Low Pressure Separator RV	Ethylene	500	None
LD126-P	LD126-U	F-0232 LD-1 Low Pressure Separator dump valve	Ethylene	500	None
LD126A-P	LD126-U	F-0232 LD-1 Low Pressure Separator RV	Ethylene	500	None

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from these emission points shall not exceed the levels specified below.

Emission limits are not required at this time.

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational Limits are not required at this time.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: LD127-P and LD128-P (Analyzer Houses)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	EU Description	Raw Material	Rated Capacity liter/hr	Control Equipment	DNR Construction Permit
LD127-P	LD127-U	H207 Analyzer House, Analyzer 1	Ethylene	60	LD127CE1 LD127CE2 LD127CE3 LD127CE4 Combustors	03-A-405 03-A-406
		H207 Analyzer House, Analyzer 2	Ethylene			03-A-407
		H207 Analyzer House, Analyzer 3	Ethylene			03-A-408
LD128-P	LD128-U	H706 Analyzer House, Analyzer 1	Ethylene	60	LD128CE1 LD128CE2 LD128CE3 Combustors	03-A-409
		H706 Analyzer House, Analyzer 2	Ethylene			03-A-410
		H706 Analyzer House, Analyzer 3	Ethylene			03-A-411

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from these emission points shall not exceed the levels specified below.

Emission limits are not required at this time.

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required at this time.

Emission Point Characteristics

These emission points shall conform to the specifications listed below.

Emission Point	Stack Height (ft, from the ground)	Stack Opening (dia. inch)	Exhaust Flow Rate (liter/min)	Exhaust Temperature (°F)	Discharge Style	DNR Construction Permit
LD127-P	8	3	1.0	100	Vertical Unobstructed	03-A-405, 03-A-406 03-A-407, 03-A-408
LD128-P	8	3	1.0	100	Vertical Unobstructed	03-A-409, 03-A-410 03-A-411

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: LD129-P

Associated Equipment

Emission Unit vented through this Emission Point: LD129-U
Emission Unit Description: Maintenance Emissions
Raw Material/Fuel: Ethylene
Rated Capacity: NA

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Emission limits are not required at this time.

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required at this time.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: LD130-P

Associated Equipment

Emission Unit vented through this Emission Point: LD130-U
Emission Unit Description: L829 Rear Seals
Raw Material/Fuel: Polyethylene-Extruder
Rated Capacity: NA

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Emission limits are not required at this time.

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required at this time.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Part D. Product Packing and Shipping

Emission Point ID Numbers: PP005-P through PP014-P (Loading Equipment)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	EU Description	Raw Material	Rated Capacity lb/hr	Control Equipment	DNR Construction Permit
PP005-P	PP005-U	L-0501 HDPE Old Hopper Car Elutriator	Polyethylene Pellets	65,000	PP005CE1 Cyclone	16-A-365
PP006-P	PP006-U	L-0551 LDPE Old Hopper Car Elutriator	Polyethylene Pellets	65,000	PP006CE1 Cyclone	16-A-366
PP007-P	PP007-U	L-0597 LDPE Old Hopper Car Scalperator	Polyethylene Pellets	65,000	PP007CE1 Cyclone	None
PP008-P	PP008-U	L-0503 HDPE Old Hopper Car Scalperator	Polyethylene Pellets	65,000	PP008CE1 Cyclone	17-A-715
PP011-P	PP011-U	L-0502 HDPE New Hopper Car Elutriator	Polyethylene Pellets	65,000	PP011CE1 Cyclone	79-A-102-S1
PP012-P	PP012-U	L-0509 HDPE New Hopper Car Scalperator	Polyethylene Pellets	65,000	PP012CE1 Cyclone	13-A-255-S1
PP013-P	PP013-U	L-0557 LDPE New Hopper Car Scalperator	Polyethylene Pellets	65,000	PP013CE1 Cyclone	13-A-256-S1
PP014-P	PP014-U	L-0559 LDPE New Hopper Car Elutriator	Polyethylene Pellets	65,000	PP014CE1 Cyclone	13-A-257

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified below.

EP	EU	Opacity	PM	Authority of Requirement
PP005-P	PP005-U	40%(1)	0.1 gr/dscf	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 16-A-365
PP006-P	PP006-U	40%(1)	0.1 gr/dscf	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 16-A-366
PP007-P	PP007-U	40%	40.7 lb/hr(3)	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a"
PP008-P	PP008-U	40%(2)	0.1 gr/dscf	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 17-A-715
PP011-P	PP011-U	40%(2)	40.7 lb/hr(3)	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 79-A-102-S1
PP012-P	PP012-U	40%(2)	0.1 g/dscf	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 13-A-255-S1

EP	EU	Opacity	PM	Authority of Requirement
PP013-P	PP013-U	40%[2]	0.1 g/dscf	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 13-A-256-S1
PP014-P	PP014-U	40%[2]	40.7 lb/hr[3]	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a" DNR Construction Permit 13-A-257

[1] An exceedance of the indicator opacity of no visible emissions will require the owner or operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the Department may require additional proof to demonstrate compliance (e.g., stack testing).
[2] An exceedance of the indicator opacity of 25% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).
[3] PM emission limit was based on the process weights for these units using the formulas in 567 IAC 23.3(2) "a" (2)

Operational Limits & Recordkeeping Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

PP005-P & P006-P

Control equipment parameters:

1. The control equipment shall be inspected and maintained according to the manufacture's operation and maintenance plan.
2. The owner or operator shall keep records of control equipment inspections and maintenance.

Authority for Requirement: Iowa DNR Construction Permits 16-A-365 & 13-A-366

PP008-P, PP012-P, & PP013-P

1. The facility shall maintain a log of all maintenance and inspection activities performed on each applicable piece of control equipment. This log shall include, but is not limited to:
   A. The date and time any inspection and/or maintenance was performed on the emission unit and/or control equipment;
   B. Any issue(s) identified during the inspection and the date each issue(s) was resolved; and,
   C. Any issue(s) addressed during the maintenance activities and the date each issue(s) was resolved

Authority for Requirement: DNR Construction Permit 17-A-715, 13-A-255-S1, 13-A-256-S2

Emission Point Characteristics

These emission points shall conform to the specifications listed below.

Emission Point	Stack Height (ft, from the ground)	Stack Opening (dia. inch)	Exhaust Flow Rate (scfm)	Exhaust Temperature (°F)	Discharge Style	DNR Construction Permit
PP005-P	28	24	7,000	68	Vertical Obstructed	16-A-365
PP006-P	28	24	7,000	68	Vertical Obstructed	16-A-366
PP008-P	20	16x20	5,300	Ambient	Vertical Obstructed	17-A-715
PP011-P	22	30	5,000	100	Vertical Obstructed	79-A-102-S1
PP012-P	20	16x20	5,300	Ambient	Vertical Obstructed	13-A-255-S1
PP013-P	20	16x20	5,300	Ambient	Vertical Obstructed	13-A-256-S1
PP014-P	22	30	5,000	100	Vertical Obstructed	13-A-257

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☒ **No** ☐

Required for PP007CE1, PP011CE1, and PP014CE1

Compliance Assurance Monitoring (CAM) Plan Required **Yes** ☐ **No** ☒

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.

The data pertaining to the plan shall be maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.
Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: PP017-P

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	EU Description	Raw Material	Rated Capacity lb/hr	Control Equipment	DNR Construction Permit
PP017-U	PP017-U	L-0589A LDPE New Hopper Car Deduster	Polyethylene Pellets	65,000	PP017CE1 Baghouse	98-A-599

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 20%(1)
Authority for Requirement: DNR Construction Permit 98-A-599
567 IAC 23.3(2) "d"

(1) If visible emissions are observed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr/dscf
Authority for Requirement: DNR Construction Permit 98-A-599
567 IAC 23.3(2) "a"

Pollutant: Particulate Matter (PM_{10})
Emission Limit(s): 3.29 lb/hr; 14.4 ton/yr
Authority for Requirement: DNR Construction Permit 98-A-599

Operational Limits & Recordkeeping Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required at this time.

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 19.83
Stack Opening, (inches, dia.): 16
Exhaust Flow Rate (scfm): 4,777
Exhaust Temperature (°F): 250
Discharge Style: NA
Authority for Requirement: DNR Construction Permit 98-A-599

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Opacity
The facility shall check for visible emissions weekly using EPA Method 22 for a six (6) minute observation period when the emission unit on this emission point is at or near full capacity and record the reading. A written record of the observation and any action resulting from the observation shall be maintained for a minimum of five years. Visible emissions shall be observed to ensure that no visible emissions occur during the material handling operation of the unit. If visible emissions are observed corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If corrective action does not return the observation to no visible emissions, then a Method 9 observation will be required within 24 hours of the initial observation. If an opacity greater than 20% is observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from the observation. Unless it is documented that weather, conditions prevent visible emission or opacity observation during the entire week, at least one visible emission observation or one Method 9 opacity observation must be performed each calendar week. For the purpose of this permit condition, the week begins on Monday and ends on Sunday. If all observation attempts for a week have been unsuccessful due to weather, an observation shall be made the next operating day where weather permits.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☒ **No** ☐

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.

The data pertaining to the plan shall be maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.
Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: PP020-P and PP021-P (Feed Bins)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity lb/hr	DNR Construction Permit
PP020-P	PP020-U	F-0504 HDPE North Powder Feed Bin	Polyethylene Powder	30,000	None
PP021-P	PP021-U	F-0505 HDPE South Powder Feed Bin	Polyethylene Powder	30,000	None

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from these emission points shall not exceed the levels specified below.

EP	EU	Opacity	PM	Authority of Requirement
PP020-P	PP020-U	40%	25.16 lb/hr[(1)]	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a"
PP021-P	PP021-U	40%	25.16 lb/hr[(1)]	567 IAC 23.3(2) "d" 567 IAC 23.3(2) "a"

[(1)] PM emission limit of 25.16 lb/hr was based on the process weights for these units using the formulas in 567 IAC 23.3(2) "a" (2).

Operational Limits & Recordkeeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operational limits are not required at this time.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: PP022-P (PEX Boxing Line)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	EU Description	Raw Material	Rated Capacity lb/hr	Control Equipment	DNR Construction Permit
PP022-P	PP022-U	F-0508 PEX Boxing Line	Polyethylene Powder	37,000	PP022CE1 Baghouse	08-A-659-S1

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%(1)
Authority for Requirement: DNR Construction Permit 08-A-659-S1
567 IAC 23.3(2) "d"

(1) An exceedance of the indicator opacity of "10%" will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr/dscf; 0.27 lb/hr
Authority for Requirement: DNR Construction Permit 08-A-659-S1
567 IAC 23.3(2) "a"

Pollutant: Particulate Matter (PM_{10})
Emission Limit(s): 0.27 lb/hr
Authority for Requirement: DNR Construction Permit 08-A-659-S1

Operational Limits & Recordkeeping Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

NSPS and NESHAP Applicability

The facility is subject to NSPS Subpart DDD - Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry. Per 40 CFR §60.560(g), the facility claims exception from the VOC control requirements of 40 CFR§60.562-1 because the vent streams emit annual uncontrolled total organic compounds (TOC) emission of less than 1.75 tpy, or with a weight percent TOC of less than 0.1 percent. All the reporting and record keeping requirements of 40 CFR §60.565(a), (a)(10), (h), (k), (k)(6), and (k)(7) shall be fulfilled.
Authority for Requirement: DNR Construction Permit 08-A-659-S1
567 IAC 23.1(2)"mmm"
40 CFR 60 Subpart DDD

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 15.75
Stack Opening, (inches): 10×20
Exhaust Flow Rate (scfm): 1,800
Exhaust Temperature (°F): 70
Discharge Style: Horizontal
Authority for Requirement: DNR Construction Permit 08-A-659-S1

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Pollutant – PM
Stack Test to be Completed by (date) – 7/20/2025
Test Method - 40 CFR 60, Appendix A, Method 5
40 CFR 51, Appendix M, Method 202
Authority for Requirement – 567IAC 22.108(3)

Pollutant – PM_{10}
Stack Test to be Completed by (date) – 7/20/2025
Test Method - 40 CFR 51, Appendix M, Method 202
Authority for Requirement – 567IAC 22.108(3)

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☒ **No** ☐

Required for PP022CE1

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: ENG01-P through ENG03-P (Engines)

Associated Equipment

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity MMBtu/hr	DNR Construction Permit
ENG01-P	ENG01-U	Diesel Air Compressor at Contractor Pad	Diesel	328	None
ENG02-P	ENG02-U	Diesel Air Compressor at M Furnace	Diesel	328	None
ENG03-P	ENG03-U	Diesel Pump at J160	Diesel	250	None

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from each emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%[(1)]
Authority for Requirement : 567 IAC 23.3(2) "d"
40 CFR 60 Subpart IIII
567 IAC 23.1(2) "yyy"

[(1)] Exhaust opacity must not exceed: 20 percent during the acceleration mode; 15 percent during the lugging mode; and 50 percent during the peaks in either the acceleration or lugging modes.

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr/dscf, 0.02 gr/kW-hr
Authority for Requirement: 567 IAC 23.3(2) "d"
40 CFR 60 Subpart IIII
567 IAC 23.1(2) "yyy"

Pollutant: Sulfur Dioxide (SO2)
Emission Limit(s): 2.5 lb/MMBtu
Authority for Requirement: 567 IAC 23.3(3) "b"(2)

Pollutant: Nitrogen Oxides (NOx)
Emission Limit(s): 0.40 gr/kW-hr
Authority for requirement: 40 CFR 60 Subpart IIII
567 IAC 23.1(2) "yyy"

Pollutant: Nonmethane Hydrocarbon (NMHC)
Emission Limit(s): 0.19 gr/kW-hr
Authority for Requirement: 40 CFR 60 Subpart IIII
567 IAC 23.1(2) "yyy"

Pollutant: Carbon Monoxide (CO)
Emission Limit(s): 3.5 gr/kW-hr
Authority for Requirement: 40 CFR 60 Subpart IIII
567 IAC 23.1(2) "yyy"

Operational Limits & Recordkeeping Requirements

NESHAP:
These non-emergency engines are subject to 40 CFR 63 Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE). According to 40 CFR 63.6590(a)(2)(ii) these non-emergency engines, located at a major source, are new stationary RICE as they were constructed on or after June 12, 2006.

According to 40 CFR 63.6590(c)(7), a new compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions must meet the requirements of Part 63 by meeting the requirements of 40 CFR part 60 subpart IIII. No further requirements apply for this engine under Part 63.
Authority for Requirement: 40 CFR 63 Subpart ZZZZ
567 IAC 23.1(4)"cz"

NSPS:
Fuel Requirements:
You must use diesel fuel that has a maximum sulfur content of 15 ppm (0.0015%) by weight and a minimum cetane index of 40 or a maximum aromatic content of 35 percent by volume. 40 CFR 60.4207 and 40 CFR 1090.305.

Compliance Requirements:
1. If your engine is equipped with a diesel particulate filter (DPF) to comply with the emission standards, the DPF must be installed with a backpressure monitor that notifies you when the high backpressure limit of the engine is approached. 40 CFR 60.4209(b).
2. You must operate and maintain the engine to comply with the required emission standards over the entire life of the engine (40 CFR 60.4206) by doing all of the following (40 CFR 60.4211(a)).
    a) Operating and maintaining the engine and control device according to the manufacturer's emission-related written instructions;
    b) Changing only those emission-related settings that are permitted by the manufacturer; and
    c) Meeting the requirements of 40 CFR 89, 94 and/or 1068, as they apply to you.
3. You must demonstrate compliance with the applicable emission standards by purchasing an engine certified to the applicable emission standards. The engine must be installed and configured according to the manufacturer's emission-related specifications. 40 CFR 60.4211(c).
4. If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct

the following performance testing in accordance with 40 CFR 60.4212 to demonstrate compliance with applicable emission standards. You are required to notify the DNR 30 days prior to the test date and are required to submit a stack test report to the DNR within 60 days after the completion of the testing. See 40 CFR 60.4211(g) for additional information.

Maximum Engine Power	Initial Test	Subsequent Test
100 ≤ HP ≤ 500	Within 1 year of engine startup, or non-permitted action [(1)]	Not required

[(1)] Non-permitted action means that you do not install, configure, operate, and maintain the engine and control device according to the manufacturer's emission-related written instructions, or you change the emission-related settings in a way that is not permitted by the manufacturer.

Notification and Recordkeeping Requirements

1. If your engine is equipped with a diesel particulate filter (DPF), you must keep records of any corrective action taken after the backpressure monitor has notified you that the high backpressure limit of the engine is approached. 40 CFR 60.4214(c).

Authority for Requirement: 40 CFR 60 Subpart IIII
567 IAC 23.1(2) "yyy"

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

IV. General Conditions

This permit is issued under the authority of the Iowa Code subsection 455B.133(8) and in accordance with 567 Iowa Administrative Code chapter 22.

G1. Duty to Comply

1. The permittee must comply with all conditions of the Title V permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for a permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. *567 IAC 22.108(9)"a"*
2. Any compliance schedule shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based. *567 IAC 22.105 (2)"h"(3)*
3. Where an applicable requirement of the Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions shall be enforceable by the administrator and are incorporated into this permit. *567 IAC 22.108 (1)"b"*
4. Unless specified as either "state enforceable only" or "local program enforceable only", all terms and conditions in the permit, including provisions to limit a source's potential to emit, are enforceable by the administrator and citizens under the Act. *567 IAC 22.108 (14)*
5. 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 the permit. *567 IAC 22.108 (9)"b"*
6. For applicable requirements with which the permittee is in compliance, the permittee shall continue to comply with such requirements. For applicable requirements that will become effective during the permit term, the permittee shall meet such requirements on a timely basis. *567 IAC 22.108(15)"c"*

G2. Permit Expiration

1. Except as provided in rule 567—22.104(455B), permit expiration terminates a source's right to operate unless a timely and complete application for renewal has been submitted in accordance with rule 567—22.105(455B). *567 IAC 22.116(2)*
2. To be considered timely, the owner, operator, or designated representative (where applicable) of each source required to obtain a Title V permit shall submit on forms or electronic format specified by the Department to the Air Quality Bureau, Iowa Department of Natural Resources, Air Quality Bureau, Wallace State Office Building, 502 E 9th St., Des Moines, IA 50319-0034, two copies (three if your facility is located in Linn or Polk county) of a complete permit application, at least 6 months but not more than 18 months prior to the date of permit expiration. An additional copy must also be sent to U.S. EPA Region VII, Attention: Chief of Air Permitting & Standards Branch, 11201 Renner Blvd., Lenexa, KS 66219. Additional copies to local programs or EPA are not required for application materials submitted through the electronic format specified by the Department. The application must include all emission points, emission units, air pollution control equipment, and monitoring devices at the facility. All emissions generating activities, including fugitive emissions, must be included. The definition of a complete application is as indicated in 567 IAC 22.105(2). *567 IAC 22.105*

G3. Certification Requirement for Title V Related Documents

Any application, report, compliance certification or other document submitted pursuant to this permit shall contain certification by a responsible official of truth, accuracy, and completeness. All certifications shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. *567 IAC 22.107 (4)*

G4. Annual Compliance Certification

By March 31 of each year, the permittee shall submit compliance certifications for the previous calendar year. The certifications shall include descriptions of means to monitor the compliance status of all emissions sources including emissions limitations, standards, and work practices in accordance with applicable requirements. The certification for a source shall include the identification of each term or condition of the permit that is the basis of the certification; the compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with all applicable department rules. For sources determined not to be in compliance at the time of compliance certification, a compliance schedule shall be submitted which provides for periodic progress reports, dates for achieving activities, milestones, and an explanation of why any dates were missed and preventive or corrective measures. The compliance certification shall be submitted to the administrator, director, and the appropriate DNR Field office. *567 IAC 22.108 (15)"e"*

G5. Semi-Annual Monitoring Report

By March 31 and September 30 of each year, the permittee shall submit a report of any monitoring required under this permit for the 6 month periods of July 1 to December 31 and January 1 to June 30, respectively. All instances of deviations from permit requirements must be clearly identified in these reports, and the report must be signed by a responsible official, consistent with 567 IAC 22.107(4). The semi-annual monitoring report shall be submitted to the director and the appropriate DNR Field office. *567 IAC 22.108 (5)*

G6. Annual Fee

1. The permittee is required under subrule 567 IAC 22.106 to pay an annual fee based on the total tons of actual emissions of each regulated air pollutant. Beginning July 1, 1996, Title V operating permit fees will be paid on July 1 of each year. The fee shall be based on emissions for the previous calendar year.
2. The fee amount shall be calculated based on the first 4,000 tons of each regulated air pollutant emitted each year. The fee to be charged per ton of pollutant will be available from the department by June 1 of each year. The Responsible Official will be advised of any change in the annual fee per ton of pollutant.
3. The emissions inventory shall be submitted annually by March 31 with forms specified by the department documenting actual emissions for the previous calendar year.
4. The fee shall be submitted annually by July 1 with forms specified by the department.
5. If there are any changes to the emission calculation form, the department shall make revised forms available to the public by January 1. If revised forms are not available by January 1, forms from the previous year may be used and the year of emissions documented changed. The department shall calculate the total statewide Title V emissions for the prior calendar year and make this information available to the public no later than April 30 of each year.
6. Phase I acid rain affected units under section 404 of the Act shall not be required to pay a fee for emissions which occur during the years 1993 through 1999 inclusive.
7. The fee for a portable emissions unit or stationary source which operates both in Iowa and out of state shall be calculated only for emissions from the source while operating in Iowa.
8. Failure to pay the appropriate Title V fee represents cause for revocation of the Title V permit as indicated in 567 IAC 22.115(1)"d".

G7. Inspection of Premises, Records, Equipment, Methods and Discharges
Upon presentation of proper credentials and any other documents as may be required by law, the permittee shall allow the director or the director's authorized representative to:
1. Enter upon the permittee's premises where a Title V source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
3. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
4. Sample or monitor, at reasonable times, substances or parameters for the purpose of ensuring compliance with the permit or other applicable requirements. *567 IAC 22.108 (15)"b"*

G8. Duty to Provide Information
The permittee shall furnish to the director, within a reasonable time, any information that the director may request in writing 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 also shall furnish to the director copies of records required to be kept by the permit, or for information claimed to be confidential, the permittee shall furnish such records directly to the administrator of EPA along with a claim of confidentiality. *567 IAC 22.108 (9)"e"*

G9. General Maintenance and Repair Duties
The owner or operator of any air emission source or control equipment shall:
1. Maintain and operate the equipment or control equipment at all times in a manner consistent with good practice for minimizing emissions.
2. Remedy any cause of excess emissions in an expeditious manner.
3. Minimize the amount and duration of any excess emission to the maximum extent possible during periods of such emissions. These measures may include but not be limited to the use of clean fuels, production cutbacks, or the use of alternate process units or, in the case of utilities, purchase of electrical power until repairs are completed.
4. Schedule, at a minimum, routine maintenance of equipment or control equipment during periods of process shutdowns to the maximum extent possible. *567 IAC 24.2(1)*

G10. Recordkeeping Requirements for Compliance Monitoring
1. In addition to any source specific recordkeeping requirements contained in this permit, the permittee shall maintain the following compliance monitoring records, where applicable:
    a. The date, place and time of sampling or measurements
    b. The date the analyses were performed.
    c. The company or entity that performed the analyses.
    d. The analytical techniques or methods used.
    e. The results of such analyses; and
    f. The operating conditions as existing at the time of sampling or measurement.
    g. The records of quality assurance for continuous compliance monitoring systems (including but not limited to quality control activities, audits and calibration drifts.)
2. The permittee shall retain records of all required compliance monitoring data and support information for a period of at least 5 years from the date of compliance monitoring sample, measurement report or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous compliance monitoring, and copies of all reports required by the permit.
3. For any source which in its application identified reasonably anticipated alternative operating scenarios, the permittee shall:

a. Comply with all terms and conditions of this permit specific to each alternative scenario.

b. Maintain a log at the permitted facility of the scenario under which it is operating.

c. Consider the permit shield, if provided in this permit, to extend to all terms and conditions under each operating scenario. *567 IAC 22.108(4), 567 IAC 22.108(12)*

G11. Evidence used in establishing that a violation has or is occurring.

Notwithstanding any other provisions of these rules, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any provisions herein.

1. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred at a source:

a. A monitoring method approved for the source and incorporated in an operating permit pursuant to 567 Chapter 22;

b. Compliance test methods specified in 567 Chapter 25; or

c. Testing or monitoring methods approved for the source in a construction permit issued pursuant to 567 Chapter 22.

2. The following testing, monitoring or information gathering methods are presumptively credible testing, monitoring, or information gathering methods:

a. Any monitoring or testing methods provided in these rules; or

b. Other testing, monitoring, or information gathering methods that produce information comparable to that produced by any method in subrule 21.5(1) or this subrule. *567 IAC 21.5(1)-567 IAC 21.5(2)*

G12. Prevention of Accidental Release: Risk Management Plan Notification and Compliance Certification

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Act, the permittee shall notify the department of this requirement. The plan shall be filed with all appropriate authorities by the deadline specified by EPA. A certification that this risk management plan is being properly implemented shall be included in the annual compliance certification of this permit. *567 IAC 22.108(6)*

G13. Hazardous Release

The permittee must report any situation involving the actual, imminent, or probable release of a hazardous substance into the atmosphere which, because of the quantity, strength and toxicity of the substance, creates an immediate or potential danger to the public health, safety or to the environment. A verbal report shall be made to the department at (515) 725-8694 and to the local police department or the office of the sheriff of the affected county as soon as possible but not later than six hours after the discovery or onset of the condition. This verbal report must be followed up with a written report as indicated in 567 IAC 131.2(2). *567 IAC Chapter 131-State Only*

G14. Excess Emissions and Excess Emissions Reporting Requirements

1. Excess Emissions. Excess emission during a period of startup, shutdown, or cleaning of control equipment is not a violation of the emission standard if the startup, shutdown or cleaning is accomplished expeditiously and in a manner consistent with good practice for minimizing emissions. Cleaning of control equipment which does not require the shutdown of the process equipment shall be limited to one six-minute period per one-hour period. An incident of excess emission (other than an incident during startup, shutdown or cleaning of control equipment) is a violation. If the owner or operator of a source maintains that the incident of excess emission was due to a malfunction, the owner or operator must show that the conditions which caused the incident of excess emission were not preventable by reasonable maintenance and control measures. Determination of any subsequent enforcement action will be made following review

of this report. If excess emissions are occurring, either the control equipment causing the excess emission shall be repaired in an expeditious manner or the process generating the emissions shall be shutdown within a reasonable period of time. An expeditious manner is the time necessary to determine the cause of the excess emissions and to correct it within a reasonable period of time. A reasonable period of time is eight hours plus the period of time required to shut down the process without damaging the process equipment or control equipment. A variance from this subrule may be available as provided for in Iowa Code section 455B.143. In the case of an electric utility, a reasonable period of time is eight hours plus the period of time until comparable generating capacity is available to meet consumer demand with the affected unit out of service, unless, the director shall, upon investigation, reasonably determine that continued operation constitutes an unjustifiable environmental hazard and issue an order that such operation is not in the public interest and require a process shutdown to commence immediately.

2. Excess Emissions Reporting

a. Initial Reporting of Excess Emissions. An incident of excess emission (other than an incident of excess emission during a period of startup, shutdown, or cleaning) shall be reported to the appropriate field office of the department within eight hours of, or at the start of the first working day following the onset of the incident. The reporting exemption for an incident of excess emission during startup, shutdown or cleaning does not relieve the owner or operator of a source with continuous monitoring equipment of the obligation of submitting reports required in 567-subrule 25.1(6). An initial report of excess emission is not required for a source with operational continuous monitoring equipment (as specified in 567-subrule 25.1(1)) if the incident of excess emission continues for less than 30 minutes and does not exceed the applicable emission standard by more than 10 percent or the applicable visible emission standard by more than 10 percent opacity. The initial report may be made by electronic mail (E-mail), in person, or by telephone and shall include as a minimum the following:

i. The identity of the equipment or source operation from which the excess emission originated and the associated stack or emission point.

ii. The estimated quantity of the excess emission.

iii. The time and expected duration of the excess emission.

iv. The cause of the excess emission.

v. The steps being taken to remedy the excess emission.

vi. The steps being taken to limit the excess emission in the interim period.

b. Written Reporting of Excess Emissions. A written report of an incident of excess emission shall be submitted as a follow-up to all required initial reports to the department within seven days of the onset of the upset condition, and shall include as a minimum the following:

i. The identity of the equipment or source operation point from which the excess emission originated and the associated stack or emission point.

ii. The estimated quantity of the excess emission.

iii. The time and duration of the excess emission.

iv. The cause of the excess emission.

v. The steps that were taken to remedy and to prevent the recurrence of the incident of excess emission.

vi. The steps that were taken to limit the excess emission.

vii. If the owner claims that the excess emission was due to malfunction, documentation to support this claim. *567 IAC 24.1(1)-567 IAC 24.1(4)*

3. Emergency Defense for Excess Emissions. For the purposes of this permit, an “emergency” means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include non-compliance, to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation or operator error. An emergency constitutes an affirmative defense to an action brought for non-compliance with technology based limitations if it can be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that:

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

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

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

d. The permittee submitted notice of the emergency to the director by certified mail within two working days of the time when the emissions limitations were exceeded due to the emergency. This notice fulfills the requirement of paragraph 22.108(5)"b." – See G15. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof. This provision is in addition to any emergency or upset provision contained in any applicable requirement. *567 IAC 22.108(16)*

G15. Permit Deviation Reporting Requirements

A deviation is any failure to meet a term, condition or applicable requirement in the permit. Reporting requirements for deviations that result in a hazardous release or excess emissions have been indicated above (see G13 and G14). Unless more frequent deviation reporting is specified in the permit, any other deviation shall be documented in the semi-annual monitoring report and the annual compliance certification (see G4 and G5). *567 IAC 22.108(5)"b"*

G16. Notification Requirements for Sources That Become Subject to NSPS and NESHAP Regulations

During the term of this permit, the permittee must notify the department of any source that becomes subject to a standard or other requirement under 567-subrule 23.1(2) (standards of performance of new stationary sources) or section 111 of the Act; or 567-subrule 23.1(3) (emissions standards for hazardous air pollutants), 567-subrule 23.1(4) (emission standards for hazardous air pollutants for source categories) or section 112 of the Act. This notification shall be submitted in writing to the department pursuant to the notification requirements in 40 CFR Section 60.7, 40 CFR Section 61.07, and/or 40 CFR Section 63.9. *567 IAC 23.1(2), 567 IAC 23.1(3), 567 IAC 23.1(4)*

G17. Requirements for Making Changes to Emission Sources That Do Not Require Title V Permit Modification

1. Off Permit Changes to a Source. Pursuant to section 502(b)(10) of the CAAA, the permittee may make changes to this installation/facility without revising this permit if:

a. The changes are not major modifications under any provision of any program required by section 110 of the Act, modifications under section 111 of the act, modifications under section 112 of the act, or major modifications as defined in 567 IAC Chapter 22.

b. The changes do not exceed the emissions allowable under the permit (whether

expressed therein as a rate of emissions or in terms of total emissions);
c. The changes are not modifications under any provisions of Title I of the Act and the changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or as total emissions);
d. The changes are not subject to any requirement under Title IV of the Act (revisions affecting Title IV permitting are addressed in rules 567—22.140(455B) through 567 - 22.144(455B));.
e. The changes comply with all applicable requirements.
f. For each such change, the permitted source provides to the department and the administrator by certified mail, at least 30 days in advance of the proposed change, a written notification, including the following, which must be attached to the permit by the source, the department and the administrator:

i. A brief description of the change within the permitted facility,
ii. The date on which the change will occur,
iii. Any change in emission as a result of that change,
iv. The pollutants emitted subject to the emissions trade
v. If the emissions trading provisions of the state implementation plan are invoked, then Title V permit requirements with which the source shall comply; a description of how the emissions increases and decreases will comply with the terms and conditions of the Title V permit.
vi. A description of the trading of emissions increases and decreases for the purpose of complying with a federally enforceable emissions cap as specified in and in compliance with the Title V permit; and
vii. Any permit term or condition no longer applicable as a result of the change. *567 IAC 22.110(1)*

2. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), record keeping, reporting, or compliance certification requirements. *567 IAC 22.110(2)*
3. Notwithstanding any other part of this rule, the director may, upon review of a notice, require a stationary source to apply for a Title V permit if the change does not meet the requirements of subrule 22.110(1). *567 IAC 22.110(3)*
4. The permit shield provided in subrule 22.108(18) shall not apply to any change made pursuant to this rule. Compliance with the permit requirements that the source will meet using the emissions trade shall be determined according to requirements of the state implementation plan authorizing the emissions trade. *567 IAC 22.110(4)*
5. 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. *567 IAC 22.108(11)*

G18. Duty to Modify a Title V Permit

1. Administrative Amendment.

a. An administrative permit amendment is a permit revision that does any of the following:

i. Correct typographical errors
ii. Identify a change in the name, address, or telephone number of any person identified in the permit, or provides a similar minor administrative change at the source;
iii. Require more frequent monitoring or reporting by the permittee; or

iv. Allow for a change in ownership or operational control of a source where the director determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new permittee has been submitted to the director.

b. The permittee may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request. The request shall be submitted to the director.

c. Administrative amendments to portions of permits containing provisions pursuant to Title IV of the Act shall be governed by regulations promulgated by the administrator under Title IV of the Act.

2. Minor Title V Permit Modification.

a. Minor Title V permit modification procedures may be used only for those permit modifications that satisfy all of the following:

i. Do not violate any applicable requirement;

ii. Do not involve significant changes to existing monitoring, reporting or recordkeeping requirements in the Title V permit;

iii. Do not require or change a case by case determination of an emission limitation or other standard, or an increment analysis;

iv. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed in order to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include any federally enforceable emissions caps which the source would assume to avoid classification as a modification under any provision under Title I of the Act; and an alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Act;

v. Are not modifications under any provision of Title I of the Act; and

vi. Are not required to be processed as significant modification under rule 567 - 22.113(455B).

b. An application for minor permit revision shall be on the minor Title V modification application form and shall include at least the following:

i. A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs;

ii. The permittee's suggested draft permit;

iii. Certification by a responsible official, pursuant to 567 IAC 22.107(4), that the proposed modification meets the criteria for use of minor permit modification procedures and a request that such procedures be used; and

iv. Completed forms to enable the department to notify the administrator and the affected states as required by 567 IAC 22.107(7).

c. The permittee may make the change proposed in its minor permit modification application immediately after it files the application. After the permittee makes this change and until the director takes any of the actions specified in 567 IAC 22.112(4) "a" to "c", the permittee must comply with both the applicable requirements governing the change and the proposed permit terms and conditions. During this time, the permittee need not comply with the existing permit terms and conditions it seeks to modify. However, if the permittee fails to comply with its proposed permit terms and conditions

during this time period, the existing permit terms and conditions it seeks to modify may be enforced against the facility.

3. Significant Title V Permit Modification.

Significant Title V modification procedures shall be used for applications requesting Title V permit modifications that do not qualify as minor Title V modifications or as administrative amendments. These include but are not limited to all significant changes in monitoring permit terms, every relaxation of reporting or recordkeeping permit terms, and any change in the method of measuring compliance with existing requirements. Significant Title V modifications shall meet all requirements of 567 IAC Chapter 22, including those for applications, public participation, review by affected states, and review by the administrator, as those requirements that apply to Title V issuance and renewal.

The permittee shall submit an application for a significant permit modification not later than three months after commencing operation of the changed source unless the existing Title V permit would prohibit such construction or change in operation, in which event the operation of the changed source may not commence until the department revises the permit. *567 IAC 22.111-567 IAC 22.113*

G19. Duty to Obtain Construction Permits

Unless exempted in 567 IAC 22.1(2) or to meet the parameters established in 567 IAC 22.1(1)"c", the permittee shall not construct, install, reconstruct or alter any equipment, control equipment or anaerobic lagoon without first obtaining a construction permit, or conditional permit, or permit pursuant to rule 567 IAC 22.8, or permits required pursuant to rules 567 IAC 22.4, 567 IAC 22.5, 567 IAC 31.3, and 567 IAC 33.3 as required in 567 IAC 22.1(1). A permit shall be obtained prior to the initiation of construction, installation or alteration of any portion of the stationary source or anaerobic lagoon. *567 IAC 22.1(1)*

G20. Asbestos

The permittee shall comply with 567 IAC 23.1(3)"a", and 567 IAC 23.2(3)"g" when activities involve asbestos mills, surfacing of roadways, manufacturing operations, fabricating, insulating, waste disposal, spraying applications, demolition and renovation operations (*567 IAC 23.1(3)"a");* training fires and controlled burning of a demolished building *(567 IAC 23.2).*

G21. Open Burning

The permittee is prohibited from conducting open burning, except as provided in 567 IAC 23.2. *567 IAC 23.2 <u>except</u> 23.2(3)"j"; 567 IAC 23.2(3)"j" - State Only*

G22. Acid Rain (Title IV) Emissions Allowances

The permittee shall not exceed any allowances that it holds under Title IV of the Act or the regulations promulgated there under. Annual emissions of sulfur dioxide in excess of the number of allowances to emit sulfur dioxide held by the owners and operators of the unit or the designated representative of the owners and operators is prohibited. Exceedances of applicable emission rates are prohibited. "Held" in this context refers to both those allowances assigned to the owners and operators by USEPA, and those allowances supplementally acquired by the owners and operators. The use of any allowance prior to the year for which it was allocated is prohibited. Contravention of any other provision of the permit is prohibited. *567 IAC 22.108(7)*

G23. Stratospheric Ozone and Climate Protection (Title VI) Requirements

1. The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:

a. 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 class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to § 82.106.

b. The placement of the required warning statement must comply with the requirements pursuant to § 82.108.

c. The form of the label bearing the required warning statement must comply with the requirements pursuant to § 82.110.

d. No person may modify, remove, or interfere with the required warning statement except as described in § 82.112.

2. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for MVACs in Subpart B:

a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to § 82.156.

b. 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.

c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to § 82.161.

d. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with reporting and recordkeeping requirements pursuant to § 82.166. ("MVAC-like appliance" as defined at § 82.152)

e. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to § 82.156.

f. Owners/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.

3. If the permittee manufactures, transforms, 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.

4. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (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. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant,

5. The permittee shall be allowed to switch from any ozone-depleting or greenhouse gas generating substances to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program. *40 CFR part 82*

G24. Permit Reopenings

1. 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. *567 IAC 22.108(9)"c"*

2. Additional applicable requirements under the Act become applicable to a major part 70 source with a remaining permit term of 3 or more years. Revisions shall be made as expeditiously as practicable, but not later than 18 months after the promulgation of such standards and regulations.

a. Reopening and revision on this ground is not required if the permit has a remaining term of less than three years;

b. Reopening and revision on this ground is not 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 have been extended pursuant to 40 CFR 70.4(b)(10)(i) or (ii) as amended to May 15, 2001.

c. Reopening and revision on this ground is not required if the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. *567 IAC 22.108(17)"a", 567 IAC 22.108(17)"b"*

3. A permit shall be reopened and revised under any of the following circumstances:

a. The department receives notice that the administrator has granted a petition for disapproval of a permit pursuant to 40 CFR 70.8(d) as amended to July 21, 1992, provided that the reopening may be stayed pending judicial review of that determination;

b. The department or the administrator determines that the Title V permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the Title V permit;

c. Additional applicable requirements under the Act become applicable to a Title V source, provided that the reopening on this ground is not required if the permit has a remaining term of less than three years, the effective date of the requirement is later than the date on which the permit is due to expire, or the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. Such a reopening shall be complete not later than 18 months after promulgation of the applicable requirement.

d. Additional requirements, including excess emissions requirements, become applicable to a Title IV affected source under the acid rain program. Upon approval by the administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.

e. The department or the administrator determines that the permit must be revised or revoked to ensure compliance by the source with the applicable requirements. *567 IAC 22.114(1)*

4. Proceedings to reopen and reissue a Title V permit shall follow the procedures applicable to initial permit issuance and shall effect only those parts of the permit for which cause to reopen exists. *567 IAC 22.114(2)*

5. A notice of intent shall be provided to the Title V source at least 30 days in advance of the date the permit is to be reopened, except that the director may provide a shorter time period in the case of an emergency. *567 IAC 22.114(3)*

G25. Permit Shield

1. The director may expressly include in a Title V permit a provision stating that compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that:

a. Such applicable requirements are included and are specifically identified in the permit; or

b. The director, 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.

2. A Title V permit that does not expressly state that a permit shield exists shall be presumed not to provide such a shield.

3. A permit shield shall not alter or affect the following:

a. The provisions of Section 303 of the Act (emergency orders), including the authority of the administrator under that section;

b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;

c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the Act;

d. The ability of the department or the administrator to obtain information from the facility pursuant to Section 114 of the Act. *567 IAC 22.108 (18)*

G26. Severability

The provisions of this permit are severable and if any provision or application of any provision is found to be invalid by this department or a court of law, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected by such finding. *567 IAC 22.108 (8)*

G27. Property Rights

The permit does not convey any property rights of any sort, or any exclusive privilege. *567 IAC 22.108 (9)"d"*

G28. Transferability

This permit is not transferable from one source to another. If title to the facility or any part of it is transferred, an administrative amendment to the permit must be sought consistent with the requirements of 567 IAC 22.111(1). *567 IAC 22.111 (1)"d"*

G29. Disclaimer

No review has been undertaken on the engineering aspects of the equipment or control equipment other than the potential of that equipment for reducing air contaminant emissions. *567 IAC 22.3(3)"c"*

G30. Notification and Reporting Requirements for Stack Tests or Monitor Certification

The permittee shall notify the department's stack test contact in writing not less than 30 days before a required test or performance evaluation of a continuous emission monitor is performed to determine compliance with applicable requirements of 567 – Chapter 23 or a permit condition. Such notice shall include the time, the place, the name of the person who will conduct the test and other information as required by the department. If the owner or operator does not provide timely notice to the department, the department shall not consider the test results or performance evaluation results to be a valid demonstration of compliance with applicable rules or permit conditions. Upon written request, the department may allow a notification period of less than 30 days. At the department’s request, a pretest meeting shall be held not later than 15 days prior to conducting the compliance demonstration. A testing protocol shall be submitted to the department no later than 15 days before the owner or operator conducts the compliance

demonstration. A representative of the department shall be permitted to witness the tests. Results of the tests shall be submitted in writing to the department's stack test contact in the form of a comprehensive report within six weeks of the completion of the testing. Compliance tests conducted pursuant to this permit shall be conducted with the source operating in a normal manner at its maximum continuous output as rated by the equipment manufacturer, or the rate specified by the owner as the maximum production rate at which the source shall be operated. In cases where compliance is to be demonstrated at less than the maximum continuous output as rated by the equipment manufacturer, and it is the owner's intent to limit the capacity to that rating, the owner may submit evidence to the department that the source has been physically altered so that capacity cannot be exceeded, or the department may require additional testing, continuous monitoring, reports of operating levels, or any other information deemed necessary by the department to determine whether such source is in compliance.

Stack test notifications, reports and correspondence shall be sent to:

Stack Test Review Coordinator
Iowa DNR, Air Quality Bureau
Wallace State Office Building
502 E 9th St.
Des Moines, IA 50319-0034
(515) 725-9545

Within Polk and Linn Counties, stack test notifications, reports and correspondence shall also be directed to the supervisor of the respective county air pollution program.

567 IAC 25.1(7)"a", 567 IAC 25.1(9)

G31. Prevention of Air Pollution Emergency Episodes

The permittee shall comply with the provisions of 567 IAC Chapter 26 in the prevention of excessive build-up of air contaminants during air pollution episodes, thereby preventing the occurrence of an emergency due to the effects of these contaminants on the health of persons.

567 IAC 26.1(1)

G32. Contacts List

The current address and phone number for reports and notifications to the EPA administrator is:

Iowa Compliance Officer
Air Branch
Enforcement and Compliance Assurance Division
U.S. EPA Region 7
11201 Renner Blvd.
Lenexa, KS 66219
(913) 551-7020

The current address and phone number for reports and notifications to the department or the Director is:

Chief, Air Quality Bureau
Iowa Department of Natural Resources
Wallace State Office Building
502 E 9th St.
Des Moines, IA 50319-0034
(515) 725-8200

Reports or notifications to the DNR Field Offices or local programs shall be directed to the supervisor at the appropriate field office or local program. Current addresses and phone numbers are:

Field Office 1
1101 Commercial Court, Suite 10
Manchester, IA 52057
(563) 927-2640

Field Office 2
2300-15th St., SW
Mason City, IA 50401
(641) 424-4073

Field Office 3
1900 N. Grand Ave.
Spencer, IA 51301
(712) 262-4177

Field Office 4
1401 Sunnyside Lane
Atlantic, IA 50022
(712) 243-1934

Field Office 5
Wallace State Office Building
502 E 9th St.
Des Moines, IA 50319-0034
(515) 725-0268

Field Office 6
1023 West Madison Street
Washington, IA 52353-1623
(319) 653-2135

Polk County Public Works Dept.
Air Quality Division
5885 NE 14th St.
Des Moines, IA 50313
(515) 286-3351

Linn County Public Health
Air Quality Branch
1020 6th Street SE
Cedar Rapids, IA 52401
(319) 892-6000

V. Appendix A: Federal Rule Weblinks

A. 40 CFR 60 Subpart A Requirements – General Provisions
https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-60/subpart-A

B. 40 CFR 60 Subpart DDD Requirements – Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry
https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-60/subpart-DDD

C. 40 CFR 60 Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-60/subpart-IIII

D. 40 CFR 61 Subpart A Requirements – General Provisions
https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-61/subpart-A

E. 40 CFR 61 Subpart J Requirements – National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene
https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-61/subpart-J

F. 40 CFR 61 Subpart V Requirements – National Emission Standard for Equipment Leaks (Fugitive Emission Sources)
https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-61/subpart-V

G. 40 CFR 61 Subpart Y – National Emission Standards for Benzene Emissions from Benzene Storage Vessels.
https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-61/subpart-Y

H. 40 CFR 61 Subpart BB Requirements – National Emission Standard for Benzene Emissions from Benzene Transfer Operations
https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-61/subpart-BB

I. 40 CFR 61 Subpart FF Requirements – National Emission Standard for Benzene Waste Operations
https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-61/subpart-FF

J. 40 CFR 63 Subpart A Requirements – General Provisions
https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-63/subpart-A

K. 40 CFR 63 Subpart SS – National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process.
https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-63/subpart-SS

L. 40 CFR 63 Subpart UU – National Emission Standards for Equipment Leaks – Control Level 2 Standards.
https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-63/subpart-UU

M. 40 CFR 63 Subpart WW – National Emission Standards for Storage Vessels (Tanks) – Control Level 2.
https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-63/subpart-WW

N. 40 CFR 63 Subpart XX Requirements – National Emission Standards for Ethylene Manufacturing Process Units: Heat Exchange Systems and Waste Operations
https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-63/subpart-XX

O. 40 CFR 63 Subpart YY Requirements – National Emission Standards for Hazardous Air Pollutants for Source Categories: Generic Maximum Achievable Control Technology Standards
https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-63/subpart-YY

P. 40 CFR 63 Subpart FFFF Requirements – National Emission Standard for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing
https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-63/subpart-FFFF

Q. 40 CFR 63 Subpart ZZZZ Requirements – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-63/subpart-ZZZZ

R. 40 CFR 63 Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers and Process Heaters.
https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-63/subpart-DDDDD

S. 40 CFR 63 Subpart GGGGG – National Emission Standards for Hazardous Air Pollutants: Site Remediation
https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-63/subpart-GGGGG

Appendix B: CAM Plan

Compliance Assurance Monitoring Plan
HDPE Finishing Fabric Filter/Baghouses

1. Identification of the emissions unit, applicable emissions limit or standard, and description of the control technology;

HDPE Unit				
EP	**EU**	**EU Description**	**CE**	**Con. Permit**
HD018-P	HD018-U	F-0462 F-line Feed Bin	HD018CE2	89-A-065-S2
HD019-P	HD019-U	F-0463 F-line Feed Bin	HD019CE2	07-A-1190-S1
HD050A-P	HD050A1-U	L0420A Mixer	HD050ACE1	19-A-054
	HD050A2-U	V0426A Batch Weigh Scale		
HD050B-P	HD050B1-U	L0420B Mixer	HD050BCE1	19-A-055
	HD050B2-U	V0426B Batch Weigh Scale		
HD050C-P	HD050C-U	L-0470 F Line Conveyor & Dust Collector	HD050CCE1	89-A-070-S2

2. Description of the indicators to be monitored for trouble shooting purposes;

Potential indicators that can be monitored: Visible emissions – once daily (if operating).

3. Description of the indicator ranges, or the process by which indicators are to be established;

For the daily visible emission observation, the acceptable threshold is no visible emissions.

4. Description of the performance criteria for monitoring, including:

This section is based upon good practices for the operation and maintenance of fabric filter baghouses and the manufacturer's recommendations.

- Specifications for representative operating data – n/a
- Verification procedures to confirm the monitoring equipment's operational status – daily observations of the control equipment
- Visible Emissions Monitoring Frequency – daily (**post**-control emissions are less than the major source thresholds)

- Data averaging period; - not applicable

5. Justification for the proposed monitoring;

Visible emission detection was selected as the performance indicator because it demonstrates the proper operating conditions of this control device and therefore the optimal PM control performance.

6. Emissions test data;

Source testing performed by METCO Environmental, file number 06-165 was conducted on the HD018-P stack, and the PP008-P stack. All three of PM results demonstrated that the tested emissions were a small fraction of the PM allowable claimed from the Title V permit application and the allowable emission rates. The testing was performed during June 2006 to comply with the Title V periodic monitoring requirement.

7. An implementation plan for installing, testing, and operating the monitoring equipment if necessary.

Operating Discipline (OD) rounds data are collected with hand held data loggers which contain entry spaces for the daily baghouse visible emission observations.

8. QIP Threshold

The QIP threshold is six excursions in a six month period.

Compliance Assurance Monitoring Plans
HDPE Fabric Filter/Baghouses

1. Identification of the emissions unit, applicable emissions limit or standard, and description of the control technology;

EP	EU	EU Description	CE	Con. Permit
HD008N/S-P	HD008A/H-U	F-0431A/H Rundown Bins	HD008CE1/2	94-A-109-S1, 94-A-110-S1
HD009N/S-P	HD009A/H-U	F-0439A/H Rundown Bins	HD009CE1/2	93-A-157-S4, 93-A-158-S4
HD200-P	HD200-U	J0407D/J-1444A Product Transfer System	HD200CE1	17-A-602
HD201-P	HD201-U	J0407B/J-1444B Product Transfer System	HD201CE1	17-A-603
HD202-P	HD202-U	J0407C/J-1444C Product Transfer System	HD202CE1	17-A-604

2. Description of the indicators to be monitored for troubleshooting purposes;

Visible emissions from the atmospheric vent on the control equipment – once per day (if operating)

3. Description of the indicator ranges, or the process by which indicators are to be established;

For the daily visible emission observation, the acceptable threshold is no visible emissions.

4. Description of the performance criteria for monitoring, including:

This section is based upon good practices for the operation and maintenance of fabric filter baghouses and the manufacturer's recommendations.

- Specifications for representative operating data – n/a
- Verification procedures to confirm the monitoring equipment's operational status – daily observations of the control equipment
- Visible Emissions Monitoring Frequency – daily (**post**-control emissions are less than the major source thresholds)
- Data averaging period; - not applicable

5. Justification for the proposed monitoring;

Visible emission detection was selected as the performance indicator because it demonstrates the proper operating conditions of this control device and therefore the optimal PM control performance.

6. Emissions test data;

In 2012, a stack test (Metco #12-350) was performed on the discharge of HD008N-U. The average hourly rate of particulate emissions was found to be 0.04 lb/hr with a flow rate of 2400 scfm.

In 2011, (Metco #11-317) a stack test was performed on the discharge of HD009N-U. The average hourly rate of particulate emissions was found to be 0.02 lb/hr with a flow rate of 1325 scfm.

Stack testing is to be performed on one of the sources HD200-P through HD203-P.

7. *An implementation plan for installing, testing, and operating the monitoring equipment if necessary*.

Operating Discipline (OD) rounds data are collected with hand-held data loggers which contain entry spaces for the daily baghouse visible emission observations.

8. *QIP Thresholds*

The QIP threshold is six excursions in a six-month period.

Compliance Assurance Monitoring Plans
Packaging Baghouses

1. Identification of the emissions unit, applicable emissions limit or standard, and description of the control technology;

EP	EU	EU Description	CE	Con. Permit
PP022-P	PP022-U	PEX Boxing Line	PP022CE1	08-A-659-S1

2. Description of the indicators to be monitored for troubleshooting purposes;

Visible emissions from the atmospheric vent on the control equipment – once per day (if operating)

3. Description of the indicator ranges, or the process by which indicators are to be established;

For the daily visible emission observation, the acceptable threshold is no visible emissions.

4. Description of the performance criteria for monitoring, including:

This section is based upon good practices for the operation and maintenance of fabric filter baghouses and the manufacturer's recommendations.

- Specifications for representative operating data – n/a
- Verification procedures to confirm the monitoring equipment's operational status – daily observations of the control equipment
- Visible Emissions Monitoring Frequency – daily (**post**-control emissions are less than the major source thresholds)
- Data averaging period; - not applicable

5. Justification for the proposed monitoring;

Daily VE observations is the minimum required interval per IDNR guidelines.

6. Emissions test data;

Stack testing is to be performed on source.

7. ***An implementation plan for installing, testing, and operating the monitoring equipment if necessary***.

Operating Discipline (OD) rounds data are collected with hand-held data loggers which contain entry spaces for the daily baghouse visible emission observations.

8. ***QIP Thresholds***

The QIP threshold is six excursions in a six-month period.

Appendix C: 2022 Consent Decree

Below is the consent decree and supporting documents as included in construction permit 00-A-911-S8. The full consent decree can be found at https://www.epa.gov/system/files/documents/2021-10/lyondellbasell-cd.pdf .

APPENDIX A

Applicable Requirements for Flare Operations and Fenceline Monitoring

The terms and conditions in this Appendix A shall survive termination of the Consent Decree in Civil Action No. 4:21-cv-03359 and shall not be removed or modified solely on the basis that the Consent Decree has been terminated. *See United States of America, Plaintiff v. Equistar Chemicals, LP; LyondellBasell Acetyls, LLC; and Lyondell Chemical Company, Defendants, in the US District Court for the Southern District of Texas, Houston Division, Case No. 4:21-cv-03359 (Entered January 19, 2022).*

Definitions:

The following definitions apply in this Appendix A:

a. "Air Construction Permit" means a preconstruction permit issued under the authority of 567 Iowa Administrative Code (IAC) Title II (Air Quality), Chapter 22 (Controlling Pollution).

b. "Appendix A-1" means the appendix titled "Calculating Combustion Efficiency, Net Heating Value of the Combustion Zone Gas (NHVcz), the Net Heating Value Dilution Parameter (NHVdil), and Flare Tip Velocity," appended to this Appendix A.

c. "Appendix A-2" means the appendix titled "Calculating the Unobstructed Cross-Sectional Area of Various Types of Flares," appended to this Appendix A.

d. "Appendix A-3" means the appendix titled "Clinton Plant Waste Gas Minimizing Equipment and Operational Procedures," appended to this Appendix A.

e. "Appendix A-4" or the "Johnson Letter" means the February 5, 2018 letter to representatives of Extrel CMS, LLC and AMETEK, Energy and Process Division from Steffan M. Johnson, Group Leader, Measurement Technology Group, Office of Air Quality Planning and Standards, appended to this Appendix A.

f. "Appendix A-5" means the appendix titled "Scope of Work for the Fenceline Monitoring Project," appended to this Appendix A.

g. "Assist Air" means all air that is intentionally introduced before or at a Flare tip through nozzles or other hardware conveyance for the purposes of, including, but not limited to, protecting the design of the Flare tip, promoting turbulence for mixing, or inducing air into the flame. Assist Air includes premix assist air and perimeter assist air. Assist Air does not include surrounding ambient air.

h. "Assist Steam" means all steam that is intentionally introduced before or at a Flare tip through nozzles or other hardware conveyance for the purposes of, including, but not limited to, protecting the design of the Flare tip, promoting turbulence for mixing, or inducing air into the flame. Assist Steam includes, but is not necessarily limited to, center steam, lower steam, and upper steam.

i. "Capable of Receiving Sweep, Supplemental, and/or Waste Gas" means that the flow of Sweep Gas, Supplemental Gas, and/or Waste Gas is not prevented from being directed to the Flare by means of an isolation device such as closed valves, blinds, or stopples.

j. "Clinton Plant" means the petrochemical manufacturing plant owned and operated by Equistar Chemicals, LP, located at 3400 Anamosa Road in Clinton, Iowa, IDNR Plant Number 23-01-004.

k. "Combustion Efficiency" means a flare's efficiency in converting the organic carbon compounds found in Combustion Zone Gas to carbon dioxide.

l. "Combustion Zone" means the area of the Flare flame where the Combustion Zone Gas combines for combustion.

m. "Combustion Zone Gas" means all gases and vapors found after the Flare tip. This gas includes all Vent Gas, Pilot Gas, Total Steam, and Assist Air.

n. "Consent Decree" means the consent decree, including any and all tables and attached appendices entered January 19, 2022, in *United States of America, Plaintiff v. Equistar Chemicals, LP; LyondellBasell Acetyls, LLC; and Lyondell Chemical Company, Defendants*, in the U.S. District Court for the Southern District of Texas, Houston Division, Case No. 4:21-cv-03359.

o. "Covered Flare" or "the Flare" means the Waste Gas Flare, EP033CE1, used at the Clinton Plant, provided however that once the Waste Gas Flare is permanently taken out of service and removed from the Air Construction Permit, it is no longer a Covered Flare.

p. "Day" means a calendar day unless expressly stated to be a business day. In computing any period of time for a compliance deadline under this Appendix, where the last day would fall on a Saturday, Sunday, or federal or state holiday, the period will run until the close of business of the next business day.

q. "Design Capacity" means, with respect to an FGRS, the capacity, in mscf per Day, of the installed flare gas recovery Eductor.

r. "Eductor" means a mechanical device for compressing and conveying gases. An Eductor utilizes the pressure energy found within a high pressure motive gas (e.g., steam) to entrain and compress

a secondary low pressure gas (e.g., Vent Gas). The Eductor utilizes a specially shaped nozzle to create a "venturi effect" which increases the fluid velocity and decreases the fluid pressure, hereby resulting in a mixture of high pressure and low pressure gases on the discharge side.

s. "Flare Gas Recovery System" or "FGRS" means a system of one or more Eductors, piping, and associated water seal, rupture disk, or other equipment used to divert gas from a Flare and direct the gas to a fuel gas system, to a combustion device other than the Flare, or to a product, co-product, by-product, or raw material recovery system.

t. "Flare Tip Velocity" or "V_{tip}" means the velocity of gases exiting the flare tip as defined in Condition 12.

u. "In Operation" with respect to the Flare, means all times that Sweep, Supplemental, or Waste Gas is or may be vented to a Flare. A Flare that is In Operation is Capable of Receiving Sweep, Supplemental, and/or Waste Gas unless all Sweep, Supplemental, and Waste Gas flow is prevented by means of an isolation device such as closed valves, blinds, and/or stopples.

v. "Malfunction" means, as specified in 40 C.F.R. § 60.2, any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not Malfunctions.

w. "Net Heating Value" means the theoretical total quantity of heat liberated by the complete combustion of a unit volume or weight of a fuel initially at 25 degrees Centigrade and 760 mm Hg, assuming that the produced water is vaporized and all combustion products remain at, or are returned to, 25 degrees Centigrade; however, the standard for determining the volume corresponding to one mole is 20 degrees Centigrade.

x. "Net Heating Value Analyzer" or "NHV Analyzer" means an instrument capable of measuring the Net Heating Value of Vent Gas in BTU/scf. The sample extraction point of a Net Heating Value Analyzer may be located upstream of the introduction of Supplemental Gas and/or Sweep Gas and/or Purge Gas if the composition and flow rate of any such Supplemental Gas and/or Sweep Gas and/or Purge Gas is known and if this known value then is used in the calculation of the Net Heating Value of the Vent Gas.

y. "Net Heating Value of Combustion Zone Gas" or "NHV_{cz}" means the Net Heating Value, in BTU/scf, of the Combustion Zone Gas in a flare. NHV_{cz} must be calculated in accordance with Step 3 of Appendix A-1.

z. "Net Heating Value of the Vent Gas" or "NHV_{vg}" means the Net Heating Value, in BTU/scf, of the Vent Gas directed to a flare. NHV_{vg} must be calculated in accordance with Step 1 of Appendix A-1.

aa. "Newly Installed Covered Flare" means any Air-Assisted Flare or Steam-Assisted Flare that is permanently installed, receives Waste Gas that has been redirected to it from a Covered Flare, and commences operation at the Clinton Plant after the January 19, 2022.

bb. "Pilot Gas" means gas introduced into a flare tip that provides a flame to ignite the Vent Gas.

cc. "Portable Flare" means a Steam-Assisted Flare or Air-Assisted Flare that is not permanently installed and that receives Waste Gas that has been redirected to it from a Covered Flare.

dd. "Potentially Recoverable Gas" means the Sweep Gas, Supplemental Gas, and/or Waste Gas (including hydrogen, nitrogen, oxygen, carbon dioxide, carbon monoxide, and/or water) directed to the FGRS, except that Regeneration Waste Gas Streams are not included in the definition of "Potentially Recoverable Gas."

ee. "Purge Gas" means the gas introduced between a flare header's water seal and the flare tip to prevent oxygen infiltration (backflow) into the flare tip. For a flare with no water seal, the function of Purge Gas is performed by Sweep Gas, and therefore, by definition, such a flare has no Purge Gas.

ff. "Regeneration Waste Streams" means Waste Gas streams produced during the regeneration and subsequent clearing of the dryers, reactors, and other vessels at the Clinton Plant. Regeneration Waste Gas Streams are high in nitrogen (typically approximately 90%) and thus cannot be returned to the process.

gg. "SCFM" or "scfm" means standard cubic feet per hour.

hh. "Semi-Annual Period" means a six-month period ending on June 30 or December 31.

ii. "Smoke Emissions" means the definition set forth in Section 3.5 of Method 22 of 40 C.F.R. Part 60, Appendix A. For purposes of this Appendix, Smoke Emissions may be either documented by a video camera or determined by an observer knowledgeable with respect to the general procedures for determining the presence of Smoke Emissions per Method 22

jj. "Standard Conditions" means a temperature of 68 degrees Fahrenheit and a pressure of 1 atmosphere. Unless otherwise expressly set forth in this Appendix, Standard Conditions apply.

kk. "Steam-Assisted Flare" means a flare that uses steam piped to a flare tip to assist in combustion.

ll. "Supplemental Gas" means all gas introduced to a flare in order to improve the combustible characteristics of the Combustion Zone Gas.

mm. "Sweep Gas" means, for a Flare with an FGRS, Gas intentionally introduced into a Flare header system to prevent oxygen buildup in the Flare header. Sweep Gas in these Flares is introduced prior to and recovered by the FGRS.

nn. "Total Steam" means the total of all steam that is supplied to a flare and includes, but is not limited to, lower steam, center steam, and upper steam.

oo. "Turnaround" means a complete shutdown of any emission unit to: (1) perform necessary cleaning and repairs; (2) perform required tests and internal inspections; and/or (3) install any modifications or additions, or make preparations necessary for a future modification or addition.

pp. "Unobstructed Cross-Sectional Area of the Flare Tip" or "$A_{tip\text{-}unob}$" means the open, unobstructed area of a flare tip through which Vent Gas and center steam pass. Diagrams of four common flare types are set forth in Appendix A-2 together with the equations for calculating the $A_{tip\text{-}unob}$ of these four types.

qq. "Vent Gas" means all gas found just before the flare tip. This gas includes all Waste Gas, that portion of Sweep Gas that is not recovered, Purge Gas, and Supplemental Gas, but does not include Pilot Gas, Total Steam, or Assist Air.

rr. "Visible Emissions" means five minutes or more of Smoke Emissions during any two consecutive hours.

ss. "Waste Gas" means the mixture of all gases from plant operations that is directed to the Flare for the purpose of disposing of the gas. "Waste Gas" does not include gas introduced to a flare exclusively to make it operate safely and as intended; therefore, "Waste Gas" does not include Pilot Gas, Total Steam, Assist Air, or the minimum amount of Sweep Gas and Purge Gas that is necessary to perform the functions of Sweep Gas and Purge Gas. "Waste Gas" also does not include the minimum amount of gas introduced to a flare to comply with regulatory and/or enforceable permit requirements regarding the combustible characteristics of Combustion Zone Gas; therefore, "Waste Gas" does not include Supplemental Gas. Depending upon the instrumentation that monitors Waste Gas, certain compounds (hydrogen, nitrogen, oxygen, carbon dioxide, carbon monoxide, and/or water (steam)) that are directed to a flare for the purpose of disposing of these compounds may be excluded from calculations relating to Waste Gas flow.

tt. "Waste Gas Minimizing Equipment" means the equipment identified in Appendix A-3.

uu. "Waste Gas Minimizing Procedures" means the operating procedures and practices identified in Appendix A-3.

1. Installation and Operation of Monitoring and Control Systems on Covered Flares
    a. Equistar Chemicals, LP in Clinton, Iowa (the owner or operator) must install and operate the instrumentation, controls, and monitoring systems set forth in Conditions 2 – 5 of this Appendix for the facility's Waste Gas Flare, EP033CE1 (the Flare), emission unit EP033B-U and emission point EP033-P.
    b. If the owner or operator installs a Newly Installed Covered Flare or Portable Flare that is Capable of Receiving Waste, Supplemental, and/or Sweep Gas at the facility, the owner or operator must complete installation and commence operation of the instrumentation, controls, and monitoring systems set forth in Condition 2 – 5 of this Appendix. The owner or operator must operate the instrumentation, controls, and monitoring systems for each Newly Installed Covered Flare and Portable Flare in accordance with Condition 2 – 5 of this Appendix. The owner or operator is required to obtain an Air Construction Permit for any new flare prior to initiating construction of the affected flare.

2. Vent Gas and Assist Steam Monitoring Systems
    a. For the Steam-Assisted Waste Gas Flare (EP033CE1), the owner or operator must install, operate, calibrate, and maintain a monitoring system capable of continuously measuring, calculating, and recording the volumetric flow rate of Vent Gas in the header or headers feeding the Flare (EP033CE1). This system must be able to continuously analyze pressure and temperature at each point of Vent Gas flow measurement. Different flow monitoring methods may be used to measure different gaseous streams that make up the Vent Gas provided that the flow rates of all gas streams that contribute to the Vent Gas are determined. Flow must be calculated in scfm and pounds per hour.
    b. For the Steam-Assisted Waste Gas Flare (EP033CE1), the owner or operator must install, operate, calibrate, and maintain a monitoring system capable of continuously measuring, calculating, and recording the volumetric flow rate of Assist Steam used at the Flare (EP033CE1). This system must also be able to continuously analyze the pressure and temperature of Assist Steam at a representative point of steam flow measurement. Flow must be calculated in scfm and pounds per hour.
    c. The flow rate monitoring system must be able to correct for the temperature and pressure of the system and output parameters in Standard Conditions.
    d. In lieu of a monitoring system that directly measures volumetric flow rate, the owner or operator may choose from the following additional options for monitoring any gas stream:
        i. Mass flow monitors may be used for determining the volumetric flow rate of Assist Steam provided that the owner or operator converts the mass flow rates to volumetric flow rates pursuant to the methodology in Step 2 of Appendix A-1;
        ii. Mass flow monitors may be used for determining the volumetric flow rate of Vent Gas, provided the owner or operator determines the molecular weight of such Vent Gas using compositional analysis data collected pursuant to the monitoring method specified in Condition 5.a of this Appendix and provided that the owner or operator converts the mass flow rates to volumetric flow rates pursuant to the methodology in Step 2 of Appendix A-1; and,
        iii. Continuous pressure/temperature monitoring system(s) and appropriate engineering calculations may be used in lieu of a continuous volumetric flow monitoring system provided the molecular weight of the gas is known and provided the owner or operator complies with the methodology in Step 2 of Appendix A-1 for calculating volumetric flow rates. For Vent Gas, the owner or operator must determine molecular weight using compositional analysis data collected pursuant to the monitoring method specified in Condition 5.a of this Appendix.
    e. The owner or operator shall record the method chosen for monitoring the gas stream. The owner or operator shall notify the Department prior to changing the method for monitoring the gas stream.

3. Assist Steam Control Equipment
   The owner or operator must install and commence operation of equipment, including, as necessary, main and trim control valves and piping which enables the facility to control Assist Steam flow to the Steam-Assisted Flare (EP033CE1) in a manner sufficient to ensure compliance with the requirements of this Appendix.

4. Video Camera
   The owner or operator must install and commence operation of a video camera that is capable of monitoring and recording, in digital format, the flame of and any Smoke Emissions from the Flare. It is not a violation of this permit condition [Appendix A], however, if the Flare video equipment cannot discern the Flare combustion zone and/or any smoke emissions at the Flare subject to these provisions due to weather conditions such as fog or snow, provided that recordings are created and retained in accordance with the conditions of this Appendix.

5. Vent Gas Compositional Monitoring or Direct Monitoring of Net Heating Value of Vent Gas
   For the Flare, the owner or operator must either determine the concentration of individual components in the Vent Gas or directly monitor the Net Heating Value of the Vent Gas (NHV_{vg}) in compliance with one of the methods specified in this Condition. The owner or operator may elect to use different monitoring methods (of the methods provided in this Condition) for different gaseous streams that make up the Vent Gas, provided the composition or Net Heating Value of all gas streams that contribute to the Vent Gas are determined. The owner or operator must:
   a. Install, operate, calibrate, and maintain a monitoring system capable of continuously measuring (*i.e.,* at least once every 15 minutes), calculating, and recording the individual component concentrations present in the Vent Gas; or
   b. Install, operate, calibrate, and maintain a calorimeter capable of continuously measuring (*i.e.*, at least once every 15 minutes), calculating, and recording the NHV_{vg} at Standard Conditions. If The owner or operator elects this method, the facility may install, operate, calibrate, and maintain a monitoring system capable of continuously measuring, calculating, and recording the hydrogen concentration in the flare Vent Gas. The sample extraction point of the calorimeter may be located upstream of the introduction of Supplemental Gas or Sweep Gas or Purge Gas if the composition and flow rate of such gas is known, and if this known value then is used in the calculation of the Net Heating Value of the Vent Gas.
   c. If The owner or operator elects the method in Condition 5.b of this Appendix, and the Net Heating Value of the Vent Gas exceeds the upper calibrated span of the calorimeter on the Flare, then the owner or operator must use the value of the upper calibrated span of that calorimeter for calculating the NHV_{vg} at Standard Conditions until the Net Heating Value of the Vent Gas returns to within the measured calibrated span. Use of this method will not constitute instrument system downtime for the period of time that the Net Heating Value of the Vent Gas exceeds the upper calibrated span of the calorimeter.

   Direct compositional or Net Heating Value monitoring is not required for purchased ("pipeline quality") natural gas streams. The Net Heating Value of purchased natural gas streams may be determined using annual or more frequent grab sampling at any one representative location. Alternatively, the Net Heating Value of any purchased natural gas stream can be assumed to be 920 BTU/scf.

Specifications, Calibration, Quality Control, and Maintenance/Recording and Averaging Times/Operation

6. Instrumentation and Monitoring Systems: Specifications, Calibration, Quality Control, and Maintenance
    a. The instrumentation and monitoring systems identified in Conditions 2 and 5 of this Appendix must:
        i. Meet or exceed all applicable minimum accuracy, calibration, and qualitycontrol requirements specified in Table 13 of 40 C.F.R. Part 63, Subpart CC;
        ii. Have an associated readout (*i.e.*, a visual display or record) or other indication of the monitored operating parameter that is readily accessible onsite for operational control or inspection by the facility (The owner or operator);
        iii. Be capable of measuring the appropriate parameter over the range of valuesexpected for that measurement location; and,
        iv. Have an associated data recording system with a resolution that is equal to or better than the required instrumentation/system accuracy.

    b. The owner or operator must operate, maintain, and calibrate each instrument and monitoring system identified in Conditions 2 and 5 of this Appendix according to a monitoring plan that contains the information listed in 40 C.F.R. §63.671(b)(1)-(5). However, if the owner or operator is determining NHV_{vg} using a process mass spectrometer, the facility (the owner or operator) must use the methods established for determining NHV_{vg} as outlined in Appendix A-4 (the Johnson letter)] in lieu of complying with 40 C.F.R. §63.671(b)(1)-(5)'s requirements for determining NHV_{vg} using a Gas Chromatograph.

    c. All Gas Chromatograph monitoring systems used to comply with Condition 5.a of this Appendix must also meet the requirements of 40 C.F.R. §63.671(e)(1) through (3) (Additional Requirements for Gas Chromatographs). All process mass spectrometers used to estimate Waste Gas composition in order to calculate NHV_{vg} must comply with: i) 40 C.F.R. §63.671(e)(1) and (2) and ii) 40 C.F.R. §63.671(e)(3) as specified and modified by the Johnson Letter (Appendix A-4).

    d. For each instrumentation and monitoring system required by Conditions 2 and 5 of this Appendix, the owner or operator must comply with the out-of-control procedures described in 40 C.F.R. §63.671(c)(1) and (2), and with the data reduction requirements specified in 40 C.F.R. §63.671(d)(1) through (3).

    e. The language in 40 C.F.R. §63.671, Table 13 of 40 C.F.R. Part 63, Subpart CC,or in any regulatory provision cross-referenced in 40 C.F.R. §63.671 or Table 13 of 40 C.F.R. Part 63, Subpart CC, that limits the applicability of these regulatory requirements to periods when "regulated material" (as defined in 40 C.F.R. §63.641) is routed to the Flare, is not applicable for purposes of this permit. In addition, for purposes of this permit, the language in 40 C.F.R. §63.671, Table 13 of 40 C.F.R. Part 63, Subpart CC, or in any regulatory provision cross-referenced in 40 C.F.R. §63.671 or Table 13 of 40 C.F.R. Part 63, Subpart CC,that refers to a continuous parametric monitoring system will instead be read to refer to the instrumentation and monitoring systems required by Paragraphs 2 and 5 of this Appendix.

    f. The owner or operator may elect to utilize the exceptions set forth in 40 C.F.R. §63.1103(e)(4)(i)-(ix) when complying with this condition, Condition 6 of this Appendix.

7. Instrumentation and Monitoring Systems: Recording and Averaging Times
The instrumentation and monitoring systems identified in Conditions 2 and 4–5 of this Appendix must be able to produce and record data measurements and calculations for each parameter at the following time intervals:

Instrumentation and Monitoring System	**Recording and Averaging Times**
Vent Gas, Assist Steam Flow Monitoring Systems, and (if installed) Pilot Gas Flow	Measure continuously and record 15-minute block averages
Vent Gas Compositional Monitoring (if using the methodology in Condition 5.a (Paragraph 22.a. [of CD])	Measure no less than once every 15 minutes and record that value
Vent Gas Net Heating Value Analyzer (if using the methodology in Condition 5.b (Paragraph 22.b. [of CD])	Measure continuously and record 15-minute block averages
Video Camera	Record at a rate of no less than 4 frames per minute

The term "continuously" in this Paragraph means to make a measurement as often as the manufacturer's stated design capabilities of the flow monitors (for Vent Gas, Assist Steam, Assist Air, and if installed, Pilot Gas) and the Vent Gas Net Heating Value analyzers during each fifteen (15) minute block period, but in no case shall the flow monitors or the Vent Gas Net Heating Value analyzers make less than one measurement in each fifteen (15) minute block period. The measurement results are then averaged and recorded to represent each fifteen (15) minute block period. Nothing in this condition prohibits the owner or operator from setting up process control logic that uses different averaging times from those in this table, provided that the recording and averaging times in this table are available and used for determining compliance with this permit.

8. Instrumentation and Monitoring Systems: Operation
The owner or operator must operate each of the instruments and monitoring systems required by Conditions 2 and 4 – 5 of this Appendix and collect data on a continuous basis when the Covered Flare that the instrument and/or monitoring system is associated with is In Operation and Capable of Receiving Sweep, Supplemental, and/or Waste Gas, except for the periods of Instrument Downtime specified in Condition 16 of this Appendix.

Determining whether Flare has Potentially Recoverable Gas

9. For this Flare that has a water seal, if all of the following conditions are met, then the Flare is not receiving Potentially Recoverable Gas flow:
    a. For the water seal drum associated with the Flare, the pressure difference between the inlet pressure and the outlet pressure is less than the water seal pressure as set by the static head of water between the opening of the dip tube in the drum and the water level in the drum;
    b. For the water seal drum associated with the Flare, the water level in the drum is: (i) at the level of the weir or (ii) if the water level in the drum is measured, the measurement indicates that the water seal is present; and,
    c. Downstream of the seal drum, there is no flow of Supplemental Gas directed to the Flare.

FGRS and Waste Gas Minimizing Equipment: Operation and Availability Requirements

10. Waste Gas Minimizing Equipment: Operation and Availability Requirements
    a. General. The owner or operator must operate each set of Waste Gas Minimizing Equipment required in Appendix A-3 in a manner to minimize Waste Gas to the Flare while ensuring safe chemical plant operations. The owner or operator also must operate each set of Waste Gas Minimizing Equipment required by Appendix A-3 consistent with good engineering and maintenance practices and in accordance with its design and the manufacturer's specifications. Nothing in this Condition will require the owner or operator to recover Regeneration Waste Streams in an FGRS.
    b. Requirements Related to Waste Gas Minimizing Equipment Operating Time. The owner or operator must comply with the following requirements for each set of Waste Gas Minimizing Equipment required in Appendix A-3 when Potentially Recoverable Gas is being generated:
        i. Clinton Plant Waste Gas Minimizing Equipment and Operational Procedures: Availability. The Clinton Plant Waste Gas Minimizing Equipment, as described in and required by Appendix A-3 (the Vent Stream Recovery System (the "Dephlegmator") and the Tank Farm Ethylene Vent Recovery System), must be in operation 98% of the time. The Clinton Waste Gas Minimizing Procedures, as described and required by Appendix A-3 (Flare Minimization Regeneration Procedures) must be implemented during regeneration in 98% of the hours during which regeneration is occurring in each 8,760 hour-period, rolled hourly.
    c. Averaging Periods
        i. For the purposes of calculating compliance with the period of time that the Waste Gas Minimizing Equipment must be in operation, as required by Condition 10.b.i of this Appendix the period of time to be used must be an 8,760-hour period rolling sum, rolled hourly, but this sum may exclude hours occurring during a Turnaround of the emissions units that normally vent to or receive Waste Gas from the Waste Gas Minimizing Equipment.

Flaring Combustion Efficiency

11. General Emission Standards Applicable to the Flare
    The owner or operator must comply with the requirements set forth in this Condition at the Flare at all times when the Flare is In Operation.
    a. Operation During Emissions Venting
    The owner or operator must operate the Flare at all times when emissions may be vented to it.
    b. No Visible Emissions
    The owner or operator must specify the smokeless design capacity of the Flare and operate with no Visible Emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours, when the Flare is In Operation and the Vent Gas flow is less than the smokeless design capacity of the Flare. For purposes of this permit, Visible Emissions may be determined by a person trained in accordance with Section 2.3 of Method 22 or documented by a video camera. The owner or operator must monitor for Visible Emissions from the Flare while it is In Operation as specified below. An initial Visible Emissions demonstration must be conducted using an observation period of 2 hours using Method 22 at 40 C.F.R. Part 60, Appendix A–7. Subsequent Visible Emissions observations must be conducted using either method listed below. The owner or operator must record and report any instances where Visible Emissions are observed for more than 5 minutes during any 2 consecutive hours as specified in 40 C.F.R. §63.655(g)(11)(ii).
        i. At least once per Day, the owner or operator must conduct Visible Emissions observations using an observation period of 5 minutes using Method 22 at 40 C.F.R. Part 60, Appendix A–7. If at any time the owner or operator sees Visible Emissions, even if the minimum required daily Visible Emission monitoring has already been performed, the owner or operator must immediately begin an observation period of 5 minutes using

Method 22 at 40 C.F.R. Part 60, Appendix A–7. If Visible Emissions are observed for more than one continuous minute during any 5-minute observation period, the observation period using Method 22 at 40 C.F.R. Part 60, Appendix A–7 must be extended to 2 hours or until 5 minutes of Visible Emissions are observed.

ii. Alternatively, the owner or operator may use a video surveillance camera to continuously record (at least one frame every 15 seconds with time and date stamps) images of the Flare flame at a reasonable distance above the Flare flame, and at an angle suitable for Visible Emissions observations. The owner or operator must provide real-time video surveillance camera output to the control room or other continuously staffed location where the camera images may be viewed at any time.

c. Pilot Flame Presence
The owner or operator must operate the Flare with a pilot flame present at all times. The owner or operator must continuously monitor the presence of the pilot flame(s) using a device (including, but not limited to, a thermocouple, ultraviolet beam sensor, or infrared sensor) capable of detecting that the pilot flame is present.

d. Monitoring According to Applicable Provisions
The owner or operator must comply with all applicable Subparts of 40 C.F.R. Parts 60, 61, or 63 that state how the Flare must be monitored.

e. Good Air Pollution Control Practices
At all times, including during periods of startup, shutdown, and/or Malfunction, the owner or operator must implement good air pollution control practices to minimize emissions from the Flare. Nothing in this condition requires the owner or operator to install or maintain Flare monitoring equipment in addition to or different from the equipment required by this permit.

12. Flare Tip Velocity or Vtip
The owner or operator must operate the Covered Flare in compliance with either condition below, provided that the appropriate monitoring systems are in place, whenever the Vent Gas flow rate is less than the smokeless design capacity of the Flare.
    a. The actual Flare Tip Velocity (V_{tip}) must be less than 60 feet per second. The owner or operator must monitor V_{tip} using the procedures specified in Appendix A-1, or
    b. V_{tip} must be less than 400 feet per second and also less than the maximum allowed Flare Tip Velocity (V_{max}) as calculated according to Equation 11 in Appendix A-1. The owner or operator must monitor V_{tip} and gas composition, and must determine NHV_{vg} using the procedures specified in Appendix A-1. The Unobstructed Cross-Sectional Area of the Flare Tip must be calculated consistent with Appendix A-2.

13. Operation According to Design
The owner or operator must operate and maintain the Flare in accordance with its design and the requirements of this permit.

14. Net Heating Value Standards
The owner or operator must comply with the following Net Heating Value standards, except as provided in Condition 16 (Standard During Instrument Downtime).
    a. Net Heating Value of Vent Gas (NHV*vg*)
        i. Net Heating Value of Vent Gas (NHV*vg*) for all Covered Flares except Unassisted Flares. Until the earlier of: (i) termination of the Consent Decree; or (ii) the requirements in 40 C.F.R. §§ 60.18(c)(3)(ii) and 63.11(b)(6)(ii) related to the NHV*vg* are modified (whether in those regulations, in any applicable NESHAP/NSPS regulation, or by applicable AMEL), The owner or operator must operate each Covered Flare, except Unassisted Flares, with an NHV*vg* of greater than or equal to 300 BTU/scf determined on a 15-minute block period basis when Waste Gas is routed to the Flare for

at least 15 minutes. The owner or operator must monitor and calculate NHV*vg* at the Flare in accordance with Appendix A-1.

b. Net Heating Value of Combustion Zone Gas (NHVcz) for all Covered Flares except Unassisted Flares

At any time the Flare is In Operation, the owner or operator must operate that Flare so as to maintain the NHV*cz* at or above 270 BTU/scf determined on a 15-minute block period basis when Waste Gas is routed to the Flare for at least 15 minutes. The owner or operator must monitor and calculate NHV*cz* at the Flare in accordance with Appendix A-1.

15. 98% Combustion Efficiency

The owner or operator must operate the Flare with a minimum of a 98% Combustion Efficiency at all times when Waste Gas is vented to it. To demonstrate continuous compliance with the 98% Combustion Efficiency, the owner or operator must operate the Flare in compliance with the applicable requirements in Condition 14.b (for Covered Flares except Unassisted Flares).

16. Standard During Instrument Downtime

If one or more of the following conditions (collectively referred to as "Instrument Downtime") is present and renders the owner or operator incapable of operating the Flare in accordance with the applicable NHV standards in Condition 14.b, the owner or operator must operate that Flare in accordance with good air pollution control practices so as to minimize emissions and ensure good Combustion Efficiency at the Flare:

a. Malfunction of an instrument needed to meet the requirement(s);
b. Repairs following Malfunction of an instrument needed to meet the requirement(s);
c. Recommended scheduled maintenance of an instrument in accordance with the manufacturer's recommended schedule, for an instrument needed to meet the requirement(s); and/or
d. Quality Assurance/Quality Control activities on an instrument needed to meet the requirement(s).

Instrument Downtime must be calculated in accordance with 40 C.F.R. §60.13(h)(2). In no event shall Instrument Downtime exceed 5% of the time in each Semi-Annual Period that the Flare affected by the Instrument Downtime is In Operation. For purposes of calculating the percentage of Instrument Downtime allowed by this condition, the time used for NHV Analyzer, mass spectrometer, or gas chromatograph calibration and validation activities may be excluded. Prior to termination of the Consent Decree, nothing in this Condition is intended to prevent Equistar Chemicals, LP from asserting force majeure under the Consent Decree as the cause of any period of Instrument Downtime.

17. Recordkeeping for All Covered Flares: Timing and Substance

The owner or operator must comply with the following recordkeeping requirements:

a. For the Flare, the owner or operator must calculate and record each of the following parameters:
    i. Volumetric flow rates of all gas streams that contribute to the Vent Gas volumetric flow rate (in scfm) (in 15-minute block averages andin accordance with any calculation requirements of Conditions 2, 7, and Step 2 of Appendix A-1 (for Covered Flares except Unassisted Flares);
    ii. Assist Steam volumetric flow rate (in scfm) (in 15-minute blockaverages and in accordance with any calculation requirements of Conditions 2, 7, and Step 2 of Appendix A-1) (for Steam-Assisted Flares);
    iii. NHV*vg* (in BTU/scf) (in 15-minute block averages in accordance with Step 1 of Appendix A-1 (for Covered Flares except Unassisted Flares); and,
    iv. NHV_{cz} (in BTU/scf) (in 15-minute block averages in accordance with Step 3 of Appendix A-1 (for Covered Flares except Unassisted Flares).
b. For the Flare, the owner or operator must record the duration of all periods of Instrument Downtime for the Flare that exceed 5% of the time in a Semi-Annual Period that the Flare is in Operation. The owner or operator must record which instrument(s) experienced the downtime,

which the Flare was affected by the downtime, an explanation of the cause(s) of the deviation, and a description of the corrective action(s) that the owner or operator took.

c. The owner or operator must record the dates and times of any periods that the owner or operator deviates from the standards in Condition 10.b. The owner or operator must also record the duration ofthe deviation, an explanation of the cause(s) of the deviation, and a description of the corrective action(s) that the owner or operator took.

d. At any time that the owner or operator deviates from the emissions standards in Conditions 14-16 at the Flare, the owner or operator must record the duration of the deviation, an explanation of the cause(s) of the deviation, and a description of the corrective action(s) that the owner or operator took.

Fenceline Monitoring Project Requirements

18. The owner or operator must maintain and operate a Fenceline Monitoring Project in accordance with Appendix A-5.

Appendix A-1: Calculating Combustion Efficiency, Net Heating Value of the Combustion Zone Gas (NHV_{cz}), the Net Heating Value Dilution Parameter (NHV_{dil}), and Flare Tip Velocity

All abbreviations, constants, and variables are defined in the Key at the end of this Appendix (Appendix A-1).

Combustion Efficiency Equation:

CE = [CO2]/([CO2] + [CO] + [OC])

where:

[CO2] = Concentration in volume percent or ppm-meters of carbon dioxide in the combusted gas immediately above the Combustion Zone

[CO] = Concentration in volume percent or ppm-meters of carbon monoxide in the combusted gas immediately above the Combustion Zone

[OC] = Concentration in volume percent or ppm-meters of the sum of all organic carbon compounds in the combusted gas immediately above the Combustion Zone, counting each carbon molecule separately where the concentration of each individual compound is multiplied by the number of carbon atoms it contains before summing (e.g., 0.1 volume percent ethane shall count as 0.2 percent OC because ethane has two carbon atoms)

For purposes of using the CE equation, the unit of measurement for CO2, CO, and OC must be the same; that is, if "volume percent" is used for one compound, it must be used for all compounds. "Volume percent" cannot be used for one or more compounds and "ppm-meters" for the remainder.

Step 1: Determine the Net Heating Value of the Vent Gas (NHVvg)

The owner or operator shall determine the Net Heating Value of the Vent Gas (NHVvg) based on composition monitoring data on a 15-minute block average basis according to the following requirements. If the owner or operator monitors separate gas streams that combine to comprise the total vent gas flow to a Covered Flare, the 15-minute block average Net Heating Value shall be determined separately for each measurement location according to the following requirements and a flow-weighted average of the gas stream Net Heating Values shall be used to determine the 15-minute block average Net Heating Value of the cumulative Vent Gas. The NHVvg 15-minute block averages shall be calculated for set 15-minute time periods starting at 12 midnight to 12:15 AM, 12:15 AM to 12:30 AM and so on, concluding at 11:45 PM to midnight.

Step 1a: Equation or Output to be Used to Determine NHVvg at a Measurement Location

For any gas stream for which the owner or operator complies with Condition 5 (Appendix A) by collecting compositional analysis data in accordance with the method set forth in Condition 5.a (Appendix A): Equation 1 shall be used to determine the NHVvg of a specific sample by summing the Net Heating Value for each individual component by individual component volume fractions. Individual component Net Heating Values are listed in Table 1 of this Appendix (Appendix A-1).

$$NHV_{vg} = \sum_{i=1}^{n}(x_i \cdot NHV_i) \qquad \text{Equation 1}$$

Appendix A-1

For any gas stream for which the owner or operator complies with Condition 5 (Appendix A) by collecting direct Net Heating Value monitoring data in accordance with the method set forth in Condition 5.b (Appendix A) but for which a Hydrogen Concentration Monitor is not used: Use the direct output (measured value) of the monitoring system(s) (in BTU/scf) to determine the NHVvg for the sample.

For any gas stream for which the owner or operator complies with Condition 5 (Appendix A) by collecting direct Net Heating Value monitoring data in accordance with the method set forth in Condition 5.b (Appendix A) and for which a Hydrogen Concentration Monitor is also used: Equation 2 shall be used to determine the NHVvg for each sample measured via the Net Heating Value monitoring system. Where hydrogen concentration data is collected, Equation 2 performs a net correction for the measured heating value of hydrogen since the theoretical Net Heating Value for hydrogen is 274 Btu/scf, but for the purposes of this Appendix, a Net Heating Value of 1,212 Btu/scf may be used (1,212 – 274 = 938 BTU/scf).

$$NHV_{vg} = NHV_{measured} + 938x_{H2} \qquad \text{Equation 2}$$

Step 1b: Calculation Method to be Used in Applying Equation/Output to Determine NHVvg

For any Covered Flare for which the owner or operator complies with Condition 5 (Appendix A) by using a continuous monitoring system in accordance with the method set forth in Condition 5.a or 5.b (Appendix A): the owner or operator may elect to determine the 15-minute block average NHVvg using either the Feed-Forward Calculation Method or the Direct Calculation Method (both described below). The owner or operator needs not elect to use the same methodology at all Covered Flares with a continuous monitoring system; however, for each such Covered Flare, the owner or operator must elect one calculation method that will apply at all times, and use that method for all continuously monitored flare vent streams associated with that Covered Flare. If the owner or operator intends to change the calculation method that applies to a Covered Flare, the owner or operator must notify the EPA 30 days in advance of such a change.

Feed-Forward Calculation Method. When calculating NHVvg for a specific 15-minute block:

1. Use the results from the first sample collected during an event (for periodic Vent Gas flow events) for the first 15-minute block associated with that event.

2. If the results from the first sample collected during an event (for periodic Vent Gas flow events) are not available until after the second 15-minute block starts, use the results from the first sample collected during an event for the second 15-minute block associated with that event.

3. For all other cases, use the results that are available from the most recent sample prior to the 15-minute block period for that 15-minute block period for all Vent Gas streams. For the purpose of this requirement, use the time that the results become available rather than the time the sample was collected. For example, if a sample is collected at 12:25 AM and the analysis is completed at 12:38 AM, the results are available at 12:38 AM and these results would be used to determine compliance during the 15-minute block period from 12:45 AM to 1:00 AM.

Direct Calculation Method. When calculating NHVvg for a specific 15-minute block:

1. If the results from the first sample collected during an event (for periodic Vent Gas flow events) are not available until after the second 15-minute block starts, use the results from the first sample collected during an event for the first 15-minute block associated with that event.

2. For all other cases, use the arithmetic average of all NHVvg measurement data results that become available during a 15-minute block to calculate the 15-minute block average for that period. For the purpose of this requirement, use the time that the results become available rather than the time the sample was collected. For example, if a sample is collected at 12:25 AM and the analysis is completed at 12:38 AM, the results are available at 12:38 AM and these results would be used to determine compliance during the 15-minute block period from 12:30 AM to 12:45 AM.

Step 2: Determine Volumetric Flow Rates of Gas Streams

The owner or operator shall determine the volumetric flow rate in standard cubic feet (scf) of Vent Gas, along with the volumetric flow rates (in scf) of any Supplemental Gas, Assist Steam, and Premix Assist Air, over a 15-minute block average basis. The 15-minute block average volumetric flow rates shall be calculated for set 15-minute time periods starting at 12 midnight to 12:15 AM, 12:15 AM to 12:30 AM and so on, concluding at 11:45 PM to midnight.

For any gas streams for which the owner or operator complies with Condition 2 (Appendix A) by using a monitoring system that directly records volumetric flow rate: Use the direct output (measured value) of the monitoring system(s) (in scf), as corrected for the temperature and pressure of the system to standard conditions (i.e., a temperature of 20 °C (68 °F) and a pressure of 1 atmosphere) to then calculate the average volumetric flow rate of that gas stream for the 15- minute block period.

For Vent Gas, Assist Steam, or Premix Assist Air gas streams for which the owner or operator complies with Condition 2 (Appendix A) by using a mass flow monitor to determine volumetric flow rate: Equation 3 shall be used to determine the volumetric flow rate of Vent Gas, Assist Air, or Assist Steam by converting mass flow rate to volumetric flow at standard conditions (i.e., a temperature of 20 °C (68 °F) and a pressure of 1 atmosphere). Equation 3 uses the molecular weight of the gas stream as an input to the equation; therefore, if *the owner or operator* elects to use a mass flow monitor to determine volumetric flow rate of Vent Gas, the *owner or operator* must collect compositional analysis data for such Vent Gas in accordance with the method set forth in Condition 14.a (Appendix A). For Assist Steam, use a molecular weight of 18 pounds per pound-mole. For Assist Air, use a molecular weight of 29 pounds per pound-mole. The converted volumetric flow rates at standard conditions from Equation 3 shall then be used to calculate the average volumetric flow rate of that gas stream for the 15-minute block period.

$$Q_{vol} = \frac{Q_{mass} * 385.3}{MWt} \qquad \text{Equation 3}$$

For gas streams for which the molecular weight of the gas is known and for which the owner or operator complies with Condition 2 (Appendix A) by using continuous pressure/temperature monitoring system(s): Use appropriate engineering calculations to determine the

average volumetric flow rate of that gas stream for the 15-minute block period. For Assist Steam, use a molecular weight of 18 pounds per pound-mole. For Assist Air, use a molecular weight of 29 pounds per pound-mole. For Vent Gas, molecular weight must be determined by collecting compositional analysis data for such Vent Gas in accordance with the method set forth in Condition 14.a (Appendix A).

Step 3: Calculate the Net Heating Value of the Combustion Zone Gas (NHVcz)

For any Covered Flare at which: 1) the Feed-Forward Calculation Method is used; 2) gas composition or Net Heating Value monitoring is performed in a location representative of the cumulative vent gas stream; and 3) Supplemental Gas flow additions to the flare are directly monitored: Equation 4 shall be used to determine the 15-minute block average NHVcz based on the 15-minute block average Vent Gas, Supplemental Gas, and assist gas flow rates.

$$NHV_{cz} = \frac{(Q_{vg} - Q_{NG2} + Q_{NG1}) * NHV_{vg} + (Q_{NG2} - Q_{NG1}) * NHV_{NG}}{Q_{vg} + Q_s + Q_{a,premix}} \qquad \text{Equation 4}$$

For the first 15-minute block period of an event, Q_{NG1} shall use the volumetric flow value for the current 15-minute block period (i.e. $Q_{NG1} = Q_{NG2}$). NHV_{NG} shall be determined using one of the following methods: 1) direct compositional or Net Heating Value monitoring of the natural gas stream in accordance with Step 1; or 2) for purchased ("pipeline quality") natural gas streams, *the owner or operator* may elect to either: a) use annual or more frequent grab sampling at any one representative location, or b) assume a Net Heating Value of 920 BTU/scf.

For all other Covered Flares: Equation 5 shall be used to determine the 15-minute block average NHVcz based on the 15-minute block average Vent Gas and assist gas flow rates. For periods when there is no Assist Steam flow or Premix Assist Air flow, NHVcz = NHVvg.

$$NHV_{cz} = \frac{(Q_{vg}) * NHV_{vg}}{Q_{vg} + Q_s + Q_{a,premix}} \qquad \text{Equation 5}$$

Step 4: Calculate the Net Heating Value Dilution Parameter (NHV_{dil})

For any Covered Flare at which: 1) the Feed-Forward Calculation Method is used; 2) gas composition or Net Heating Value monitoring is performed in a location representative of the cumulative vent gas stream; and 3) Supplemental Gas flow additions to the flare are directly monitored: Equation 6 shall be used to determine the 15-minute block average NHV_{dil} only during periods when Perimeter Assist Air is used. For 15-minute block periods when there is no cumulative volumetric flow of Perimeter Assist Air, the 15-minute block average NHV_{dil} parameter does not need to be calculated.

$$NHV_{dil} = \frac{[(Q_{vg} - Q_{NG2} + Q_{NG1}) * NHV_{vg} + (Q_{NG2} - Q_{NG1}) * NHV_{NG}] * Diam}{(Q_{vg} + Q_s + Q_{a,premix} + Q_{a,perimeter})} \qquad \text{Equation 6}$$

For the first 15-minute block period of an event, Q_{NG1} shall use the volumetric flow value for the current 15-minute block period (i.e. $Q_{NG1} = Q_{NG2}$). NHV_{NG} shall be determined using one of the following

methods: 1) direct compositional or Net Heating Value monitoring of the natural gas stream in accordance with Step 1; or 2) for purchased ("pipeline quality") natural gas streams, the owner or operator may elect to either: a) use annual or more frequent grab sampling at any one representative location, or b) assume a Net Heating Value of 920 BTU/scf.

For all other Covered Flares: Equation 7 shall be used to determine the 15-minute block average NHV_{dil} based on the 15-minute block average Vent Gas and Perimeter Assist Air flow rates, only during periods when Perimeter Assist Air is used. For 15-minute block periods when there is no cumulative volumetric flow of Perimeter Assist Air, the 15-minute block average NHV_{dil} parameter does not need to be calculated.

$$NHV_{dil} = \frac{Q_{vg} * Diam * NHV_{vg}}{(Q_{vg} + Q_s + Q_{a,premix} + Q_{a,perimeter})} \quad \text{Equation 7}$$

Step 5: Ensure that during flare operation, $NHV_{cz} \geq 270$ BTU/scf

The flare must be operated to ensure that NHVcz is equal to or above 270 BTU/scf, as determined for each 15-minute block period when Supplemental, Sweep, and/or Waste Gas is routed to a Covered Flare for at least 15-minutes. Equation 8 shows this relationship.

$$NHV_{cz} \geq 270 \text{ BTU/scf} \quad \text{Equation 8}$$

Step 6: Ensure that during flare operation, $NHV_{dil} \geq 22$ BTU/ft^2

A flare actively receiving Perimeter Assist Air must be operated to ensure that NHVdil is equal to or above 22 BTU/ft2, as determined for each 15-minute block period when Supplemental, Sweep, and/or Waste Gas is routed to a Covered Flare for at least 15-minutes. Equation 9 shows this relationship.

$$NHV_{dil} \geq 22 \text{ BTU/ft}^2 \quad \text{Equation 9}$$

Calculation Method for Determining Compliance with V_{tip} Operating Limits.

The owner or operator shall determine V_{tip} on a 15-minute block average basis according to the following requirements:

(a) The owner or operator shall use design and engineering principles and the guidance in Appendix A-2 to determine the Unobstructed Cross-Sectional Area of the Flare Tip. The Unobstructed Cross-Sectional Area of the Flare Tip is the total tip area that Vent Gas can pass through. This area does not include any stability tabs, stability rings, and Upper Steam or air tubes because Vent Gas does not exit through them.

(b) *The owner or operator* shall determine the cumulative volumetric flow of Vent Gas for each 15-minute block average period using the data from the continuous flow monitoring system required in Condition 2 (Appendix A) according to the requirements in Step 2 above.

(c) The 15-minute block average V_{tip} shall be calculated using Equation 10.

$$V_{tip} = \frac{Q_{cum}}{Area_x 900} \qquad \text{Equation 10}$$

(d) If *The owner or operator* chooses to comply with Condition 12.b (Appendix A), *The owner or operator* shall also determine the NHV_{vg} using Step 1 above and calculate V_{max} using Equation 11 in order to compare V_{tip} to V_{max} on a 15-minute Block average basis.

$$log_{10}(V_{max}) = \frac{NHV_{vg} + 1{,}212}{850} \qquad \text{Equation 11}$$

Appendix A-1

Key to the Abbreviations:

385.3= Conversion Factor (scf/lb-mol)

850 = Constant

900 = Conversion Factor (seconds/ 15-minute block average)

1,212 = Constant

Area = The unobstructed cross-sectional area of the flare tip is the total tip area that vent gas can pass through, in ft^2. This area does not include any stability tabs, stability rings, and upper steam or air tubes because Vent Gas does not exit through them. Use design and engineering principles to determine the unobstructed cross-sectional area of the flare tip.

Diam = Effective diameter of the unobstructed area of the flare tip for Vent Gas flow, in ft. Determine the diameter as $Diam = 2 * \sqrt{Area \div \pi}$

i = individual component in Vent Gas (unitless)

MWt = molecular weight of the gas at the flow monitoring location (lb/lb-mol)

n = number of components in Vent Gas (unitless)

NHV_{cz} = Net Heating Value of Combustion Zone Gas (BTU/scf)

NHV_i = Net Heating Value of component I according to Table 1 (BTU/scf)

$NHV_{measured}$ = Net Heating Value of Vent Gas stream as measured by monitoring system (BTU/scf)

NHV_{NG} = Net Heating Value of Supplemental Gas to flare during the 15-minute block period (BTU/scf)

NHV_{vg} = Net Heating Value of Vent Gas (BTU/scf)

$Q_{a,perimeter}$ = cumulative volumetric flow of perimeter assist air during the 15-minute block period (scf)

$Q_{a,premix}$ = cumulative volumetric flow of premix assist air during the 15-minute block period (scf)

Q_{cum} = cumulative volumetric flow over 15-minute block average period (scf)

Q_{mass} = mass flow rate (pounds per second)

Q_{NG1} = cumulative vol flow of supplemental gas to flare during previous 15-minute block period (scf)

Q_{NG2} = cumulative vol flow of supplemental gas to flare during the 15-minute block period (scf)

Q_S = cumulative volumetric flow of Total Steam during the 15-minute block period (scf)

Q_{vg} = cumulative vol flow of Vent Gas during the 15-minute block period (scf)

Q_{vol} = volumetric flow rate (scf per second)

V_{max} = Maximum allowed flare tip velocity (feet per second)

V_{tip} = Flare tip velocity (feet per second)

x_i = concentration of component I in Vent Gas (vol fraction)

x_{H2} = concentration of H2 in Vent Gas at time sample was input int NHV monitoring system (vol fraction)

Appendix A-1

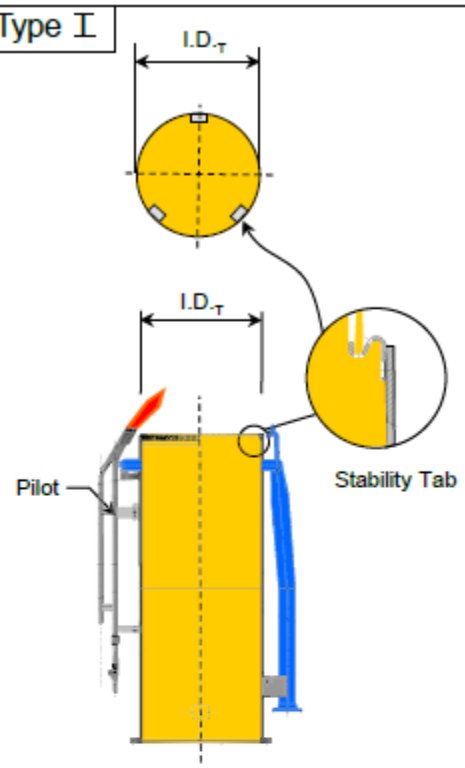
Table 1: Individual Component Properties

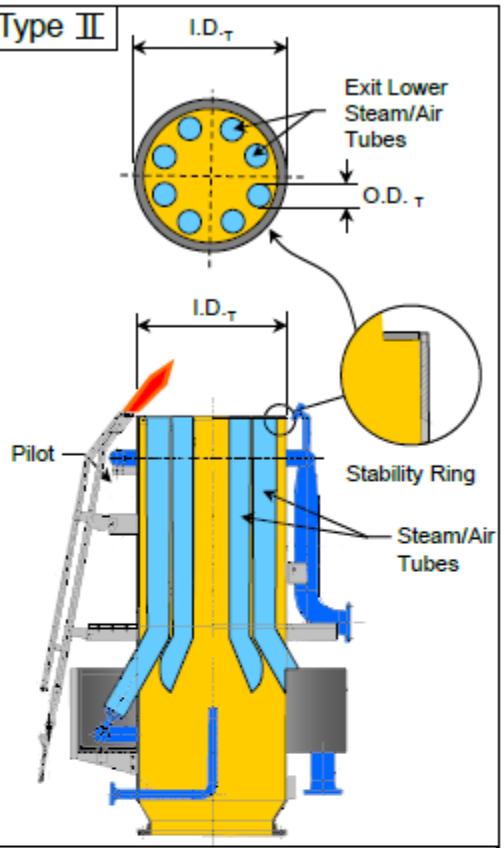
Component	Molecular Formula	MW_i (pounds per pound-mole)	CMN_i (mole per mole)	NHV_i (British thermal units per standard cubic foot)	LFL_i (volume %)
Acetylene	C_2H_2	26.04	2	1,404	2.5
Benzene	C_6H_6	78.11	6	3,591	1.3
1,2-Butadiene	C_4H_6	54.09	4	2,794	2.0
1,3-Butadiene	C_4H_6	54.09	4	2,690	2.0
iso-Butane	C_4H_{10}	58.12	4	2,957	1.8
n-Butane	C_4H_{10}	58.12	4	2,968	1.8
cis-Butene	C_4H_8	56.11	4	2,830	1.6
iso-Butene	C_4H_8	56.11	4	2,928	1.8
trans-Butene	C_4H_8	56.11	4	2,826	1.7
Carbon Dioxide	CO_2	44.01	1	0	∞
Carbon Monoxide	CO	28.01	1	316	12.5
Cyclopropane	C_3H_6	42.08	3	2,185	2.4
Ethane	C_2H_6	30.07	2	1,595	3.0
Ethylene	C_2H_4	28.05	2	1,477	2.7
Hydrogen	H_2	2.02	0	1,212[A]	4.0
Hydrogen Sulfide	H_2S	34.08	0	587	4.0
Methane	CH_4	16.04	1	896	5.0
Methyl-Acetylene	C_3H_4	40.06	3	2,088	1.7
Nitrogen	N_2	28.01	0	0	∞
Oxygen	O_2	32.00	0	0	∞
Pentane+ (C5+)	C_5H_{12}	72.15	5	3,655	1.4
Propadiene	C_3H_4	40.06	3	2,066	2.16
Propane	C_3H_8	44.10	3	2,281	2.1
Propylene	C_3H_6	42.08	3	2,150	2.4
Water	H_2O	18.02	0	0	∞

[A] The theoretical Net Heating Value for hydrogen is 274 Btu/scf, but for the purposes of this Appendix, a Net Heating Value of 1,212 Btu/scf shall be used.

Note: If a component is not specified in this Table 1, the heats of combustion may be determined using any published values where the net enthalpy per mole of off-gas is based on combustion at 25 °C and 1 atmosphere (or constant pressure) with off-gas water in the gaseous state, but the standard temperature for determining the volume corresponding to one mole of vent gas is 20°C.

Appendix A-2: Calculating the Unobstructed Cross-Sectional Area of Various Types of Flares

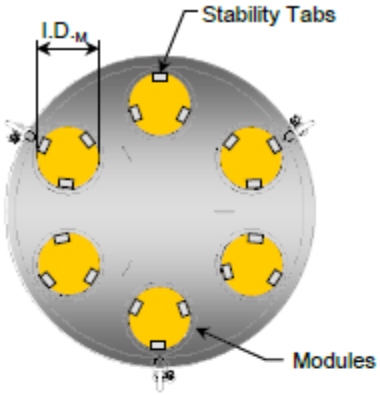
<table>
<tr>
<td>
Type Ⅰ


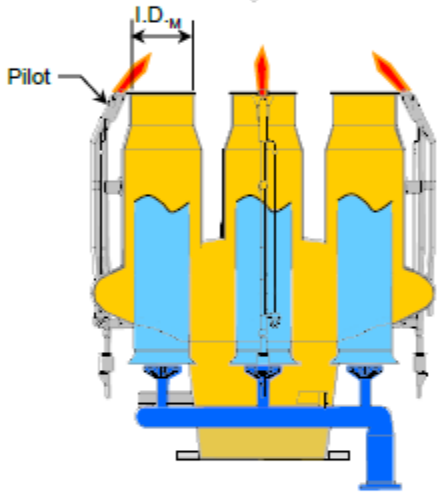
$A_{tip\text{-}unob} = \pi(I.D._T)^2/4 - (X_T * A_{ST})$
</td>
<td>
Type Ⅱ


$A_{tip\text{-}unob} = \pi(I.D._T)^2/4 - A_{ST} - N_T * \pi * (O.D._T)^2/4$
</td>
</tr>
<tr>
<td>
Where:
$A_{tip\text{-}unob}$ = Unobstructed Cross Sectional Area of Flare Tip
$I.D._T$ = Inside Diameter Flare Tip
X_T = Number of Stability Tabs
A_{ST} = Area of a Stability Tab
</td>
<td>
Where:
$A_{tip\text{-}unob}$ = Unobstructed Cross Sectional Area of Flare Tip
$I.D._T$ = Inside Diameter Flare Tip
A_{ST} = Area of Stability Ring
$O.D._T$ = Outside Diameter of Steam/Air Tubes
N_T = Number of Steam/Air Tubes
</td>
</tr>
<tr>
<td>
Example: $I.D._T$ = 41.5 inches
X_T = 3
A_{ST} = 3 Sq. inches
</td>
<td>
Example: $I.D._T$ = 47.5 inches
A_{ST} = 100 Sq. inches
$O.D._T$ = 6.5 inches
N_T = 8
</td>
</tr>
<tr>
<td>
$A_{tip\text{-}unob} = \pi(41.5)^2/4 - (3 * 3)$
$A_{tip\text{-}unob}$ = 1344 Sq. inches
</td>
<td>
$A_{tip\text{-}unob} = \pi\ (47.5)^2/4 - 100 - 8 * \pi * (6.5)^2/4$
$A_{tip\text{-}unob}$ = 1322 Sq. inches
</td>
</tr>
</table>

Appendix A-2

Type III





$A_{tip\text{-}unob} = N_M * (\pi * (I.D._M)^2/4 - X_T * A_{ST})$

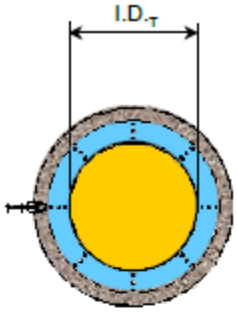
Where:
- $A_{tip\text{-}unob}$ = Unobstructed Cross Sectional Area of Flare Tip
- $I.D._M$ = Inside Diameter of One Tip Module
- N_M = Number of Modules
- X_T = Number of Stability Tabs per Module
- A_{ST} = Area of a Stability Tab

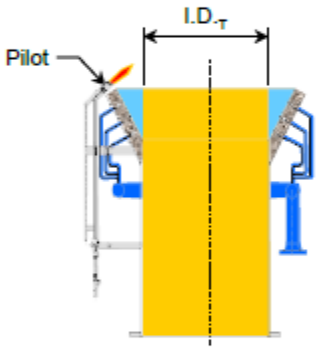
Example:
- $I.D._M$ = 17 inches
- N_M = 6
- X_T = 3
- A_{ST} = 3 Sq. inches

$A_{tip\text{-}unob} = 6 * (\pi * (17)^2/4 - 3 * 3)$

$A_{tip\text{-}unob}$ = 1308 Sq. inches

Type IV





$A_{tip\text{-}unob} = \pi (I.D._T)^2/4$

Where:
- $A_{tip\text{-}unob}$ = Unobstructed Cross Sectional Area of Flare Tip
- $I.D._T$ = Inside Diameter of Flare Tip

Example:
- $I.D._T$ = 41.5 inches

$A_{tip\text{-}unob} = \pi (41.5)^2/4$

$A_{tip\text{-}unob}$ = 1353 Sq. inches

Appendix A-3: Clinton Plant Waste Gas Minimizing Equipment and Operational Procedures

At the Clinton Plant, the owner or operator must operate the following equipment and perform the following operational procedures to minimize flaring.

Vent Stream Recovery System – Dephlegmator

The Dephlegmator Vent Recovery System collects continuous vent streams from the Topping Still Reflux Drum, Main C2 Splitter Reflux Drum, 2nd Ethylene Refrigerant Compressor Receiver Drum, and the C3 Splitter Reflux Drum in the separation section of the plant and condenses out heavier liquids, which are returned to the process. The remaining gas stream is routed to the Process Gas Compressor for recovery in the separation section, or to the fuel gas system. The estimated gas recovery for the Dephlegmator is approximately 1.4 mscf per Day under normal conditions. During the 98% operating time required by Condition 10.b.i (Appendix A), the gas streams described above must not be routed to a Flare.

Tank Farm Ethylene Vent Recovery System

The Clinton Plant employs a cryogenic tank for ethylene surge storage. This cryogenic tank is located in the onsite tank farm. The Tank Farm Ethylene Vent Recovery System compresses vapors generated by ambient heat gain in the cryogenic Ethylene Storage Tank and routes them to the product recovery system in the separation section of the ethylene unit. The estimated gas recovery for the tank farm ethylene vent recovery system is approximately 0.6 mscf per Day under normal conditions. During the 98% operating time required by Condition 10.b.i (Appendix A), the gas streams described above must not be routed to a Flare.

Flare Minimization Regeneration Procedures

Molecular sieve desiccant dryers are used in the olefins process to remove moisture and other contaminants from process streams. These dryers require periodic regeneration via temperature swing adsorption, using hot regeneration gases, to desorb the moisture and contaminants. Flare Minimization Regeneration Procedures are employed to optimize the recovery of process fluids to

(i) the Process Gas Compressor system for recovery in the separation section, and

(ii) recovery of regeneration gases to the fuel system. These procedures are employed during the regeneration of the Process Gas Dryers and C2 Splitter Guard Dryers. The estimated average gas recovery for the flare minimization regeneration procedures is 0.4 mscf per Day for normal regeneration cycles. During the 98% operating time required by Condition 10.b.i (Appendix A), the gas streams described above must not be routed to a Flare.

Appendix A-4: Johnson Letter

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

Mr. Chuck DeCarlo
Marketing Manager
Extrel CMS, LLC
575 Epsilon Drive, Suite 2
Pittsburg, PA 15238-2838

FEB 05 2018

OFFICE OF
AIR QUALITY PLANNING
AND STANDARDS

Mr. Tony Slapikas
Product Manager for Mass Spectrometry
AMETEK, Energy & Process Division
150 Freeport Road
Pittsburgh, PA 15238

Dear Mr. DeCarlo and Mr. Slapikas,

I am writing in response to your letter dated August 18, 2017, requesting approval for use of process mass spectrometers as part of an alternative to testing procedures utilizing calorimeters or gas chromatographs to measure Net Heating Value (NHV_{VG}) in flare vent gas as required under 40 CFR Part 63, Subpart CC – National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries. The owner or operator of facilities subject to Subpart CC must measure flare vent gas composition to determine NHV_{VG} in units of British Thermal Units per standard cubic foot (BTU/SCF). This BTU/SCF determination may be performed using a calorimeter capable of continuously measuring, calculating, and recording NHV_{VG} at standard conditions (40 CFR 63.670 (j)(3)) or equipment that determines the concentration of individual components in the flare vent gas (40 CFR 63.670 (j)(1)), such as a gas chromatograph, and, if desired, may directly measure the hydrogen concentration in the flare vent gas following the methods provided in 40 CFR 63.670 (j)(4). All monitoring equipment must meet the applicable minimum accuracy, calibration and quality control requirements specified in Table 13 and §63.671 of Subpart CC.

In your letter, you propose to use a process mass spectrometer analyzer and the following measurement approach as an alternative to measure NHV_{VG}:

1) The owner or operator of the affected facility will perform a pre-survey to determine the list and concentration of components that are present in flare vent gas feed. This pre-survey will be used in part to:
   a) Determine an appropriate analysis method for the site-specific refinery flare vent gas;
   b) Create a list of vent gas components to be included in calibration gas cylinders to be used to evaluate the quality of the measurement procedure used to determine NHV_{VG};
   c) Define calibration standards to be prepared by a vendor at a certified accuracy of 2 percent and traceable to NIST; and
   d) Perform an initial calibration to identify mass fragment overlap and response factors for the target compounds.

2) The process mass spectrometer will be calibrated using calibration gas standards consisting of a mix of the compounds identified in the site specific flare gas pre-survey.
3) During flare gas analysis, compounds that are not identified during the pre-survey and that have mass fragments identical to the compounds found during the pre-survey will be included in the calculation of NHVVG.
4) Calibration error (CE) for each component in the calibration blend will be calculated using the following equation:

$$CE = \frac{C_m - C_a}{C_a} \, x \, 100$$

Where :

C_m = Average instrument response, (ppm)
C_a = Cylinder gas value or tag value, (ppm)

5) The average instrument CE for each calibration compound at any calibration concentration must not differ by more than 10 percent from the cylinder gas value or tag value.
6) For each set of triplicate injections at each calibration concentration for each calibration compound, any one introduction shall not deviate more than 5 percent from the average concentration measured at that level.

Your supporting information included Method 301 calculations that showed acceptable bias and precision when you measured a mixture of gases from a vendor certified gas cylinder. Your request also includes reference to facilities needing to monitor flare gas composition continuously to effectively maintain flare efficiency while compensating for changes in the flare gas composition.

With this letter, we are approving your request to substitute continuous process mass spectrometry for continuous gas chromatography as allowed in 40 CFR 63.670 and 63.671 predicated on both your proposed use of these process mass spectrometers as described above and the additional provisos listed below:

1) You must meet the requirements in 40 CFR 63.671 (e)(1) and (2) including Table 13 requirements for Net Heating Value by Gas Chromatograph.
2) You may use the alternative sampling line temperature allowed in 40 CFR 63, Subpart CC, Table 13, under Net Heating Value by Gas Chromatograph.
3) You must meet applicable Performance Specification 9 (40 CFR part 60, appendix B) requirements for initial continuous monitoring system acceptance including, but not limited to:
    - Performing a multi-point calibration check at three concentrations following the procedure in Section 10.1; and
    - Performing periodic process mass spectrometer calibrations as directed for gas chromatographs in 40 CFR 63, Subpart CC, Table 13.
4) You may augment the minimum list of calibration gas components found in 40 CFR 63.671(e) with compounds found during the pre-survey as needed to develop a site-specific analysis method.

5) For unknown gas components that have similar analytical mass fragments to calibration compounds, you may report the unknowns as an increase in the overlapped calibration gas compound.
6) For unknown compounds that do not produce mass fragments that overlap calibration compounds, you may use the response factor for the nearest molecular weight hydrocarbon in the calibration mix to quantify the unknown component's NHV_{VG}. This requirement parallels the requirements in 40 CFR Part 63.671 (e)(3) for gas chromatographs.
7) You may use the response factor for n-pentane to quantify any unknown components detected with a higher molecular weight than n-pentane.
8) You must meet all other applicable generic requirements of §§63.670 and 63.671 for measurement of NHV_{VG} (i.e., measurement requirements not specifically targeted to gas chromatographs).
9) A copy of this approval letter must be included in the report for each testing program where these alternative testing procedures are applied.

Since this alternative test method approval under 40 CFR 63.7 (f) is appropriate for use at all facilities subject to 40 CFR 63, Subpart CC, we will announce on EPA's Web site (*https://www.epa.gov/emc/broadly-applicable-approved-alternative-test-methods*) that the alternative method is broadly applicable to determination of NHV_{VG} under this subpart.

If you have any questions regarding this approval or need further assistance, please contact Ray Merrill at (919) 541-5225 or *merrill.raymond@epa.gov*, or Robin Segall at (919) 541-0893 or *segall.robin@epa.gov*.

Sincerely,

Robin R. Segall for SMJ

Steffan M. Johnson, Group Leader
Measurement Technology Group

cc.

Gerri Garwood, EPA/OAQPS/SPPD
Maria Malave, EPA/OECA/OC
Brenda Shine, EPA/OAQPS/SPPD
EPA Regional Testing Contacts

APPENDIX A-5: SCOPE OF WORK FOR THE FENCELINE MONITORING PROJECT

1. Applicability. The requirements of this Fenceline Monitoring Project apply to the Equistar Plant in Clinton.

2. Timing and Public Transparency. By October 16, 2022, the owner or operator must submit in writing to EPA a report: a) showing the location of all monitors at each Covered Plant that will be utilized to comply with the Monitoring Requirements of Paragraph 3 below; b) providing an active/live/not password protected URL to a mockup of the publicly available website to be used to report monitoring data pursuant to this Fenceline Monitoring Project; and c) a statement indicating that the website is properly indexed (including, but not limited to the following search terms, "benzene," "fenceline monitoring," and the Plant name and location) with the major search engines (e.g., Google, Bing, Yahoo) to allow the public to easily find the website.

The Fenceline Monitoring System described in Paragraph 3 below must commence collecting data by January 19, 2023, unless a different time is provided pursuant Paragraph 3(i) below.

The owner or operator must post to a publicly available website each individual sample result for each monitor, each biweekly annual average concentration difference value (once annual averages are available), and any corrective action plan submitted to EPA pursuant to Paragraph 3(h)(corrective action plans posted to the website may be redacted to protect confidential business information). The owner or operator must post each individual sample result for each monitor within 30 Days of the end of the biweekly sampling period or within 30 Days of sampling collected pursuant to the "alternative sampling frequency for burden reduction" requirements set forth in Paragraph 3(f)(3) below. The owner or operator must post each annual average difference value within 45 Days of the sampling period that allows the creation of a new annual average difference value. The data must be presented in a tabular format.

3. Monitoring Requirements.

a. The owner or operator must commence sampling along the property boundary of the Plant. The owner or operator must collect and analyze the samples in accordance with Methods 325A and 325B of Appendix A to 40 C.F.R. Part 63 (Test Methods – Pollutant Measurement Methods from Various Waste Media) (hereafter "Rule Appendix A"), and subparagraphs 3(b) through 3(g).

b. The target analyte for the Fenceline Monitoring System is benzene.

c. The owner or operator may submit and discuss additional data collected by it or by third parties in the reports required pursuant to Paragraph 3.h of this Appendix. If The owner or operator concludes that an exceedance of the action level described in Paragraph 3.g is caused by an offsite source(s), such a conclusion does not relieve the owner or operator of its obligation to perform the Root Cause investigation described in Paragraph 3.h.

d. Siting of monitors. The owner or operator must determine the passive monitor locations comprising each Fenceline Monitoring System in accordance with Section 8.2 of Method 325A of Rule Appendix A, with the exception of the number of duplicates and blanks, which will be determined pursuant to 40 C.F.R. § 63.658(c)(3).

(1) As it pertains to this Fenceline Monitoring Project, known sources of VOCs, as used in Section 8.2.1.3 in Method 325A of Rule Appendix A for siting passive monitors, means a wastewater treatment unit, process unit, or any emission source requiring HAP control according to the requirements of any state or federal air permit applicable to the Covered Plants, including marine vessel loading operations. For marine loading operations that are located offshore, one passive monitor should be sited on the shoreline adjacent to the dock. For purposes of this Appendix, an additional monitor is not required if the only emission sources within 50 meters of the monitoring boundary are equipment leak sources satisfying all of the requirements in 40 CFR § 63.658(c)(1)(i) through (iv).

(2) If there are 19 or fewer monitoring locations, the owner or operator shall collect at least one co-located duplicate sample per sampling period and at least one field blank per sampling period. If there are 20 or more monitoring locations, the owner or operator shall collect at least two co-located duplicate samples per sampling period and at least one field blank per sampling period, as described in 40 C.F.R. § 63.658(c)(3). The co-located duplicates may be collected at any one of the perimeter sampling locations.

(3) The owner or operator must follow the procedure in Section 9.6 of Method 325B of Rule Appendix A to determine the detection limit of benzene for each sampler used to collect samples and co-located samples and blanks. Each monitor used to conduct sampling in accordance with this Appendix must have a detection limit that is at least an order of magnitude lower than the benzene action level.

(4) The owner or operator may install additional monitors and may submit and discuss additional data collected by it or by third parties in the reports required pursuant to Paragraph 3.h of this Appendix. If The owner or operator concludes that an exceedance of the Action Level described in Paragraph 3.g is caused by an offsite source(s), such a conclusion does not relieve the owner or operator of its obligation to perform the Root Cause investigation described in Paragraph 3.h.

e. Collection of meteorological data. The owner or operator must collect and record meteorological data according to the applicable requirements in sub-Paragraphs 3(e)(1) and 3(e)(2).

(1) The owner or operator must collect and record the average temperature and barometric pressure during each sampling period using either an on-site meteorological station in accordance with Section 8.3 of Method 325A of Rule Appendix A or, alternatively, using data from a United States Weather Service (USWS) meteorological station provided the USWS meteorological station is within 40 kilometers (25 miles) of the Plant.

(2) If an on-site meteorological station is used, the owner or operator must follow the calibration and standardization procedures for meteorological measurements in EPA-454/B-08-002.

http://www3.epa.gov/ttnamti1/files/ambient/met/Volume_IV_Meteorological_Measurements.pdf.

f. Sampling Frequency. The owner or operator must use a sampling period and sampling frequency as specified in this sub-Paragraph 3(f).

(1) Sampling period. A 14-Day sampling period must be used, unless a shorter sampling period is determined to be necessary under Paragraph 3(h). A sampling period is defined as the period during which a sampling tube is deployed at a specific sampling location with the diffusive sampling end cap in-place. The sampling period does not include the time required to analyze the sample. For the purpose of this sub-Paragraph, a 14-Day sampling period may be no shorter than 13 calendar days and no longer than 15 calendar days, but the routine sampling period must be 14 calendar days.

(2) Base sampling frequency. Except as provided in Paragraph 3(f)(3), the frequency of sample collection must be once each contiguous 14-Day sampling period, such that the next 14-Day sampling period begins immediately upon the completion of the previous 14-Day sampling period.

(3) Alternative sampling frequency for burden reduction. When an individual monitor consistently, as defined in sub-Paragraph 3(f)(3)(i) through (v), yields results at or below 0.9 $\mu g/m^3$, the owner or operator may elect to use the applicable minimum sampling frequency specified in Paragraph 3(f)(3)(i) through (v) for that individual monitoring site.

When calculating Δc (as defined in Paragraph 3(g)) for the monitoring period when using this alternative for burden reduction, zero must be substituted for the sample result for the monitoring site for any period where a sample is not taken.

(i) If every sample at an individual monitoring site is at or below 0.9 $\mu g/m^3$ for 2 years (52 consecutive samples), every other sampling period can be skipped for that individual monitoring site, i.e., sampling can occur approximately once per month.

(ii) If every sample at an individual monitoring site that is monitored at the frequency specified in Paragraph 3(f)(3)(i) is at or below 0.9 $\mu g/m^3$ for 2 years (i.e., 26 consecutive “monthly” samples), five 14-Day sampling periods can be skipped for that individual monitoring site following each period of sampling, i.e., sampling will occur approximately once per quarter.

(iii) If every sample at an individual monitoring site that is monitored at the frequency specified in Paragraph 3(f)(3)(ii) is at or below 0.9 $\mu g/m^3$ for 2 years (i.e., 8 consecutive quarterly samples), twelve 14-Day sampling periods can be skipped for that individual monitoring site following each period of sampling, i.e., sampling will occur twice a year.

(iv) If every sample at an individual monitoring site that is monitored at the frequency specified in Paragraph 3(f)(3)(iii) is at or below 0.9 $\mu g/m^3$ for 2 years (i.e., 4 consecutive semi-annual samples), only one sample per year is required for that individual monitoring site. For yearly sampling, samples must occur at least 10 months but no more than 14 months apart.

(v) If at any time a sample for an individual monitoring site that is monitored at the frequency specified in Paragraphs 3(f)(3)(i) through (iv) returns a result that is above 0.9 μg/m^3, that sampling site must return to the original sampling requirements of contiguous 14-Day sampling periods with no skip periods for one quarter (six 14-Day sampling periods). If every sample collected during this quarter is at or below 0.9 μg/m^3, the owner or operator may revert back to the reduced monitoring frequency applicable for that individual monitoring site immediately prior to the sample reading exceeding 0.9 μg/m^3. If any sample collected during this quarter is above 0.9 μg/m^3, that individual monitoring site must return to the original sampling requirements of contiguous 14-Day sampling periods with no skip periods for a minimum of two years. The burden reduction requirements can be used again for that monitoring site once the requirements of Paragraph 3(f)(3)(i) are met again, i.e., after 52 contiguous 14-Day samples with no results above 0.9 μg/m^3.

g. Action Level. Within 45 Days of completion of each sampling period, the owner or operator must determine whether the results are above or below the action level as follows:

(1) Calculation of the Δc. *The owner or operator* must determine the benzene difference concentration (Δc) for each 14-Day sampling period by determining the highest and lowest sample results for benzene concentrations from the sample pool and calculating the Δc as the difference in these concentrations. The owner or operator must adhere to the following procedures when one or more samples for the sampling period are below the method detection limit for benzene:

(i) If the lowest detected value of benzene is below detection, the owner or operator must use zero as the lowest sample result when calculating Δc.

(ii) If all sample results are below the method detection limit, the owner or operator must use the method detection limit as the highest sample result.

(2) The owner or operator must calculate the annual average Δc based on the average of the 26 most recent 14-Day sampling periods. The owner or operator must update this annual average value after receiving the results of each subsequent 14-Day sampling period (i.e., on a “rolling” basis).

(3) The action level for benzene is 9 micrograms per cubic meter (μg/m^3) on an annual average basis. If the annual average Δc value for benzene is less than or equal to 9 μg/m^3, the concentration is below the action level. If the annual average Δc value for benzene is greater than 9 μg/m^3, the concentration is above the action level, and the owner or operator must conduct a root cause analysis and corrective action in accordance with Paragraph 3(h).

h. Root Cause Analysis and Corrective Action. Within 5 Days of determining that the action level has been exceeded for any annual average Δc and no longer than 50 Days after completion of the sampling period, the owner or operator must initiate a root cause analysis to determine the cause of such exceedance and to determine appropriate corrective action, such as those described in Paragraphs 3(h)(1) through (4). The root cause analysis and initial corrective action analysis must be completed and initial corrective actions taken no later than 45 Days after determining there is an exceedance. Root cause analysis and corrective action may include, but is not limited to:

APPENDIX A-5

(1) Leak inspection using Method 21 of 40 C.F.R. Part 60, Appendix A-7 and repairing any leaks found.

(2) Leak inspection using optical gas imaging and repairing any leaks found.

(3) Visual inspection to determine the cause of the high benzene emissions and implementing repairs to reduce the level of emissions.

(4) Employing progressively more frequent sampling, analysis and meteorology (e.g., using shorter sampling periods for Methods 325A and 325B of Appendix A of 40 C.F.R. Part 63, or using active sampling techniques). If, after completing the corrective action analysis and corrective actions such as those described in Paragraph 3(h), the Δc value for the next 14-Day sampling period for which the sampling start time begins after the completion of the corrective actions is greater than 9 $\mu g/m^3$ or if all corrective action measures identified require more than 45 Days to implement, the owner or operator must develop a corrective action plan that describes the corrective action(s) completed to date, additional measures that The owner or operator proposes to employ to reduce benzene concentrations at the fenceline location in question below the action level, and a schedule for completion of these measures. The owner or operator must submit the corrective action plan to EPA within 60 Days after receiving the analytical results indicating that the Δc value for the 14-Day sampling period following the completion of the initial corrective action is greater than 9 $\mu g/m^3$ or, if no initial corrective actions were identified, no later than 60 Days following the completion of the corrective action analysis required in Paragraph 3(h).

i. Alternative Test Method. The owner or operator may submit for review and approval pursuant a request to use an alternative test method as provided in 40 C.F.R. § 63.658(k).