Public Notice of Application and Preliminary Decision

Equistar Chemicals, LP

New Source Review (NSR) Permit No. 9423
Permit Amendment Application

Regulated Entity No. RN100216761

Customer No. CN600124705

Bayport Polypropylene Plant

Bayport Polymers Plant (BYO)

Pasadena, Harris County

June 2020

Copy placed in LaPorte Public Library on June 2, 2020 through book dropoff

lyondellbasell

TABLE OF CONTENTS

1. INITIAL APPLICATION MAR 26, 2019 NON CONF.

lyondellbasell

March 26, 2019

7018 0360 0001 0583 8864

Air Permits Initial Review Team (APIRT) – MC 161
Office of Permitting, Remediation, and Registration
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711-3087

Re: NSR Permit Amendment Application
New Source Review (NSR) Permit Number: 9423
Equistar Chemicals, LP
Polypropylene Production Units (Bulk Plant)
Customer Number CN600124705
Regulated Entity Number RN100216761

Attn: APIRT

Equistar Chemicals, L.P. (Equistar) is submitting the enclosed NSR Permit amendment application for the above-referenced facility to include emissions from existing polymer visbreaking activities. Certain products require visbreaking of the polypropylene base polymer to adjust the viscosity, which is accomplished by the addition of organic peroxide.

The Bayport Polymers Bulk Plant operates three units (C, D and E-Line) (Permit No. 9423) all of which use organic peroxide to adjust the viscosity of certain products. The emissions from this activity were not previously quantified and have been disclosed as part of an audit conducted under the Environmental, Health and Safety Audit Privilege Act (TCEQ Investigation Number 1389420). This application is part of the ongoing corrective action associated with the audit. The application includes a PI-1, Table 30 and supporting documentation.

A copy of this application is being sent to the TCEQ Regional Office in Houston, and Harris County Pollution Control Services. An application fee of $900.00 has been paid via ePay (Voucher: 412745). This submittal includes CONFIDENTIAL information which is segregated and clearly labeled. Please handle this information accordingly.

If you have any questions or need additional information, please contact Derek Rodricks at (281) 291-1684 or derek.rodricks@lyondellbasell.com.

Sincerely,

Sharon D. Stewart
Environmental Manager
LyondellBasell Bayport Complex

Equistar Chemicals, LP
12001 Bay Area Blvd
Pasadena, Texas 77507

Tel +1 281 604 3800
Fax +1 281 604 3430
lyondellbasell.com

Attachments
cc:

Harris County Pollution Control
Services
Mr. Bob Allen, Director
101 S. Richey, Suite H
Pasadena, TX 77506
7018-0360-0001-0583-8857

Air Section Manager
TCEQ Region 12
5425 Polk Street, Suite H
Houston, TX 77023-1452

7018-0360-0001-0583-8840

Your transaction is complete. Thank you for using TCEQ ePay.

Note: It may take up to 3 working days for this electronic payment to be processed and be reflected in the TCEQ ePay system. Print this receipt and the vouchers for your records. An email receipt has also been sent.

Transaction Information

Trace Number:	582EA000339911
Date:	03/19/2019 05:38 PM
Payment Method:	CC - Authorization 0000098425
Amount:	$900.00
ePay Actor:	Derek Rodricks
Actor Email:	derek.rodricks@lyondellbasell.com
IP:	165.249.0.191

Payment Contact Information

Name:	Juanita Miller
Company:	Lyondellbasell
Address:	10801 Choate Road, Pasadena, TX 77507
Phone:	281-474-0719

Cart Items

Click on the voucher number to see the voucher details.

Voucher	Fee Description	AR Number	Amount
412745	AIR PERMIT - AMENDMENT		$900.00
	Total fees for transaction:	**$900.00**	

ePay Again | Exit ePay

Note: It may take up to 3 working days for this electronic payment to be processed and be reflected in the TCEQ ePay system. Print this receipt for your records.

Texas Commission on Environmental Quality
NSR Permit No. 9423 Amendment Application

Equistar Chemicals, L.P.
Bayport Polypropylene Plant

Pasadena, Harris County
Air Quality Account ID No. HG-0323-M
Regulated Entity No. RN100216761
Customer No. CN600124705

March 2019

Prepared by:

Ryan S. Mayces
Project Manager

3/26/19

Approved by:

Jason M. Graves, P.E.
Principal Engineer

Waid Corporation dba Waid Environmental
Certificate of Registration No. F-58

Document based on information provided by Equistar Chemicals, L.P.
Waid Project No. EPB13323

WAID ENVIRONMENTAL
www.waid.com

Austin Office
13785 Research Blvd., Suite 100, Austin, Texas 78750
512.255.9999 • 512.255.8780 FAX

Houston Office
1325 Space Park Dr., Suite D, Houston, Texas 77058
281.333.9990 • 512.255.8780 FAX

Texas Commission on Environmental Quality
Form PI-1 General Application for
Air Preconstruction Permit and Amendment
Page 1

Important Note: The agency requires that a Core Data Form be submitted on all incoming applications unless a Regulated Entity and Customer Reference Number have been issued and no core data information has changed. For more information regarding the Core Data Form, call (512) 239-5175 or go to www.tceq.texas.gov/permitting/central_registry/guidance.html.

Important Note: we strongly encourage you to utilize the NSR Application Workbook to improve your permitting timeline. The workbook can be found at www.tceq.texas.gov/permitting/air/guidance/newsourcereview/nsrapp-tools.html

Does your application include an NSR Application Workbook? If yes, you do not need to complete any other questions on this form as the information is contained within the workbook. Complete this question, sign the last page of the form, and provide the hard copy of the entire form with your application submittal.	☐ YES ☒ NO
Is this an application for a Readily Available Permit (RAP)? If yes, you do not need to complete any other questions on this form as the relevant information is contained within the RAP workbook. Complete this question, sign the last page of the form, and provide the hard copy of the entire form with your application submittal.	☐ YES ☒ NO

I. Applicant Information		
A. Company or Other Legal Name: Equistar Chemicals, L.P.		
Texas Secretary of State Charter/Registration Number (if applicable):		
B. Company Official Contact Information: (☒ Mr. ☐ Mrs. ☐ Ms. ☐ Other:) _____		
Name: Stephen G. Goff		
Title: Site Manager		
Mailing Address: 10801 Choate Roade		
City: Pasadena	State: TX	ZIP Code: 77507
Telephone No.: (281) 474-0436	Fax No.:	
Email Address: stephen.goff@lyb.com		
All permit correspondence will be sent via electronic copies unless hard copies are specifically requested through regular mail. The company official must initial here if hard copy correspondence is requested. _____		
C. Technical Contact Name Information: (☒ Mr. ☐ Mrs. ☐ Ms. ☐ Other:) _____		
Name: Derek Rodricks		
Title: Principal Environmental Engineer		
Company Name: Lyondell Chemical Company		
Mailing Address: 10801 Choate Road		
City: Pasadena	State: TX	ZIP Code: 77507
Telephone No.: 281-291-1684	Fax No.:	
Email Address: derek.rodricks@lyb.com		
D. Site Name: Bayport Polypropylene Plant		

Texas Commission on Environmental Quality
Form PI-1 General Application for
Air Preconstruction Permit and Amendment
Page 2

I.	**Applicant Information (continued)**		
E.	Area Name/Type of Facility: Polypropylene Production Units	☒ Permanent ☐ Portable	
For portable units, please provide the serial number of the equipment being authorized below.			
Serial No:		Serial No:	
F.	Principal Company Product or Business: Plastic Materials		
Principal Standard Industrial Classification Code (SIC): 2821			
Principal North American Industry Classification System (NAICS): 325211			
G.	Projected Start of Construction Date: N/A		
Projected Start of Operation Date:			
H.	Facility and Site Location Information (If no street address, provide clear driving directions to the site in writing.):		
Street Address: 12001 Bay Area Blvd.			
City/Town: Pasadena	County: Harris	ZIP Code: 77507	
Latitude (nearest second): 29 38' 4"		Longitude (nearest second): 95 2' 53"	
I.	Account Identification Number (leave blank if new site or facility): HG-0323-M		
J.	Core Data Form		
Is the Core Data Form (Form 10400) attached? If No, provide customer reference number and regulated entity number (complete K and L).			☐ YES ☒ NO
K.	Customer Reference Number (CN): CN600124705		
L.	Regulated Entity Number (RN): RN100216761		
II.	**General Information**		
A.	Is confidential information submitted with this application? If Yes, mark each confidential page confidential in large red letters at the bottom of each page.		☒ YES ☐ NO
B.	Is this application in response to an investigation, notice of violation, or enforcement action?		☐ YES ☒ NO
If Yes, attach a copy of any correspondence from the agency and provide the RN in section I.L. above.			
C.	Number of New Jobs: 0		
D.	Provide the name of the State Senator and State Representative and district numbers for this facility site:		
State Senator: Larry Taylor		District No.: 11	
State Representative: Dennis Paul		District No.: 129	

III. Type of Permit Action Requested				
A. Mark the appropriate box indicating what type of action is requested.				
☐ Initial	☒ Amendment	☐ Revision (30 TAC § 116.116(e)		
☐ Change of Location	☐ Relocation			
B. Permit Number (if existing): 9423				
C. Permit Type: Mark the appropriate box indicating what type of permit is requested. *(check all that apply, skip for change of location)*				
☒ Construction	☐ Flexible	☐ Multiple Plant	☐ Nonattainment	☐ Plant-Wide Applicability Limit
☐ Prevention of Significant Deterioration (PSD)		☐ Hazardous Air Pollutant Major Source		
☐ PSD for Greenhouse Gases (GHGs)		☐ Other:_____		
D. Is a permit renewal application being submitted in conjunction with this amendment in accordance with 30 TAC § 116.315(c).				☐ YES ☒ NO
E. Is this application for a change of location of previously permitted facilities?				☐ YES ☒ NO
If Yes, complete all parts of III.E.				
Current Location of Facility (If no street address, provide clear driving directions to the site in writing.):				
Street Address:				
City:	County:	ZIP Code:		
Proposed Location of Facility (If no street address, provide clear driving directions to the site in writing.):				
Street Address:				
City:	County:	ZIP Code:		
Will the proposed facility, site, and plot plan meet all current technical requirements of the permit special conditions? If "NO," attach detailed information.				☐ YES ☐ NO
Is the site where the facility is moving considered a major source of criteria pollutants or HAPs?				☐ YES ☐ NO

III. Type of Permit Action Requested *(continued)*	
F. Are there any standard permits, standard exemptions, or PBRs to be incorporated by reference?	☐ YES ☒ NO
If Yes, list any PBR, standard exemptions, or standard permits that need to be referenced. *(attach pages as needed)*	
Are there any PBR, standard exemptions, or standard permits associated to be incorporated by consolidation?	☐ YES ☒ NO
If Yes, list any PBR, standard exemptions, or standard permits that need to be consolidated. *(attach pages as needed)*	
If Yes, are emission calculations, a BACT analysis, and an impacts analysis attached to this application for any authorization to be incorporated by consolidation.	☐ YES ☐ NO
G. Are you permitting planned maintenance, startup, and shutdown emissions?	☐ YES ☒ NO
If Yes, attach information on any changes to emissions under this application as specified in VII and VIII.	
H. Federal Operating Permit Requirements (30 TAC Chapter 122 Applicability)	
Is this facility located at a site required to obtain a federal operating permit?	☒ YES ☐ NO ☐ To Be Determined
If Yes, list all associated permit number(s), attach pages as needed).	
O1419	
Identify the requirements of 30 TAC Chapter 122 that will be triggered if this application is approved.	
☐ FOP Significant Revision ☒ FOP Minor ☐ Application for an FOP Revision	
☐ Operational Flexibility/Off-Permit Notification ☐ Streamlined Revision for GOP	
☐ To be Determined ☐ None	
Identify the type(s) of FOP(s) issued and/or FOP application(s) submitted/pending for the site. ***(check all that apply)***	
☐ GOP Issued ☐ GOP application/revision application submitted or under APD review	
☒ SOP Issued ☐ SOP application/revision application submitted or under APD review	

IV. Public Notice Applicability	
A. Is this a new permit application or a change of location application?	☐ YES ☒ NO
B. Is this application for a concrete batch plant? If Yes, complete all parts of V.D.	☐ YES ☒ NO
C. Is this an application for a major modification of a PSD, nonattainment, FCAA § 112(g) permit, or exceedance of a PAL permit?	☐ YES ☒ NO
D. If this is an application for emissions of GHGs, select one of the following: ☐ Separate Public Notice (requires a separate application) ☐ Consolidated Public Notice	
E. Is this application for a PSD or major modification of a PSD located within 100 kilometers or less of an affected state or Class I Area?	☐ YES ☒ NO

If Yes, list the affected state(s) and/or Class I Area(s).

State	Class I Area

F. Is this a state permit amendment application? If Yes, complete all parts of IV.F.	☒ YES ☐ NO
Is there any change in character of emissions in this application?	☒ YES ☐ NO
Is there a new air contaminant in this application?	☒ YES ☐ NO
Do the facilities handle, load, unload, dry, manufacture, or process grain, seed, legumes, or vegetables fibers (agricultural facilities)?	☐ YES ☒ NO

List the total annual emission increases associated with the application
(List all that apply and attach additional sheets as needed):

Volatile Organic Compounds (VOC):	6.12
Sulfur Dioxide (SO_2):	
Carbon Monoxide (CO):	
Nitrogen Oxides (NO_x):	
Particulate Matter (PM):	
PM 10 microns or less (PM_{10}):	
PM 2.5 microns or less ($PM_{2.5}$):	
Lead (Pb):	
Hazardous Air Pollutants (HAPs):	

Below list other speciated air contaminants not listed above:

Acetone (Exempt Solvent)	26.19

V. Public Notice Information *(complete if applicable)*		
A. Responsible Person: (☒ Mr. ☐ Mrs. ☐ Ms. ☐ Other:)		
Name: Stephen G. Goff		
Title: Site Manager		
Company Name: Equistar Chemicals, L.P.		
Mailing Address: 10801 Choate Road		
City: Pasadena	State: TX	ZIP Code: 77507
Telephone No.: (281) 474-0436	Fax No.:	
Email Address: stephen.goff@lyb.com		
B. Technical Contact: (☒ Mr. ☐ Mrs. ☐ Ms. ☐ Other:)		
Name: Derek Rodricks		
Title: Principal Environmental Engineer		
Mailing Address: 10801 Choate Road		
City: Pasadena	State: TX	ZIP Code: 77507
Telephone No.: (281) 291-1684	Fax No.:	
Email Address: derek.rodricks@lyb.com		
C. Name of the Public Place: La Porte Public Library		
Physical Address *(No P.O. Boxes)*: 600 S. Broadway Street		
City: La Porte	County: Harris	ZIP Code: 77521
The public place has granted authorization to place the application for public viewing and copying.		☒ YES ☐ NO
The public place has internet access available for the public.		☒ YES ☐ NO
D. Concrete Batch Plants, PSD, and Nonattainment Permits		
County Judge Information (For Concrete Batch Plants and PSD and/or Nonattainment Permits) for this facility site.		
The Honorable:		
Mailing Address:		
City:	State:	ZIP Code:

V.	**Public Notice Information *(complete if applicable) (continued)***		
D.	Concrete Batch Plants, PSD, and Nonattainment Permits ***(continued)***		
For Concrete Batch Plants			
Is the facility located in a municipality or an extraterritorial jurisdiction of a municipality?			☐ YES ☐ NO
Presiding Officers Name(s):			
Title:			
Mailing Address:			
City:	State:	ZIP Code:	
Provide the name, mailing address of the chief executive for the location where the facility is or will be located.			
Chief Executive:			
Mailing Address:			
City:	State:	ZIP Code:	
D.	Concrete Batch Plants, PSD, and Nonattainment Permits ***(continued)***		
Provide the name, mailing address of the Indian Governing Body for the location where the facility is or will be located.			
Indian Governing Body:			
Mailing Address:			
City:	State:	ZIP Code:	
Identify the Federal Land Manager(s) for the location where the facility is or will be located.			
Federal Land Manager(s):			
E.	Bilingual Notice		
Is a bilingual program required by the Texas Education Code in the School District?			☒ YES ☐ NO
Are the children who attend either the elementary school or the middle school closest to your facility eligible to be enrolled in a bilingual program provided by the district?			☒ YES ☐ NO
If Yes, list which languages are required by the bilingual program?			
Spanish			

VI.	**Small Business Classification *(Required)***	
A.	Does this company (including parent companies and subsidiary companies) have fewer than 100 employees or less than $6 million in annual gross receipts?	☐ YES ☒ NO
B.	Is the site a major stationary source for federal air quality permitting?	☒ YES ☐ NO
C.	Are the site emissions of any regulated air pollutant greater than or equal to 50 tpy?	☒ YES ☐ NO
D.	Are the site emissions of all regulated air pollutants combined less than 75 tpy?	☐ YES ☒ NO

VII. Technical Information		
A. The following information must be submitted with your Form PI-1 ***(this is just a checklist to make sure you have included everything)***		
☒ Current Area Map		
☒ Plot Plan		
☒ Existing Authorizations		
☒ Process Flow Diagram		
☒ Process Description		
☒ Maximum Emissions Data and Calculations		
☒ Air Permit Application Tables		
☒ Table 1(a) (Form 10153) entitled, Emission Point Summary		
☒ Table 2 (Form 10155) entitled, Material Balance		
☐ Other equipment, process or control device tables		
B. Are any schools located within 3,000 feet of this facility?		☐ YES ☒ NO
C. Maximum Operating Schedule:		
Hour(s): 24	Day(s): 7	
Week(s): 52	Year(s):	
Seasonal Operation? If Yes, please describe in the space provide below.		☐ YES ☒ NO
Hour(s):	Day(s):	
Week(s):	Year(s):	
D. Have the planned MSS emissions been previously submitted as part of an emissions inventory?		☒ YES ☐ NO
Provide a list of each planned MSS facility or related activity and indicate which years the MSS activities have been included in the emissions inventories. Attach pages as needed.		
MSS Facility(s) or Activity	**Year(s)**	
See Attachments		

VII.	**Technical Information *(continued)***	
E.	Does this application involve any air contaminants for which a disaster review is required?	☐ YES ☒ NO
If Yes, list which air contaminants require a disaster review		
F.	Does this application include a pollutant of concern on the Air Pollutant Watch List (APWL)?	☐ YES ☒ NO
G.	Are emissions of GHGs associated with this project subject to PSD?	☐ YES ☒ NO
If Yes, provide a list of all associated applications for this project:		
H.	Does this project require an impacts analysis?	☒ YES ☐ NO
	If No, is a description of why an impacts analysis is not required attached?	☐ YES ☐ NO
For Non-Federal Projects		
	Is an attachment included detailing how the project meets all applicable impacts requirements, including which MERA step was met (if applicable), how the modeling was conducted (if applicable), and the results demonstrating compliance with all applicable impacts requirements following the Initial Modeling Summary guidance document?	☒ YES ☐ NO
Note: for projects with modeling, utilizing APD's Electronic Modeling Evaluation Workbook to complete this analysis will help streamline the modeling review and is strongly encouraged.		
VIII.	**State Regulatory Requirements** **Applicants must demonstrate compliance with all applicable state regulations to obtain a permit or amendment.** *The application must contain detailed attachments addressing applicability or non-applicability; identify state regulations; show how requirements are met; and include compliance demonstrations.*	
A.	Will the emissions from the proposed facility protect public health and welfare, and comply with all rules and regulations of the TCEQ?	☒ YES ☐ NO
B.	Will emissions of significant air contaminants from the facility be measured?	☒ YES ☐ NO
C.	Is the Best Available Control Technology (BACT) demonstration attached?	☒ YES ☐ NO
D.	Will the proposed facilities achieve the performance represented in the permit application as demonstrated through recordkeeping, monitoring, stack testing, or other applicable methods?	☒ YES ☐ NO
IX.	**Federal Regulatory Requirements** **Applicants must demonstrate compliance with all applicable federal regulations to obtain a permit or amendment.** *The application must contain detailed attachments addressing applicability or non-applicability; identify federal regulation subparts; show how requirements are met; and include compliance demonstrations.*	
A.	Does Title 40 Code of Federal Regulations Part 60, (40 CFR Part 60) New Source Performance Standard (NSPS) apply to a facility in this application?	☒ YES ☐ NO
B.	Does 40 CFR Part 61, National Emissions Standard for Hazardous Air Pollutants (NESHAP) apply to a facility in this application?	☐ YES ☒ NO

IX.	**Federal Regulatory Requirements *(continued)*** **Applicants must demonstrate compliance with all applicable federal regulations to obtain a permit or amendment.** *The application must contain detailed attachments addressing applicability or non-applicability; identify federal regulation subparts; show how requirements are met; and include compliance demonstrations.*	
C.	Does 40 CFR Part 63, Maximum Achievable Control Technology (MACT) standard apply to a facility in this application?	☒ YES ☐ NO
D.	Do nonattainment permitting requirements apply to this application?	☐ YES ☒ NO
E.	Do prevention of significant deterioration permitting requirements apply to this application?	☐ YES ☒ NO
F.	Do Hazardous Air Pollutant Major Source [FCAA § 112(g)] requirements apply to this application?	☐ YES ☒ NO
G.	Is a Plant-wide Applicability Limit permit being requested?	☐ YES ☒ NO
X.	**Professional Engineer (P.E.) Seal**	
Is the estimated capital cost of the project greater than $2 million dollars?		☐ YES ☒ NO
If Yes, submit the application under the seal of a Texas licensed P.E.		
XI.	**Permit Fee Information**	
Check, Money Order, Transaction Number, ePay Voucher Number: Voucher No. 412745		
Fee Amount: $ 900.00		
Paid online?		☒ YES ☐ NO
Company name on check:		
Is a Table 30 (Form 10196) entitled, Estimated Capital Cost and Fee Verification, attached?		☒ YES ☐ NO ☐ N/A
XII.	**Delinquent Fees and Penalties**	
This form will not be processed until all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ is paid in accordance with the Delinquent Fee and Penalty Protocol. For more information regarding Delinquent Fees and Penalties, go to the TCEQ website at: www.tceq.texas.gov/agency/financial/fees/delin.		
XIII.	**Signature**	
The signature below confirms that I have knowledge of the facts included in this application and that these facts are true and correct to the best of my knowledge and belief. I further state that to the best of my knowledge and belief, the project for which application is made will not in any way violate any provision of the Texas Water Code (TWC), Chapter 7; the Texas Health and Safety Code, Chapter 382, the Texas Clean Air Act (TCAA) the air quality rules of the Texas Commission on Environmental Quality; or any local governmental ordinance or resolution enacted pursuant to the TCAA. I further state that I understand my signature indicates that this application meets all applicable nonattainment, prevention of significant deterioration, or major source of hazardous air pollutant permitting requirements. The signature further signifies awareness that intentionally or knowingly making or causing to be made false material statements or representations in the application is a criminal offense subject to criminal penalties.		
Name: Stephen G. Goff		
Signature: Stephen G. Goff *Original Signature Required*		
Date: 3/26/2019		

Save Form Reset Form

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Equistar Chemicals, LP (Equistar), a wholly owned subsidiary of LyondellBasell Industries (LyondellBasell), owns and operates the Bayport Polymers Plant at 12001 Bay Area Blvd., in Pasadena, Harris County, Texas. The Bayport Polymers Plant consists of the Catalloy Unit, and Polypropylene Production Units (Bulk Plant). The Bulk Plant operates three units (C, D, and E-Line), which produce polypropylene using the Spheripol process. Air emissions from Equistar's Bayport Bulk Plant have been authorized under TCEQ New Source Review (NSR) Permit No. 9423.

Equistar is submitting an amendment application for TCEQ NSR Permit No. 9423 to add emissions from visbreaking. Certain products require visbreaking of the polypropylene base polymer to adjust the viscosity, which is accomplished by the addition of organic peroxide.

The Bulk Plant operates three units (C, D, and E-Line), all of which use organic peroxide to adjust the viscosity of products. The peroxide is added to the polymer as part of the additive package during extrusion. The organic peroxide decomposes releasing primarily into TBA and acetone, along with some lighter hydrocarbons. The emissions from this activity were not previously quantified and have been disclosed as part of an audit conducted under the Environmental, Health and Safety Audit Privilege Act. This application is part of the ongoing corrective action associated with the audit.

STANDARD PERMITS, EXEMPTIONS OR PERMITS BY RULE

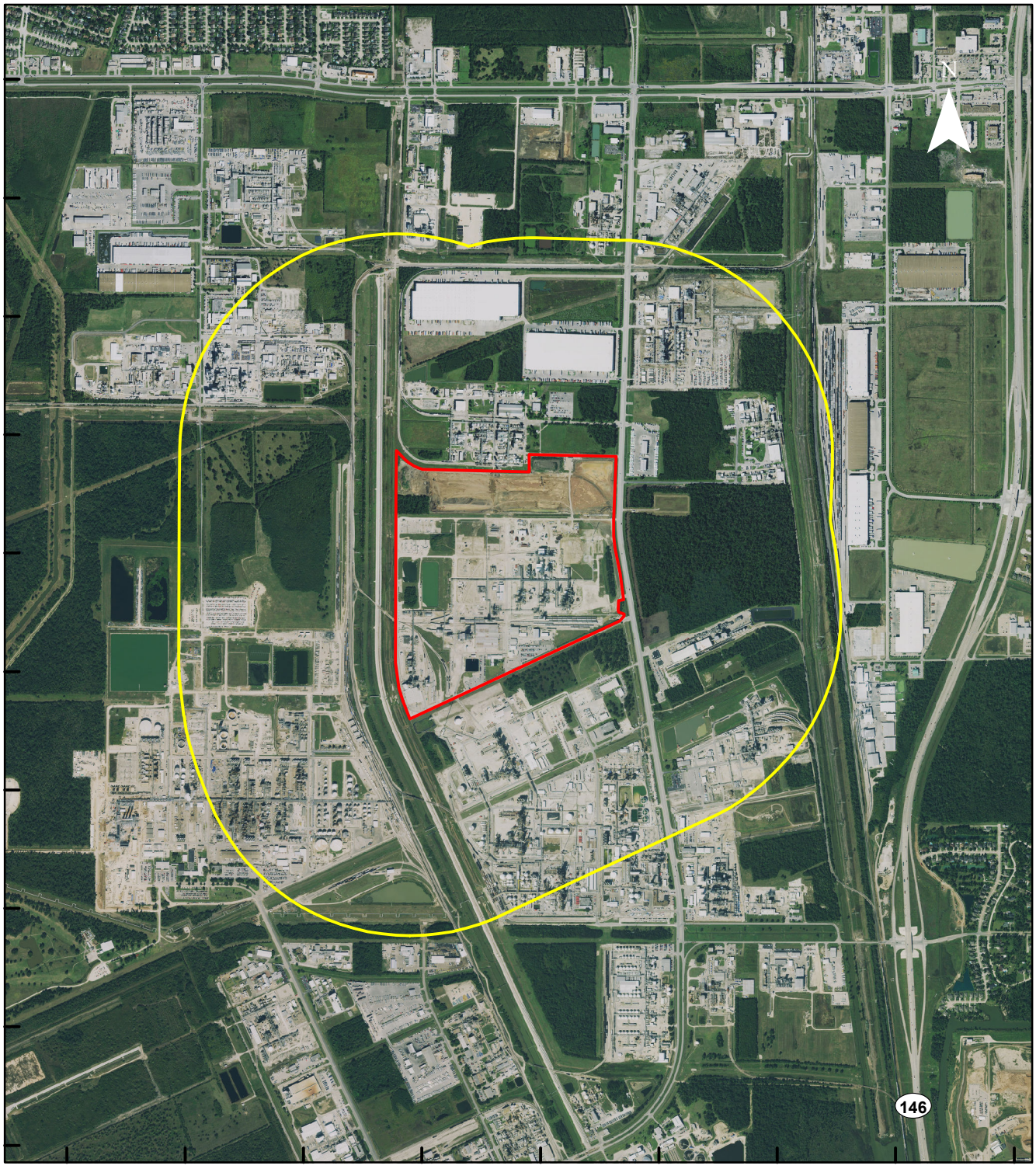
There are no standard permits or permits by rule to incorporate into this application since it is an amendment application.

PLANNED MAINTENANCE, STARTUP, AND SHUTDOWN EMISSIONS

Planned maintenance, startup, and shutdown (MSS) emissions for C, D and E-Line are authorized by this permit. This amendment does not include any additional MSS activities.

AREA MAP

Equistar Chemicals, L.P.
Area Map



Scale

0 1,000 2,000 3,000 4,000

Feet

lyondellbasell

Legend

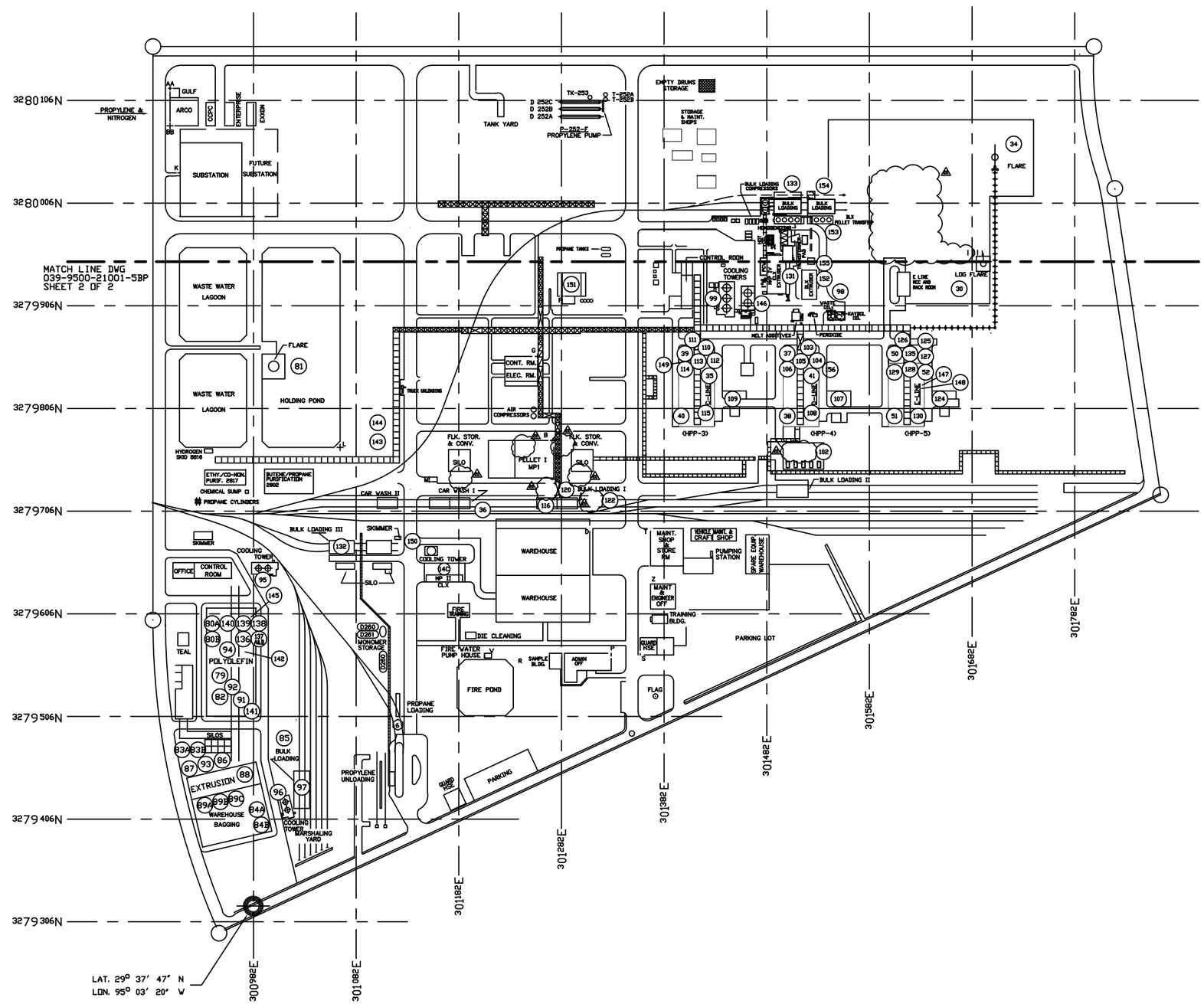
Property Line

3000 ft boundary

5

Coordinate System: NAD83 UTM Zone 15N
Map: NAIP 2014 Harris County Mosaic
Date: 05/05/2016

PLOT PLAN



EPN	PERMIT NO.	DESCRIPTION
14C	9423	PELLET TRANSFER SYSTEM
30	9423	LOW OFFGAS FLARE
34	9423	ELEVATED FLARE
35	9423	FUGITIVE EMISSIONS
37	9423	CATALYST UNLOADING
38	9423	STABILIZER VENT
39	9423	CATALYST HANDLING
40	9423	STABILIZER VENT
41	9423	FUGITIVE EMISSIONS
50A	9423	CATALYST UNLOADING
50B	9423	CATALYST UNLOADING
51	9423	STABILIZER VENT
52	9423	FUGITIVE EMISSIONS
79	19546	FUGITIVE EMISSIONS
80A	19546	CATALYST VENT
80B	19546	CATALYST VENT
81	19546	ELEVATED FLARE
82	19546	STABILIZER HANDLING BAG FILTER
83A	19546	SILO BAG FILTER
83B	19546	SILO BAG FILTER
84A	19546	SILO BAG FILTER
84B	19546	SILO BAG FILTER
85	19546	SILO BAG FILTER
86	19546	SILO BAG FILTER
87	19546	STABILIZER HANDLING BAG FILTER
88	19546	EXTRUDER VENT
89A	19546	PELLET SILO
89B	19546	PELLET SILO
89C	19546	PELLET SILO
91	19546	TRANSFER BAG FILTER
92	19546	TRANSFER BAG FILTER
93	19546	EXTRUSION BAG FILTER
94	19546	SCRUBBER (WASTEWATER)
95	19546	COOLING TOWER
96	19546	COOLING TOWER
97	19546	RAILCAR LOADING
98	9423	WASTE OIL LOADING
99	9423	COOLING TOWER
102	9423	RAIL CAR LOADING (FLAKE)
103	9423	OIL & GREASE MIXING
104	9423	DONDR STORAGE DRUM
105	9423	DONDR STORAGE DRUM
106	9423	DONDR STORAGE TANK
107	9423	TEAL SEAL POT
108	9423	SCRUBBER (WASTEWATER)
109	9423	TEAL SEAL POT
110	9423	OIL & GREASE MIXING
111	9423	HYDRAULIC OIL DRUM
112	9423	ADDITIVE STORAGE DRUM
113	9423	DONDR STORAGE DRUM
114	9423	DONDR STORAGE TANK
115	9423	SCRUBBER (WASTEWATER)
116	9423	RAILCAR LOADING (FLAKE)
120	9423	BAG FILTER
122	9423	BAG FILTER
124	9423	TEAL SEAL POT
125	9423	OIL & GREASE MIXING
126	9423	HYDRAULIC OIL DRUM
127	9423	DONDR STORAGE DRUM
128	9423	DONDR STORAGE DRUM
129	9423	DONDR STORAGE TANK
130	9423	SCRUBBER (WASTEWATER)
131	9423	PELLET TRANSFER SYSTEM
132	9423	RAILCAR LOADING (MPII)
133	9423	RAILCAR LOADING (MPIV)
135	9423	ADDITIVE SURGE DRUM
136	19546	ADDITIVE SURGE DRUM
137A	19546	DONDR STORAGE DRUM
137B	19546	DONDR STORAGE DRUM
138	19546	TEAL SEAL POT
139	19546	OIL DRUM
140	19546	HYDRAULIC OIL SURGE DRUM
141	19546	USED OIL LOADING
142	19546	DRYER SCRUBBER VENT
143	9423	TK-2527A MINERAL OIL TANK
144	9423	TK-2527B MINERAL OIL TANK
145	19546	OIL DRUM
146	9423	COOLING TOWER
147	9423	ADDITIVE STORAGE
148	9423	ADDITIVE STORAGE
149	9423	CATALYST HANDLING
150	9423	COOLING TOWER
151	9423	MARLEY COOLING TOWER #3
152	9423	DLX FLAKE TRANSFER
153	9423	DLX PELLET TRANSFER
154	9423	DLX RAILCAR LOADING
155	9423	DLX COOLING TOWER
156	9423	HYDRAULIC OIL SURGE DRUM

COORDINATES ARE IN 1983 UTM UNITS

NO.	DATE	PROJ./VD MDCA	DESCRIPTION	RVS'D	CK'D	APPV'D
17	11/2/07		PERMIT CONSOLIDATION	SJS	MP	MP
16	4/27/07		GEN. REV. UPDATE TO UNITS	SJS	AT	AT
15	7/31/06		GEN. REV. MANY CHANGES	VC	AT	AT
14	5/31/06		GEN. REV. MANY CHANGES	VC	AT	AT
13	5/31/06		REV DWG NO WAS 21011	VC		
12	5/31/06		ADD POINTS 142,143,144,145	VC	AT	AT

REVISIONS

NO.	DATE	PROJ./VD MDCA	DESCRIPTION	RVS'D	CK'D	APPV'D
11	7/23/03		UPDATE PER FLARE PERMIT	WC	AT	AT
10	6/27/01		ADDED ELX & RAIL EXT.	WC	HA	HA
9	5/24/01	43453	GENERAL REVISION	DW	VLR	VLR
8	5/24/01	43453	REVISED AS NOTED	DW	VLR	VLR
7	1/30/01	43453	REVISED AS NOTED	DW	VLR	VLR
6	11/30/00		ADDED 14C	DW	HA	HA

REVISIONS

NO.	DATE	PROJ. W/D	DESCRIPTION	RVS'D	CK'D	APPV'D
5	6-29-04		GEN. UPDATE	DW		VLR
22	5/14/04		GEN. UPDATE	RC	CN	CN
21	5/14/04		ADDED 156 & GEN REV.	RC	MP	MP
20	5/14/04		ADDED 155 DLX COOLING TOWER	SJS	MP	MP
19	VLR		ADDED DLX EXTRUDER AND TRANSFER	SJS	MP	MP
18	12-20-02		ADDED 151 MARLEY COOLING TOWER	SJS	MP	MP

REVISIONS

7

TITLE	PLANT	ACCOUNT	CLASS	FILE CODE

REFERENCE DRAWINGS

TITLE	PLANT	ACCOUNT	CLASS	FILE CODE
POLYOLEFIN FLOW DIAG	039	9500	21013	5BP
EMISSIONS FLOW DIAG.	039	9500	21012	5BP

REFERENCE DRAWINGS

EQUIPMENT REFERENCE

STORES REFERENCE

PROJ./ V.D./ MDCA

SCALE 3/4" =100'

DATE

DESIGNED

DRAWN WAYNE C. 5-20-98

CHECKED

APPROVED

APPROVED

APPROVED

APPROVED

APPROVED

APPROVED

lyondellbasell
BAYPORT POLYOLEFINS
2401 BAY AREA BOULEVARD
PASADENA, TEXAS 77507
281-604-3272

PROJECT

ACCOUNT TITLE

BAYPORT PLANT EMISSIONS LOCATION

DRAWING NUMBER

PLANT	ACCOUNT	CLASSIFICATION	FILE CODE	REV.
039	9200	21011	5BP	22

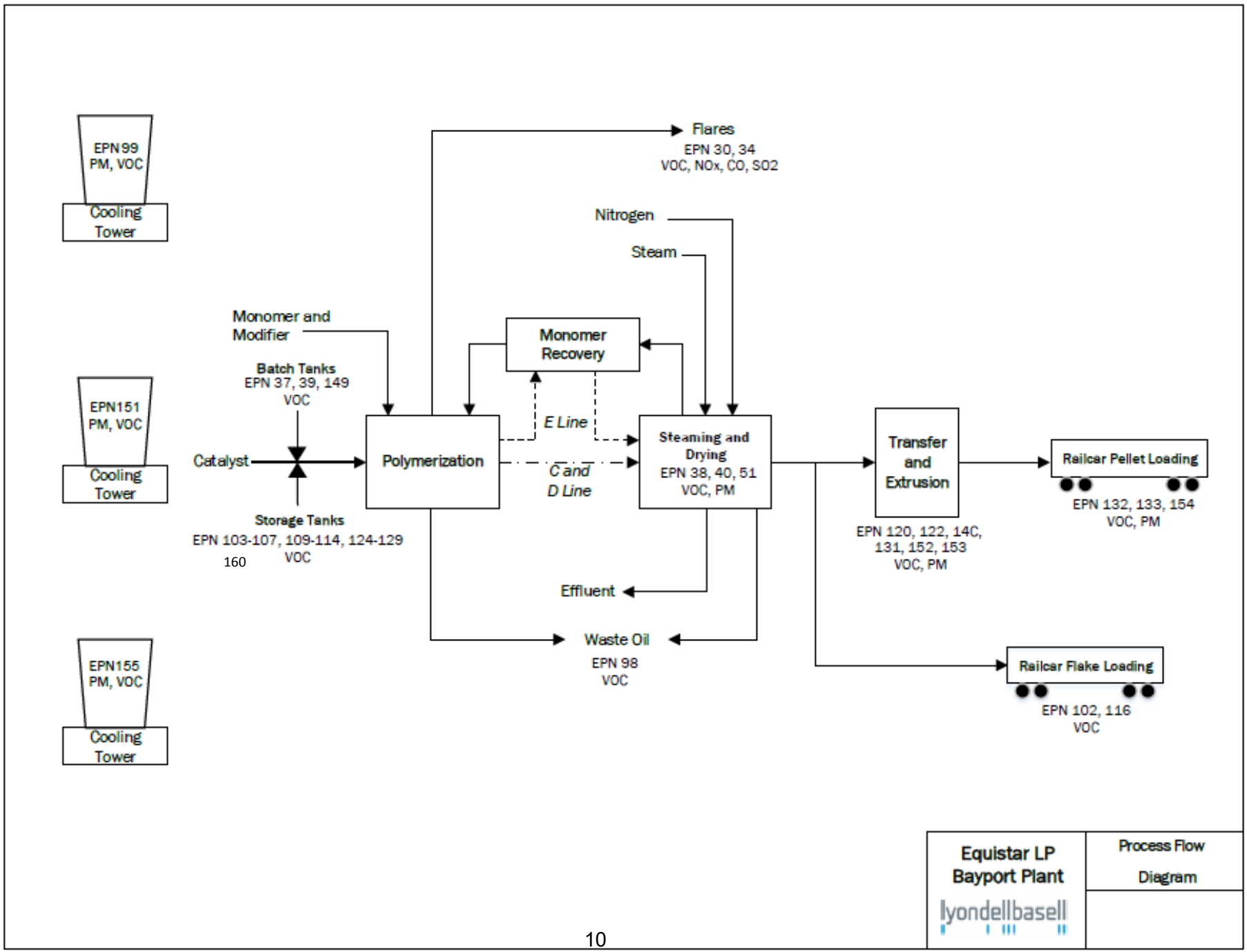
CAD REF. NO. 9200-21

SHEET 1 OF 1

EXISTING AUTHORIZATIONS

EPN	Description	Authorization Type	Authorization Identifier
E-CAP	VOC Emission Cap for EPNs 120, 122, 116, 152, 102, 153, 154, 14C, 131, 132, and 133	NSR Permit	9423

PROCESS FLOW DIAGRAM


EPN 99
PM, VOC
Cooling Tower
EPN151
PM, VOC
Cooling Tower
EPN155
PM, VOC
Cooling Tower
Flares
EPN 30, 34
VOC, NOx, CO, SO2
Nitrogen
Steam
Monomer and Modifier
Batch Tanks
EPN 37, 39, 149
VOC
Monomer Recovery
Catalyst
Polymerization
E Line
C and D Line
Steaming and Drying
EPN 38, 40, 51
VOC, PM
Transfer and Extrusion
EPN 120, 122, 140, 131, 152, 153
VOC, PM
Railcar Pellet Loading
EPN 132, 133, 154
VOC, PM
Storage Tanks
EPN 103-107, 109-114, 124-129
VOC
160
Effluent
Waste Oil
EPN 98
VOC
Railcar Flake Loading
EPN 102, 116
VOC
Equistar LP
Bayport Plant
lyondellbasell
Process Flow
Diagram

PROCESS DESCRIPTION

Equistar's Bayport Polypropylene Units are comprised of C, D and E-Line production units, which produce polypropylene homopolymers and copolymers and are authorized under TCEQ NSR Permit No. 9423.

Polymerization

Raw material monomers used in the production lines include propylene, ethylene, and propane. Liquid propylene is received via pipeline into the common propylene feed distribution system for the Bayport Polypropylene Units. Propane comes into the plant as a component of the propylene stream. Compressed gaseous ethylene is transferred via pipeline to the facility. There is no on-site storage of ethylene. Propylene and (in some instances) ethylene is fed to the polymerization section, along with catalyst and co-catalysts.

Following polymerization in the reactors, polymer is separated from gaseous propylene, propane and ethylene. Monomers are recovered for recycle. Polymer is then contacted with steam to remove residual hydrocarbons and to stop further polymerization. The polymer is then dried using nitrogen and transferred either directly to a railcar for sale or transferred to one of the three pelletizing extruders. After the extruder, the pellets are transferred to a storage silo or directly to railcar loading. Hydrocarbons are vented to the flare(s) and condensed steam is discharged to the wastewater system.

Pelletization (Extruders)

Polymer from the process dryer is transferred either directly to railcars, storage silos or one of the three extruders. Polymer is transferred in a closed loop nitrogen atmosphere to storage silos or pelletization extruders. During pelletization, the polymer is melted with additives and cut into pellets. After the pellet dryers, the pellets are transferred either directly to a railcar or to storage silos prior to loading to a railcar. Emissions from air transfer systems include particulates and minor emissions of residual hydrocarbons. There are two wet surface cooling towers servicing the C and D-Line extruders, which do not contact VOCs.

Utilities and Common Facilities

Utilities (electricity, steam, and nitrogen) used at the Bayport plant are purchased from adjacent facilities. There are no on-site boilers, heaters, or furnaces. Three HRVOC cooling towers are authorized in NSR Permit No. 9423 that service the C, D and E-Line units. Off-gas is routed to either the Elevated flare (EPN 34) or the Low off-gas flare (EPN 30). Off-gas is also routed to an adjacent facility. Waste mineral oil from the process, generated from catalyst preparation, polymerization, and monomer recovery sections of the units is routed to a process oil tank. The tank vents to the flare system. The process oil is periodically loaded into tank trucks to be sent off-site for disposal.

Proposed Change

The Bulk Plant operates three units (C, D and E-Line), all of which use organic peroxide to adjust the viscosity of certain products. The peroxide is added to the polymer as part of the additive package during extrusion. The organic peroxide decomposes releasing primarily into TBA and acetone, along with some lighter hydrocarbons. The emissions from this activity were not previously quantified and have been disclosed as part of an audit conducted under the Environmental, Health and Safety Audit Privilege Act. This application is part of the ongoing corrective action associated with the audit.

EMISSIONS DATA

Emission calculations and a detailed discussion can be found in the confidential section of this application. The Table 1(a) is provided in the Air Permit Application Table Section.

AIR PERMIT APPLICATION TABLE

A Table 1(a) is attached. Equistar considers all other TCEQ tables to contain confidential information and are included in the confidential section of this application.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Table 1(a) Emission Point Summary

Date:	March 2019	**Permit No.:** 9423		**Regulated Entity No.:**	RN100216761
Area Name:	Bayport Polypropylene Plant			**Customer Reference No.:**	CN600124705

Review of applications and issuance of permits will be expedited by supplying all necessary information requested on this Table.

AIR CONTAMINANT DATA					
1. Emission Point			**2. Component or Air Contaminant Name**	**3. Air Contaminant Emission Rate**	
(A) EPN	**(B) FIN**	**(C) NAME**		**(A) POUND**	**(B) TPY**
EPNs common to C-Line, D-Line, and E-Line					
E-CAP [1]	14C, 102, 116, 120, 122, 131, 132, 133, 152, 153, 154	VOC Emission Cap for EPNs 120, 122, 116, 152, 102, 153, 154, 14C, 131, 132, and 133	VOC	9.75	19.39
			Exempt Solvent	7.36	26.19

Notes:

EPN = Emission Point Number

FIN = Facility Identification Number

EPNs not listed are not affected by this project

[1] From foot note in MAERT "The combined total VOC emissions for all EPNs with this note shall not exceed the emission rates indicated for EPN E-CAP"

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Table 1(a) Emission Point Summary

Date:	March 2019	**Permit No.:** 9423	**Regulated Entity No.:** RN100216761
Area Name:	Bayport Polypropylene Plant		**Customer Reference No.:** CN600124705

Review of applications and issuance of permits will be expedited by supplying all necessary information requested on this Table.

AIR CONTAMINANT DATA			EMISSION POINT DISCHARGE PARAMETERS										
1. Emission Point			4. UTM Coordinates of Emission Point			Source							
						5. Building	6. Height Above	7. Stack Exit Data			8. Fugitives		
EPN (A)	FIN (B)	Name (C)	Zone	East (Meters)	North (Meters)	Height (Ft.)	Ground (Ft.)	Diameter (Ft.) (A)	Velocity (FPS) (B)	Temperature (°F) (C)	Length (Ft.) (A)	Width (Ft.) (B)	Axis Degrees (C)
E-Cap	102	VOC Emission Cap for EPNs 120, 122, 116, 152, 102, 153, 154, 14C, 131, 132, and 133	15	301,536	3,279,762	10.0	10.0				2	15	0
E-Cap	116	VOC Emission Cap for EPNs 120, 122, 116, 152, 102, 153, 154, 14C, 131, 132, and 133	15	301,267	3,279,716	16.0	16.0				16	16	0
E-Cap	120	VOC Emission Cap for EPNs 120, 122, 116, 152, 102, 153, 154, 14C, 131, 132, and 133	15	301,288	3,279,811	4.0	4.0	0.5	73.0	80			
E-Cap	122	VOC Emission Cap for EPNs 120, 122, 116, 152, 102, 153, 154, 14C, 131, 132, and 133	15	301,332	3,279,816	4.0	4.0	0.8	91.0	80			
E-Cap	131	VOC Emission Cap for EPNs 120, 122, 116, 152, 102, 153, 154, 14C, 131, 132, and 133	15	301,182	3,279,616	10.0	10.0	0.5	0.0	80			
E-Cap	132	VOC Emission Cap for EPNs 120, 122, 116, 152, 102, 153, 154, 14C, 131, 132, and 133	15	301,072	3,279,676	16.0	16.0	1.0	0.0	80			
E-Cap	133	VOC Emission Cap for EPNs 120, 122, 116, 152, 102, 153, 154, 14C, 131, 132, and 133	15	301,092	3,279,676	16.0	16.0	1.0	0.0	80			
E-Cap	14C	VOC Emission Cap for EPNs 120, 122, 116, 152, 102, 153, 154, 14C, 131, 132, and 133	15	301,182	3,279,616	10.0	10.0	0.5	0.0	80			
E-Cap	152	VOC Emission Cap for EPNs 120, 122, 116, 152, 102, 153, 154, 14C, 131, 132, and 133	15	301,549	3,279,926	15.0	15.0	0.7	21.0	75			
E-Cap	153	VOC Emission Cap for EPNs 120, 122, 116, 152, 102, 153, 154, 14C, 131, 132, and 133	15	301,543	3,279,926	110.0	110.0	1.7	25.0	125			
E-Cap	154	VOC Emission Cap for EPNs 120, 122, 116, 152, 102, 153, 154, 14C, 131, 132, and 133	15	301,549	3,280,006	7.0	7.0	0.7	60.0	75			

EPN = Emission Point Number

FIN = Facility Identification Number

DISASTER REVIEW

Does not apply. Equistar does not propose to store or handle significant quantities of toxic chemicals in this application.

STATE REGULATORY REQUIREMENTS

CITATION	CITATION DESCRIPTION	APPLICABLE?	COMMENT
Chapter 101	**General Rules**		
§101.2	Multiple Air Contaminant Sources or Properties	☐ Yes ☒ No	Equistar is not petitioning the commission to designate two or more properties as a single property.
§101.3.	Circumvention	☒ Yes ☐ No	Equistar will not use a plan, activity, device or contrivance to conceal or appear to minimize an emission violation of the Act or a regulation.
§101.4	Nuisance	☒ Yes ☐ No	The facility will not discharge air contaminants in such concentration/ duration to be injurious or adversely affect human health or welfare, or interfere with the normal use/enjoyment of animal life, vegetation, or property.
§101.5	Traffic Hazard	☒ Yes ☐ No	The facility will not discharge air contaminants, uncombined water, or other materials from any source that causes or has a tendency to cause a traffic hazard or interfere with normal road use.
§101.8 and §101.9	Sampling and Sampling Ports	☒ Yes ☐ No	Equistar will comply with the applicable requirements if requested by the board or Executive Director to conduct sampling.
§101.10.	Emissions Inventory Requirements	☒ Yes ☐ No	Equistar annually submits an emission inventory by the required due date.
§101.14.	Sampling Procedures and Terminology	☒ Yes ☐ No	Equistar will employ commonly accepted methods and procedures for sampling/measuring air contaminants when otherwise not specified in rules, regulations, determinations and/or orders by the commission.
§101.20.	Compliance with Environmental Protection Agency Standards	☒ Yes ☐ No	The sources in this application will be operated to comply with the applicable Environmental Protection Agency Standards as detailed in this supporting documentation.
§101.21.	The National Primary and Secondary Ambient Air Quality Standards	☒ Yes ☐ No	The sources in this application will be operated in accordance with the National Primary and Secondary Air Quality Standards. Air dispersion modeling will be submitted at the request of the commission.
§101.23.	Alternate Emission Reduction (“Bubble”) Policy	☐ Yes ☒ No	Equistar does not seek approval of emission controls from another facility at this site in lieu of controlling the sources as explained in this application

CITATION	CITATION DESCRIPTION	APPLICABLE?	COMMENT
§101.24.	Inspection Fees	☒ Yes ☐ No	Equistar submits the relevant inspection or emissions fees annually to the commission by the specified due date.
§101.26.	Surcharge on Fuel Oil in Specified Boilers	☐ Yes ☒ No	There is not an industrial boiler or utility boiler as defined in §101.1 associated with this application.
§101.27.	Emissions Fees	☒ Yes ☐ No	Equistar submits the relevant inspection or emissions fees as required.
§101.28.	Stringency Determination for Federal Operating Permits	☐ Yes ☒ No	Equistar will comply with the relevant state regulatory requirements as defined by §122.10 rather than equivalent or more stringent requirements.
§101.201.	Emissions Event Reporting and Recordkeeping Requirements	☒ Yes ☐ No	Equistar will comply with the emissions events reporting and recordkeeping requirements.
§101.211.	Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements	☒ Yes ☐ No	Equistar will comply with the reporting and recordkeeping requirements for scheduled non-permitted maintenance, startup, and shutdown activities.
§101.221 through §101.224.	Operational Requirements, Demonstrations, and Actions to Reduce Excessive Emissions	☒ Yes ☐ No	Equistar will comply with the applicable requirements of §101.221 through §101.224.
§101.231 through §101.233.	Variances	☐ Yes ☒ No	Equistar is not seeking a variance.
§101.300 through §101.311.	Emission Credit Banking and Trading	☒ Yes ☐ No	Equistar participates in the emission credit banking and trading and complies with the relevant registry and recordkeeping requirements.
§101.330 through §101.339.	Emission Banking and Trading of Allowances	☐ Yes ☒ No	The site does not include an electric generating unit permitted under Chapter 116, Subchapter I.
§101.350 through §101.363.	Mass Emissions Cap and Trade Program	☒ Yes ☐ No	Equistar complies with the relevant provisions, allowance allocation, monitoring, compliance demonstration, reporting, and level of activity certification requirements.
§101.370 through §101.379.	Discrete Emission Credit Banking and Trading	☒ Yes ☐ No	Equistar participates in this voluntary reduction program.

CITATION	CITATION DESCRIPTION	APPLICABLE?	COMMENT
§101.390 through §101.401.	Highly Reactive Volatile Organic Compound Emission Cap and Trade Program	☒ Yes ☐ No	Equistar complies with the relevant provisions, recordkeeping, and reporting requirements.
Chapter 111.	**Visible Emissions**		
§111.111 through §111.113.	Visible Emissions	☒ Yes ☐ No	Any visible emissions that occur will be below the applicable opacity limits.
§111.121 through §111.129.	Incineration	☐ Yes ☒ No	There is not an incinerator associated with this application that burns domestic, commercial, or industrial solid waste as defined in §101.1, medical waste, or hazardous waste as fuel for energy recovery.
§111.131 through §111.139.	Abrasive Blasting of Water Storage Tanks Performed by Portable Operations	☐ Yes ☒ No	Abrasive blasting of water storage tanks performed by portable operations will not be performed at the facility as part of this application.
§111.141 through §111.149.	Materials Handling, Construction, Roads, Streets, Alleys, and Parking Lots	☐ Yes ☒ No	The site is located in Harris County outside the Beltway 8 Loop which is not listed as an affected area.
§111.151.	Allowable Emissions Limits	☒ Yes ☐ No	The PM emission rates will not exceed the allowable emission rates presented in Table 1 in §111.151.
§111.153.	Emissions Limits on Steam Generators	☐ Yes ☒ No	There are no steam generators with heat input greater than 2500 MM Btu/hr or any solid fossil fuel-fired steam generators associated with this application.
§111.171 through §111.175.	Emissions Limits on Agricultural Processes	☐ Yes ☒ No	There are no agricultural processes associated with this application.
§111.181 through §111.183.	Exemptions for Portable or Transient Operations	☐ Yes ☒ No	There are no portable or transient operations such as rock crushers, hot mix asphaltic concrete facilities, etc., associated with this application.
§111.201 through §111.221.	Outdoor Burning	☒ Yes ☐ No	Equistar will conduct outdoor burning only as authorized by §111.201-§111.221, and will comply with the General Requirements for Allowable Outdoor Burning in §111.219 for any outdoor burning conducted, such as for fire training or barbecues.

CITATION	CITATION DESCRIPTION	APPLICABLE?	COMMENT
Chapter 112.	**Sulfur Compounds**		
§112.3 through §112.4.	Net Ground Level Concentrations	☒ Yes ☐ No	The sources associated with this application are not expected to cause or contribute to a condition that exceeds the applicable net ground level concentration limit.
§112.5 and §112.6.	Allowable Emission Rates - Sulfuric Acid Plants	☐ Yes ☒ No	There is not an affected sulfuric acid plant associated with this application.
§112.7.	Allowable Emission Rates - Sulfur Recovery Plant	☐ Yes ☒ No	There is not an affected sulfur recovery plant associated with this application.
§112.8.	Allowable Emission Rates from Solid Fossil Fuel-Fired Steam Generators	☐ Yes ☒ No	There is not a solid fossil fuel-fired steam generator associated with this application.
§112.9.	Allowable Emission Rates - Combustion of Liquid Fuel	☐ Yes ☒ No	There is not a combustion unit burning liquid fuel associated with this application.
§112.14.	Allowable Emission Rates from Nonferrous Smelter Processes	☐ Yes ☒ No	There is not an affected nonferrous smelter process associated with this application.
§112.15 through §112.18.	Temporary Fuel Shortage Plan	☒ Yes ☐ No	Equistar will comply with all applicable filing, operating, notification, and reporting requirements in case of a temporary fuel shortage.
§112.19 through §112.21.	Area Control Plan	☐ Yes ☒ No	Equistar does not intend to apply for an Area Control Plan at this time.
§112.31 through §112.34.	Control of Hydrogen Sulfide	☐ Yes ☒ No	The sources associated with this application are not expected to emit H_2S.
§112.41 through §112.47.	Control of Sulfuric Acid	☐ Yes ☒ No	The sources associated with this application are not expected to emit sulfuric acid.
§112.51 through §112.59.	Control of Total Reduced Sulfur	☐ Yes ☒ No	Equistar Bayport Plant is not a kraft pulp mill.

CITATION	CITATION DESCRIPTION	APPLICABLE?	COMMENT
Chapter 113.	**Toxic Materials**		
§113.100	General Provisions (40 CFR 63, Subpart A)	☒ Yes ☐ No	Equistar will comply with the applicable requirements.
§113.890.	Miscellaneous Organic Chemical Manufacturing (40 CFR 63, Subpart FFFF)	☒ Yes ☐ No	The C, D, and E-Line units are subject to 40 CFR 63, Subpart FFFF. Equistar will comply with the applicable requirements.
Chapter 115.	**Volatile Organic Compound**		
§115.112 through §115.119.	Storage of Volatile Organic Compounds	☒ Yes ☐ No	Equistar will comply with the applicable requirements.
§115.120 through §115.129.	Vent Gas Control	☒ Yes ☐ No	Equistar will comply with the applicable requirements.
§115.131 through §115.139.	Water Separation	☐ Yes ☒ No	There is no water separation facility associated with this application.
§115.140 through §115.149.	Industrial Wastewater	☐ Yes ☒ No	There is not an affected VOC wastewater stream associated with this application.
§115.152 through §115.159.	Municipal Solid Waste Landfills	☐ Yes ☒ No	There is not an affected municipal solid waste landfill source associated with this application.
§115.160 through §115.169.	Batch Processes	☐ Yes ☒ No	There is not an affected batch process associated with this application.
§115.211 through §115.219.	Loading and Unloading of Volatile Organic Compounds	☒ Yes ☐ No	Equistar will comply with the applicable requirements.
§115.221 through §115.229.	Filling of Gasoline Storage Vessels (Stage I) for Motor Vehicle Fuel Dispensing Facilities	☐ Yes ☒ No	There is not an affected vehicle fuel dispensing facility associated with this application.

CITATION	CITATION DESCRIPTION	APPLICABLE?	COMMENT
§115.234 through §115.239.	Control of Volatile Organic Compound Leaks from Transport Vessels	☐ Yes ☒ No	The sources in this application are not associated with filling or emptying gasoline tank trucks.
§115.240 through §115.249.	Control of Vehicle Refueling Emissions (Stage II) at Motor Vehicle Fuel Dispensing Facilities	☐ Yes ☒ No	There is not an affected motor fuel dispensing facility associated with this application.
§115.252 through §115.259.	Control of Reid Vapor Pressure of Gasoline	☐ Yes ☒ No	The sources associated with this application do not handle, store, and/or transfer gasoline.
§115.311 through §115.319.	Process Unit Turnaround and Vacuum-Producing Systems	☒ Yes ☐ No	Equistar will comply with the applicable requirements.
§115.322 through §115.329.	Fugitive Emission Control in Petroleum Refineries in Gregg, Nueces, and Victoria Counties	☐ Yes ☒ No	Equistar's Bayport Plant is not a petroleum refinery or located in Gregg, Nueces, or Victoria Counties.
§115.352 through §115.359.	Fugitive Emission Control in Petroleum Refining, Natural Gas/Gasoline Processing, and Petrochemical Processes in Ozone Nonattainment Areas	☒ Yes ☐ No	Equistar will comply with the applicable requirements.
§115.412 through §115.419.	Degreasing Processes	☐ Yes ☒ No	There is not an affected degreasing facility associated with this application.
§115.420 through §115.429.	Surface Coating Processes	☐ Yes ☒ No	There is not an affected surface coating facility associated with this application.
§115.430 through §115.439.	Flexographic and Rotogravure Printing	☐ Yes ☒ No	There is not an affected rotogravure or flexographic process associated with this application.

CITATION	CITATION DESCRIPTION	APPLICABLE?	COMMENT
§115.440 through §115.449.	Offset Lithographic Printing	☐ Yes ☒ No	There is not an affected offset lithographic printing facility associated with this application.
§115.450 through §115.459.	Control Requirements for Surface Coating Processes	☐ Yes ☒ No	There is not an affected surface coating process associated with this application.
§115.460 through §115.469.	Industrial Cleaning Solvents	☐ Yes ☒ No	There is not an affected industrial cleaning solvent process associated with this application.
§115.470 through §115.479.	Miscellaneous Industrial Adhesives	☐ Yes ☒ No	There is not an affected industrial adhesive process associated with this application.
§115.510 through §115.519.	Cutback Asphalt	☐ Yes ☒ No	There is not a source of cutback asphalt associated with this application.
§115.531 through §115.539.	Pharmaceutical Manufacturing Facilities	☐ Yes ☒ No	There is not an affected pharmaceutical manufacturing facility associated with this application.
§115.541 through §115.549.	Degassing or Cleaning of Stationary, Marine, and Transport Vessels	☒ Yes ☐ No	Equistar will comply with the applicable requirements.
§115.552 through §115.559.	Petroleum Dry Cleaning Systems	☐ Yes ☒ No	There is not an affected petroleum dry cleaning system associated with this application.
§115.600 through §115.619.	Automotive Windshield Washer Fluid	☐ Yes ☒ No	Equistar's Bayport Plant does not sell, supply, offer for sale, distribute, or manufacture automotive windshield washer fluid as defined in §115.600.
§115.720 through §115.729.	Vent Gas Control	☒ Yes ☐ No	Equistar will comply with the applicable requirements.

CITATION	CITATION DESCRIPTION	APPLICABLE?	COMMENT
§115.760 through §115.769.	Cooling Tower Heat Exchange Systems	☒ Yes ☐ No	Equistar will comply with the applicable requirements.
§115.780 through §115.789.	Fugitive Emissions	☒ Yes ☐ No	Equistar will comply with the applicable requirements.
§115.901 and §115.910 through §115.916.	Alternate Means of Control	☐ Yes ☒ No	No insignificant emissions or alternate means of control are proposed.
§115.920 and §115.923.	Early Reductions	☐ Yes ☒ No	An extension of the compliance date is not requested.
§115.930 through §115.940.	Compliance and Control Plan Requirements	☐ Yes ☒ No	There are no relevant compliance dates or control plan requirements.
§115.950. Emissions Trading	Emissions Trading	☐ Yes ☒ No	Equistar is not participating in the emissions trading system to meet the emission control requirements.
Chapter 117.	**Nitrogen Oxide**		
§117.100 through §117.156.	Combustion Control at Major Industrial, Commercial, and Institutional Sources in Beaumont- Port Arthur Ozone Nonattainment Area	☐ Yes ☒ No	The site is not located in the Beaumont-Port Arthur ozone nonattainment area.
§117.200 through §117.256.	Combustion Control at Major Industrial, Commercial, and Institutional Sources in Dallas-Fort Worth Ozone Nonattainment Area	☐ Yes ☒ No	The site is not located in the Dallas-Fort Worth ozone nonattainment area.

CITATION	CITATION DESCRIPTION	APPLICABLE?	COMMENT
§117.300 through §117.356.	Combustion Control at Major Industrial, Commercial, and Institutional Sources in Houston- Galveston- Brazoria Ozone Nonattainment Area	☒ Yes ☐ No	Equistar will comply with the applicable requirements.
§117.400 through §117.456.	Combustion Control at Major Industrial, Commercial, and Institutional Sources in Dallas- Fort Worth Eight Hour Ozone Nonattainment Area	☐ Yes ☒ No	The site is not located in the Dallas-Fort Worth Eight Hour ozone nonattainment area.
§117.1000 through §117.1056.	Combustion Control at Major Utility Electric Generation in Beaumont- Port Arthur Ozone Nonattainment Area	☐ Yes ☒ No	The site is not located in the Beaumont-Port Arthur ozone nonattainment area.
§117.1100 through §117.1156.	Combustion Control at Major Utility Electric Generation in Dallas-Fort Worth Ozone Nonattainment Area	☐ Yes ☒ No	The site is not located in the Dallas-Fort Worth ozone nonattainment area.
§117.1200 through §117.1256.	Combustion Control at Major Utility Electric Generation in Houston- Galveston- Brazoria Ozone Nonattainment Area	☐ Yes ☒ No	There is not an affected electric power generating system associated with this application.
§117.1300 through §117.1356.	Combustion Control at Major Utility Electric Generation in Dallas-Fort Worth Eight Hour Ozone Nonattainment Area	☐ Yes ☒ No	The site is not located in the Dallas-Fort Worth eight hour ozone nonattainment area.
§117.2000 through 117.2045.	Houston-Galveston-Brazoria Ozone Nonattainment Area Minor Sources	☐ Yes ☒ No	The site is a major source of NOx.
§117.2100 through 117.2145.	Dallas- Fort Worth Eight-Hour Ozone Nonattainment Area Minor Sources	☐ Yes ☒ No	The site is not located in the Dallas-Fort Worth Eight Hour ozone nonattainment area.

CITATION	CITATION DESCRIPTION	APPLICABLE?	COMMENT
§117.3000 through 117.3056.	Utility Electric Generation in East and Central Texas	☐ Yes ☒ No	The site is not located in an affected county.
§117.3100 through 117.3145.	Cement Kilns	☐ Yes ☒ No	The site is not located in an affected county.
§117.3200 through 117.3215.	Water Heaters, Small Boilers, and Process Heaters	☐ Yes ☒ No	Equistar does not manufacture, distribute, retail or install of natural gas-fired water heaters, boilers, or process heater with a rated capacity of 2.0 MM Btu/hr or less at this facility.
§117.3300 through 117.3345.	East Texas Combustion	☐ Yes ☒ No	The site is not located in an affected county.

MEASUREMENT OF EMISSIONS [§116.111(a)(2)(B)]

Measuring the emissions of significant air contaminants will be conducted as required by the Executive Director.

BEST AVAILABLE CONTROL TECHNOLOGY (BACT) [§116.111(a)(2)(C)]

Polymer Transfer Vents (EPN E-CAP)

The waste gas streams upstream of the extruder are controlled by flare(s). Uncontrolled VOC is less than 80 lbs per MMlb of polypropylene on an annual average basis for the combined lines. The existing operation, including emissions from visbreak activities, exceeds the requirements for Tier 1 BACT.

PERFORMANCE DEMONSTRATION [§116.111(a)(2)(G)]

Equistar's facility will achieve the performance specified in this application and will submit additional performance data as may be required by the Executive Director.

NEW SOURCE PERFORMANCE STANDARDS (NSPS) [§116.111(a)(2)(D)]

NSPS Subpart A, Subpart DDD, and Subpart VV are applicable to C, D, and E-Line units. Equistar will comply with all applicable control, recordkeeping, reporting, and monitoring requirements.

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP) [§116.111(a)(2)(E)]

Does not apply. The sources in this application are not subject to the referenced NESHAP standards.

MAXIMUM ACHIEVABLE CONTROL TECHNOLOGIES (MACT) [§116.111(a)(2)(F)]

MACT Subpart A and Subpart FFFF are applicable to C, D, and E-Line units. Equistar will comply with all applicable control, recordkeeping, reporting, and monitoring requirements

NONATTAINMENT REVIEW [§116.111(a)(2)(H)]

The Bayport Polymers Plant is located in Harris County, which is part of the Houston-Galveston-Brazoria (HGB) ozone nonattainment area currently classified moderate for the 2008 8-hour ozone NAAQS. HGB had been classified as a severe nonattainment area, based on designation under the 1997 8-hour ozone NAAQS. EPA proposed approval of a redesignation substitute and finding of attainment for the 1997 8-hour ozone NAAQS. The final approval notice was published on November 8, 2016 in the Federal Register with an effective date of December 8, 2016. The HGB area is currently designated as moderate nonattainment for the 2008 8-hour ozone NAAQS.

Nonattainment NSR applicability is determined according to the most stringent nonattainment area classification as of the date of issuance of the permit. However, there are no proposed physical changes or changes in method of operation associated with emissions estimated from visbreaking. The emissions from this activity are historic and previously unknown. As such, a retrospective nonattainment applicability analysis is appropriate.

The retrospective review, proposed in this application, allocates the emissions increase based on the throughput that was authorized prior to and for the recent expansion. The expansion project (TCEQ Project No. 271097) authorized a throughput increase for C and D-Lines. The VOC emissions from visbreaking tied to the expansion have been added to the Table 1F and 2F that was submitted with that application. The project was finalized by TCEQ on September 26, 2018. The revised total for VOC (see Table 1F a 2F) is compared to the significance level of 40 tons based on the moderate designation of the HGB nonattainment area in effect at the time. The VOC emission rate estimated for visbreaking that occurred prior to the expansion is compared to the significance level of 5 tons assuming HGB was designated as severe when the activity was initiated (see Table 1F and 2F Pre-Expansion). The proposed VOC project emissions increase for those periods is below the significance level that was in effect at the time of the change. Therefore, the proposed increase is a minor modification under NNSR and no further review is required.

PREVENTION OF SIGNIFICANT DETERIORATION (PSD) REVIEW [§116.111(a)(2)(I)]

The Bayport Polymers Plant is located in Harris County which is classified as an ozone nonattainment area. PSD review does not apply to the emissions increase of VOC associated with visbreak activities represented in this application.

HAZARDOUS AIR POLLUTANTS [§116.111(a)(2)(K)]

Does not apply. This application is not proposing to add any new major HAP sources.

PERMIT FEES

Texas Commission on Environmental Quality
Table 30
Estimated Capital Cost and Fee Verification

Include estimated cost of the equipment and services that would normally be capitalized according to standard and generally accepted corporate financing and accounting procedures. Tables, checklists, and guidance documents pertaining to air quality permits are available from the Texas Commission on Environmental Quality, Air Permits Division Web site at **www.tceq.texas.gov/nav/permits/air_permits.html**.

I.	**Direct Costs [30 TAC § 116.141(c)(1)]**	**Estimated Capital Cost**
A.	A process and control equipment not previously owned by the applicant and not currently authorized under this chapter.	$
B.	Auxiliary equipment, including exhaust hoods, ducting, fans, pumps, piping, conveyors, stacks, storage tanks, waste disposal facilities, and air pollution control equipment specifically needed to meet permit and regulation requirements.	$ 0.00
C.	Freight charges	$
D.	Site preparation, including demolition, construction of fences, outdoor lighting, road, and parking areas.	$
E.	Installation, including foundations, erection of supporting structures, enclosures or weather protection, insulation and painting, utilities and connections, process integration, and process control equipment.	$
F.	Auxiliary buildings, including materials storage, employee facilities, and changes to existing structures.	$ 0.00
G.	Ambient air monitoring network.	$ 0.00
II.	**Indirect Costs [30 TAC § 116.141(c)(2)]**	**Estimated Capital Cost**
A.	Final engineering design and supervision, and administrative overhead.	$
B.	Construction expense, including construction liaison, securing local building permits, insurance, temporary construction facilities, and construction clean-up.	$ 0.00
C.	Contractor's fee and overhead.	$
	Total Estimated Capital Cost	$ 0.00

Texas Commission on Environmental Quality
Table 30
Estimated Capital Cost and Fee Verification

I certify that the total estimated capital cost of the project as defined in 30 TAC § 116.141 is equal to or less than the above figure. I further state that I have read and understand Texas Water Code § 7.179, which defines Criminal Offenses for certain violations, including intentionally or knowingly making, or causing to be made, false material statements or representations.

Company Name: Equistar Chemicals, L.P.

Company Representative Name *(please print)*: Stephen G. Goff

Title: Site Manager

Company Representative Signature: Stephen G. Goff

Estimated Capital Cost		Permit Application Fee	GHG*/PSD/Nonattainment Application Fee
Less than	$300,000	$900 (minimum fee)	$3,000 (minimum fee)
$300,000 to	$25,000,000	0.30% of capital cost	
$300,000 to	$7,500,000		1.0% of capital cost
Greater than	$25,000,000	$75,000 (maximum fee)	
Greater than	$7,500,000		$75,000 (maximum fee)

*A single PSD fee (calculated on the capital cost of the project per 30 TAC § 116.163) will be required for all of the associated permitting actions for a GHG PSD project. Other NSR permit fees related to the project that have already been remitted to the TCEQ can be subtracted when determining the appropriate fee to submit with the GHG PSD application; please identify these other fees in the GHG PSD permit application.

Permit Application Fee (from table above) = $ 900.00 | Date: 3/26/2019

APPENDIX A – AIR QUALITY IMPACTS ANALYSIS

Texas Commission on Environmental Quality
NSR Permit No. 9423 Amendment Application
Air Quality Impacts Analysis

Equistar Chemicals, L.P.
Bayport Polypropylene Plant

Pasadena, Harris County
Air Quality Account ID No. HG-0323-M
Regulated Entity No. RN100216761
Customer No. CN600124705

March 2019

Prepared by:

Steven DeNero
Senior Air Dispersion Modeler

Approved by:

Joerg Windolph, P.E.
Principal Engineer

Waid Corporation dba Waid Environmental
Certificate of Registration No. F-58

Document based on information provided by
Equistar Chemicals, L.P.
Waid Project No. EPB13323

Austin Office
13785 Research Blvd., Suite 100, Austin, Texas 78750
512.255.9999 • 512.255.8780 FAX

Houston Office
1325 Space Park Dr., Suite D, Houston, Texas 77058
281.333.9990 • 512.255.8780 FAX

TABLE OF CONTENTS

(In order, as listed in the TCEQ Air Dispersion Modeling Guidelines, September 2018)

EXECUTIVE SUMMARY

Equistar Chemicals, L.P. (Equistar) has recently submitted an amendment to New Source Review (NSR) Permit No. 9423 for increasing C-Line and D-Line production capacity at the Bayport Polypropylene Plant located in Pasadena, Texas. This amendment addresses changes in permit representations and emission calculations based on the use of organic peroxides.

This Air Quality Impacts Analysis is submitted to demonstrate that the project design remains protective of human and environmental health.

SECTION 1.0

PROJECT IDENTIFICATION INFORMATION

Company Name: Equistar Chemicals, L.P.

Company Contact:
Derek Rodricks
Principal Environmental Engineer
10801 Choate Road
Pasadena, TX 77507
(281) 291-1684
derek.rodricks@lyb.com

Facility Name: Bayport Polypropylene Plant

Project Name: Bulk Plant Organic Peroxide Addition

Permit Application No.: NSR Permit No. 9423
TCEQ Project No. 291466

Nearest City and County: Pasadena, Harris County

Modelers: Waid Environmental Contacts:

Joerg Windolph, P.E.
Principal Engineer
jwindolph@waid.com

Steven DeNero
Sr. Air Dispersion Modeler
sdenero@waid.com

13785 Research Blvd., Suite 100
Austin, Texas 78750
(512) 255-9999

SECTION 2.0

PROJECT OVERVIEW

This Impacts Analysis provides details on the steps taken to study the off-property impacts from the emission increases proposed in the Permit No. 9423 Amendment application.

Documentation of emission calculations can be found in the appropriate sections of the permit amendment application. Emission summary tables and modeled release parameters are provided in Appendix A of this report.

2.1 Type of Permit Review

The project proposes emission increases in non-criteria pollutants. These pollutants (listed in Table 1 below) have effects screening levels (ESLs) for short-term (1-hour) and long-term (annual). This Impacts Analysis provides a thorough view of the State Health Effects Analysis conducted in accordance with the TCEQ's Modeling and Effects Review Applicability[1] (MERA) guidance.

2.2 Constituents to be Evaluated

The table below presents the short-term and long-term effects screening level (ESL) thresholds used in the MERA analysis. The long-term ESL for acetone and tert-Butyl alcohol (TBA) is at least 10% of the respective short-term ESLs. Therefore the analysis for these two pollutants focuses on the impacts from short-term emissions, following the guidelines of the MERA documentation.

The long-term ESL for ethylene is less than 10% of the short-term ESL. Therefore a health effects analysis is required for both hourly (short-term) and annual (long-term) ethylene impacts.

Propane and propylene are both listed on the TCEQ's Toxicology Screening list. No health impacts analysis is required for either of these pollutants.

Table 1. Pollutants for State Health Effects Analysis

Pollutant	CAS No.	Short-Term ESL	Long-Term ESL
Acetone	67-64-1	7,800	4,800
Ethylene	74-85-1	170,000	1,800
Propane	74-98-6	N/A	N/A
Propylene	115-07-1	N/A	N/A
tert-Butyl Alcohol	75-65-0	620	62

1 https://www.tceq.texas.gov/assets/public/permitting/air/Guidance/NewSourceReview/mera.pdf

SECTION 3.0

PLOT PLAN

The Bayport Polypropylene Plant is shown on the enclosed plot plan in Appendix B. The plot plan includes a clearly marked scale, all property lines, all emission points associated with the project analysis, a true north arrow, reference UTM coordinates, and all buildings and structures which could create downwash effects. The UTM coordinates are based on North American Datum (NAD 83) system. The length, width, and heights of the buildings and structures are summarized in a table on the plot plan, and an electronic file is provided with this report which summarizes their heights.

SECTION 4.0

AREA MAP

An area map of the Bayport Polypropylene Plant is provided in Appendix C. It is an excerpt of a United States Geological Survey (USGS) 7.5-minute quadrangle. This area map displays a UTM coordinate grid, property/fence lines, and a 3,000-ft radius from the plant. There are no schools located within 3,000 feet of the property line.

SECTION 5.0

AIR QUALITY MONITORING DATA

No ambient monitoring data is required for this analysis. There are no criteria pollutants associated with this project.

SECTION 6.0

MODELING EMISSIONS INVENTORY

6.1 On-Property Sources to be Modeled

Emissions of non-criteria pollutants were modeled and evaluated according to procedures specified in the MERA guidance document.

6.2 Other On-Property and Off-Property Sources

As discussed in Section 13, the project emissions for all pollutants lead to a predicted impact below 10% of their respective ESLs. Therefore no other sources were included in this analysis, per the MERA guidance document.

6.3 EPN and Model Input File Source ID Number Cross-Reference

A source ID number cross-reference list can be found in Appendix A.

6.4 Stack Parameter Justification

The following section provides justification for emission sources modeled at the Bayport Polypropylene Plant. The project emission sources includes a variety of fugitive or fugitive-like emissions. The locations of all on-site sources included in this analysis are presented in Appendix A, and are shown on the plot plan in Appendix B. The proposed modeled source characterizations described below are consistent with the guidance in the TCEQ's Modeling Guidelines.

Emission Rates

Tables in Appendix A summarize the maximum allowable emission rates of each contaminant that were included in the modeling analysis.

Modeled Source Characterizations – Volume Sources

Emissions from each source were represented in the model as surface-based volume sources. The affected sources have fugitive style emissions, and surface based volume sources is a conservative approximation for these releases. The emissions have little to no plume rise, and can occur over a small horizontal or vertical range. Given the 3-dimensional nature of these releases, a volume source is the most appropriate choice. All sources were represented with 20 foot side length, 20 foot volume height, and 10 foot release heights and were placed at their physical locations. This vertical range of 20 feet accurately captures the majority of the equipment being represented. The initial lateral dimension (Sigma Y) for a single volume source is found by dividing the side length of the volume source by 4.3. The initial vertical dimension (Sigma Z) for a surface-based volume source is found by dividing the volume height by 2.15.

Source Locations

The locations of all on-site sources included in this analysis are shown on the plot plan in Appendix B.

SECTION 7.0

MODELS AND MODELING TECHNIQUES

EPA's dispersion model AERMOD, version 18081, was used in this modeling analysis. Regulatory default modeling options were used. The model predicted off-property concentrations from the Bayport Polypropylene Plant emission sources over 1-hour and annual averaging periods for the non-criteria pollutants.

7.1 Apportioning Project Emissions

The project proposes an increase in non-criteria pollutants. Physically, a small portion of the total emissions are possible at any one of the eleven (11) affected sources represented in this report. However, to provide a conservative result for this impacts analysis, the sum-total of either pollutant is represented as emitted from any of the 11 sources.

SECTION 8.0

SELECTION OF DISPERSION OPTION

This analysis used the default rural dispersion coefficients in lieu of justifying the use of the urban option coefficients.

SECTION 9.0

BUILDING WAKE EFFECTS (DOWNWASH)

All of the affected project sources were represented as surface-based volume sources. AERMOD intrinsically calculated wake effects through the Sigma Y and Sigma Z volume source parameters. Therefore, no buildings or wake inducing structures were explicitly included in the modeling representation for this analysis.

SECTION 10.0

RECEPTOR GRID - TERRAIN

The modeling analysis for the Bayport Polypropylene Plant used terrain heights extracted from the National Elevation Dataset (NED) at 1 degree horizontal resolution available from WebGIS. AERMAP (version 18081) was used to process terrain data from the Digital Elevation Model (DEM) file and to assign base elevation heights to each receptor, building, and emission source. The proposed process to assign base elevation values to the modeling domain is consistent with the written guidance of the TCEQ's Modeling Guidelines.

SECTION 11.0

RECEPTOR GRID - DESIGN

The receptor grid used in this analysis was based on UTM coordinates (NAD 83). The plot plan shows the relationship between the property line, fence lines and controlled access areas, and UTM coordinates.

The design of the receptor grid is:

- 25-meter spacing along the property boundary
- 25-meter grid spacing starting at the property boundary; extending out 100 meters.
- 100-meter grid spacing extending to a total of 300 meters from the property boundary.

The results of each modeling simulation were analyzed to ensure that the maximum impact from each analysis is fully captured, and the receptor grid will be extended as needed. The proposed receptor grid design to evaluate the modeling output is consistent with the written guidance of the TCEQ's Modeling Guidelines.

SECTION 12.0

METEOROLOGICAL DATA

One year of meteorological data from William P. Hobby Airport (HOU) located in Harris County was used in the modeling analysis. The data was obtained from the TCEQ's website[2]. The meteorological dataset was processed by the TCEQ, and uses raw surface data from HOU, and raw upper air data from Lake Charles Regional Airport (LCH). The TCEQ provides two choices for surface meteorological data in Harris County; William P. Hobby Airport (HOU) and George Bush Intercontinental Airport (IAH). In deciding which dataset to use for this analysis, proximity to the Bayport Polypropylene Plant, and similarity of surface roughness were both addressed. The Bayport Polypropylene Plant is much closer to Hobby Airport (21 km) than it is to Bush Intercontinental Airport (47 km). Additionally, the surface roughness at Hobby Airport (0.190) is closer in value to that of the Bayport Polypropylene Plant than Bush Intercontinental Airport's (0.053). Therefore, the Hobby Airport dataset was used in this analysis.

The Hobby Airport station's base elevation is 14.3 meters above sea level. To develop their meteorological data files, TCEQ processed the surface and upper air data using AERMET (version 16216). TCEQ provides three different meteorological data sets – low, medium, and high surface roughness. The AERSURFACE program (dated 13016) was run to determine which data set to use.

Land cover data was obtained from the USGS NLCD92 archives. AERSURFACE was run using this land cover data and the following default values: 1 km study radius for surface roughness, annual temporal resolution of surface characteristics, and default month-to-season associations. Other AERSURFACE values used were the following: not located at airport, no continuous snow cover for at least 1 month, not located in an arid region, and average surface moisture condition.

The resulting surface roughness length for the project site of 0.655 meter corresponds to TCEQ's medium surface roughness category (0.1 – 0.7 meter). Therefore, the medium surface roughness meteorological data sets was used in this analysis.

2 https://www.tceq.texas.gov/permitting/air/nav/datasets.html

SECTION 13.0

MODELING RESULTS

The table at the end of this section provides a summary view of predicted impacts from the project and from the site-wide operations at the Bayport Polypropylene Plant.

State Health Effects Analysis

Proposed increases in acetone, ethylene, and tert-butyl alcohol (TBA) emissions were analyzed following the guidelines of the TCEQ's MERA Guidance document. The following discusses the extent of this MERA analysis for these pollutants:

- Step 1 – No Net Increase
  There is no proposed increase in ethylene annual emissions, and so ethylene annual emissions fall out at this step. The proposed acetone, TBA, and hourly ethylene increases do not meet the qualifications of this step. There is a proposed net increase in acetone, TBA, and hourly ethylene.

- Step 2 – De Minimis Increase
  The proposed increases in emissions of acetone, hourly ethylene, and TBA do not meet the qualifications of this step. The proposed increases exceed the applicable de minimis thresholds.

- Step 3 – Unit Impact
  The proposed increase in allowable emissions for acetone, hourly ethylene, and TBA meets the qualifications of this step. Impacts from project emissions are under 10% of the respective ESL values when using the unit impact scaling approach and the conservative approach described in Section 7.1. The scaling analysis is included on the following page, and an electronic version of this page is included in the files shared for this project.

This state health effects analysis is complete.

Project Affected Emission Sources - Representative Model Inputs

Volume Source Parameters

	UTM			Side Length		Volume Height		Release Height		σy	σy
EPN	Zone	East	North	(ft)	(m)	(ft)	(m)	(ft)	(m)	(m)	(m)
E-CAP	***VOC Emission Cap for EPNs 120, 122, 116, 152, 102, 153, 154, 14C, 131, 132, and 133***										
120	15	301,279	3,279,725	20.0	6.096	20.0	6.096	10.0	3.048	1.4	2.84
122	15	301,302	3,279,713	20.0	6.096	20.0	6.096	10.0	3.048	1.4	2.84
116	15	301,255	3,279,715	20.0	6.096	20.0	6.096	10.0	3.048	1.4	2.84
152	15	301,537	3,279,931	20.0	6.096	20.0	6.096	10.0	3.048	1.4	2.84
102	15	301,509	3,279,725	20.0	6.096	20.0	6.096	10.0	3.048	1.4	2.84
153	15	301,548	3,279,981	20.0	6.096	20.0	6.096	10.0	3.048	1.4	2.84
154	15	301,518	3,280,018	20.0	6.096	20.0	6.096	10.0	3.048	1.4	2.84
14C	15	301,173	3,279,647	20.0	6.096	20.0	6.096	10.0	3.048	1.4	2.84
131	15	301,496	3,279,943	20.0	6.096	20.0	6.096	10.0	3.048	1.4	2.84
132	15	301,069	3,279,672	20.0	6.096	20.0	6.096	10.0	3.048	1.4	2.84
133	15	301,496	3,280,018	20.0	6.096	20.0	6.096	10.0	3.048	1.4	2.84

Initial Horizontal Dimension
Model ID 120
= Volume Side Length / 4.3
= 6.1 m / 4.3
= 1.42 m

Initial Vertical Dimension (Surface-Based)
Model ID 120
= Volume Height / 2.15
= 6.1 m / 2.15
= 2.84 m

Proposed Emission Rate Increases

		Pollutant Increase			
EPN	Pollutant	(lbs/hr)	(g/s)	(tons/yr)	(g/s)
E-CAP	Acetone	7.36	9.277E-01	26.19	7.542E-01
E-CAP	Ethylene	4.17	5.256E-01	0	0E+00
E-CAP	Propane	4.17	5.256E-01	0	0E+00
E-CAP	Propylene	4.17	5.256E-01	0	0E+00
E-CAP	tert-Butyl Alcohol	1.53	1.932E-01	6.12	1.762E-01

SECTION 14.0

ELECTRONIC INFORMATION

Model input/output and associated computer or electronic files will be shared via the TCEQ's FTP site. The guide below provides an overview of the contents and organization of this shared directory.

File or Folder Name	Description
01 – Model Output	This directory contains the AERMOD modeling input/output files.
02 – Meteorology	This directory contains the meteorological input files downloaded from the TCEQ's website and used in this analysis.
03 – Receptors	This directory contains the receptor grid used for this modeling analysis
04 – AERSURFACE	This directory contains the AERSURFACE output files, containing the surface roughness value for the project site, Hobby Airport, and Bust Intercontinental Airport.
05 – Terrain Elevation	This directory contains the land elevation file used to determine base elevation of each receptor and emission point.
06 – Plots and Maps	This directory contains the plot plan, area map, and figures included in Appendix B and C.

APPENDIX A

EMISSIONS SUMMARY TABLES AND MODELED RELEASE PARAMETERS

Information on Affected Pollutants

Pollutant	CAS	ST ESL (µg/m³)	LT ESL (µg/m³)	LT >= 10% ST
Acetone	67-64-1	7,800	4,800	TRUE
Ethylene	74-85-1	170,000	1,800	FALSE
Propane	74-98-6	-	-	-
Propylene	115-07-1	-	-	-
tert-Butyl Alcohol	75-65-0	620	62	TRUE

Proposed Emission Rate Increases

EPN	Pollutant	Pollutant Increase (lbs/hr)	(g/s)	(tons/yr)	(g/s)
E-CAP	Acetone	7.36	9.277E-01	26.19	7.542E-01
E-CAP	Ethylene	4.17	5.256E-01	0	0E+00
E-CAP	Propane	4.17	5.256E-01	0	0E+00
E-CAP	Propylene	4.17	5.256E-01	0	0E+00
E-CAP	tert-Butyl Alcohol	1.53	1.932E-01	6.12	1.762E-01

Model Representations of Affected EPNs

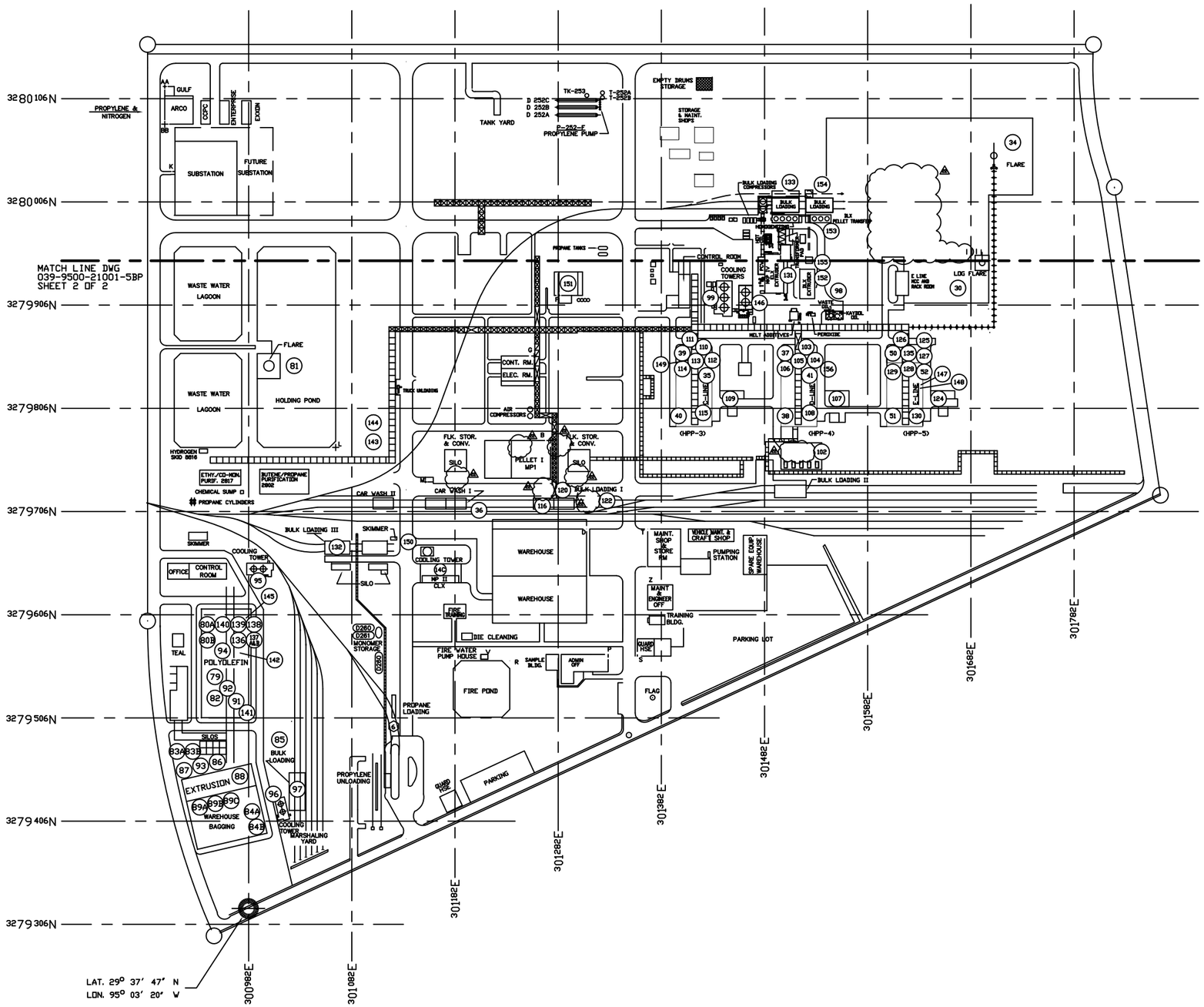
Model ID	Unit Impact (µg/m³) /(lbs/hr)	Acetone Impact (µg/m³)	Impact Above 10% ESL?	Ethylene Impact (µg/m³)	Impact Above 10% ESL?	TBA Impact (µg/m³)	Impact Above 10% ESL?
120	17.5	128.9	No	73.0	No	26.8	No
122	19.0	140.0	No	79.3	No	29.2	No
116	18.2	133.9	No	75.9	No	27.9	No
152	16.8	123.5	No	70.0	No	25.7	No
102	37.0	271.8	No	154.0	No	56.6	No
153	17.2	126.5	No	71.7	No	26.4	No
154	15.8	116.5	No	66.0	No	24.3	No
14C	21.8	160.5	No	90.9	No	33.4	No
131	15.1	111.3	No	63.1	No	23.2	No
132	31.7	233.3	No	132.2	No	48.6	No
133	15.0	110.5	No	62.6	No	23.0	No

Sample Calculation

Acetone Impact from Source 120
= Source 120 Unit Impact *
Total Acetone Hourly Emission Rate
= 17.5 (µg/m³)/(lbs/hr) * 7.356 (lbs/hr)
= 128.9 (µg/m³)
Compared to ST ESL * 10% = 780 µg/m³

APPENDIX B

PLOT PLAN



EPN	PERMIT NO.	DESCRIPTION
14C	9423	PELLET TRANSFER SYSTEM
30	9423	LOW OFFGAS FLARE
34	9423	ELEVATED FLARE
35	9423	FUGITIVE EMISSIONS
37	9423	CATALYST UNLOADING
38	9423	STABILIZER VENT
39	9423	CATALYST HANDLING
40	9423	STABILIZER VENT
41	9423	FUGITIVE EMISSIONS
50A	9423	CATALYST UNLOADING
50B	9423	CATALYST UNLOADING
51	9423	STABILIZER VENT
52	9423	FUGITIVE EMISSIONS
79	19546	FUGITIVE EMISSIONS
80A	19546	CATALYST VENT
80B	19546	CATALYST VENT
81	19546	ELEVATED FLARE
82	19546	STABILIZER HANDLING BAG FILTER
83A	19546	SILO BAG FILTER
83B	19546	SILO BAG FILTER
84A	19546	SILO BAG FILTER
84B	19546	SILO BAG FILTER
85	19546	SILO BAG FILTER
86	19546	SILO BAG FILTER
87	19546	STABILIZER HANDLING BAG FILTER
88	19546	EXTRUDER VENT
89A	19546	PELLET SILO
89B	19546	PELLET SILO
89C	19546	PELLET SILO
91	19546	TRANSFER BAG FILTER
92	19546	TRANSFER BAG FILTER
93	19546	EXTRUSION BAG FILTER
94	19546	SCRUBBER (WASTEWATER)
95	19546	COOLING TOWER
96	19546	COOLING TOWER
97	19546	RAILCAR LOADING
98	9423	WASTE OIL LOADING
99	9423	COOLING TOWER
102	9423	RAIL CAR LOADING (FLAKE)
103	9423	OIL & GREASE MIXING
104	9423	DONDR STORAGE DRUM
105	9423	DONDR STORAGE DRUM
106	9423	DONDR STORAGE TANK
107	9423	TEAL SEAL POT
108	9423	SCRUBBER (WASTEWATER)
109	9423	TEAL SEAL POT
110	9423	OIL & GREASE MIXING
111	9423	HYDRAULIC OIL DRUM
112	9423	ADDITIVE STORAGE DRUM
113	9423	DONDR STORAGE DRUM
114	9423	DONDR STORAGE TANK
115	9423	SCRUBBER (WASTEWATER)
116	9423	RAILCAR LOADING (FLAKE)
120	9423	BAG FILTER
122	9423	BAG FILTER
124	9423	TEAL SEAL POT
125	9423	OIL & GREASE MIXING
126	9423	HYDRAULIC OIL DRUM
127	9423	DONDR STORAGE DRUM
128	9423	DONDR STORAGE DRUM
129	9423	DONDR STORAGE TANK
130	9423	SCRUBBER (WASTEWATER)
131	9423	PELLET TRANSFER SYSTEM
132	9423	RAILCAR LOADING (MPII)
133	9423	RAILCAR LOADING (MPIV)
135	9423	ADDITIVE SURGE DRUM
136	19546	ADDITIVE SURGE DRUM
137A	19546	DONDR STORAGE DRUM
137B	19546	DONDR STORAGE DRUM
138	19546	TEAL SEAL POT
139	19546	OIL DRUM
140	19546	HYDRAULIC OIL SURGE DRUM
141	19546	USED OIL LOADING
142	19546	DRYER SCRUBBER VENT
143	9423	TK-2527A MINERAL OIL TANK
144	9423	TK-2527B MINERAL OIL TANK
145	19546	OIL DRUM
146	9423	COOLING TOWER
147	9423	ADDITIVE STORAGE
148	9423	ADDITIVE STORAGE
149	9423	CATALYST HANDLING
150	9423	COOLING TOWER
151	9423	MARLEY COOLING TOWER #3
152	9423	DLX FLAKE TRANSFER
153	9423	DLX PELLET TRANSFER
154	9423	DLX RAILCAR LOADING
155	9423	DLX COOLING TOWER
156	9423	HYDRAULIC OIL SURGE DRUM

COORDINATES ARE IN 1983 UTM UNITS

NO.	DATE	DESCRIPTION	RVS'D	CK'D	APPV'D
17	11/2/17	PERMIT CONSOLIDATION	SJS	MP	MP
16	4/27/17	GEN. REV. UPDATE TO UNITS	SJS	AT	AT
15	7/21/16	GEN. REV. MANY CHANGES	VC	AT	AT
14	7/21/16	GEN. REV. MANY CHANGES	VC	AT	AT
13	7/21/16	REV DWG NO WAS 21011	VC		
12	7/21/16	ADD POINTS 142,143,144,145	VC	AT	AT

REVISIONS

NO.	DATE	PROJ./VD MDCA	DESCRIPTION	RVS'D	CK'D	APPV'D
11	7/23/08		UPDATE PER FLARE PERMIT	WC	AT	AT
10	6/27/08		ADDED ELX & RAIL EXT.	WC	HA	HA
9	5/27/08	43453	GENERAL REVISION	DW	VLR	VLR
8	5/5/08	43453	REVISED AS NOTED	DW	VLR	VLR
7	1/30/08	43453	REVISED AS NOTED	DW	VLR	VLR
6	11/30/06		ADDED 14C	DW	HA	HA

REVISIONS

NO.	DATE	PROJ. W/D	DESCRIPTION	RVS'D	CK'D	APPV'D
5	6-29-06		GEN. UPDATE	DW		VLR
22	5/14/04		GEN. UPDATE	RC	CN	CN
21	5/14/04		ADDED 156 & GEN REV.	RC	MP	MP
20	4/5/04		ADDED 155 DLX COOLING TOWER	SJS	MP	MP
19	4/5/04		ADDED DLX EXTRUDER AND TRANSFER	SJS	MP	MP
18	12-20-03		ADDED 151 MARLEY COOLING TOWER	SJS	MP	MP

REVISIONS

TITLE	PLANT	ACCOUNT	CLASS	FILE CODE

REFERENCE DRAWINGS

TITLE	PLANT	ACCOUNT	CLASS	FILE CODE
POLYOLEFIN FLOW DIAG	039	9500	21013	5BP
EMISSIONS FLOW DIAG.	039	9500	21012	5BP

REFERENCE DRAWINGS

EQUIPMENT REFERENCE

STORES REFERENCE

PROJ./ V.D./ MDCA

SCALE 3/4" =100'

DESIGNED

DRAWN WAYNE C. 5-20-08

CHECKED

APPROVED

APPROVED

APPROVED

APPROVED

APPROVED

APPROVED

DATE

lyondellbasell
BAYPORT POLYOLEFINS
2501 BAY AREA BOULEVARD
PASADENA, TEXAS 77507
281-604-3272

PROJECT

ACCOUNT TITLE

BAYPORT PLANT EMISSIONS LOCATION

DRAWING NUMBER

PLANT	ACCOUNT	CLASSIFICATION	FILE CODE	REV.
039	9200	21011	5BP	22

CAD REF. NO. 9200-21

SHEET 1 OF 1

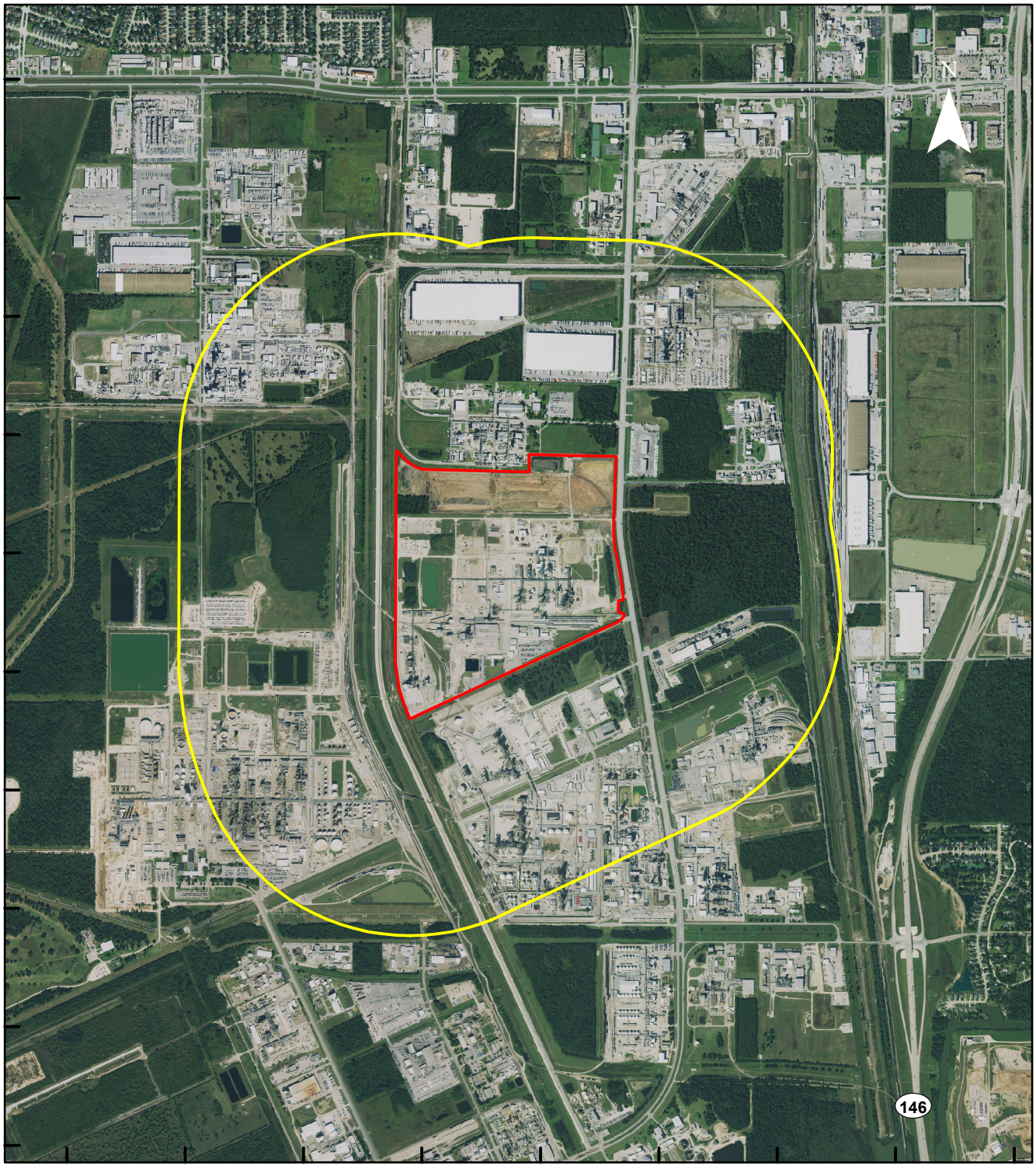
Appendix B

Aerial View of Bayport Polypropylene Plant
- Blue squares with pins represent the location of each modeled volume source.
- White shaded area represents the plant property boundary.
- Yellow pins provide scale and benchmarks.

APPENDIX C

AREA MAP

Equistar Chemicals, L.P.
Area Map



Scale

0 1,000 2,000 3,000 4,000

Feet

lyondellbasell

Legend

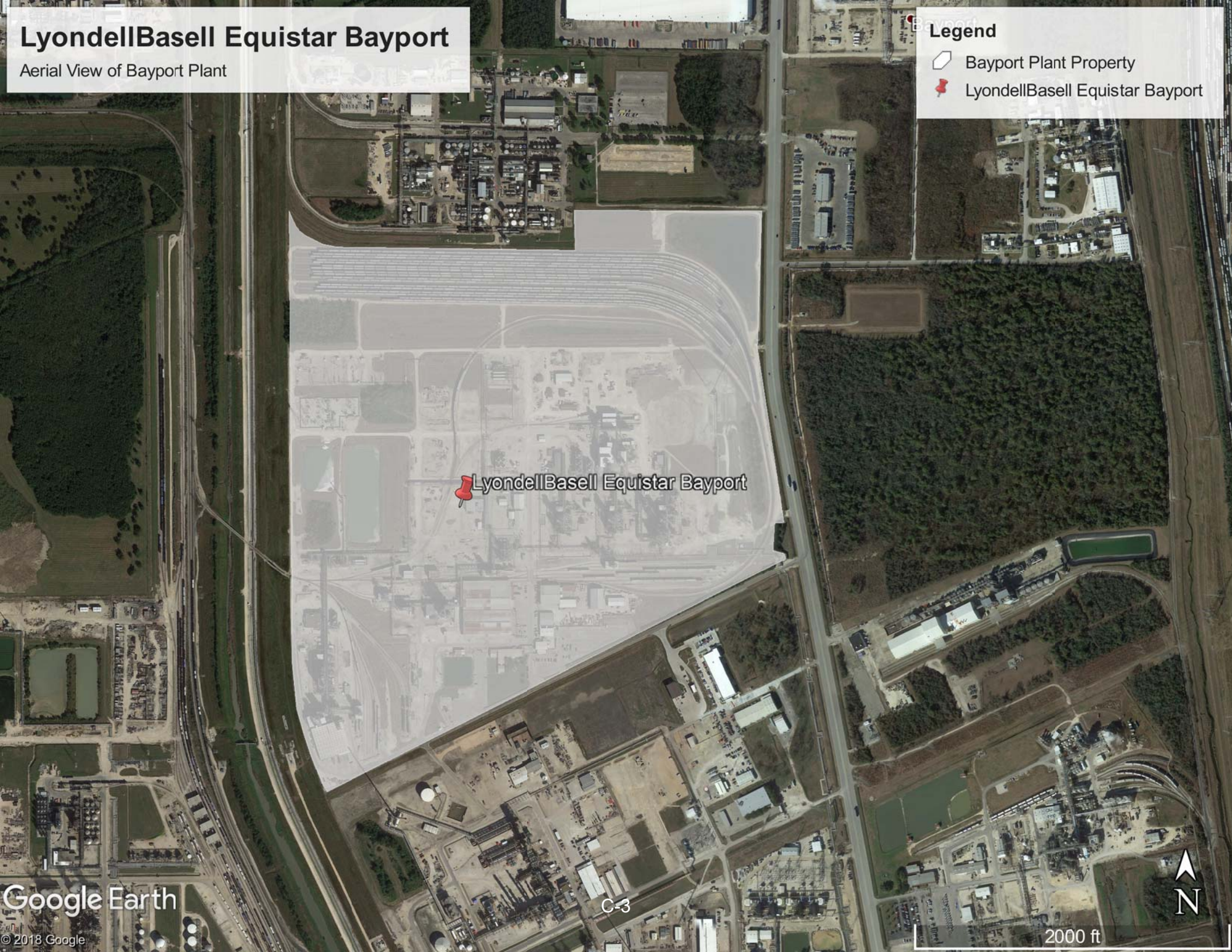
Property Line

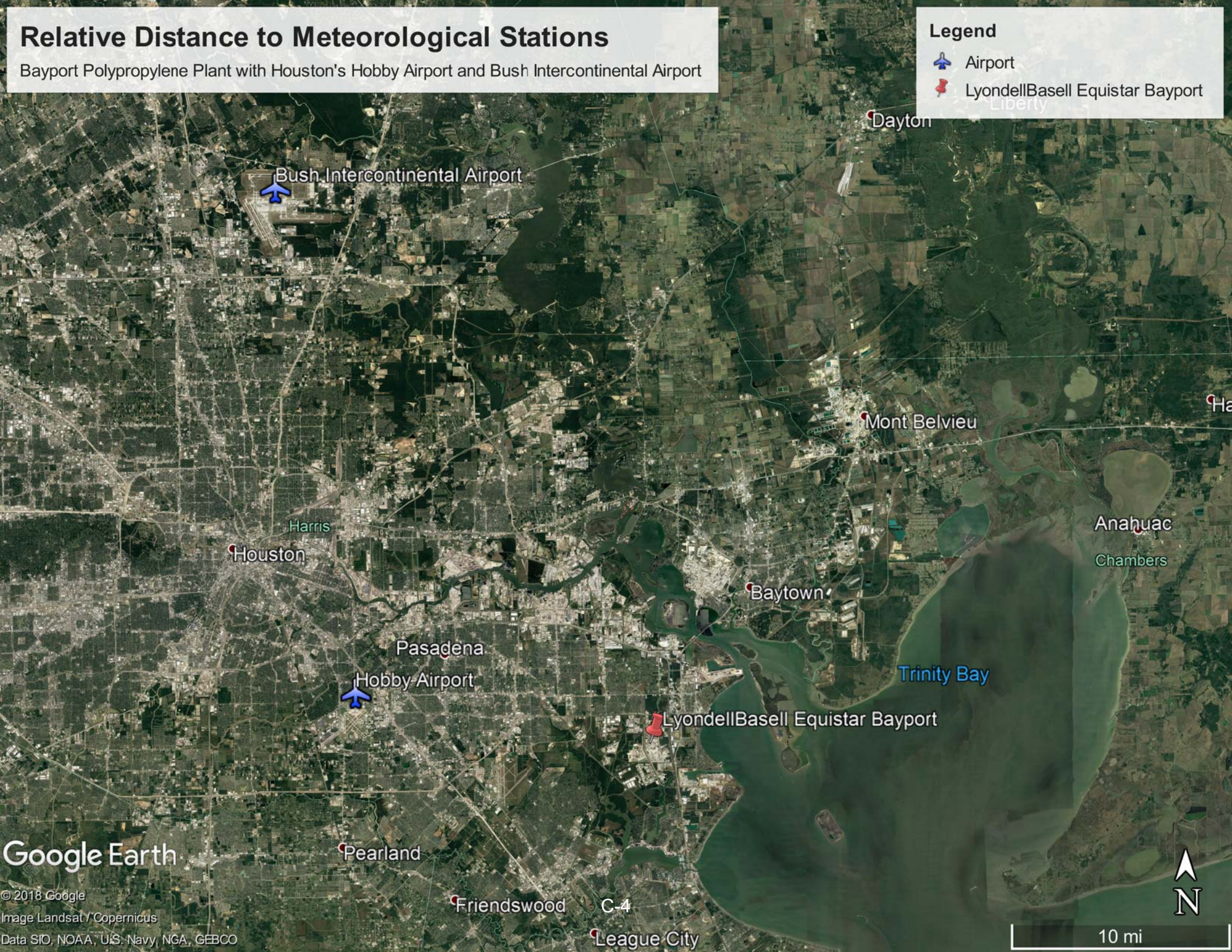
3000 ft boundary

Coordinate System: NAD83 UTM Zone 15N
Map: NAIP 2014 Harris County Mosaic
Date: 05/05/2016

LyondellBasell Equistar Bayport

Aerial View of Bayport Plant




Relative Distance to Meteorological Stations
Bayport Polypropylene Plant with Houston's Hobby Airport and Bush Intercontinental Airport
Legend
Airport
LyondellBasell Equistar Bayport
Liberty
Dayton
Bush Intercontinental Airport
Mont Belvieu
Harris
Houston
Anahuac
Chambers
Baytown
Pasadena
Hobby Airport
Trinity Bay
LyondellBasell Equistar Bayport
Pearland
Friendswood
C-4
League City
Google Earth
© 2018 Google
Image Landsat / Copernicus
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
N
10 mi

APPENDIX B – PSD AND NONATTAINMENT FORMS

TABLE 1F
AIR QUALITY APPLICATION SUPPLEMENT

Permit No.:	**9423**	**Application Submittal Date: June 2017; Revised March 2019**	
Company:	**Equistar Chemicals LP - Bayport Polypropylene Plant**		
RN:	**RN100216761**	**Facility Location:**	**12001 Bay Area Blvd.**
City:	**Pasadena**	**County:**	**Harris**
Permit Unit I.D.:		**Permit Name:**	
Permit Activity:	☐ **New Source** ☒ **Modification**		
Project or Process Description:	**BYO Expansion Project - Updated to Include Visbreak Emissions**		

Complete for all Pollutants with a Project Emission Increase.	**POLLUTANTS**						
	Ozone		**CO**	**PM_{10}**	**NOx**	**SO_2**	**Other[1] (PM2.5)**
	VOC	**NOx**					
Nonattainment? (yes or no)	Yes	Yes	No	No	No	No	No
Existing site PTE (tpy)?	> 100	< 100	> 100	< 100	< 100	< 100	
Proposed project emission increases (tpy from 2F)[3]	39.64	< 40	84.75	< 15	< 40	< 40	< 10
Is the existing site a major source?[2] If not, is the project a major source by itself? (yes or no)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
If site is major, is project increase significant?	No	No	No	No	No	No	No
If netting required, estimated start of construction?							
Five years prior to start of construction	contemporaneous						
Estimated start of operation	period						
Net contemporaneous change, including proposed project, from Table 3F (tpy)							
FNSR APPLICABLE? (yes or no)	No	No	No	No	No	No	No

1 Other PSD pollutants

2 Nonattainment major source is defined in Table 1 in 30 TAC 116.12(11) by pollutant and county. PSD thresholds are found in 40 CFR § 51.166(b)(1).

3 Sum of proposed emissions minus baseline emissions, increases only. Nonattainment thresholds are found in Table 1 in 30 TAC 116.12(11) and PSD thresholds in 40 CFR § 51.166(b)(23).

The representations made above and on the accompanying tables are true and correct to the best of my knowledge.

Signature Derek Hardwicke Title Env. Eng. Date 3/26/19

TABLE 1F
AIR QUALITY APPLICATION SUPPLEMENT

Permit No.:	**9423**	**Application Submittal Date: March 2019**	
Company:	**Equistar Chemicals LP - Bayport Polypropylene Plant**		
RN:	**RN100216761**	**Facility Location:**	**12001 Bay Area Blvd.**
City:	**Pasadena**	**County:**	**Harris**
Permit Unit I.D.:		**Permit Name:**	
Permit Activity:	☐ **New Source** ☒ **Modification**		
Project or Process Description:	**Pre-Expansion - Visbreak Emissions**		

Complete for all Pollutants with a Project Emission Increase.	**POLLUTANTS**						
	Ozone		**CO**	**PM_{10}**	**NOx**	**SO_2**	**Other[1] (PM2.5)**
	VOC	**NOx**					
Nonattainment? (yes or no)	Yes						
Existing site PTE (tpy)?	> 100						
Proposed project emission increases (tpy from 2F)[3]	4 79						
Is the existing site a major source?[2] If not, is the project a major source by itself? (yes or no)	Yes						
If site is major, is project increase significant?	No						
If netting required, estimated start of construction?							
Five years prior to start of construction							
Estimated start of operation							
Net contemporaneous change, including proposed project, from Table 3F. (tpy)							
FNSR APPLICABLE? (yes or no)	No						

1 Other PSD pollutants.

2 Nonattainment major source is defined in Table 1 in 30 TAC 116 12(11) by pollutant and county. PSD thresholds are found in 40 CFR § 51.166(b)(1).

3 Sum of proposed emissions minus baseline emissions, increases only. Nonattainment thresholds are found in Table 1 in 30 TAC 116 12(11) and PSD thresholds in 40 CFR § 51.166(b)(23).

The representations made above and on the accompanying tables are true and correct to the best of my knowledge.

Derek Rodrick Env. Eng. 3/26/19

Signature Title Date

TABLE 2F
PROJECT EMISSIONS INCREASE

Pollutant[1]: VOC	**Permit: 9423**
Baseline Period: Jan 2011 - Dec 2012	

Affected or Modified Facilities [2]			Permit No.	Actual Emissions[3]	A	B	Projected Actual Emissions	Difference (B-A)[6]	Correction[7]	Project Increase[8]
	FIN	EPN			Baseline Emissions[4]	Proposed Emissions[5]				
1	30 + 34	30 + 34 [10]	9423	69.17	61.56	77.69	No	16.13		16.13
2	98	98	9423	0.00	0.00	0.05	No	0.05		0.05
3	99	99	9423	0.21	0.21	6.20	No	5.98		5.98
4	151	151	9423	0.31	0.31	5.58	No	5.27		5.27
5	39	39	9423	0.01	0.01	0.01	No	--		--
6	40	40	9423	0.01	0.01	0.01	No	--		--
7	109	109	9423	0.01	0.01	0.01	No	--		--
8	110	110	9423	0.01	0.01	0.01	No	--		--
9	112	112	9423	0.01	0.01	0.01	No	--		--
10	113	113	9423	0.01	0.01	0.01	No	--		--
11	114	114	9423	0.01	0.01	0.01	No	--		--
12	35	35 [12]	9423	0.00	0.00	0.50	No	0.50		0.50
13	143	143	9423	0.01	0.01	0.01	No	--		--
14	144	144	9423	0.01	0.01	0.01	No	--		--
15	149	149	9423	0.00	0.00	0.01	No	0.01		0.01
16	37	37	9423	0.01	0.01	0.01	No	--		--
17	38	38	9423	0.01	0.01	0.01	No	--		--
18	41	41 [12]	9423	0.00	0.00	0.45	No	0.45		0.45
19	103	103	9423	0.01	0.01	0.01	No	--		--
20	104	104	9423	0.01	0.01	0.01	No	--		--
21	105	105	9423	0.01	0.01	0.01	No	--		--
22	106	106	9423	0.01	0.01	0.01	No	--		--
23	107	107	9423	0.01	0.01	0.01	No	--		--
24	14C, 102, 116, 120, 122, 131, 132, 133, 152, 153, 154	E-CAP 1	9423	3.93	3.93	13.26	No	9.34		9.34
25	14C, 102, 116, 120, 122, 131, 132, 133, 152, 153, 154	E-CAP 1 - Visbreak Contribution	9423	0.00	0.00	1.34	No	1.34		1.34

TABLE 2F
PROJECT EMISSIONS INCREASE

Pollutant[1]: VOC	**Permit: 9423**
Baseline Period: Jan 2011 - Dec 2012	

Affected or Modified Facilities [2]			Permit No.	Actual Emissions[3]	A	B	Projected Actual Emissions	Difference (B-A)[6]	Correction[7]	Project Increase[8]
	FIN	EPN			Baseline Emissions[4]	Proposed Emissions[5]				
26	PP-WWTR	PP-WWTR [11]	9423	0.55	0.55	0.87	No	0.33		0.33
27	MSS41	MSS41	9423	0.00	0.00	0.06	No	0.06		0.06
28	MSS42	MSS42	9423	0.00	0.00	0.06	No	0.06		0.06
29	MSS53	MSS53	9423	0.00	0.00	0.06	No	0.06		0.06
30	MSS54	MSS54	9423	0.00	0.00	0.06	No	0.06		0.06
31	52	52 [12]	9423	0.00	0.00	0.03	No	0.03		0.03
								Page Subtotal[9]		**39.64**

All emissions must be listed in tons per year (tpy). The same baseline period must apply for all facilities for a given NSR pollutant.

1. Individual Table 2F's should be used to summarize the project emission increase for each criteria pollutant.
2. Emission Point Number as designated in NSR Permit or Emissions Inventory.
3. All records and calculations for these values must be available upon request.
4. Correct actual emissions for currently applicable rule or permit requirements, and periods of non-compliance. These corrections, as well as any MSS previously demonstrated under 30 TAC 101, should be explained in the Table 2F supplement.
5. If projected actual emission is used it must be noted in the next column and the basis for the projection identified in the Table 2F supplement.
6. Proposed Emissions (column B) Baseline Emissions (column A).
7. Correction made to emission increase for what portion could have been accommodated during the baseline period. The justification and basis for this estimate must be provided in the Table 2F supplement.
8. Obtained by subtracting the correction from the difference. Must be a positive number.
9. Sum all values for this page.

10 Baseline emissions adjusted to maximum of authorized in baseline years.

11 Baseline emissions for EPN PP-WWTR are based on the sum of the EPNs 115,108, and 130. These are the effluent wastewater from the C-Line, D-Line and E-line that will be removed and replaced by a consolidated EPN, PP-WWTR.

12 Incremental analysis used for fugitive project emission increases. Baseline emissions assumed zero for EPNs 35, 41, and 52. Proposed emissions are not the MAERT.

TABLE 2F
PROJECT EMISSIONS INCREASE

Pollutant[1]: VOC	**Permit: 9423**
Baseline Period: Not Applicable	

Affected or Modified Facilities [2]			Permit No.	Actual Emissions[3]	A	B	Projected Actual Emissions	Difference (B-A)[6]	Correction[7]	Project Increase[8]
	FIN	EPN			Baseline Emissions[4]	Proposed Emissions[5]				
25	14C, 102, 116, 120, 122, 131, 132, 133, 152, 153, 154	E-CAP 1 - Visbreak Contribution	9423	0.00	0.00	4.79	No	4.79		4.79
Page Subtotal[9]										**4.79**

All emissions must be listed in tons per year (tpy). The same baseline period must apply for all facilities for a given NSR pollutant.

1. Individual Table 2F's should be used to summarize the project emission increase for each criteria pollutant.
2. Emission Point Number as designated in NSR Permit or Emissions Inventory. P
3. All records and calculations for these values must be available upon request.
4. Correct actual emissions for currently applicable rule or permit requirements, and periods of non-compliance. These corrections, as well as any MSS previously demonstrated under 30 TAC 101, should be explained in the Table 2F supplement.
5. If projected actual emission is used it must be noted in the next column and the basis for the projection identified in the Table 2F supplement.
6. Proposed Emissions (column B) Baseline Emissions (column A).
7. Correction made to emission increase for what portion could have been accommodated during the baseline period. The justification and basis for this estimate must be provided in the Table 2F supplement.
8. Obtained by subtracting the correction from the difference. Must be a positive number.
9. Sum all values for this page.
10. Baseline emissions adjusted to maximum of authorized in baseline years.
11. Incremental analysis used for Visbreak emission increases associated with pre-expansion emission rates. Proposed emissions are not the MAERT.

CONFIDENTIAL SECTION

CONFIDENTIAL

TABLE OF CONTENTS

CONFIDENTIAL AIR PERMIT APPLICATION TABLE

CONFIDENTIAL

2. JULY 30, 2019 NOD AND RESPONSE NON CONF.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 30, 2019

MR. STEPHEN G GOFF
SITE MANAGER
EQUISTAR CHEMICALS LP
10801 CHOATE RD
PASADENA TX 77507-1503

Re: Permit Amendment
Permit Number: 9423
Bayport Polypropylene Plant
Pasadena, Harris County
Regulated Entity Number: RN100216761
Customer Reference Number: CN600124705

Dear Mr. Goff:

Upon evaluation of the above-referenced amendment, we have determined that your application is deficient and Equistar Chemicals, LP must provide additional information to ensure that the requirements for obtaining a permit amendment are met. Please furnish the following information within 30 days:

1. The Notice of Receipt and Intent (NORI) Package was mailed on April 4, 2019. According to our records, however, no Public Notice (PN) documentation has been received. Generally, PN is started within 30 calendar days after date of administrative completeness. An additional package was emailed to Equistar on July 30, 2019 to ensure the package had been received.

    a. Please submit all PN related documents – Clippings/copies of the notices in the appropriate newspapers and alternative language newspapers, original affidavits for the publications, Public Notice Verification Form, etc.

2. Please provide additional information related to the organic peroxides utilized in this process. A confidential submittal addressing this question is acceptable, if applicable.
    a. Please provide detailed Material Safety Data Sheets (MSDSs) for all the organic peroxides that will be used in the process. Additionally, confirm if there will be residual organic peroxides emitted to the atmosphere and in what quantities.

3. The process description states that organic peroxides are added to the process as part of a group of additives during extrusion. This description is too general. Since visbreaking is the specific focus of this amendment, more information is needed about this part of the process. More details will aid in providing a clear, concise picture of what is occurring during this part of the process.

    a. Please submit an updated process description that focuses more on the organic peroxide addition and how it specifically related to the extrusion part of the overall process. Please ensure that this description includes where the peroxides are stored prior to being added to the process, how they are added, and any equipment and/or EPNs affected during this piece of the production process. This should include control devices as well.
        i. Please confirm that all affected EPNs with emission increases have been accounted for in the application. If not, please provide updated calculations and

emissions for those EPNs. Please also provide updated BACT representations, if applicable.

b. Provide justification as to why no fugitive emissions will be affected by this amendment.

4. Please provide an updated process flow diagram that focuses on the addition of organic peroxide to the process and visbreaking activities. Please include all applicable equipment and EPNs associated with it.

5. Equistar currently represents that the visbreaking activities and associated emissions originated before the expansion project that was approved in September 2018, which also increased as a result of that same expansion project. The emissions associated with visbreaking have therefore been split into two time periods – pre-expansion emissions (4.79 tpy VOC) and expansion emissions (1.34 tpy VOC). However, there is no documentation provided that verifies the emissions date of origin for these emissions. The Table 2F (Page B-6) states that the baseline period for the pre-expansion emissions is "Not Applicable." Without specific dates and associated information related to the origin of these emissions and their represented totals, it is not possible to determine how the emissions were split, and if splitting these emissions is appropriate. Without the ability to split the emissions into pre-expansion and expansion totals, the emissions represented must be looked at as a whole (i.e. 6.12 tpy VOC) and compared to the appropriate timeframes in which they are believed to have originated.

   Based on the dates given in the application, the easiest Non-attainment thresholds to compare this value against would be those in place at the time of the September 2018 expansion project (Project No. 271097). That project authorized a VOC increase of 38.30 tpy. Assuming the entire increase of emissions from visbreaking activities should have been included in that project, the VOC emissions increase would have been 44.42 tpy. The moderate nonattainment major source modification threshold for HGB Counties is currently 40 tpy VOC. Therefore, the previous project would have been applicable to nonattainment review. Additionally, if we were to assume the entirety of the emissions were to have taken place when HGB was classified as a severe nonattainment area, the 6.12 tpy VOC is still greater than the severe major source modification threshold of 5 tpy VOC. Therefore, nonattainment review would still be applicable.

   a. Please provide a timeline of events for the visbreaking activities. This should include the date(s) of construction for the associated equipment, when the emissions should have been included in a permitting action, and an appropriate justification for why the emissions should continue to be split as represented in the application.
      i. Please ensure that this timeline, and associated information, is detailed enough to verify that these emissions would not have triggered nonattainment new source review.
      ii. Please make sure to account for the emissions authorized in July 26, 2019 amendment (Project No. 291466).
   b. Please also submit updated Tables 1F and 2F, if applicable.

6. The emission calculations summary states that sampling was conducted in order to determine the quantity of VOC and acetone in the sample.

   a. Please provide the sampling results in order to verify the concentrations utilized in the emission calculations.
   b. When was the sampling conducted? If conducted recently (i.e. for this project), please provide justification for why older samples from previous streams were not utilized in the calculations and/or why a recent sample is a more conservative and accurate approach to determining concentrations in the stream.

c. Please also provide details on how the annual concentrations were determined.

7. The only BACT represented in the application is for the polymer transfer vents (EPN E-CAP). The BACT represented for this source states that the "uncontrolled VOC is <80 lbs/MMlb of polypropylene on an average annual basis for the combined lines." However, current accepted BACT is for VOC to be <80 lb/MMlb. Using "average" denotes that that there are times when this threshold is exceeded, and would therefore, not actually meet BACT requirements.
    a. Please provide updated BACT for this source that confirms BACT requirements are met.
    b. Please confirm why these emissions are not being sent to a control device but rather emitting to the atmosphere.

8. There are two Permits by Rule (PBRs) that have been authorized recently associated with this NSR Permit. PBR 156193, authorized April 17, 2019, authorizes fugitive components in the C, D, and E lines. PBR 157033, authorized July 3, 2019, authorizes the use of propane to operate the pilots for Elevated Flare (EPN 34). This flare controls emissions associated with the C, D, and E Lines.
    a. Please provide justification for why these PBRs are not being incorporated into NSR Permit No. 9423 with this amendment.
    b. If these PBRs do need to be incorporated, a new page 4 of the PI-1 Form will need to be submitted as Section III.F currently represents no other permits will be incorporated.

9. The application represents that AERMOD was utilized for the modeling and impacts evaluation.
    a. Please provide the AERMOD files and other associated data utilized for the modeling analysis.
    b. If there were changes made to calculations and/or emissions that were previously modeled or represented in the MERA analysis, the appropriate updated will need to be made. Please provide updated information as applicable.

10. Please provide all associated emission calculations/updates, emission summary table(s), Table 1(a), Federal Applicability Tables, and other documents as applicable, that are updated in response to this notice of deficiency.

After receipt of all the additional information, we will continue the review of your application. If the information furnished in response to this notice results in the need for further clarification or additional information, we will notify you. Please note that the applicant Equistar Chemicals, LP is required to furnish all information to demonstrate that the facility or source will comply with all applicable federal and state rules and statutes.

Failure to submit all of the requested information within 30 days of the date of this notification may result in a voidance of your application. Following a voidance, the permit fee will be retained for 180 days. If you still wish to pursue the project following the voidance, you will need to submit an entirely new application. The new application will be subject to the state and federal rules and regulations in place at the time of submittal. If public notice was required in the original application, you may be required to republish the notice. You do not need to submit additional fees with the new application if the project scope has not increased and the original fee was correct.

In addition, please ensure that a copy of the submitted information is also sent to the applicable Texas Commission on Environmental Quality (TCEQ) regional office and any local air pollution control program(s) with jurisdiction. Please note that the cover letter for your submission should indicate that a copy has been sent to the regional office [and local air pollution control program(s), if applicable]. Lists of the TCEQ regional offices and local air pollution control programs are available at:

https://www.tceq.texas.gov/agency/directory/region/reglist.html
and
www.tceq.texas.gov/permitting/air/local_programs.html, respectively.

If a new application is not submitted within 180 days from the date of the voidance, you will forfeit the original permit fee.

Thank you for your cooperation in this matter. If you have any questions, please contact me at (512) 239-4970, or write to the TCEQ, Office of Air, Air Permits Division, MC-163, P.O. Box 13087, Austin, Texas 78711-3087.

Sincerely,

John Bregger
Air Permits Division
Texas Commission on Environmental Quality

Enclosure

cc: Chief Health Inspector, Health Department, City of Pasadena, Pasadena
Director, Harris County, Pollution Control Services, Pasadena
Air Section Manager, Region 12 - Houston

Project Number: 299187

September 3, 2019

Mr. John Bregger EMAILED
Office of Air, Air Permits Division, MC-163
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

Re: Equistar Chemicals LP
Permit Amendment
Permit No.: 9423
Bayport Polypropylene Plant
Pasadena, Harris County
Regulated Entity Number: RN100216761
Customer Reference Number: CN600124705

Dear Mr. Bregger:

On behalf of Equistar Chemicals LP, I am responding to your notice of deficiency letter dated July 30, 2019.

1. The Notice of Receipt and Intent (NORI) Package was mailed on April 4, 2019. According to our records, however, no Public Notice (PN) documentation has been received. Generally, PN is started within 30 calendar days after date of administrative completeness. An additional package was emailed to Equistar on July 30, 2019 to ensure the package had been received.

   a. Please submit all PN related documents – Clippings/copies of the notices in the appropriate newspapers and alternative language newspapers, original affidavits for the publications, Public Notice Verification Form, etc.

   Equistar Chemicals LP

   Based on the NORI package provided by Mr. Bregger on July 30, 2019, Equistar has completed the first Public Notice publication on the following dates:

   - **English language notice in a Houston Chronicle newspaper: 08/21/2019**
   - **Spanish language notice in La Voz: 08/25/2019**

   The clippings/copies of the notices in the appropriate newspapers and alternative language newspapers (tear sheets), and original affidavits for the publications will be mailed within 10 business days of first publication. Also the public notice verification form will be mailed after the end of the 30 day comment period.

2. Please provide additional information related to the organic peroxides utilized in this process. A confidential submittal addressing this question is acceptable, if applicable.

a. Please provide detailed Material Safety Data Sheets (MSDSs) for all the organic peroxides that will be used in the process. Additionally, confirm if there will be residual organic peroxides emitted to the atmosphere and in what quantities.

Equistar Chemicals LP

The organic peroxide used is 5-dimethly-2,5-di(tert-butlyperoxy)hexane CAS # 78-63-7. The peroxide is supplied by different suppliers. Attachment A, includes requested SDS information for the organic peroxide.

3. The process description states that organic peroxides are added to the process as part of a group of additives during extrusion. This description is too general. Since visbreaking is the specific focus of this amendment, more information is needed about this part of the process. More details will aid in providing a clear, concise picture of what is occurring during this part of the process.

   a. Please submit an updated process description that focuses more on the organic peroxide addition and how it specifically related to the extrusion part of the overall process. Please ensure that this description includes where the peroxides are stored prior to being added to the process, how they are added, and any equipment and/or EPNs affected during this piece of the production process. This should include control devices as well.

      i. Please confirm that all affected EPNs with emission increases have been accounted for in the application. If not, please provide updated calculations and emissions for those EPNs. Please also provide updated BACT representations, if applicable.

   b. Provide justification as to why no fugitive emissions will be affected by this amendment.

Equistar Chemicals LP

The Equistar BYO Polymer plant uses three Spheripol technology manufacturing units (C-Line, D-Line, and E-Line) to produce homopolymer, random copolymer and hetero-phasic copolymer polypropylene. The physical properties of the products vary based upon the reactants and operating conditions during the manufacture of the polymers. Most of the raw polymer produced in the polymerization units are in turn processed through extruders where the material is melt homogenized and pelletized to uniform-size pellets for shipment in railcars to customers.
During the extrusion step, stabilizers and processing aids are added to the raw polymer to protect and enhance the performance of the products. The additives are typically mixed with the polymer immediately upstream of the extruder in a mixer or blender. Along with melting and homogenizing the raw polymer, the additives are dispersed in the polymer blend in the extruder prior to pelletization.

In the extrusion step, organic peroxide can be added to modify the physical properties of the polymer. The organic peroxide reacts with the polymer in such a way as to degrade the molecules via beta-scission. As a consequence, the average molecular weight decreases and the molecular weight distribution narrows. This "breaks" the viscosity of the polymer melt. The viscosity of the polymer melt decreases and the melt flow rate increases. This is commonly known as "vis breaking". With the controlled addition of organic peroxide, the melt rheology of the

polymer can be controlled to various degrees beyond the original polymerization process output.

The chemical process of 'visbreaking' is a 3 step process. The first step is "initiation". The organic peroxide thermally decomposes to form free radicals. The second step is "macro radical formation". The alkoxy radicals formed in the initiation step transfers to the PP molecules. The third step is "beta scission". Macro radical rearrangement leads to the chains scission of the PP molecules. The macro radical can then be transferred to other PP molecules repeating step 2. The chemical reactions occur in the polymer melt in the extruder as the melt homogenization and additive dispersion takes place.

Equistar's BYO utilizes liquid organic peroxide to perform the polymer visbreaking. Liquid peroxide is typically received in 5 gallon totes. The peroxide is transferred into a storage tank located outside of the extrusion process building. From the storage tank, the peroxide is pumped, metered and injected into the polymer stream in the additive mixer or blender upstream of the extruder. There are three extruders for the Spheripol polymerization lines; CLX, DLX and ELX. The CLX extruder has a peroxide storage tank and two pumps for delivery of the peroxide. The DLX and ELX extruders share a common storage tank with two pumps dedicated to DLX and two pumps dedicated to ELX.

Peroxide emission from the two atmospheric tanks used to store the additive are included in Attachment D.

Other the emissions associated with the production of visbroken product have been already included in the application. The amount of air contaminants (VOC and acetone) is assumed to leave the product in the operations downstream of the extruder (i.e., extrusion, transfer, storage, and loading), and is associated with EPN: E-CAP, which includes all atmospheric EPNs affected by this part of Operations. These are emissions from streams with very low concentrations of VOC that do not allow for accurate continuous monitoring. Fugitive emissions from piping components have been accounted for in all prior applications and there is no increase in piping component emissions associated with this update.

4. Please provide an updated process flow diagram that focuses on the addition of organic peroxide to the process and visbreaking activities. Please include all applicable equipment and EPNs associated with it.

<u>Equistar Chemicals LP</u>

Please find included, in Attachment B, an updated process flow diagram that focusses on the addition of organic peroxide to the process, with all applicable equipment and associated EPNs.

5. Equistar currently represents that the visbreaking activities and associated emissions originated before the expansion project that was approved in September 2018, which also increased as a result of that same expansion project. The emissions associated with visbreaking have therefore been split into two time periods – pre-expansion emissions (4.79 tpy VOC) and expansion emissions (1.34 tpy VOC). However, there is no documentation provided that verifies the emissions date of origin for these emissions. The Table 2F (Page B-6) states that the baseline period for the pre-expansion emissions is "Not Applicable."

Without specific dates and associated information related to the origin of these emissions and their represented totals, it is not possible to determine how the emissions were split, and if splitting these emissions is appropriate. Without the ability to split the emissions into pre-expansion and expansion totals, the emissions represented must be looked at as a whole (i.e. 6.12 tpy VOC) and compared to the appropriate timeframes in which they are believed to have originated.

Based on the dates given in the application, the easiest Non-attainment thresholds to compare this value against would be those in place at the time of the September 2018 expansion project (Project No. 271097). That project authorized a VOC increase of 38.30 tpy. Assuming the entire increase of emissions from visbreaking activities should have been included in that project, the VOC emissions increase would have been 44.42 tpy. The moderate nonattainment major source modification threshold for HGB Counties is currently 40 tpy VOC. Therefore, the previous project would have been applicable to nonattainment review. Additionally, if we were to assume the entirety of the emissions were to have taken place when HGB was classified as a severe nonattainment area, the 6.12 tpy VOC is still greater than the severe major source modification threshold of 5 tpy VOC. Therefore, nonattainment review would still be applicable.

a. Please provide a timeline of events for the visbreaking activities. This should include the date(s) of construction for the associated equipment, when the emissions should have been included in a permitting action, and an appropriate justification for why the emissions should continue to be split as represented in the application.

    i. Please ensure that this timeline, and associated information, is detailed enough to verify that these emissions would not have triggered nonattainment new source review.

    ii. Please make sure to account for the emissions authorized in July 26, 2019 amendment (Project No. 291466).

c. Please also submit updated Tables 1F and 2F, if applicable.

Equistar Chemicals LP

The use of organic peroxides dates back to the construction and initial operation of the manufacturing lines (C-Line, D-Line, and E-Line). The following are the construction dates for each line.

C-Line – 1985
D-Line – 1987
E-Line – 1989

After consulting with Rick Goertz, prior to his retirement, Equistar conservatively represented the project increases for pre-expansion as if the increases had occurred from a single project. Those emissions were then conservatively compared to the lowest nonattainment netting trigger (5 tons) for any time period since the plants initial construction. As detailed above, the pre-expansion emissions associated with the use of organic peroxides in C, D, and E Lines predates the nonattainment area designation for HGB. As such, the pre-expansion project emission summary tables will not be updated and have not been included as part of this response. Equistar is

resubmitting the Table 1F and 2F (Attachment C) for the expansion project including the associated increases from the use of organic peroxides.

6. The emission calculations summary states that sampling was conducted in order to determine the quantity of VOC and acetone in the sample.

   a. Please provide the sampling results in order to verify the concentrations utilized in the emission calculations.

   b. When was the sampling conducted? If conducted recently (i.e. for this project), please provide justification for why older samples from previous streams were not utilized in the calculations and/or why a recent sample is a more conservative and accurate approach to determining concentrations in the stream.

   d. Please also provide details on how the annual concentrations were determined.

   Equistar Chemicals LP

   Please find included, in Attachment D, sampling results that were used in order to establish the concentrations utilized in the emission calculations.

   The sampling of worst-case visbroken products and headspace analysis began in late 2018/ early 2019 to provide an emissions estimate for permit authorization. Historically, visbroken products have been sampled for product quality and personnel exposure (safety) purposes only and analyzed using another analytical method. There was not an existing requirement or practice to analyze visbroken products via headspace analysis. Therefore, the data was not available.

   The annual concentrations were determined by utilizing VOC and acetone concentrations that were previously not analyzed via headspace analysis.

7. The only BACT represented in the application is for the polymer transfer vents (EPN E-CAP). The BACT represented for this source states that the “uncontrolled VOC is <80 lbs/MMlb of polypropylene on an average annual basis for the combined lines.” However, current accepted BACT is for VOC to be <80 lb/MMlb. Using “average” denotes that that there are times when this threshold is exceeded, and would therefore, not actually meet BACT requirements.

   a. Please provide updated BACT for this source that confirms BACT requirements are met.

   b. Please confirm why these emissions are not being sent to a control device but rather emitting to the atmosphere.

   Equistar Chemicals LP

   Tier 1 BACT for uncontrolled VOC (<80lbs/MMlb) from polypropylene production is based on average sampling. Special Condition 25 describes the method for determining compliance with Tier 1 BACT.

8. There are two Permits by Rule (PBRs) that have been authorized recently associated with this NSR Permit. PBR 156193, authorized April 17, 2019, authorizes fugitive components in the C, D, and E lines. PBR 157033, authorized July 3, 2019, authorizes the use of propane

to operate the pilots for Elevated Flare (EPN 34). This flare controls emissions associated with the C, D, and E Lines.

a. Please provide justification for why these PBRs are not being incorporated into NSR Permit No. 9423 with this amendment.

b. If these PBRs do need to be incorporated, a new page 4 of the PI-1 Form will need to be submitted as Section III.F currently represents no other permits will be incorporated.

Equistar Chemicals LP

This application was submitted to add emissions from visbreaking that were not previously quantified. The error was disclosed as part of an audit conducted under the Environmental, Health and Safety Audit Privilege Act. This application is part of the ongoing corrective action associated with the audit and the scope should be limited to those corrections. PBR 156193 authorized minor piping changes that will not likely increase the permit allowable which can be determined once a full review of the fugitive database can be completed. PBR 157033 is associated with two permits and the determination of which permit to update will be made separate from this application.

9. The application represents that AERMOD was utilized for the modeling and impacts evaluation.

a. Please provide the AERMOD files and other associated data utilized for the modeling analysis.

b. If there were changes made to calculations and/or emissions that were previously modeled or represented in the MERA analysis, the appropriate updated will need to be made. Please provide updated information as applicable.

Equistar Chemicals LP

The impacts analysis for this project will be sent as a separate submittal with instructions for accessing the AERMOD files.

10. Please provide all associated emission calculations/updates, emission summary table(s), Table 1(a), Federal Applicability Tables, and other documents as applicable, that are updated in response to this notice of deficiency.

Equistar Chemicals LP

Please find updated emissions data in Attachment D.

ATTACHMENT A

SAFETY DATA SHEET

RAW MATERIAL SPECIFICATION

SAP#: 2000061
SPEC#: 2000061

ISSUE DATE	REVISION DATE	REVISION NUMBER	APPROVED BY:
1/23/95	5/26/11	5	M. A. Sartain

This is not a control document if printed.

DATE PRINTED: 5/26/2011

COMMERCIAL NAME: 2,5-Di; Trigonox® 101; DBPH; DHBP; Peroxan HX; Luperox® 101

SYNONYMS: C0520; Peroxide 101; 0009.7.03; 0009.1.01; 0009.6.02; 0009.8.04; 30000047; 30000643; 30003134

1.0 CHEMICAL NAME: 2,5-Dimethyl-2,5-di-(t-butylperoxy)hexane

1.1 CAS #: 78-63-7

1.2 EINECS #: 201-128-1

1.3 APPEARANCE: Clear liquid

2.0 SPECIFICATIONS

VENDOR SHALL FURNISH A CERTIFICATE OF ANALYSIS AND/OR SQC DATA FOR THE PROPERTIES LISTED BELOW AS DICTATED BY THE ORDERING LOCATION. IF A PROPERTY IS NOT MARKED WITH AN "X", CERTIFICATE AND/OR SQC DATA IS NOT REQUIRED.

FAILURE TO PROVIDE PROOF OF CONFORMANCE TO THESE REQUIREMENTS OR FAILURE TO PASS ANY ACCEPTANCE TEST LISTED BELOW PERFORMED BY A LYONDELLBASELL LABORATORY WILL BE GROUNDS FOR REJECTION OF MATERIAL.

PROPERTY	TARGET	MIN	MAX	TEST METHOD	SQC	COA
Active Oxygen, wt%		10.14		Vendor		X
Assay, wt%		92.0		Vendor		X

Notes:

3.0 FUNCTION: Initiator

4.0 REGULATORY:

4.1 TSCA: ☒ Yes

4.2 DSL ☒ Yes EXCEPTIONS NONE

4.3 FDA: Not regulated

4.4 OSHA: Subject to OSHA Hazard Communication Standard - Organic Peroxides.

4.5 ATF: Not applicable

lyondellbasell

RAW MATERIAL SPECIFICATION

SAP#: 2000061
SPEC#: 2000061

ISSUE DATE	REVISION DATE	REVISION NUMBER	APPROVED BY:
1/23/95	5/26/11	5	M. A. Sartain

This is not a control document if printed.

Vendor Information

5.0 NOTIFICATION OF CHANGE

The LyondellBasell Raw Material Specifications Coordinator, research and development, and the receiving location's purchasing department must be advised of, and approve of, any changes in processing, materials, or conditions affecting the quality of the material before receipt of such material.

6.0 PACKAGING AND LABELING

The product shall be shipped in standard containers with proper grounding instructions on the package, or mentioned in MSDS, as applicable.

(NOTE: Required information will be supplied on the label, Bill of Lading or COA)

	Required?	
Manufacturer's Lot Number	Yes	
Manufacturer's Product Name	Yes	
Date Produced or Certification Date#	Yes	# Date may be encoded in lot number
Container Number	No	
LyondellBasell SAP Number	Yes	
Hazardous Material Information	Yes	
FIBC Containers##	No	## Use only type B,C, or D bags

7.0 SPECIAL INSTRUCTIONS

Unless by special arrangement, manufacturer will ship minimum number of batch lots to complete order.

8.0 APPROVED RAW MATERIAL VENDORS & LOCATIONS

Not maintained in this document.

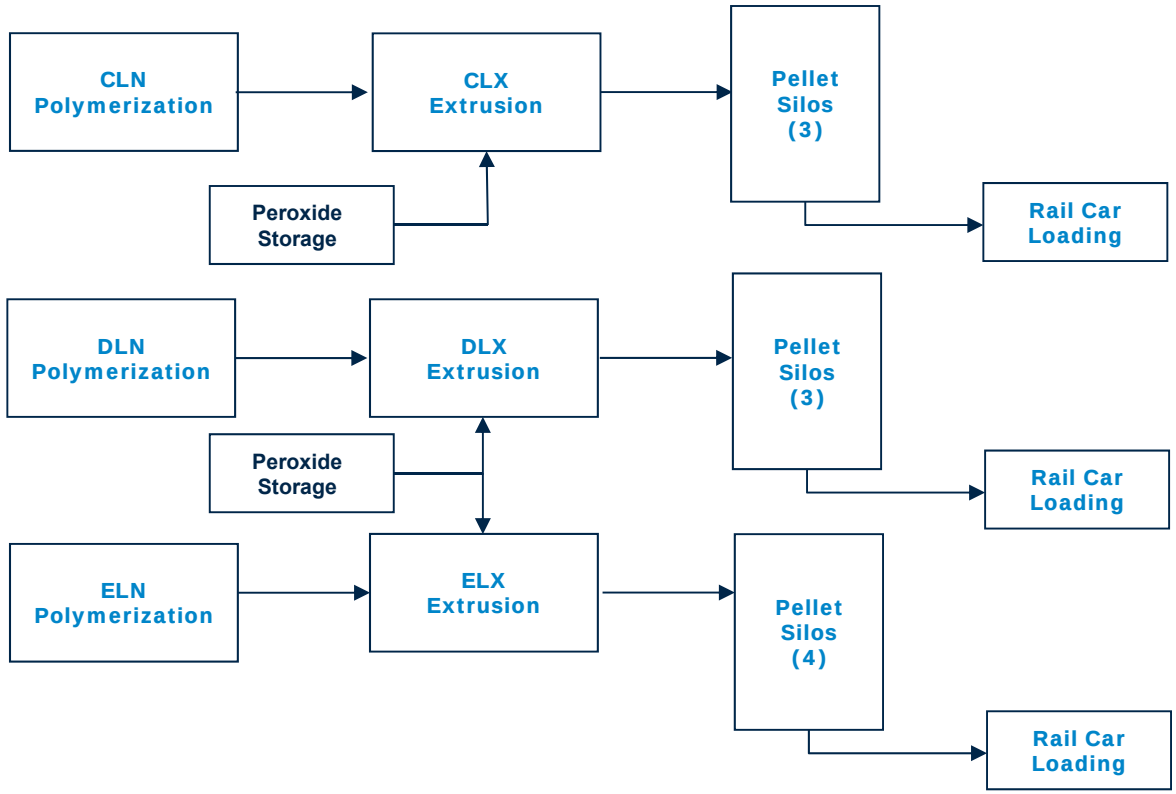
Reason for Change:

6/14/99 Update format
1/28/02 Change Section 7 by adding requirements to packaging and labeling, deleting CAS number and purchase order number; Change test methods to vendor; Add trade name
10/20/05 Change Section 9.0 to "Not maintained in this document"; Update format and logo; Update Section 8 to minimum number of lots from two max; Delete BPO Synonym
11/2/07 Update Section 7.0 grounding & packaging and labeling statement; Add EINECS number
5/26/11 Merge legacy specifications; Move old SAP and spec numbers to Synonyms; Update limits to current vendor specifications

ATTACHMENT B

PROCESS FLOW DIAGRAM

BYO PP Peroxide Systems



ATTACHMENT C

TABLES 1F AND 2F

TABLE 1F
AIR QUALITY APPLICATION SUPPLEMENT

Permit No.:	**9423**	**Application Submittal Date: June 2017; Revised March 2019**	
Company:	**Equistar Chemicals LP - Bayport Polypropylene Plant**		
RN:	**RN100216761**	**Facility Location:**	**12001 Bay Area Blvd.**
City:	**Pasadena**	**County:**	**Harris**
Permit Unit I.D.:		**Permit Name:**	
Permit Activity:	☐ **New Source** ☒ **Modification**		
Project or Process Description:	**BYO Expansion Project - Updated to Include Visbreak Emissions**		

Complete for all Pollutants with a Project Emission Increase.	**POLLUTANTS**						
	Ozone		**CO**	**PM_{10}**	**NOx**	**SO_2**	**Other[1] (PM2.5)**
	VOC	**NOx**					
Nonattainment? (yes or no)	Yes	Yes	No	No	No	No	No
Existing site PTE (tpy)?	> 100	< 100	> 100	< 100	< 100	< 100	
Proposed project emission increases (tpy from 2F)[3]	39.67	< 40	84.75	< 15	< 40	< 40	< 10
Is the existing site a major source?[2] If not, is the project a major source by itself? (yes or no)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
If site is major, is project increase significant?	No	No	No	No	No	No	No
If netting required, estimated start of construction?							
Five years prior to start of construction	contemporaneous						
Estimated start of operation	period						
Net contemporaneous change, including proposed project, from Table 3F. (tpy)							
FNSR APPLICABLE? (yes or no)	No	No	No	No	No	No	No

1 Other PSD pollutants.

2 Nonattainment major source is defined in Table 1 in 30 TAC 116.12(11) by pollutant and county. PSD thresholds are found in 40 CFR § 51.166(b)(1).

3 Sum of proposed emissions minus baseline emissions, increases only. Nonattainment thresholds are found in Table 1 in 30 TAC 116.12(11) and PSD thresholds in 40 CFR § 51.166(b)(23).

The representations made above and on the accompanying tables are true and correct to the best of my knowledge.

Signature Title Date

TABLE 2F
PROJECT EMISSIONS INCREASE

Pollutant[1]: VOC	**Permit: 9423**
Baseline Period: Jan 2011 - Dec 2012	

Affected or Modified Facilities [2]			Permit No.	Actual Emissions[3]	A	B	Projected Actual Emissions	Difference (B-A)[6]	Correction[7]	Project Increase[8]
	FIN	EPN			Baseline Emissions[4]	Proposed Emissions[5]				
1	30 + 34	30 + 34 [10]	9423	69.17	61.56	77.69	No	16.13		16.13
2	98	98	9423	0.00	0.00	0.05	No	0.05		0.05
3	99	99	9423	0.21	0.21	6.20	No	5.98		5.98
4	151	151	9423	0.31	0.31	5.58	No	5.27		5.27
5	39	39	9423	0.01	0.01	0.01	No	--		--
6	40	40	9423	0.01	0.01	0.01	No	--		--
7	109	109	9423	0.01	0.01	0.01	No	--		--
8	110	110	9423	0.01	0.01	0.01	No	--		--
9	112	112	9423	0.01	0.01	0.01	No	--		--
10	113	113	9423	0.01	0.01	0.01	No	--		--
11	114	114	9423	0.01	0.01	0.01	No	--		--
12	35	35 [12]	9423	0.00	0.00	0.50	No	0.50		0.50
13	143	143	9423	0.01	0.01	0.01	No	--		--
14	144	144	9423	0.01	0.01	0.01	No	--		--
15	149	149	9423	0.00	0.00	0.01	No	0.01		0.01
16	37	37	9423	0.01	0.01	0.01	No	--		--
17	38	38	9423	0.01	0.01	0.01	No	--		--
18	41	41 [12]	9423	0.00	0.00	0.45	No	0.45		0.45
19	103	103	9423	0.01	0.01	0.01	No	--		--
20	104	104	9423	0.01	0.01	0.01	No	--		--
21	105	105	9423	0.01	0.01	0.01	No	--		--
22	106	106	9423	0.01	0.01	0.01	No	--		--
23	107	107	9423	0.01	0.01	0.01	No	--		--
24	14C, 102, 116, 120, 122, 131, 132, 133, 152, 153, 154	E-CAP 1	9423	3.93	3.93	13.26	No	9.34		9.34
25	14C, 102, 116, 120, 122, 131, 132, 133, 152, 153, 154	E-CAP 1 - Visbreak Contribution	9423	0.00	0.00	1.34	No	1.34		1.34

TABLE 2F
PROJECT EMISSIONS INCREASE

Pollutant[1]: VOC	**Permit: 9423**
Baseline Period: Jan 2011 - Dec 2012	

	Affected or Modified Facilities [2]		Permit No.	Actual Emissions[3]	A	B	Projected Actual Emissions	Difference (B-A)[6]	Correction[7]	Project Increase[8]
	FIN	EPN			Baseline Emissions[4]	Proposed Emissions[5]				
26	PP-WWTR	PP-WWTR [11]	9423	0.55	0.55	0.87	No	0.33		0.33
27	MSS41	MSS41	9423	0.00	0.00	0.06	No	0.06		0.06
28	MSS42	MSS42	9423	0.00	0.00	0.06	No	0.06		0.06
29	MSS53	MSS53	9423	0.00	0.00	0.06	No	0.06		0.06
30	MSS54	MSS54	9423	0.00	0.00	0.06	No	0.06		0.06
31	52	52 [12]	9423	0.00	0.00	0.03	No	0.03		0.03
32	D-6850	D-6850	9423	0.00	0.00	0.00004	No	0.00004		0.00004
33	T-5104C	T-5104C	9423	0.00	0.00	0.00003	No	0.00003		0.00003
								Page Subtotal[9]		**39.67**

All emissions must be listed in tons per year (tpy). The same baseline period must apply for all facilities for a given NSR pollutant.

1. Individual Table 2F's should be used to summarize the project emission increase for each criteria pollutant.
2. Emission Point Number as designated in NSR Permit or Emissions Inventory.
3. All records and calculations for these values must be available upon request.
4. Correct actual emissions for currently applicable rule or permit requirements, and periods of non-compliance. These corrections, as well as any MSS previously demonstrated under 30 TAC 101, should be explained in the Table 2F supplement.
5. If projected actual emission is used it must be noted in the next column and the basis for the projection identified in the Table 2F supplement.
6. Proposed Emissions (column B) Baseline Emissions (column A).
7. Correction made to emission increase for what portion could have been accommodated during the baseline period. The justification and basis for this estimate must be provided in the Table 2F supplement.
8. Obtained by subtracting the correction from the difference. Must be a positive number.
9. Sum all values for this page.
10. Baseline emissions adjusted to maximum of authorized in baseline years.
11. Baseline emissions for EPN PP-WWTR are based on the sum of the EPNs 115,108, and 130. These are the effluent wastewater from the C-Line, D-Line and E-line that will be removed and replaced by a consolidated EPN, PP-WWTR.
12. Incremental analysis used for fugitive project emission increases. Baseline emissions assumed zero for EPNs 35, 41, and 52. Proposed emissions are not the MAERT.

ATTACHMENT D

SAMPLING DATA
EMISSIONS DATA AND CALCULATIONS

Waid Corporation dba Waid
Environmental Certificate of Registration
No. F-58

3. JANUARY 22, 2020 NOD AND RESPONSE NON CONF.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

January 22, 2020

MR. GERALD CRAWFORD
ENVIRONMENTAL MANAGER
EQUISTAR CHEMICALS LP
10801 CHOATE RD
PASADENA TX 77507-1503

Re: Permit Amendment
Permit Number: 9423
Bayport Polypropylene Plant
Pasadena, Harris County
Regulated Entity Number: RN100216761
Customer Reference Number: CN600124705

Dear Mr. Crawford:

Upon evaluation of the above-referenced amendment, we have determined that your application is deficient and Equistar Chemicals, LP must provide additional information to ensure that the requirements for obtaining a permit amendment are met. Please furnish the following information within 15 days, i.e., by February 5, 2020:

- Equistar is currently requesting the authorization of some unaccounted emissions from visbreaking activities that have been occurring since 1984. In the current Amendment Project Number 299187, Equistar has performed retrospective Nonattainment review that includes these unaccounted emissions, going back to September 2018 with Amendment Project Number 271097. Since the unaccounted visbreaking emissions originated from 1984, please provide the Nonattainment review analysis for any projects since 1984, specifically, but not limited to Amendment Project Number 271097, in which contemporaneous netting was triggered, considering any modification made to the permit and the unaccounted visbreaking emissions within the contemporaneous period. Please provide Tables 1F, 2F, and 3F as necessary. Any project that has already triggered Nonattainment review may be excluded from this analysis.

- In Renewal Project Number 156362, issued in December 2010, emission caps from the three individual lines were combined into a single cap. When this was done, some Emission Point Numbers (EPNs) were removed but their contributions to the emission limits in the emissions cap were not adjusted. This action could thus be considered a modification of the permit, which would require a retrospective review for Nonattainment associated with the renewal project that would include the modification as well as incorporation of the unaccounted visbreaking emissions during that time. Please either provide the retrospective review, including Tables 1F, 2F, and 3F as necessary, or provide an explanation of why the establishment of the combined emissions cap did not constitute a modification given the contributions were not removed from the emissions cap.

After receipt of all the additional information, we will continue the review of your application. If the information furnished in response to this notice results in the need for further clarification or additional information, we will notify you. Please note that the applicant Equistar Chemicals, LP is required to furnish

all information to demonstrate that the facility or source will comply with all applicable federal and state rules and statutes.

Failure to submit all of the requested information within 15 days of the date of this notification may result in a voidance of your application. Following a voidance, the permit fee will be retained for 180 days. If you still wish to pursue the project following the voidance, you will need to submit an entirely new application. The new application will be subject to the state and federal rules and regulations in place at the time of submittal. If public notice was required in the original application, you may be required to republish the notice. You do not need to submit additional fees with the new application if the project scope has not increased and the original fee was correct.

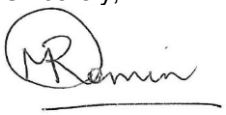
In addition, please ensure that a copy of the submitted information is also sent to the applicable Texas Commission on Environmental Quality (TCEQ) regional office and any local air pollution control program(s) with jurisdiction. Please note that the cover letter for your submission should indicate that a copy has been sent to the regional office [and local air pollution control program(s), if applicable]. Lists of the TCEQ regional offices and local air pollution control programs are available at:

https://www.tceq.texas.gov/agency/directory/region/reglist.html
and
www.tceq.texas.gov/permitting/air/local_programs.html, respectively.

If a new application is not submitted within 180 days from the date of the voidance, you will forfeit the original permit fee.

Thank you for your cooperation in this matter. If you have any questions, please contact me at (512) 239-1284, or write to the TCEQ, Office of Air, Air Permits Division, MC-163, P.O. Box 13087, Austin, Texas 78711-3087.

Sincerely,



Rahim Momin
Air Permits Division
Texas Commission on Environmental Quality

Enclosure

cc: Chief Health Inspector, Health Department, City of Pasadena, Pasadena
Director, Harris County, Pollution Control Services, Pasadena
Air Section Manager, Region 12 – Houston
Mr. Derek Rodricks, Principal Environmental Engineer, Equistar Chemicals, L.P.
Mr. Ryan S. Mayces, Project Manager, Waid Environmental

Project Number: 299187

Subject: Application Deficiency: Equistar Chemicals; Project Number 299187; Permit Number 9423

Rahim,

Thank you for your assistance in locating project files. E-CAP represents emissions from uncontrolled sources downstream of the dryers. VOC emissions from polymer handling are calculated using the headspace testing method. Product collected immediately prior to leaving the dryer is sampled and tested for VOC emissions. Emissions from C line, D line and E line are estimated using the headspace analysis and production lbs for each individual production unit as per Special Condition. Visbreak emissions are estimated in a similar fashion with sampling occurring after organic peroxides are added at the extruder. E-CAP emissions are practically enforceable based on the production limits for each line and the periodic sampling required by the permit. As such, the project history was reviewed in an attempt to identify projects that resulted in authorized production increases.

As you are aware, permit representations for projects that occurred prior to the ownership of the facility by Equistar Chemicals cannot be certified by Equistar. As such, I have put together the following tables for our response to Item 1.

C – Line (Permit No. 9423)

Given: 7.7 lbs VOC/MMlbs production

Permit No.	TCEQ Project No.	Project Complete Date	Authorized Production MMlbs	Netting Indicated	Project Increase/Net Increase (tons/yr)	Visbreak Contribution (tons/yr)	PSD/NA Potential Applicability	Comment
9423	952	4/19/1984	260	Retrospective 1994	Negative for the period	1.00	No	1994 Retrospective netting indicated that the period included reductions from unit shutdowns in excess of 100 tons.
9423	4477	10/13/1988	???	Retrospective 1994	Negative for the period	???	No	1994 Retrospective netting indicated that the period included reductions from unit shutdowns in excess of 100 tons.

9423	44769	11/15/1996	500	Yes	Negative for the period	<0.924	No	Project files indicate excess reductions from unit shutdowns.
9423	21097	9/26/2018	701	No	38.33	0.77	No	Table 1F and 2F were previously submitted. Total project increase for all sources 39.67 (includes visbreak contribution of 1.34 tons/yr from C & D line)

D – Line (Permit No. 9496 & 9423)

Given: 5.6 lbs VOC/MMlbs production

Permit No.	TCEQ Project No.	Project Complete Date	Authorized Production MMlbs	Netting Indicated	Project Increase/Net Increase (tons/yr)	Visbreak Contribution (tons/yr)	PSD/NA Potential Applicability	Comment
9496	1370	2/11/1985	260	Retrospective 1994	Negative for the period	0.73	No	1994 Retrospective netting indicated that the period included reductions from unit shutdowns in excess of 100 tons.
9423	41899	10/9/1996	500	No	2.96	<0.672	No	Project files indicate project increase < 5 ton netting trigger.
9423	21097	9/26/2018	701	No	38.33	0.57	No	Table 1F and 2F were previously submitted. Revised project increase for all sources

								39.67 (includes visbreak contribution of 1.34 tons/yr from C & D line)

E – Line (Permit No. 19036 & 9423)

Given: 3.9 lbs VOC/MMlbs production

Permit No.	TCEQ Project No.	Project Complete Date	Authorized Production MMlbs	Netting Indicated	Project Increase/Net Increase (tons/yr)	Visbreak Contribution (tons/yr)	PSD/NA Potential Applicability	Comment
19036	4400	12/6/1988	378	Retrospective 1994	Negative for the period	0.74	No	1994 Retrospective netting indicated that the period included reductions from unit shutdowns in excess of 100 tons.
19036	47343	3/20/1997	560	No	0.52	0.35	No	Project files indicate project increase < 5 ton netting trigger.
75448 (PBR)	114541	05/04/05	650	No	2.45	0.18	No	Project files indicate project increase < 5 ton netting trigger.
84081	136507	03/6/2008	750	No	0.92	0.20	No	Project files indicate project increase < 5 ton netting trigger.

Item 2

Project Number 156362, issued in December 2010, combined multiple EPNs under E-CAP. However, the production limits and headspace testing requirements for each line remained in place. E-CAP represents emissions from uncontrolled sources downstream of the dryers. VOC emissions from polymer handling are calculated using the headspace testing method. Product collected immediately prior to leaving the dryer is sampled and tested for VOC emissions. Emissions from C line, D line and E line are estimated using the headspace analysis and production lbs for each individual production unit per Special Condition. As such, the emissions CAP created in the referenced project did not relax the enforceable emission

limits for each line. The combination of the individual EPNS under a CAP is similar to combining equipment fugitive areas into a single EPN. There was no project increase related to creation of E-CAP because the production limits were not combined.

Thanks,

Ryan S. Mayces
Senior Consulting Engineer
Waid Corporation dba **Waid Environmental**
1325 Space Park Drive, Suite D, Houston, TX 77058
Phone: 281-333-9990 Fax: 512-255-8780 Cell: 281-513-1936

http://www.waid.com

4. OTHER APPLICATION UPDATES

From: Ryan S. Mayces
To: "Rahim Momin"
Cc: Rodricks, Derek
Subject: RE: Equistar; Project 299187; Permit 9423
Date: Thursday, January 9, 2020 1:58:01 PM
Attachments: LBY_Visbreak Table 1F.PDF
LBY_Visbreak Table 2F.PDF

Rahim,

I have attached proposed Table 1Fs and 2Fs accounting for the 4.79 tons/yr VOC attributable to pre-expansion visbreaking activities for C line, D-Line, and E-Line. The units were issued construction permits between 1984-1988. The visbreak activities were conducted from the start of operation of each unit. The emissions were considered to be negligible prior to the audit finding that prompted TCEQ Project 299187, amending Permit 9423. The construction permits were issued prior to regulation of nonattainment areas. The following summarizes the information provided in the Forms.

C Line – Originally authorized by Permit No. 9423 (1984)– Site VOC < 100 tons/yr and Project < 100 tons/yr (Including Visbreak Contribution)

D Line – Originally authorized by Permit No. 9496 (1985) – Site VOC < 100 tons/yr and Project < 100 tons/yr (Including Visbreak Contribution)

E Line – Originally authorized by Permit No. 19036 (1988) - Site VOC > 100 tons/yr and Project < 40 tons/yr (Including Visbreak Contribution)

The attached Forms and analysis are based on a review of historic files available through TCEQ's online records search dating back to 7/10/1997. The original permit MAERTs could not be located.

Thanks,

Ryan S. Mayces
Senior Consulting Engineer
Waid Corporation dba **Waid Environmental**
1325 Space Park Drive, Suite D, Houston, TX 77058
Phone: 281-333-9990 Fax: 512-255-8780 Cell: 281-513-1936
http://www.waid.com

From: Rahim Momin [mailto:Rahim.Momin@tceq.texas.gov]
Sent: Monday, January 6, 2020 10:42 AM
To: Ryan S. Mayces <RMayces@WAID.com>
Subject: Equistar; Project 299187; Permit 9423

Hello Mr. Mayces:

Please note: There are only two MAERTs that I am referencing. If we include the unaccounted visbreaking VOC emissions then the projected changes goes over the threshold 40 tpy.

September 2018 modification approval for expansion (Amendment; Project 271097)

Emission Summary for VOC

Air Contaminant	Current Allowable Emission Rates (tpy)	Allowable Emission Rates Authorized by Consolidated PBRs (tpy)	Proposed Allowable Emission Rates (tpy)	Change in Allowable Emission Rates (tpy)	Project Changes at Major Sources (Baseline Actual to Allowable)*
VOC	165.43	5.79	179.49 (+4.79)**	8.27	38.30 (43.09)***

* Baseline actuals for VOC are based on Jan 2011-Dec 2012. *Baseline Actual value is 141.19 tpy.*

**If pre-expansion unaccounted visbreaking emissions of 4.79 tpy are included.

***VOC emissions exceed the 40 tpy threshold for a major site in a *moderate* nonattainment county.

July 2019 Project 291466 (Amendment to update emissions from Project 271097)

Emission Summary for VOC

Air Contaminant	Current Allowable Emission Rates (tpy)	Proposed Allowable Emission Rates (tpy)	Change in Allowable Emission Rates (tpy)	Project Changes at Major Sources (Baseline Actual to Allowable)*
VOC	179.49 (+4.79)	179.72 (+4.79)	0.23	38.53 (43.32)

Current Project 299187

Emission Summary

Air Contaminant	Current Allowable Emission Rates (tpy)	Proposed Allowable Emission Rates (tpy)	Change in Allowable Emission Rates (tpy)	Project Changes at Major Sources (Baseline Actual to Allowable)
VOC	179.72 (+4.79)	181.06 (+4.79)	4.79 + 1.34 = 6.13	39.87 (44.66)

Thank you.

Rahim Momin
TCEQ Air Permits
Chemical Team 1
(512) 239-1284

How is our customer service?

Fill out our online customer satisfaction survey at:
https://www.tceq.texas.gov/customersurvey

TABLE 1F
AIR QUALITY APPLICATION SUPPLEMENT

Permit No.:	**9423 (Orginal Permit No. 9423)**	**Application Submittal Date: March 2019 (Original Issuance 4/19/1984)**	
Company:	**Equistar Chemicals LP - Bayport Polypropylene Plant**		
RN:	**RN100216761**	**Facility Location:**	**12001 Bay Area Blvd.**
City:	**Pasadena**	**County:**	**Harris**
Permit Unit I.D.:		**Permit Name:**	
Permit Activity:	☐ **New Source** ☒ **Modification**		
Project or Process Description:	**Pre-Expansion - C-Line Visbreak Emissions**		

ALL RESPONSES BASED ON 1984

Complete for all Pollutants with a Project Emission Increase.	**POLLUTANTS**						
	Ozone		**CO**	**PM_{10}**	**NOx**	**SO_2**	**Other[1] (PM2.5)**
	VOC	**NOx**					
Nonattainment? (yes or no)	No						
Existing site PTE (tpy)?	< 100						
Proposed project emission increases (tpy from 2F)[3]	<100						
Is the existing site a major source?[2] If not, is the project a major source by itself? (yes or no)	No						
If site is major, is project increase significant?	No						
If netting required, estimated start of construction?							
Five years prior to start of construction							
Estimated start of operation							
Net contemporaneous change, including proposed project, from Table 3F. (tpy)							
FNSR APPLICABLE? (yes or no)	No						

1 Other PSD pollutants.

2 Nonattainment major source is defined in Table 1 in 30 TAC 116.12(11) by pollutant and county. PSD thresholds are found in 40 CFR § 51.166(b)(1).

3 Sum of proposed emissions minus baseline emissions, increases only. Nonattainment thresholds are found in Table 1 in 30 TAC 116.12(11) and PSD thresholds in 40 CFR § 51.166(b)(23).

The representations made above and on the accompanying tables are true and correct to the best of my knowledge.

Signature Title Date

TABLE 1F
AIR QUALITY APPLICATION SUPPLEMENT

Permit No.:	**9423 (Orginal Permit No. 9496)**	**Application Submittal Date: March 2019 (Original Issuance 02/11/1985)**	
Company:	**Equistar Chemicals LP - Bayport Polypropylene Plant**		
RN:	**RN100216761**	**Facility Location:**	**12001 Bay Area Blvd.**
City:	**Pasadena**	**County:**	**Harris**
Permit Unit I.D.:		**Permit Name:**	
Permit Activity:	☐ **New Source** ☒ **Modification**		
Project or Process Description:	**Pre-Expansion - D-Line Visbreak Emissions**		

ALL RESPONSES BASED ON 1985

Complete for all Pollutants with a Project Emission Increase.	**POLLUTANTS**						
	Ozone		**CO**	**PM_{10}**	**NOx**	**SO_2**	**Other[1] (PM2.5)**
	VOC	**NOx**					
Nonattainment? (yes or no)	No						
Existing site PTE (tpy)?	< 100						
Proposed project emission increases (tpy from 2F)[3]	< 100						
Is the existing site a major source?[2] If not, is the project a major source by itself? (yes or no)	No						
If site is major, is project increase significant?	No						
If netting required, estimated start of construction?							
Five years prior to start of construction							
Estimated start of operation							
Net contemporaneous change, including proposed project, from Table 3F. (tpy)							
FNSR APPLICABLE? (yes or no)	No						

1 Other PSD pollutants.

2 Nonattainment major source is defined in Table 1 in 30 TAC 116.12(11) by pollutant and county. PSD thresholds are found in 40 CFR § 51.166(b)(1).

3 Sum of proposed emissions minus baseline emissions, increases only. Nonattainment thresholds are found in Table 1 in 30 TAC 116.12(11) and PSD thresholds in 40 CFR § 51.166(b)(23).

The representations made above and on the accompanying tables are true and correct to the best of my knowledge.

Signature Title Date

TABLE 1F
AIR QUALITY APPLICATION SUPPLEMENT

Permit No.:	**9423 (Orginal Permit No. 19036)**	**Application Submittal Date: March 2019 (Original Issuance 12/06/1988)**	
Company:	**Equistar Chemicals LP - Bayport Polypropylene Plant**		
RN:	**RN100216761**	**Facility Location:**	**12001 Bay Area Blvd.**
City:	**Pasadena**	**County:**	**Harris**
Permit Unit I.D.:		**Permit Name:**	
Permit Activity:	☐ **New Source** ☒ **Modification**		
Project or Process Description:	**Pre-Expansion - E-Line Visbreak Emissions**		

ALL RESPONSES BASED ON 1988

Complete for all Pollutants with a Project Emission Increase.	**POLLUTANTS**						
	Ozone		**CO**	**PM_{10}**	**NOx**	**SO_2**	**Other[1] (PM2.5)**
	VOC	**NOx**					
Nonattainment? (yes or no)	No						
Existing site PTE (tpy)?	> 100						
Proposed project emission increases (tpy from 2F)[3]	< 40						
Is the existing site a major source?[2] If not, is the project a major source by itself? (yes or no)	No						
If site is major, is project increase significant?	No						
If netting required, estimated start of construction?							
Five years prior to start of construction							
Estimated start of operation							
Net contemporaneous change, including proposed project, from Table 3F. (tpy)							
FNSR APPLICABLE? (yes or no)	No						

1 Other PSD pollutants.

2 Nonattainment major source is defined in Table 1 in 30 TAC 116.12(11) by pollutant and county. PSD thresholds are found in 40 CFR § 51.166(b)(1).

3 Sum of proposed emissions minus baseline emissions, increases only. Nonattainment thresholds are found in Table 1 in 30 TAC 116.12(11) and PSD thresholds in 40 CFR § 51.166(b)(23).

The representations made above and on the accompanying tables are true and correct to the best of my knowledge.

Signature Title Date

TABLE 2F
PROJECT EMISSIONS INCREASE

Pollutant[1]: VOC	**Permit: 9423**
Baseline Period: Original Issuance 4/19/1984	

Affected or Modified Facilities [2]			Permit No.	Actual Emissions[3]	A	B	Projected Actual Emissions	Difference (B-A)[6]	Correction[7]	Project Increase[8]
	FIN	EPN			Baseline Emissions[4]	Proposed Emissions[5]				
25	14C, 102, 116, 120, 122, 131, 132, 133, 152, 153, 154	E-CAP 1 - Visbreak Contribution (C-Line)	9423	0.00	0.00	1.93	No	1.93		1.93
C Line site contribution of VOC is less than 100 tons including the 1.93 tons/yr from visbreak activities. The original authorization would not have triggered PSD. Nonattainment review was not applicable at the time of contruction.										
								Page Subtotal[9]		**1.93**

All emissions must be listed in tons per year (tpy). The same baseline period must apply for all facilities for a given NSR pollutant.

1. Individual Table 2F's should be used to summarize the project emission increase for each criteria pollutant.
2. Emission Point Number as designated in NSR Permit or Emissions Inventory.
3. All records and calculations for these values must be available upon request.
4. Correct actual emissions for currently applicable rule or permit requirements, and periods of non-compliance. These corrections, as well as any MSS previously demonstrated under 30 TAC 101, should be explained in the Table 2F supplement.
5. If projected actual emission is used it must be noted in the next column and the basis for the projection identified in the Table 2F supplement.
6. Proposed Emissions (column B) Baseline Emissions (column A).
7. Correction made to emission increase for what portion could have been accommodated during the baseline period. The justification and basis for this estimate must be provided in the Table 2F supplement.
8. Obtained by subtracting the correction from the difference. Must be a positive number.
9. Sum all values for this page.
10. Baseline emissions adjusted to maximum of authorized in baseline years.
11. Incremental analysis used for Visbreak emission increases associated with pre-expansion emission rates. Proposed emissions are not the MAERT.

TABLE 2F
PROJECT EMISSIONS INCREASE

Pollutant[1]: VOC	**Permit: 9423 (Permit No. 9496)**
Baseline Period: Original Issuance 2/11/1985	

Affected or Modified Facilities [2]			Permit No.	Actual Emissions[3]	A	B	Projected Actual Emissions	Difference (B-A)[6]	Correction[7]	Project Increase[8]
	FIN	EPN			Baseline Emissions[4]	Proposed Emissions[5]				
25	14C, 102, 116, 120, 122, 131, 132, 133, 152, 153, 154	E-CAP 1 - Visbreak Contribution (D-Line)	9423 (Original 9496)	0.00	0.00	1.40	No	1.40		1.40
D Line site contribution of VOC is less than 100 tons including the 1.40 tons/yr from visbreak activities. The original authorization would not have triggered PSD. Nonattainment review was not applicable at the time of contruction.										
								Page Subtotal[9]		**1.40**

All emissions must be listed in tons per year (tpy). The same baseline period must apply for all facilities for a given NSR pollutant.

1. Individual Table 2F's should be used to summarize the project emission increase for each criteria pollutant.
2. Emission Point Number as designated in NSR Permit or Emissions Inventory.
3. All records and calculations for these values must be available upon request.
4. Correct actual emissions for currently applicable rule or permit requirements, and periods of non-compliance. These corrections, as well as any MSS previously demonstrated under 30 TAC 101, should be explained in the Table 2F supplement.
5. If projected actual emission is used it must be noted in the next column and the basis for the projection identified in the Table 2F supplement.
6. Proposed Emissions (column B) Baseline Emissions (column A).
7. Correction made to emission increase for what portion could have been accommodated during the baseline period. The justification and basis for this estimate must be provided in the Table 2F supplement.
8. Obtained by subtracting the correction from the difference. Must be a positive number.
9. Sum all values for this page.
10. Baseline emissions adjusted to maximum of authorized in baseline years.
11. Incremental analysis used for Visbreak emission increases associated with pre-expansion emission rates. Proposed emissions are not the MAERT.

TABLE 2F
PROJECT EMISSIONS INCREASE

Pollutant[1]: VOC	Permit: 9423 (Permit No. 19036)
Baseline Period: Original Issuance 12/06/1988	

Affected or Modified Facilities [2]			Permit No.	Actual Emissions[3]	A	B	Projected Actual Emissions	Difference (B-A)[6]	Correction[7]	Project Increase[8]
	FIN	EPN			Baseline Emissions[4]	Proposed Emissions[5]				
25	14C, 102, 116, 120, 122, 131, 132, 133, 152, 153, 154	E-CAP 1 - Visbreak Contribution (E-Line)	9423 (Original 19036)	0.00	0.00	1.46	No	1.46		1.46
E Line site contribution of VOC is less than 40 tons including the 1.46 tons/yr from visbreak activities. The original authorization would not have triggered PSD. Nonattainment review was not applicable at the time of contruction.										
Page Subtotal[9]										1.46

All emissions must be listed in tons per year (tpy). The same baseline period must apply for all facilities for a given NSR pollutant.

1. Individual Table 2F's should be used to summarize the project emission increase for each criteria pollutant.
2. Emission Point Number as designated in NSR Permit or Emissions Inventory.
3. All records and calculations for these values must be available upon request.
4. Correct actual emissions for currently applicable rule or permit requirements, and periods of non-compliance. These corrections, as well as any MSS previously demonstrated under 30 TAC 101, should be explained in the Table 2F supplement.
5. If projected actual emission is used it must be noted in the next column and the basis for the projection identified in the Table 2F supplement.
6. Proposed Emissions (column B) Baseline Emissions (column A).
7. Correction made to emission increase for what portion could have been accommodated during the baseline period. The justification and basis for this estimate must be provided in the Table 2F supplement.
8. Obtained by subtracting the correction from the difference. Must be a positive number.
9. Sum all values for this page.
10. Baseline emissions adjusted to maximum of authorized in baseline years.
11. Incremental analysis used for Visbreak emission increases associated with pre-expansion emission rates. Proposed emissions are not the MAERT.

From: Ryan S. Mayces
To: "Rahim Momin"; Rodricks, Derek
Subject: RE: Notice of Deficiency Equistar Amendment Permit No. 9423
Date: Friday, February 28, 2020 12:58:14 PM
Attachments: image001.png

The two organic peroxide storage tanks represented in this application store material having a vapor pressure that is much less than 0.5 psia. The tanks are insulated and equipped with submerged-fill pipes, which meets Tier 1 BACT.

Thanks,

Ryan S. Mayces
Senior Consulting Engineer
Waid Corporation dba **Waid Environmental**
1325 Space Park Drive, Suite D, Houston, TX 77058
Phone: 281-333-9990 Fax: 512-255-8780 Cell: 281-513-1936

http://www.waid.com

From: Rahim Momin [mailto:Rahim.Momin@tceq.texas.gov]
Sent: Thursday, February 27, 2020 9:47 AM
To: Rodricks, Derek <Derek.Rodricks@lyondellbasell.com>
Cc: Ryan S. Mayces <RMayces@WAID.com>
Subject: FW: Notice of Deficiency Equistar Amendment Permit No. 9423

Dear Mr. Rodricks:

Can you please email me the BACT review analysis for the two organic peroxide storage tanks (DLX/ELX Peroxide Feed Tank and CLX Peroxide Feed Tank). Please call me you have question.

Thank you.
Rahim Momin
TCEQ Air Permits
Chemical Team 1
(512) 239-1284

How is our customer service?
Fill out our online customer satisfaction survey at:
https://www.tceq.texas.gov/customersurvey

From: Rodricks, Derek <Derek.Rodricks@lyondellbasell.com>
Sent: Tuesday, September 3, 2019 10:34 PM
To: John Bregger <John.Bregger@Tceq.Texas.Gov>; Rahim Momin <Rahim.Momin@tceq.texas.gov>
Cc: Ryan S. Mayces <RMayces@WAID.com>
Subject: RE: Notice of Deficiency Equistar Amendment Permit No. 9423

Mr. Bregger,
Please find attached, Equistar's response to the NOD dated July 30, 2019. The updated modeling files will be sent in a separate email with a link to the files. Please contact me if there are questions or additional information is needed. I would like to wish you the best in your career outside TCEQ. I deeply appreciate the opportunity to work with you on couple of our air permit applications.

Regards

Derek Rodricks
(281)291-1684

From: John Bregger <John.Bregger@Tceq.Texas.Gov>
Sent: Thursday, August 29, 2019 9:13 AM
To: Rodricks, Derek <Derek.Rodricks@lyondellbasell.com>
Cc: Rahim Momin <Rahim.Momin@tceq.texas.gov>
Subject: RE: Notice of Deficiency Equistar Amendment Permit No. 9423

Good morning Derek,

I appreciate the note regarding the NOD response. I wanted to let you know that I will be leaving the agency next week. This amendment has been reassigned to my colleague, Mr. Rahim Momin, who has been CC'd on this email. I will be working with him during this transition phase before my departure.

Regarding the cooling tower flow update request – I think this should be fine. The project is still in the review portion at this point (awaiting review of the NOD responses) and evaluating the data given as of now. If any updates are required (such as calculations, Table 1a, modeling/impacts,

retrospective review discussion), please make sure to include those in this update.

Thank you,

John

From: Rodricks, Derek <Derek.Rodricks@lyondellbasell.com>
Sent: Thursday, August 29, 2019 8:51 AM
To: John Bregger <John.Bregger@Tceq.Texas.Gov>
Subject: RE: Notice of Deficiency Equistar Amendment Permit No. 9423

Good morning Mr. Bregger,
I wanted to drop you note, saying that our consultant is finalizing our response. I shall be sending our comments back later today. I wanted to check with you, if you were open to me including a cooling tower flow update with this application. I will call you later today, after I have finalized our response to the July 29, 2019 NOD.

Thank you.

Derek

From: John Bregger <John.Bregger@Tceq.Texas.Gov>
Sent: Tuesday, July 30, 2019 3:27 PM
To: Rodricks, Derek <Derek.Rodricks@lyondellbasell.com>
Cc: R12APDMail <R12APDMail@tceq.texas.gov>; modaniel@ci.pasadena.tx.us; Air_Permits@pcs.hctx.net; latrice.babin@pcs.hctx.net; Goff, Stephen G <Stephen.Goff@lyondellbasell.com>
Subject: Notice of Deficiency Equistar Amendment Permit No. 9423

Good afternoon Mr. Rodricks,

I have attached the Notice of Deficiency (NOD) we discussed yesterday, July 29, 2019. The requested due date for the items in the NOD is 30 days from the date of the letter, which is **Thursday, August 29, 2019**. I have CC'd Mr. Goff, who is listed as the Responsible Official for this amendment, as well as the other appropriate recipients.

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

Thank you,

John Bregger
Chemical Section • Air Permits Division
Texas Commission on Environmental Quality
Main: 512-239-1250 • Direct: 512-239-4970 • Fax: 512-239-0977

How is our customer service?

Fill out our online customer satisfaction survey at:
www.tceq.state.tx.us/goto/customersurvey.

NOTICE: New Source Review Application workbooks are now available for all initial, amendment, and change of location air permit applications. Applicable sheets may be used for renewal, qualified facility, and alteration projects. These workbooks will help you create a complete application, which will streamline the review process and reduce permit processing timeframes. Additionally, please note that the Electronic Modeling Evaluation Workbook (EMEW) is available to assist in your impacts reviews (both for SCREEN3 and Non-SCREEN3). For more information, click here.

Starting June 1, 2019, the NSR Application Workbook will be required and all minor projects utilizing modeling to complete an impacts analysis will be required to include an EMEW with the application submittal.

Information contained in this email is subject to the Disclaimer and Privacy Notice found by clicking on the following link: <a href="http://www.lyb.com/en/about-us/disclaimer">http://www.lyb.com/en/about-us/disclaimer

From: Ryan S. Mayces
To: "Rahim Momin"; Rodricks, Derek
Subject: RE: Application Deficiency: Equistar Chemicals; Project Number 299187; Permit Number 9423
Date: Friday, March 20, 2020 5:24:37 PM
Attachments: Visbreak_Permit9423_RetrospectiveAnalysis.xlsx
9423_1994.pdf
9423_1996.pdf
9496_1994.pdf
9496_1996.pdf
19036_1997.pdf
75448_tech review.pdf
84081_tech review.pdf
HPP5_retrospectivenetting1994.pdf

Rahim,

Attached is an updated table and PDF files that were used to determine increases from the listed projects. Please contact me and I can walk you through the information provided. As we discussed, visbreak emissions are based on production. E-CAP emissions are practically enforceable based on the production limits for each line and the periodic sampling required by the permit. As such, the project history was reviewed in an attempt to identify projects that resulted in authorized production increases.

Thanks,

Ryan S. Mayces
Senior Consulting Engineer
Waid Corporation dba **Waid Environmental**
1325 Space Park Drive, Suite D, Houston, TX 77058
Phone: 281-333-9990 Fax: 512-255-8780 Cell: 281-513-1936

http://www.waid.com

From: Rahim Momin [mailto:Rahim.Momin@tceq.texas.gov]
Sent: Monday, March 16, 2020 4:15 PM
To: Rodricks, Derek <Derek.Rodricks@lyondellbasell.com>; Ryan S. Mayces <RMayces@WAID.com>
Subject: FW: Application Deficiency: Equistar Chemicals; Project Number 299187; Permit Number 9423

Dear Mr. Mayces:

Please fill the summary table below for the retrospective NA review analysis and provide Table 1F, 2F and 3F as per the NOD request (attachment). If you cannot find the information please insert “NA”, and explain why it cannot trigger NA review. Please call me if you have any question.

Permit No.	Project No.	Application Date	Netting Threshold	Allowables to Baseline Actuals (2F)	Netting Triggered Y/N	Net Contemporaneous Change (3F)

Thank you.
Rahim Momin
TCEQ Air Permits
Chemical Team 1
(512) 239-1284

How is our customer service?
Fill out our online customer satisfaction survey at:
https://www.tceq.texas.gov/customersurvey

From: Amber Vice <AVice@WAID.com>
Sent: Friday, February 7, 2020 10:42 AM
To: Rahim Momin <Rahim.Momin@tceq.texas.gov>
Cc: R12APDMail <R12APDMail@tceq.texas.gov>; 'modaniel@ci.pasadena.tx.us' <modaniel@ci.pasadena.tx.us>; 'Air_Permits@pcs.hctx.net' <Air_Permits@pcs.hctx.net>; 'latrice.babin@pcs.hctx.net' <latrice.babin@pcs.hctx.net>; 'Derek.Rodricks@lyondellbasell.com' <Derek.Rodricks@lyondellbasell.com>; Ryan S. Mayces <RMayces@WAID.com>
Subject: Application Deficiency: Equistar Chemicals; Project Number 299187; Permit Number 9423

Good morning Mr. Momin,

On behalf of Equistar Chemicals, I am sending you the NOD Response for Permit No. 9423.

If I can be of further assistance, please let me know.

Thank you,
Amber Vice
Waid Environmental
1325 Space Park Drive, Suite D
Houston, TX 77058
(512) 255-9999

Permit No.	Project No.	Description of Change	Application Date	Project Complete Date	Visbreak Contribution (tons/yr)	Netting Threshold (tons/yr)	Allowables to Baseline Actuals (2F)	Netting Triggered Y/N	Net Contemporaneous Change (3F)	Comment
9423	952	C-Line - 260 MMlb	1/23/1984	4/19/1984	1	40	N/A	Y	-124.78	Retrospective netting was performed in 1994 (see 9423_1994)
9496	1370	D-Line - 260 MMlb	7/6/1984	2/11/1985	0.73	40	N/A	Y	-124.78	Retrospective netting was performed in 1994 (see 9496_1994)
19036	4400	E-Line - 378 MMlb	8/18/1988	12/6/1988	0.74	40	N/A	Y	-82.185	Estimated from 1994 Table 2N Permit No. 19546 (see HPP5_retrospectivenetting 1994
9496	41899	C-Line - 500 MMlb	3/1/1996	10/9/1996	0.672	5	2.69	N		Emissions discussion (9496_1996)
9423	44769	D-Line - 500 MMlb	7/16/1996	11/15/1996	0.924	5	11.46	Y	<0	Listed creditable reductions of 237.96 tons/yr (see 9423_1996)
19036	47343	E-Line - 560 MMlb	10/30/1996	3/20/1997	0.35	5	0.52	N		TCEQ tech review (19036_1997)
75448 (PBR)	114541	E-Line - 650 MMlb	3/31/2005	5/4/2005	0.18	5	2.45	N		TCEQ tech review (75448_tech review)
84081	136507	E-Line - 750 MMlb	2/8/2008	3/6/2008	0.2	5	0.92	N		TCEQ tech review (84081_tech review)
9423	271097	C & D Line - 701 & 701 MMlbs	6/30/2017	9/26/2018	1.34	40	39.67	N		This analysis was included in the application.

HPP-3 (Permit # 9423)
Netting Calculation

A construction permit for HPP-3 was issued on 4/19/1984, and the operating permit was issued on 10/29/1985.

The contemporaneous period for this project is from 4/19/1979 to 10/29/1985. During this period the following activities took place in this facility:

1- HPP-1 completely shutdown
2- Construction of new units: HPP-3 and HPP-4.

For both HPP-3 and HPP-4 the maximum allowable emissions in the permits were less than actual emissions (during the contemporaneous period). It must also be noted that in the 1992-1993 period Himont has self reported these discrepancies, and received Notices of Violation from the TNRCC. Corrective actions were taken to get into compliance, All units are being monitored under 28MID plan which results in a decrease in emissions, and permits were/are being amended.

UNIT	Permit#	During Contemn. period emissions (28M) (ton/yr)	1993 emissions (28 MID) (ton/yr)
HPP-3	9423	45.856	35.41
HPP-4	9496	46.546	35.93
HPP-5	19036	42.595	31.05
HPP-6	19546	141.54	62.65

A review of the permit files indicates that all 4 units are required to implement 28MID.

In this calculation the maximum allowable emissions were not used. Emissions during the contemporaneous period were used as increases since they represent maximum potential emissions during that period (greater than allowable.)

The netting calculations shows a "net decrease of 124.78 tons/yr" for the HPP-3 project contemporaneous period.

HPP-1 938A
HPP-2 1357A

FAX Transmission

From:	Vicki Rodden VLR	**Montell USA Inc.**
Questions?	Call 713-474-4481 ext 406 Fax 713-474-2604	12001 Bay Area Blvd Pasadena, TX 77507
To:	Paul Mix, P.E.	
Company:	TNRCC	512-239-1330, 512-239-1564
Address:	P.O. Box 13087, Capitol Station	Austin, TX 78711-3087
Date:	November 5, 1996	
Time:	1:27 PM	Pages: 4 (including this one)

Message:

Montell is proposing to net out of NSR (and the public notice requirements) using some of the creditable reductions achieved when the HPP#2 production unit permitted under R-1357A was shutdown. Attached are Tables 3N, 5N, and 9N. I believe the documentation should now be complete, but please let me know if you need any additional information.

TABLE 3N
DESCRIPTION OF CREDITABLE REDUCTIONS

Company Name: Montell USA Inc. Contaminant: VOC
Date Action Occurred: 3/90 SIC code for this plant site: 2821
Check ONE of the following:

☒ Permit No. 1357A ☐ Grandfathered Facility ☐ Standard Exemption

For CREDITABLE reductions, verify each statement by checking all appropriate boxes:

☒ The reductions occurred within the contemporaneous period.*
☒ The reductions occurred at the applicant's same major stationary source.*
☒ The reductions have not been relied upon in issuing a previous PSD permit or nonattainment permit.
☒ The reductions have not been used as an offset in a previous nonattainment permit, and are not reserved in an application for use as an offset.*
☒ As of the date of this application, the reductions were not required by any rule pursuant to the FCAA that was effective either before the reduction occurred or within five years after the reduction occurred.*
☒ The reduction was not required by the TNRCC's regulations defining RACT, New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAP) or the 1990 Federal Clean Air Act Amendments.**
☒ The reductions are federally enforceable.*
☒ The reductions are of the same qualitative significance.*

For grandfathered facilities or standard exemptions:

☐ Records for this facility are available to demonstrate the actual emissions of this facility for a two-year period prior to the reduction claimed.

Please give a complete description of project's reductions and credits. Provide all EPN's affected by this project. Provide any explanation for above exceptions.

The reduction was due to the complete shutdown of HPP-2. All EPN's associated with this permit were removed from service. Reductions also include fugitive emissions.

Units' Allowable: _____ Units' Actual***: 237.96 tons/year

* For a reduction or increase to be creditable these boxes must be checked. Any change in emissions may not be used in netting calculation without this verification.
** This box must be checked or an explanation provided for any emission change not meeting this requirement.
*** Averaged over the two-year period prior to activity.

DRAFT *07/93*

TABLE 5N

COMPLIANCE CERTIFICATION FOR TEXAS NONATTAINMENT NEW SOURCE REVIEW.

Completion of this table will fulfill the requirements of Section 173(a)(3) of the Federal Clean Air Act.

All major stationary sources owned or operated by the applicant (or by any person controlling, controlled by, or under common control with the applicant) in the state are in compliance or on a schedule for compliance with all applicable state and federal emission limitations and standards.

My signature below certifies that the immediately preceding statement is true and correct.

Normand Boucheault - PP Production Mgr for C. LeBlanc 11/5/96

Signed Date

Plant Manager

Title

NOTE: The appropriate company official (owner, plant manager, president, vice president, or environmental director) must sign this table. It is not appropriate for the applicant's consultant to sign the table. Signatures must be original, not reproduced by photocopy, facsimile or other means.

Table 9N

Signature Verification

The appropriate company official (owner, plant manager, president, vice president or environmental director) must initial all applicable statements.

__X__ All net contemporaneous changes on Table 1N entitled "Netting Summary" are accurate and all reductions used in the calculations of all net contemporaneous changes are creditable.

__X__ All representations on Table 2N entitled "Project Contemporaneous Changes" are accurate, all reductions are creditable and no reductions included on Table 2N "Project Contemporaneous Changes" have been used for offsets.

__X__ The contemporaneous changes identified in Table 3N entitled "Description of Creditable Reductions" are accurate and have not been used as offsets. All reductions claimed on Table 3N are creditable as described by the checked boxes and these reductions have not been used as offsets for any other project.

____ The following signature certifies that the control technology proposed and represented on Table 4N entitled "Initial L.A.E.R. Determination" meets or exceeds LAER.

____ Questions 1-5 on Table 6N entitled "Alternate Site Analysis" have been answered truthfully to the best of my ability.

____ All representations on Table 7N entitled "Construction or Modification Offset Summary" are accurate, all offsets are creditable and no offsets included on Table 7N have been used for offsets in a previous nonattainment permit or relied on in the issuance of a PSD permit.

I, C.J. LeBlanc Plant Manager
(Name - please print or type) (Title)

state that the above representations and representations made on the accompanying tables are true and correct to the best of my knowledge and belief. I am also representing that those statements that are not initialed do not apply to this application.

Normand Boudreault - PP Production Mgr 11/5/96
ORIGINAL SIGNATURE MUST BE IN INK (DATE)
for CJ LeBlanc

HPP-4 (Permit # 9496)
Netting Calculation

A construction permit for HPP-4 was issued on 2/11/1985, and the operating permit was issued on 7/2-/1987.

The contemporaneous period for this project is from 2/22/1980 to 7/20/1987. During this period the following activities took place in this facility:

1- HPP-1 completely shutdown
2- Construction of new units: HPP-3 and HPP-4.

For both HPP-3 and HPP-4 the maximum allowable emissions in the permits were less than actual emissions (during the contemporaneous period). It must also be noted that in the 1992-1993 period Himont has self reported these discrepancies, and received Notices of Violation from the TNRCC. Corrective actions were taken to get into compliance, All units are being monitored under 28MID plan which results in a decrease in emissions, and permits were/are being amended.

UNIT	Permit#	During Contemn. period emissions (28M) (ton/yr)	1993 emissions (28 MID) (ton/yr)
HPP-3	9423	45.856	35.41
HPP-4	9496	46.546	35.93

In this calculation the maximum allowable emissions were not used. Emissions during the contemporaneous period were used as increases since they represent maximum potential emissions during that period (greater than allowable.)

The netting calculations shows a "net decrease of 124.78 tons/yr" for the HPP-4 project contemporaneous period.

2. Update material balance tables to reflect proposed facility production capabilites of 500 MM lb/yr.

3 Incorporate emissions information for additional minor sources.

With the approval of this application for amendment to TNRCC Permit 9496, the Bayport facility will hold four TNRCC air permits covering all sources at the facility. These will include 9496 which will cover the D-Line Production Unit, 9423 which will cover the C-Line Production Unit, 19036 which will cover the E-Line Polypropylene Production Unit, and 19546 which will cover the Catalloy Production Unit. By completing the activities described above, it is the intent of Montell USA Inc. to update production descriptions, permit information, and allowable emission rates. This amendment will supersede and replace all previous amendments to 9496.

1.3 MODIFICATIONS

No major equipment modifications will be instituted at the Montell USA Inc. - Bayport facility as a result of the proposed production increases. Only fugitive sources will be increased as a result of pipe replacements resulting in additional valves, and compressor and pump replacements. Several pumps will be added as spares to existing pumping capacity. The purpose of the operability project is to eliminate capacity restrictions and therefore, increase annual production rates without exceeding the currently permitted maximum hourly production rate. A short discussion follows on the proposed air emission changes resulting from the annual production increases.

1.4 AIR EMISSION CHANGES

As a result of this amendment, reported air emissions will change for the Bayport facility.

A majority of the changes in VOC emissions will result from additional fugitive emissions components and minor sources which were not previously permitted. More accurate estimates based on operating data also account for some of the increases. VOC emission increases resulting from the D-line debottleneck will constitute +2.69 tpy. Fugitive emissions increases reflect a +2.70 tpy increase due mostly to additional flanges, valves, pumps, and compressors that will be added to eliminate current capacity restrictions.

Existing or standard exempted sources will account for a 9.06 tpy increase in VOC emissions. Of this increase, the flare system reflects a +3.11 tpy of net increases from the previously permitted flare estimates. The elevated flare and the ground flare operate interchangeably and the total D-line emissions from both sources will not exceed 23.61 tpy under normal operating conditions.

PERMIT AMENDMENT
SOURCE ANALYSIS & TECHNICAL REVIEW

Permit No:	**19036**	Company:	**MONTELL U.S.A. INC.**
Project Type:	**RAMD**	Facility Name:	**POLYPROPYLENE MFG. HPP # 5**
Record No:	**47343**	City:	**Pasadena (Bayport)**
Account No:	**HG-0323-M**	County:	**Harris**

AUTHORIZATION CHECKLIST (any "Yes" requires signature by Executive Director):

Will a new policy/precedent be established?	**No**
Was at least one public hearing request received?	**No**
Is a state or local official opposed to the permit?	**No**
Is waste or tire derived fuel involved?	**No**
Are waste management facilities involved?	**No**

PROJECT OVERVIEW The Company submitted an amendment application by letter dated October 21, 1996 to debottleneck the polypropylene manufacturing HPP No. 5 (E-line) facility covered by Permit 19036. The Company proposes to implement process modifications to improve operability and increase production rates. Authorized throughput will increase from 378 to 560 million lbs/yr with this project. Net project emissions are given below:

VOC	+0.52 tpy
NOX	+0.13 tpy
CO	-1.92 tpy
PM	+0.08 tpy
NH3	+0.49 tpy

The Company also proposes to incorporate existing minor emission sources within the permit MAERT, and to incorporate standard exemptions and Standard Permit No. 31452 within this permit. Among these standard exemptions is a STDEX 87 action authorizing die cleaning operations. This STDEX was approved by TACB Region 7 letter dated January 31, 1990. Refer to EPN 90.

REGULATION VI RULES

PUBLIC NOTICE INFORMATION

116.130-137 Was public notification required? . . . . . **No**
If no, give reason: **Increase in emissions is below the levels triggering public notice.**

EMISSION CONTROLS

116.111(3)	Will the facility utilize BACT?	**Yes**
116.111(6)	Is the facility expected to perform as represented in the application?	**Yes**
116.140	Permit Fee: $ **75,000** Fee amount correct?	**Yes**

SAMPLING AND TESTING

116.111(1)	Are the emissions expected to comply with all TNRCC air quality rules and regulations, and the intent of the Texas Clean Air Act?	**Yes**
116.111(2)	Will emissions be measured?	**N/A**

TECHNICAL REVIEW: AIR PERMIT BY RULE

Permit No.:	75448	*Company Name:*	Basell USA, Inc.	*APD Reviewer:*	Mr. Raymond D. Lay
Project No.:	114541	*Site/Area Name:*	Operational Changes In E-line Unit	*PBR No(s).:*	106.261

GENERAL INFORMATION			
Regulated Entity No.:	RN100216761	**Project Type:**	XRVW
Customer Reference No.:	CN600623326	**Date Received by TCEQ:**	March 31, 2005
Account No.:	HG-0323-M	**Date Received by Reviewer:**	April 11, 2005
City/County:	Pasadena, Harris County	**Physical Location:**	12001 Bay Area Boulevard

CONTACT INFORMATION					
Responsible Official/ Primary Contact Name and Title:	Mr. Michel Lebrun, Site Leader	**Phone No.:** **Fax No.:**	(281) 604-3800 (281) 604-3834	**Email:**	michel.lebrun@basell.com
Technical Contact/ Consultant Name and Title:	Ms. Alexandra Taylor, Environmental Engineer	**Phone No.:** **Fax No.:**	(281) 604-3422 (281) 604-3542	**Email:**	alexandra.taylow@basell.com

GENERAL RULES CHECK	YES	NO	COMMENTS
Is confidential information included in the application?	X		
Are there associated NSR or Title V permits for the site?	X		**NSR Permit Numbers 9423, 9496, 19036, 19546, & Title V No. O-01419**
Is each PBR > 25/250 tpy?		X	**Emission increase of 2.45 tpy of HRVOC, 0.28 tpy of NO_x, & 2.21 tpy of CO.**
Are PBR sitewide emissions > 25/250 tpy?	X		
Are there permit limits on using PBRs at the site?		X	
Is PSD or Nonattainment netting required?		X	
Do NSPS, NESHAP, or MACT standards apply to this registration?		X	
Does NOx Cap and Trade apply to this registration?		X	
Is the facility in compliance with all other applicable rules and regulations?	X		**The company represents that the new facility will meet the conditions of 30 TAC 106.261.**

DESCRIBE OVERALL PROCESS AT THE SITE

The registration request is for the operational changes in the HPP No. 5 (E-Line) Unit at the Pasadena Facility located at 12001 Bay Area Boulevard, Pasadena, Harris County.

DESCRIBE PROJECT AND INVOLVED PROCESS

Basell USA, Inc. (Basel) has made representation in their registration request that the implementation of the operational changes would allow Basell's Pasadena Facility to more fully utilize the capability of the E-Line Unit. The specific changes proposed include the following:

- Increase the maximum hourly production rate from 80,000 pounds per hour (lbs/hr) to 97,000 lbs/hr;
- Increase the maximum annual production from 560 MMlbs to 650 MMlbs; and
- Simultaneous utilization of both extruder/transfer systems (referred to as the ELX and CLX systems) in the E-Line Unit.

In addition, there will be no physical modifications associated with this project.

The increase in emissions associated with the operational changes in the E-Line Unit have been summarized at 2.45 tons per year (tpy) of highly reactive volatile organic compounds, 0.28 tpy of nitrogen oxides, and 2.21 tpy of carbon monoxide.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 6, 2008

MR PAUL MOLLEUR
SITE LEADER
BASELL USA INC
12001 BAY AREA BLVD
PASADENA TX 77507

Permit by Rule Registration Number	84081
Location/City/County	12001 Bay Area Boulevard, Pasadena, Harris County
Project Description/Unit	E Line Polypropylene Unit
Regulated Entity Number	RN100216761
Customer Reference Number	CN600623326
New or Existing Site	Existing
Affected Permit (if applicable)	9423
Renewal Date (if applicable)	None

Basell USA, Inc has registered the emissions associated with the increase in annual production on the E Line Polypropylene Unit under Title 30 Texas Administrative Code § 106 261
For rule information see www tceq state tx us/permitting/air/nav/numerical_index html

No planned MSS emissions have been represented or reviewed for this registration and none will be authorized by this PBR

The company is also reminded that these facilities may be subject to and must comply with other state and federal air quality requirements This registration is taken under the authority delegated by the Executive Director of the TCEQ If you have questions, please contact Ms Nancy Akintan at (713) 767-3773

Sincerely,

Anne M Inman, P E , Manager
Rule Registrations Section
Air Permits Division

Represented Emissions

VOCs	0 92	tpy	
HRVOC	0 05	tpy	Ethylene
HRVOC	0 01	lb/hr	
HRVOC	0 78	tpy	propylene
HRVOC	0 26	lb/hr	

cc Chief Health Inspector, Health Department, City of Pasadena, Pasadena
Director, Environmental Public Health Division, Harris County Public Health and Environmental Services, Pasadena
Air Section Manager, Region 12 - Houston

Project Number 136507

TECHNICAL REVIEW AIR PERMIT BY RULE

Permit No	84081	*Company Name*	Basell USA Inc	*APD Reviewer*	Ms Nancy Akintan
Project No	136507	*Unit Name*	E Line Polypropylene Unit	*PBR No(s)*	106 261

GENERAL INFORMATION			
Regulated Entity No	RN100216761	**Project Type**	Permit by Rule Application
Customer Reference No	CN600623326	**Date Received by TCEQ**	February 8, 2008
Account No	HG 0323 M	**Date Received by Reviewer**	February 14 2008
City/County	Pasadena Harris County	**Physical Location**	12001 Bay Area Boulevard

CONTACT INFORMATION					
Responsible Official/ Primary Contact Name and Title	Mr Paul Molleur Site Leader	**Phone No** **Fax No**	(281) 604 3217 (281) 604 3822	**Email**	
Technical Contact/ Consultant Name and Title	Ms Mary Pergande Environmental Specialist	**Phone No** **Fax No**	(281) 604 3465 (281) 604 3824	**Email**	

GENERAL RULES CHECK	YES	NO	COMMENTS
Is confidential information included in the application?		X	
Are there affected NSR or Title V permits for the project?	X		NSR Permit No 9423 and Title V Permit No O 01419 There are other pending actions in the IMS but they are not related to the project
Is each PBR > 25/250 tpy?		X	
Are PBR sitewide emissions > 25/250 tpy?	NA		Site has been through Public Notice
Are there permit limits on using PBRs at the site?		X	
Is PSD or Nonattainment netting required?		X	PSD or Nonattainment netting not required
Do NSPS NESHAP or MACT standards apply to this registration?		X	NSPS NESHAP or MACT standards are not applicable
Does NOx Cap and Trade apply to this registration?		X	NOx Cap and Trade are not applicable
Is the facility in compliance with all other applicable rules and regulations?	X		

DESCRIBE OVERALL PROCESS AT THE SITE

Basell USA Inc operates a Polypropylene process unit at their chemical plant located at 12001 Bay Area Blvd in Pasadena Harris County The unit currently operates under NSR Permit Number 9423 and Title V Permit Number O 01419 This registration will authorize the increase in annual production on the E line polypropylene process from 650 million lbs/year to 750 million lbs/year under 106 261

DESCRIBE PROJECT AND INVOLVED PROCESS

The Basell Bayport E Line production unit (HPP 5) is a stand alone multi purpose unit capable of producing homopolymer and copolymer polypropylene The finished polypropylene granules are transferred in a closed loop nitrogen transfer system from the final processing step to pelletization Atmospheric vents associated with pelletization include EPN 131 (ELX flake transfer) and transfer EPN 133 (ELX pellet storage and loading) EPN 131 is a ventilation system which pulls excess nitrogen from the loss in weight system prior to the extruder EPN 131 is equipped with a bag filter (F6802) for removal of fines prior to discharge to the atmosphere EPN133 includes all atmospheric vents downstream of the extruder Following pelletization in the extruder, pellets are transferred to one of three pellet silos or directly to the railcar loading system via an air transfer system Each pellet silo (D8601 D8603 and D8603) includes a vent to the atmosphere Pellets are transferred to the railcar loading system via an air transfer system The transfer system is equipped with bag filters (F6841 and F6842) for particulate removal and vented to the atmosphere Waste mineral oil from the process generated from Sections 6100 6200 and 6300 is routed to a waste oil tank The tank vents to the flare system The waste oil is periodically loaded into tank trucks Cooling water service is either from one of the three cooling waters Steam and nitrogen for the Bayport plant are purchased from adjacent facilities There are no on site boilers heaters or furnaces

The E line production capacity will be increased without capital expenditure and no increase in the current permitted allowable emissions

No planned MSS emissions have been represented or reviewed for this registration and none will be authorized by this PBR

TECHNICAL SUMMARY - DESCRIBE HOW THE PROJECT MEETS THE RULES

Compliance with rule 106 261

1 The facility change is not specifically authorized in another permit by rule
2 The emission sources are located at >1000 feet from the nearest off plant receptor
3 Total new or increased emissions claimed under 106 261(a)(2) are below the required limits
4 There will be no changes to or additions of any existing air pollution abatement equipment
5 There will be no visible emissions exceeding 5 0 % opacity in any six minute period
6 TCEQ Form PI 7 has been submitted to register the project

TECHNICAL REVIEW AIR PERMIT BY RULE

Permit No	84081	*Company Name*	Basell USA Inc	*APD Reviewer*	Ms Nancy Akintan
Project No	136507	*Unit Name*	E Line Polypropylene Unit	*PBR No(s)*	106 261

COMMUNICATION LOG

Date	Time	Name/Company	Subject of Communication
02/14/08	am	Ms Mary Pergande with the company	Reviewer called to request emission calculation for the project Reviewer left a message for Ms Pergande Though the project will not trigger increase in permitted allowable emissions, company still has to report the project emission for this registration
02/28/08	am		Reviewer has been out sick could not get back to the company earlier than today Ms Pergande will provide the requested emission calculation
03/03/08	pm		Ms Pergande faxed emission calculations to reviewer

PBR Emission Limits

Chemical	PBR Claimed	L, mg/m³ D=1000	Emission Limit (E = L/K), lb/hr	Emission Limit tpy	Actual Emissions lb/hr	Actual Emissions tpy
Ethylene	106 261(2)	NA	6 0	10 0	0 0155	0 046
Propane	106 261(2)	NA	6 0	10 0	0 031	0 092
Propylene	106 261(2)	NA	6 0	10 0	0 2635	0 782

ESTIMATED EMISSIONS

EPN / Emission Source	Specific VOC or Other Pollutants	VOC		NOx		CO		PM_{10}		SO_2		Other	
		lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy
E Line		0 31	0 92										
TOTAL EMISSIONS (TPY)			0 92										
MAXIMUM OPERATING SCHEDULE		Hours/Day			Days/Week			Weeks/Year			Hours/Year		8 760

SITE REVIEW // DISTANCE LIMIT	Yes	No	Description/Outcome	Date	Reviewed by
Site Review Required?		X			
PBR Distance Limits Met?	X		>300 feet from the nearest property line and >1 000feet to the nearest off plant receptor	03/04/08	As represented by the company

	TECHNICAL REVIEWER	PEER REVIEWER	FINAL REVIEWER
SIGNATURE	Nancy A Kintan	Bonnie Evridge	Clyde Price
PRINTED NAME	Ms Nancy Akintan	Ms Bonnie Evridge	Mr Clyde Price
DATE	03/04/08	03/06/2008	March 6, 2008

BASIS OF PROJECT POINTS	POINTS
Base Points	1 5
Project Complexity Description and Points	
Technical Reviewer Project Points Assessment	1 5
Final Reviewer Project Points Confirmation	1 50

TABLE 2N
PROJECT CONTEMPORANEOUS CHANGES[1]

Company: HIMONT U.S.A. INC.

Criteria Pollutant VOC

Permit Application No. 19546

						A	B	C		
	PROJECT DATE[2]	EMISSION UNIT AT WHICH REDUCTION OCCURED[3] FIN	EPN	PERMIT NO.	PROJECT NAME OR ACTIVITY	ALLOWABLE EMISSIONS AFTER THE ACTIVITY[4] (tons/year)	ACTUAL EMISSIONS PRIOR TO THE ACTIVITY[4] (tons/year)	(tons/year) DIFFERENCE (A-B)[5]	CREDITABLE DECREASE OR INCREASE[6]	REASON CODE[7]
1	01/85	HPP-1	ALL	938 A	HPP-1 SHUTDOWN	ZERO	217.18	-217.18	-217.18	ela
2	01/90	HPP-2	ALL	1357A	HPP-2 SHUTDOWN	ZERO	237.96	-237.96	-237.96	ela
3	03/85	HPP-3	ALL	9423	STARTUP	45.856	0.00	45.856	45.856	
4	10/86	HPP-4	ALL	9496	STARTUP	46.546	0.00	46.546	46.546	
5	3/90	HPP-5	ALL	19036	STARTUP	42.595	0.00	42.595	42.595	
6	6/91	HPP-6	ALL	19546	STARTUP	141.540	0.00	141.540	141.540	
7										
8										
9										
10										
11										
12										
13										
14										
							PAGE SUBTOTAL[8]		-178.6	

From: Ryan S. Mayces
To: "Rahim Momin"
Cc: Rodricks, Derek
Subject: RE: Project Number 299187; Permit Number 9423
Date: Friday, April 24, 2020 3:40:52 PM
Attachments: LBY_Visbreak Updated for NOD.pdf

Rahim,

I have attached updated oxide tank representations.

Thanks,

Ryan S. Mayces
Senior Consulting Engineer
Waid Corporation dba **Waid Environmental**
1325 Space Park Drive, Suite D, Houston, TX 77058
Phone: 281-513-1936

http://www.waid.com

From: Rahim Momin [mailto:Rahim.Momin@tceq.texas.gov]
Sent: Thursday, April 23, 2020 4:21 PM
To: Ryan S. Mayces <RMayces@WAID.com>
Subject: RE: Project Number 299187; Permit Number 9423

Dear Mr. Mayces:

Tomorrow at 9 am CT is good?

Thank you.
Rahim Momin
TCEQ Air Permits
Chemical Team 1
(512) 239-1284

From: Rodricks, Derek
To: Rahim Momin
Cc: Ryan S. Mayces
Subject: RE: Notice of Deficiency Equistar Amendment Permit No. 9423
Date: Wednesday, April 29, 2020 9:28:00 AM
Attachments: image001.png

Mr. Momin

The West Marley cooling tower meets BACT, which are in the Special Conditions in Permit No. 9423

VOC:
The cooling tower water is monitored continuously for VOC leakage from heat exchangers in accordance with the requirements of 30 TAC Chapter 115, Subchapter H, Division 2.
Cooling water VOC concentrations above 0.08 ppmw typically indicate leaking equipment. Leaking equipment are repaired at the earliest opportunity but no later than the next scheduled shutdown of the process unit in which the leak occurs.

PM
Cooling towers equipped with drift eliminators having manufacturer's design assurance of 0.001% drift or less.

Thanks
Derek Rodricks

From: Rahim Momin <Rahim.Momin@tceq.texas.gov>
Sent: Tuesday, April 28, 2020 12:33 PM
To: Rodricks, Derek <Derek.Rodricks@lyondellbasell.com>
Cc: Ryan S. Mayces <RMayces@WAID.com>
Subject: RE: Notice of Deficiency Equistar Amendment Permit No. 9423

Dear Mr. Rodricks:

Since the flowrate is being corrected in the West Marley cooling tower (EPN 99) from 35,500 gpm to 47,500 gpm resulting in short term emissions increase, it triggers BACT requirements. So, please provide BACT for EPN 99, or an explanation why current BACT is sufficient. BACT for this EPN was last provided in Project 271097 issued in September 2018. Please let me know if there is any issue.

Thank you.
Rahim Momin
TCEQ Air Permits
Chemical Team 1
(512) 239-1284

How is our customer service?
Fill out our online customer satisfaction survey at:
https://www.tceq.texas.gov/customersurvey

From: Rodricks, Derek <Derek.Rodricks@lyondellbasell.com>
Sent: Tuesday, September 3, 2019 10:34 PM
To: John Bregger <John.Bregger@Tceq.Texas.Gov>; Rahim Momin <Rahim.Momin@tceq.texas.gov>
Cc: Ryan S. Mayces <RMayces@WAID.com>
Subject: RE: Notice of Deficiency Equistar Amendment Permit No. 9423

Mr. Bregger,
Please find attached, Equistar's response to the NOD dated July 30, 2019. The updated modeling files will be sent in a separate email with a link to the files. Please contact me if there are questions or additional information is needed. I would like to wish you the best in your career outside TCEQ. I deeply appreciate the opportunity to work with you on couple of our air permit applications.

Regards

Derek Rodricks
(281)291-1684

From: John Bregger <John.Bregger@Tceq.Texas.Gov>
Sent: Thursday, August 29, 2019 9:13 AM
To: Rodricks, Derek <Derek.Rodricks@lyondellbasell.com>
Cc: Rahim Momin <Rahim.Momin@tceq.texas.gov>
Subject: RE: Notice of Deficiency Equistar Amendment Permit No. 9423

Good morning Derek,

I appreciate the note regarding the NOD response. I wanted to let you know that I will be leaving the agency next week. This amendment has been reassigned to my colleague, Mr. Rahim Momin, who has been CC'd on this email. I will be working with him during this transition phase before my departure.

Regarding the cooling tower flow update request – I think this should be fine. The project is still in the review portion at this point (awaiting review of the NOD responses) and evaluating the data

given as of now. If any updates are required (such as calculations, Table 1a, modeling/impacts, retrospective review discussion), please make sure to include those in this update.

Thank you,

John

From: Rodricks, Derek <Derek.Rodricks@lyondellbasell.com>
Sent: Thursday, August 29, 2019 8:51 AM
To: John Bregger <John.Bregger@Tceq.Texas.Gov>
Subject: RE: Notice of Deficiency Equistar Amendment Permit No. 9423

Good morning Mr. Bregger,
I wanted to drop you note, saying that our consultant is finalizing our response. I shall be sending our comments back later today. I wanted to check with you, if you were open to me including a cooling tower flow update with this application. I will call you later today, after I have finalized our response to the July 29, 2019 NOD.

Thank you.

Derek

From: John Bregger <John.Bregger@Tceq.Texas.Gov>
Sent: Tuesday, July 30, 2019 3:27 PM
To: Rodricks, Derek <Derek.Rodricks@lyondellbasell.com>
Cc: R12APDMail <R12APDMail@tceq.texas.gov>; modaniel@ci.pasadena.tx.us; Air_Permits@pcs.hctx.net; latrice.babin@pcs.hctx.net; Goff, Stephen G <Stephen.Goff@lyondellbasell.com>
Subject: Notice of Deficiency Equistar Amendment Permit No. 9423

Good afternoon Mr. Rodricks,

I have attached the Notice of Deficiency (NOD) we discussed yesterday, July 29, 2019. The requested due date for the items in the NOD is 30 days from the date of the letter, which is **Thursday, August 29, 2019**. I have CC'd Mr. Goff, who is listed as the Responsible Official for this amendment, as well as the other appropriate recipients.

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

Thank you,

John Bregger
Chemical Section • Air Permits Division
Texas Commission on Environmental Quality
Main: 512-239-1250 • Direct: 512-239-4970 • Fax: 512-239-0977

How is our customer service?

Fill out our online customer satisfaction survey at:
www.tceq.state.tx.us/goto/customersurvey.

NOTICE: New Source Review Application workbooks are now available for all initial, amendment, and change of location air permit applications. Applicable sheets may be used for renewal, qualified facility, and alteration projects. These workbooks will help you create a complete application, which will streamline the review process and reduce permit processing timeframes. Additionally, please note that the Electronic Modeling Evaluation Workbook (EMEW) is available to assist in your impacts reviews (both for SCREEN3 and Non-SCREEN3). For more information, click here.

Starting June 1, 2019, the NSR Application Workbook will be required and all minor projects utilizing modeling to complete an impacts analysis will be required to include an EMEW with the application submittal.

Information contained in this email is subject to the Disclaimer and Privacy Notice found by clicking on the following link: <a href="http://www.lyb.com/en/about-us/disclaimer">http://www.lyb.com/en/about-us/disclaimer

5. NOTICE OF APPLICATION AND PRELIMINARY DECISION

May 15, 2020 letter

May 21, 2020 letter

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 15, 2020

MR GERALD CRAWFORD
ENVIRONMENTAL MANAGER
EQUISTAR CHEMICALS LP
10801 CHOATE RD
PASADENA TX 77507-1503

Re: Permit Amendment Application
Permit Number: 9423
Equistar Chemicals, LP
Bayport Polypropylene Plant
Pasadena, Harris County
Regulated Entity Number: RN100216761
Customer Reference Number: CN600124705

Dear Mr. Crawford:

The Texas Commission on Environmental Quality (TCEQ) has made a preliminary decision on the above-referenced application. In accordance with Title 30 Texas Administrative Code § 39.419(b), you are now required to publish Notice of Application and Preliminary Decision. You must provide a copy of this preliminary decision letter with the draft permit at the public place referenced in the public notice.

If you have any questions, please call Mr. Rahim Momin at (512) 239-1284, or write to the TCEQ, Office of Air, Air Permits Division, MC-163, P.O. Box 13087, Austin, Texas 78711-3087.

Sincerely,

Rebecca Partee

Rebecca Partee, Manager
Chemical New Source Review Permits Section
Air Permits Division

Enclosure

cc: Chief Health Inspector, Health Department, City of Pasadena, Pasadena
Director, Harris County, Pollution Control Services, Pasadena
Air Section Manager, Region 12 - Houston

Project Number: 299187

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 15, 2020

MR GERALD CRAWFORD
ENVIRONMENTAL MANAGER
EQUISTAR CHEMICALS LP
10801 CHOATE RD
PASADENA TX 77507-1503

Re: Permit Amendment Application
Permit Number: 9423
Equistar Chemicals, LP
Bayport Polypropylene Plant
Pasadena, Harris County
Regulated Entity Number: RN100216761
Customer Reference Number: CN600124705

Dear Mr. Crawford:

The Texas Commission on Environmental Quality (TCEQ) has completed the technical review of your application and has prepared a preliminary decision and draft permit.

You are now required to publish notice of your proposed activity. To help you meet the regulatory requirements associated with this notice, we have included the following items:

- Notices for Newspaper Publication (Examples A and B)
- Public Notice Checklist
- Instructions for Public Notice
- Affidavit of Publication for Air Permitting (Form TCEQ-20533) and Alternative Language Affidavit of Publication for Air Permitting (Form TCEQ-20534)
- Web link to download Public Notice Verification Form (refer to Public Notice Instructions)
- Notification List
- Draft Permit

Please note that it is **very important** that you follow **all** directions in the enclosed instructions. If you do not, you may be required to republish the notice. A common mistake is the unauthorized changing of notice wording or font. If you have any questions, please contact us before you proceed with publication.

A "Public Notice Checklist" is enclosed which notes the time limitations for each step of the public notice process. **The processing of your application may be delayed if these time limitations are not met (i.e.; submitting proof of publication of the notice within 10 business days after publication, affidavits of publication within 30 calendar days after the date of publication, and public notice verification form within 10 business days after the end of the designated comment period).** This checklist should be used as a tool in conjunction with the enclosed, detailed instructions.

If you do not comply with **all** requirements described in the instructions, further processing of your application may be suspended or the agency may take other actions.

Re: Permit: 9423

If you have any questions regarding publication requirements, please contact the Office of the Chief Clerk at (512) 239-3300. If you have any other questions, please contact Mr. Rahim Momin at (512) 239-1284.

Sincerely,

Bridget C. Bohac
Chief Clerk
Office of the Chief Clerk
Texas Commission on Environmental Quality

Enclosure

cc: Chief Health Inspector, Health Department, City of Pasadena, Pasadena
Director, Harris County, Pollution Control Services, Pasadena
Air Section Manager, Region 12 - Houston
Air Permits Section Chief, New Source Review Section (6MM-AP), U.S. Environmental Protection Agency, Region 6, Dallas

Project Number: 299187

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

EXAMPLE A

NOTICE OF APPLICATION AND PRELIMINARY DECISION
FOR AN AIR QUALITY PERMIT

PERMIT NUMBER: 9423

APPLICATION AND PRELIMINARY DECISION. Equistar Chemicals, LP, 10801 Choate Road, Pasadena, TX 77507-1503, has applied to the Texas Commission on Environmental Quality (TCEQ) for an amendment to Air Quality Permit Number 9423, which would authorize modification to a Bayport Polypropylene Plant located at 12001 Bay Area Boulevard, Pasadena, Harris County, Texas 77507. This application was submitted to the TCEQ on March 29, 2019. The amendment will authorize an increase in emissions of the following air contaminants: exempt solvents and organic compounds.

The executive director has completed the technical review of the application and prepared a draft permit which, if approved, would establish the conditions under which the facility must operate. The executive director has made a preliminary decision to issue the permit because it meets all rules and regulations. The permit application, executive director's preliminary decision, and draft permit will be available for viewing and copying at the TCEQ central office, the TCEQ Houston regional office, on the internet at www.lyondellbasell.com/bayportpolymers, and by contacting Mr. Derick Rodricks, Principle Environmental Engineer, Bayport Complex, (281) 291-1684, derek.rodricks@lyb.com, beginning the first day of publication of this notice. The facility's compliance file, if any exists, is available for public review at the TCEQ Houston Regional Office, 5425 Polk Street Suite H, Houston, Texas.

PUBLIC COMMENT/PUBLIC MEETING. You may submit public comments or request a public meeting about this application. The purpose of a public meeting is to provide the opportunity to submit comment or to ask questions about the application. The TCEQ will hold a public meeting if the executive director determines that there is a significant degree of public interest in the application or if requested by a local legislator. A public meeting is not a contested case hearing. **You may submit additional written public comments within 30 days of the date of newspaper publication of this notice in the manner set forth in the AGENCY CONTACTS AND INFORMATION paragraph below.**

RESPONSE TO COMMENTS AND EXECUTIVE DIRECTOR ACTION. After the deadline for public comments, the executive director will consider the comments and prepare a response to all relevant and material or significant public comments. Because no timely hearing requests have been received, after preparing the response to comments, the executive director may then issue final approval of the application. **The response to comments, along with the executive director's decision on the application will be mailed to everyone who submitted public comments or is on a mailing list for this application, and will be posted electronically to the Commissioners' Integrated Database (CID).**

INFORMATION AVAILABLE ONLINE. When they become available, the executive director's response to comments and the final decision on this application will be accessible through the Commission's Web site at www.tceq.texas.gov/goto/cid. Once you have access to the CID using the above link, enter the permit number for this application which is provided at the top of this notice. This link to an electronic map of the site or facility's general location is provided as a public courtesy and not part of the application or notice. For exact location, refer to application. http://www.tceq.texas.gov/assets/public/hb610/index.html?lat=29.634444&lng=-95.048055&zoom=13&type=r.

MAILING LIST. You may ask to be placed on a mailing list to obtain additional information on this application by sending a request to the Office of the Chief Clerk at the address below.

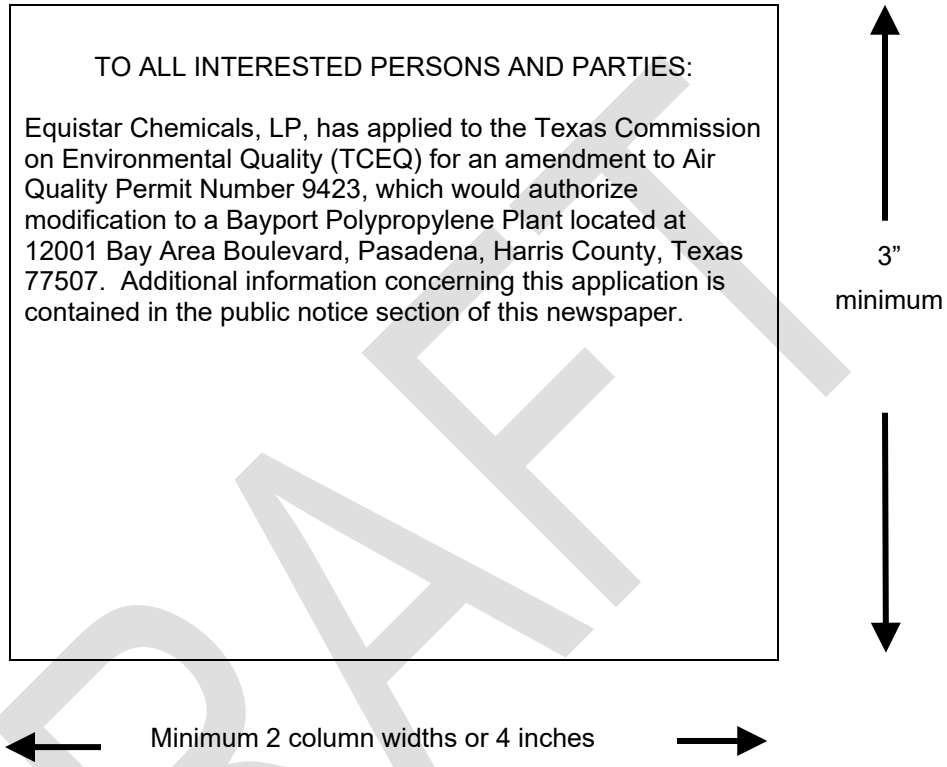
AGENCY CONTACTS AND INFORMATION. Public comments and requests must be submitted either electronically at www14.tceq.texas.gov/epic/eComment/, or in writing to the Texas Commission on Environmental Quality, Office of the Chief Clerk, MC-105, P.O. Box 13087, Austin, Texas 78711-3087. Please be aware that any contact information you provide, including your name, phone number, email address and physical address will become part of the agency's public record. For more information about this permit application or the permitting process, please call the Public Education Program toll free at 1-800-687-4040. Si desea información en Español, puede llamar al 1-800-687-4040.

Further information may also be obtained from Equistar Chemicals, LP at the address stated above or by calling Mr. Derek Rodricks, Principal Environmental Engineer at (281) 291-1684.

Notice Issuance Date: May 15, 2020

Example B

Publication Elsewhere in the Newspaper:



Public Notice Checklist
Notice of Application and Preliminary Decision for an Air Quality Permit
(2nd Notice)

The following tasks must be completed for public notice. If publication in an alternative language is required, please complete the tasks for both the English and alternative language publications. Detailed instructions are included in the "Instructions for Public Notice" section of this package.

Within 33 calendar days after date of this letter
Publish *Notice of Application and Preliminary Decision for an Air Quality Permit* in the same newspaper(s) in which you published *Notice of Receipt of Intent to Obtain Permit* for this application. - Example A must be published in "public notice" section of newspaper. Review for accuracy prior to publishing. - Example B (if applicable) must be published in prominent location (other than "public notice") in same issue of newspaper Provide copy of the complete application (including any subsequent revisions) and the executive director's preliminary decision (including the draft permit) at a public place for review and copying. Keep them there for duration of the designated comment period.
First day of newspaper publication
Review published newspaper notice for accuracy. If errors, contact Air Permits Division. Ensure copy of the complete application (including any subsequent revisions) and the executive director's preliminary decision (including the draft permit) are at the public place. It is recommended that the signs from the first notice be in place and the lettering must remain legible and visible until 30 days after publication of the *Notice of Application and Preliminary Decision* (either English or alternative language notice, whichever is later).
Within 10 business days after date of publication
Mail original proof of publication showing publication date and newspaper name to: Texas Commission on Environmental Quality Office of the Chief Clerk, MC-105 Attn: Notice Team P.O. Box 13087 Austin, Texas 78711-3087 Mail or email, as instructed, photocopies of newspaper clippings showing publication date and newspaper name to persons listed on *Notification List*.
Within 30 calendar days after date of publication
Mail original affidavit of publication for air permitting and alternative language affidavit of publication for air permitting (if applicable) to: Texas Commission on Environmental Quality Office of the Chief Clerk, MC-105 Attn: Notice Team P.O. Box 13087 Austin, Texas 78711-3087 Mail or email, as instructed, photocopies of affidavits to persons listed on *Notification List*.
Within 10 business days after end of the designated comment period
Mail Public Notice Verification Form to: Texas Commission on Environmental Quality Office of the Chief Clerk, MC-105 Attn: Notice Team P.O. Box 13087 Austin, Texas 78711-3087 Mail or email, as instructed, photocopies of Public Notice Verification Form to persons listed on *Notification List*.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Instructions for Public Notice
For New Source Review Air Permit

Notice of Application and Preliminary Decision

We have completed the technical review of your application and issued a preliminary decision. You must comply with the following instructions:

Review Notice

Included in the notice is all of the information which the commission believes is necessary to effectuate compliance with applicable public notice requirements. Please read it carefully and notify the Texas Commission on Environmental Quality (TCEQ) immediately if it contains any errors or omissions. You are responsible for ensuring the accuracy of all information published. You may not change the text of the notice without prior approval from the TCEQ.

Newspaper Notice

- You must publish the enclosed *Notice of Application and Preliminary Decision for an Air Quality Permit* within **33 calendar days** after the date this information was mailed to you (see date of letter).

- You must publish the enclosed *Notice of Application and Preliminary Decision for an Air Quality Permit* at your expense, in the same newspaper(s) in which you published the *Notice of Receipt and Intent to Obtain Permit* for this application. The newspaper must be a newspaper that is of general circulation in the municipality where the facility is or will be located. If the facility is not located within a municipality, the newspaper must be of general circulation in the municipality nearest the location.

- You must publish this notice in one issue of any applicable newspaper.

- You will find two example notices enclosed in this package. *Example A* must be published in the "public notice" section of the newspaper. The phrase "Example A" is not required to be published. *Example B* must be published in the **same issue** of the newspaper as *Example A*; however, it must be published in a prominent location (other than the public notice section). *Example B* refers the public to the "public notice" section of the newspaper where *Example A* provides more information regarding the permit application.

- *Example B* must be a total of at least **6 column inches (standard advertising units)** with a height of at least **3 inches** and a horizontal dimension of **2 column widths.** If the newspaper chosen does not use standard advertising units for measurement, the notice must be at least **12 square inches** with the shortest side of at least **3 inches**.

- The bold text of the enclosed notice **must** be printed in the newspaper in a font style or size that distinguishes it from the rest of the notice (i.e., **bold**, *italics*). **Failure to do so may require re-notice.**

Alternative Language Notice

In certain circumstances, applicants for air permits must complete notice in alternative languages.

- Public notice rules require the applicant to determine whether a bilingual program is required at either the elementary or middle school nearest to the facility or proposed facility location. Bilingual education programs are determined on a district-wide basis. When students who are required to attend either school are eligible to be enrolled in a bilingual education program, some alternative language notice is required (newspaper notice).

- Since the school district, and not the schools, must provide the bilingual education program, these programs do not have to be located at the elementary or middle school nearest to the facility or proposed facility to trigger the alternative language notice requirement. If there are students who would normally attend the nearest schools eligible to be taught in a bilingual education program at a different location, alternative language notice is required.

- If triggered, publications of alternative language notices must be made in a newspaper or publication printed primarily in each language taught in the bilingual education program. The same newspaper(s) used for *Notice of Receipt and Intent to Obtain Permit* must be used for publication of the *Notice of Application and Preliminary Decision for an Air Quality Permit*. This notice is required if such a newspaper or publication exists in the municipality or the county where the facility is or will be located.

- The applicant must demonstrate a good faith effort to identify a newspaper or publication in the required language. If a newspaper or publication of general circulation published at least once a month in such language cannot be found, publishing in that language is not required, but signs must remain posted in the same location(s) utilized during the *Notice of Receipt of Intent to Obtain Permit (1st public notice)*.

- Publication in an alternative language section or insertion within an English language newspaper does not satisfy these requirements.

- The applicant has the burden to demonstrate compliance with these requirements. You must fill out the ***Public Notice Verification Form (Form TCEQ-20244)*** indicating your compliance with the requirements regarding publication in an alternative language. **This form is available at www.tceq.texas.gov/permitting/air/nav/air_publicnotice.html.**

- It is suggested the applicant work with the local school district to do the following:

  (a) determine if a bilingual program is required in the district;
  (b) determine which language is required by the bilingual program;
  (c) locate the nearest elementary and middle schools; and
  (d) determine if any students attending either school are entitled to be enrolled in a bilingual educational program.

- **If you determine that you must meet the alternative language notice requirements, you are responsible for ensuring that the publication in the alternative language is complete and accurate in that language.** Since the most common bilingual programs are in Spanish, the TCEQ has provided example Spanish notice templates for your use. All italic notes should be replaced with the corresponding Spanish translations for the specific application and published in the alternative language publication. Electronic versions of the Spanish templates are available through the Air Permits Division Web site at www.tceq.texas.gov/goto/air/publicnotice.

- If you are required to publish notice in a language other than Spanish, you must translate the entire public notice at your own expense.

Public Comment Period

- The public comment period will last at least **30 calendar days after publication of the last notice**.

- The comment period will be longer if the last day of the public comment period ends on a weekend or a holiday. In this case, the comment period will end on the next business day.

- The comment period for the permit may lengthen depending on whether a public meeting is held. If a public meeting is held, the comment period will be extended to the later of either the date of the public meeting or the end of the second notice period.

Proof of Publication

- Check each publication to ensure that the articles were accurately published. If a notice was not published correctly you may be required to republish.

- For each newspaper in which you published, you must submit proof of publication that shows the notice, the date of publication, and the name of the newspaper to the Office of the Chief Clerk within **10 business days** after the date of publication. Acceptable proofs of publication are 1) copies of the published notice or 2) the original newspaper clippings of the published notice. If you choose to submit copies of the published notice to the Office of the Chief Clerk, copies must be on standard-size 8½'' x 11'' paper and must show the actual size of the published notice (do not reduce the image when making copies). Published notices longer than 11'' must be copied onto multiple 8½'' x 11'' pages. Please note, submitting a copy of your published notice could result in faster processing of your application. It is recommended that you maintain original newspaper clippings or tear sheets of the notice for your records.

- You must submit an **original affidavit of publication for air permitting and alternate language affidavit of publication for air permitting (if applicable)** to the Office of the Chief Clerk within **30 calendar days** after the date of publication. **You must use the enclosed affidavit forms.** The affidavits must clearly identify the applicant's name and permit number. You are encouraged to submit the affidavit with the proof of publication described above.

- You must submit the ***Public Notice Verification Form (Form TCEQ-20244)*** to the Office of the Chief Clerk within **10 business days** of the end of this public comment period. You must use this form to certify that you have met bilingual notice requirements. **This form is available at www.tceq.texas.gov/permitting/air/nav/air_publicnotice.html.**

- The **original affidavits of publication, *Public Notice Verification Form,* and acceptable proof of publication of the published notices** must be mailed to:

Texas Commission on Environmental Quality
Office of the Chief Clerk, MC-105
Attn: Notice Team
P.O. Box 13087
Austin, Texas 78711-3087

- Please ensure that the affidavit(s) you send to the Chief Clerk is/are originals and that all blanks on the affidavit are filled in correctly. Photocopies of affidavits will not be accepted.

- Photocopies of newspaper clippings, affidavits, and verifications must also be sent to those listed on the enclosed *Notification List* within the deadlines specified above.

Failure to Publish and Submit Proof of Publication

You must meet all publication requirements. **If you fail to publish the notice or submit proof of publication *on time,*** the TCEQ may suspend further processing on your application or take other actions.

Sign Posting

It is recommended that the signs that were put in place prior to publication of the first notice remain in place and be legible and visible until 30 days after publication of the *Notice of Application and Preliminary Decision* (either English or alternative language notice, whichever is later).

Application in a Public Place

- You must provide a copy of the complete application (including any subsequent revisions) and the executive director's preliminary decision (including the draft permit), at a public place for review and copying by the public. This place must be in the county in which the facility is located or proposed to be located.

- A public place is one that is publicly owned or operated (ex: libraries, county courthouses, or city halls.)

- This copy must be accessible to the public for review and copying. The copy must be available beginning on the first day of newspaper publication and remain in place until the commission has taken action on the application or the commission refers issues to the State Office of Administrative Hearings.

- If the application is submitted to the TCEQ with information marked as "CONFIDENTIAL," you are required to indicate which specific portions of the application are not being made available to the public. These portions of the application must be accompanied with the following statement: "Any request for portions of this application that are marked as confidential must be submitted in writing, pursuant to the Public Information Act, to the Texas Commission on Environmental Quality, Public Information Coordinator, MC-197, P.O. Box 13087, Austin, Texas 78711-3087."

- You must submit verification of file availability using the ***Public Notice Verification Form (Form TCEQ-20244)*** within **10 business days** after end of the publications' designated comment period. Do not submit the form verifying that the application was in a public place until after the comment period is complete. If a public meeting is held or second notice is required causing the public comment period to be extended, at a later date you will be required to verify that the application was in a public place during the entire public comment period. **This form is available at www.tceq.texas.gov/permitting/air/nav/air_publicnotice.html.**

General Information

When contacting the Commission regarding this application, please refer to the permit number at the top of the *Notice of Application and Preliminary Decision*.

If you have questions or need assistance regarding publication requirements, please contact the Office of the Chief Clerk at (512) 239-3300 or the project reviewer listed in the cover letter.

TCEQ-Office of the Chief Clerk
MC-105 Attn: Notice Team
P.O. Box 13087
Austin, Texas 78711-3087

Applicant Name: Equistar Chemicals, LP
Permit No.: 9423
Application Received Date: March 29, 2019

AFFIDAVIT OF PUBLICATION FOR AIR PERMITTING

STATE OF TEXAS §
COUNTY OF _____ §

BEFORE ME, the undersigned authority, on this day personally appeared

_____, who being by me duly sworn, deposes and says that (s)he is *(Name of Person Representing Newspaper)*

the _____ of the _____
(Title of Person Representing Newspaper) *(Name of the Newspaper)*

that said newspaper is generally circulated in _____, Texas;
(The municipality or nearest municipality to the location of the facility or the proposed facility)

that the enclosed notice was published in said newspaper on the following date(s):

_____

_____
(Newspaper Representative's Signature)

Subscribed and sworn to before me this the _____ day of _____, 20_____
to certify which witness my hand and seal of office.

_____
Notary Public in and for the State of Texas

[Affix Seal]

_____
Print or Type Name of Notary Public

_____
My Commission Expires

TCEQ-Office of the Chief Clerk
MC-105 Attn: Notice Team
P.O. Box 13087
Austin, Texas 78711-3087

Applicant Name: Equistar Chemicals, LP
Permit No.: 9423
Application Received Date: March 29, 2019

ALTERNATIVE LANGUAGE AFFIDAVIT OF PUBLICATION FOR AIR PERMITTING

STATE OF TEXAS §
COUNTY OF _____ §

BEFORE ME, the undersigned authority, on this day personally appeared

_____, who being by me duly sworn, deposes and says that (s)he is (*Name of Person Representing Newspaper)*

the _____ of the _____;
(Title of Person Representing Newspaper) *(Name of the Newspaper)*

that said newspaper is generally circulated in _____, Texas;
*(The **municipality or county** in which the facility or proposed facility is located)*

that the enclosed notice was published in said newspaper on the following date(s):

_____

_____
(Newspaper Representative's Signature)

Subscribe and sworn to before me this the _____ day of _____, 20_____
to certify which witness my hand and seal of office.

_____
Notary Public in and for the State of Texas

[Affix Seal]

_____
Print or Type Name of Notary Public

_____
My Commission Expires

Notification List

It is the responsibility of the applicant to furnish the following offices with copies of the notices published, the *Affidavit of Publication for Air Permitting, the Alternative Language Affidavit of Publication for Air Permitting (if applicable)*, and a completed copy of the *Public Notice Verification Form (Form TCEQ-20244)*. Acceptable proof of publication and originals of any affidavits and Form TCEQ-20244 should be sent to the Texas Commission on Environmental Quality, Office of the Chief Clerk, MC-105, P.O. Box 13087, Austin, Texas 78711-3087.

Electronic copies should be submitted via email to the U.S. Environmental Protection Agency (EPA), **Region 6** at R6AirPermitsTX@EPA.gov. Please contact Ms. Aimee Wilson (wilson.aimee@epa.gov) at (214) 665-7596 if you have any questions pertaining to electronic submittals to the EPA.

Hard copies should be sent to the following:

Texas Commission on Environmental Quality
Office of Air
Air Permits Division, MC-163
Mr. Rahim Momin
P.O. Box 13087
Austin, Texas 78711-3087

Texas Commission on Environmental Quality
Houston Regional Office
5425 Polk St Ste H
Houston, Texas 77023-1452

Chief Health Inspector
Health Department
City of Pasadena
PO Box 672
Pasadena, Texas 77501-0672

Director
Harris County
Pollution Control Services
101 South Richey Ste H
Pasadena, Texas 77506

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 21, 2020

MR GERALD CRAWFORD
ENVIRONMENTAL MANAGER
EQUISTAR CHEMICALS LP
10801 CHOATE RD
PASADENA 77507-1503

Re: Amended Notice of Application and Preliminary Decision
Permit Amendment Application
Permit Number: 9423
Equistar Chemicals, LP
Bayport Polypropylene Plant
Pasadena, Harris County
Regulated Entity Number: RN100216761
Customer Reference Number: CN600124705

Dear Mr. Crawford:

The Texas Commission on Environmental Quality (TCEQ) has completed the technical review of your application and has prepared a preliminary decision and draft permit.

You are now required to publish notice of your proposed activity. To help you meet the regulatory requirements associated with this notice, we have included the following items:

- Notices for Newspaper Publication (Examples A and B)
- Public Notice Checklist
- Instructions for Public Notice
- Affidavit of Publication for Air Permitting (Form TCEQ-20533) and Alternative Language Affidavit of Publication for Air Permitting (Form TCEQ-20534)
- Web link to download Public Notice Verification Form (refer to Public Notice Instructions)
- Notification List
- Draft Permit

Please note that it is **very important** that you follow **all** directions in the enclosed instructions. If you do not, you may be required to republish the notice. A common mistake is the unauthorized changing of notice wording or font. If you have any questions, please contact us before you proceed with publication.

A "Public Notice Checklist" is enclosed which notes the time limitations for each step of the public notice process. **The processing of your application may be delayed if these time limitations are not met (i.e.; submitting proof of publication of the notice within 10 business days after publication, affidavits of publication within 30 calendar days after the date of publication, and public notice verification form within 10 business days after the end of the designated comment period).** This checklist should be used as a tool in conjunction with the enclosed, detailed instructions.

If you do not comply with **all** requirements described in the instructions, further processing of your application may be suspended or the agency may take other actions.

If you have any questions regarding publication requirements, please contact the Office of the Chief Clerk at (512) 239-3300. If you have any other questions, please contact Mr. Rahim Momin at (512) 239-1284.

Sincerely,

Bridget C. Bohac
Chief Clerk
Office of the Chief Clerk
Texas Commission on Environmental Quality

Enclosure

cc: Chief Health Inspector, Health Department, City of Pasadena, Pasadena
Director, Harris County, Pollution Control Services, Pasadena
Air Section Manager, Region 12 - Houston
Air Permits Section Chief, New Source Review Section (6MM-AP), U.S. Environmental Protection Agency, Region 6, Dallas

Project Number: 299187

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

EXAMPLE A

AMENDED NOTICE OF APPLICATION AND PRELIMINARY DECISION FOR AN AIR QUALITY PERMIT

PERMIT NUMBER: 9423

APPLICATION AND PRELIMINARY DECISION. Equistar Chemicals, LP, 10801 Choate Road, Pasadena, TX 77507-1503, has applied to the Texas Commission on Environmental Quality (TCEQ) for an amendment to Air Quality Permit Number 9423, which would authorize modification to a Bayport Polypropylene Plant located at 12001 Bay Area Boulevard, Pasadena, Harris County, Texas 77507. This application was submitted to the TCEQ on March 29, 2019. The *existing facility will emit* the following contaminants: exempt solvents and organic compounds.

The executive director has completed the technical review of the application and prepared a draft permit which, if approved, would establish the conditions under which the facility must operate. The executive director has made a preliminary decision to issue the permit because it meets all rules and regulations. The permit application, executive director's preliminary decision, and draft permit will be available for viewing and copying at the TCEQ central office, the TCEQ Houston regional office, *at the La Porte Branch Library, 600 South Broadway Street, La Porte, Harris County, Texas*, on the internet at www.lyondellbasell.com/bayportpolymers, and by contacting Mr. *Derek* Rodricks, *Principal* Environmental Engineer, Bayport Complex, (281) 291-1684**,** derek.rodricks@lyb.com**,** beginning the first day of publication of this notice. The facility's compliance file, if any exists, is available for public review at the TCEQ Houston Regional Office, 5425 Polk Street Suite H, Houston, Texas.

PUBLIC COMMENT/PUBLIC MEETING. You may submit public comments or request a public meeting about this application. The purpose of a public meeting is to provide the opportunity to submit comment or to ask questions about the application. The TCEQ will hold a public meeting if the executive director determines that there is a significant degree of public interest in the application or if requested by a local legislator. A public meeting is not a contested case hearing. **You may submit additional written public comments within 30 days of the date of newspaper publication of this notice in the manner set forth in the AGENCY CONTACTS AND INFORMATION paragraph below.**

RESPONSE TO COMMENTS AND EXECUTIVE DIRECTOR ACTION. After the deadline for public comments, the executive director will consider the comments and prepare a response to all relevant and material or significant public comments. Because no timely hearing requests have been received, after preparing the response to comments, the executive director may then issue final approval of the application. **The response to comments, along with the executive director's decision on the application will be mailed to everyone who submitted public comments or is on a mailing list for this application, and will be posted electronically to the Commissioners' Integrated Database (CID).**

INFORMATION AVAILABLE ONLINE. When they become available, the executive director's response to comments and the final decision on this application will be accessible through the Commission's Web site at www.tceq.texas.gov/goto/cid. Once you have access to the CID using the above link, enter the permit number for this application which is provided at the top of this notice. This link to an electronic map of the site or facility's general location is provided as a public courtesy and not part of the application or notice. For exact location, refer to application. http://www.tceq.texas.gov/assets/public/hb610/index.html?lat=29.634444&lng=-95.048055&zoom=13&type=r.

MAILING LIST. You may ask to be placed on a mailing list to obtain additional information on this application by sending a request to the Office of the Chief Clerk at the address below.

AGENCY CONTACTS AND INFORMATION. Public comments and requests must be submitted either electronically at www14.tceq.texas.gov/epic/eComment/, or in writing to the Texas Commission on Environmental Quality, Office of the Chief Clerk, MC-105, P.O. Box 13087, Austin, Texas 78711-3087. Please be aware that any contact information you provide, including your name, phone number, email address and physical address will become part of the agency's public record. For more information about this permit application or the permitting process, please call the Public Education Program toll free at 1-800-687-4040. Si desea información en Español, puede llamar al 1-800-687-4040.

Further information may also be obtained from Equistar Chemicals, LP at the address stated above or by calling Mr. Derek Rodricks, Principal Environmental Engineer at (281) 291-1684.

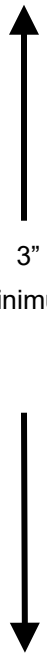
Amended Notice Issuance Date: May 21, 2020

Example B

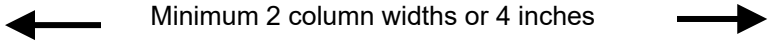
Publication Elsewhere in the Newspaper:

TO ALL INTERESTED PERSONS AND PARTIES:

Equistar Chemicals, LP, has applied to the Texas Commission on Environmental Quality (TCEQ) for an amendment to Air Quality Permit Number 9423, which would authorize modification to a Bayport Polypropylene Plant located at 12001 Bay Area Boulevard, Pasadena, Harris County, Texas 77507. Additional information concerning this application is contained in the public notice section of this newspaper.



3” minimum



Minimum 2 column widths or 4 inches

Public Notice Checklist
Notice of Application and Preliminary Decision for an Air Quality Permit
(2nd Notice)

The following tasks must be completed for public notice. If publication in an alternative language is required, please complete the tasks for both the English and alternative language publications. Detailed instructions are included in the "Instructions for Public Notice" section of this package.

Within 33 calendar days after date of this letter
Publish *Notice of Application and Preliminary Decision for an Air Quality Permit* in the same newspaper(s) in which you published *Notice of Receipt of Intent to Obtain Permit* for this application. - Example A must be published in "public notice" section of newspaper. Review for accuracy prior to publishing. - Example B (if applicable) must be published in prominent location (other than "public notice") in same issue of newspaper Provide copy of the complete application (including any subsequent revisions) and the executive director's preliminary decision (including the draft permit) at a public place for review and copying. Keep them there for duration of the designated comment period.
First day of newspaper publication
Review published newspaper notice for accuracy. If errors, contact Air Permits Division. Ensure copy of the complete application (including any subsequent revisions) and the executive director's preliminary decision (including the draft permit) are at the public place. It is recommended that the signs from the first notice be in place and the lettering must remain legible and visible until 30 days after publication of the *Notice of Application and Preliminary Decision* (either English or alternative language notice, whichever is later).
Within 10 business days after date of publication
Mail original proof of publication showing publication date and newspaper name to: Texas Commission on Environmental Quality Office of the Chief Clerk, MC-105 Attn: Notice Team P.O. Box 13087 Austin, Texas 78711-3087 Mail or email, as instructed, photocopies of newspaper clippings showing publication date and newspaper name to persons listed on *Notification List*.
Within 30 calendar days after date of publication
Mail original affidavit of publication for air permitting and alternative language affidavit of publication for air permitting (if applicable) to: Texas Commission on Environmental Quality Office of the Chief Clerk, MC-105 Attn: Notice Team P.O. Box 13087 Austin, Texas 78711-3087 Mail or email, as instructed, photocopies of affidavits to persons listed on *Notification List*.
Within 10 business days after end of the designated comment period
Mail Public Notice Verification Form to: Texas Commission on Environmental Quality Office of the Chief Clerk, MC-105 Attn: Notice Team P.O. Box 13087 Austin, Texas 78711-3087 Mail or email, as instructed, photocopies of Public Notice Verification Form to persons listed on *Notification List*.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Instructions for Public Notice
For New Source Review Air Permit

Notice of Application and Preliminary Decision

We have completed the technical review of your application and issued a preliminary decision. You must comply with the following instructions:

Review Notice

Included in the notice is all of the information which the commission believes is necessary to effectuate compliance with applicable public notice requirements. Please read it carefully and notify the Texas Commission on Environmental Quality (TCEQ) immediately if it contains any errors or omissions. You are responsible for ensuring the accuracy of all information published. You may not change the text of the notice without prior approval from the TCEQ.

Newspaper Notice

- You must publish the enclosed *Notice of Application and Preliminary Decision for an Air Quality Permit* within **33 calendar days** after the date this information was mailed to you (see date of letter).

- You must publish the enclosed *Notice of Application and Preliminary Decision for an Air Quality Permit* at your expense, in the same newspaper(s) in which you published the *Notice of Receipt and Intent to Obtain Permit* for this application. The newspaper must be a newspaper that is of general circulation in the municipality where the facility is or will be located. If the facility is not located within a municipality, the newspaper must be of general circulation in the municipality nearest the location.

- You must publish this notice in one issue of any applicable newspaper.

- You will find two example notices enclosed in this package. *Example A* must be published in the "public notice" section of the newspaper. The phrase "Example A" is not required to be published. *Example B* must be published in the **same issue** of the newspaper as *Example A*; however, it must be published in a prominent location (other than the public notice section). *Example B* refers the public to the "public notice" section of the newspaper where *Example A* provides more information regarding the permit application.

- *Example B* must be a total of at least **6 column inches (standard advertising units)** with a height of at least **3 inches** and a horizontal dimension of **2 column widths.** If the newspaper chosen does not use standard advertising units for measurement, the notice must be at least **12 square inches** with the shortest side of at least **3 inches**.

- The bold text of the enclosed notice **must** be printed in the newspaper in a font style or size that distinguishes it from the rest of the notice (i.e., **bold**, *italics*). **Failure to do so may require re-notice.**

Alternative Language Notice

In certain circumstances, applicants for air permits must complete notice in alternative languages.

- Public notice rules require the applicant to determine whether a bilingual program is required at either the elementary or middle school nearest to the facility or proposed facility location. Bilingual education programs are determined on a district-wide basis. When students who are required to attend either school are eligible to be enrolled in a bilingual education program, some alternative language notice is required (newspaper notice).

- Since the school district, and not the schools, must provide the bilingual education program, these programs do not have to be located at the elementary or middle school nearest to the facility or proposed facility to trigger the alternative language notice requirement. If there are students who would normally attend the nearest schools eligible to be taught in a bilingual education program at a different location, alternative language notice is required.

- If triggered, publications of alternative language notices must be made in a newspaper or publication printed primarily in each language taught in the bilingual education program. The same newspaper(s) used for *Notice of Receipt and Intent to Obtain Permit* must be used for publication of the *Notice of Application and Preliminary Decision for an Air Quality Permit*. This notice is required if such a newspaper or publication exists in the municipality or the county where the facility is or will be located.

- The applicant must demonstrate a good faith effort to identify a newspaper or publication in the required language. If a newspaper or publication of general circulation published at least once a month in such language cannot be found, publishing in that language is not required, but signs must remain posted in the same location(s) utilized during the *Notice of Receipt of Intent to Obtain Permit (1st public notice)*.

- Publication in an alternative language section or insertion within an English language newspaper does not satisfy these requirements.

- The applicant has the burden to demonstrate compliance with these requirements. You must fill out the ***Public Notice Verification Form (Form TCEQ-20244)*** indicating your compliance with the requirements regarding publication in an alternative language. **This form is available at www.tceq.texas.gov/permitting/air/nav/air_publicnotice.html.**

- It is suggested the applicant work with the local school district to do the following:

  (a) determine if a bilingual program is required in the district;
  (b) determine which language is required by the bilingual program;
  (c) locate the nearest elementary and middle schools; and
  (d) determine if any students attending either school are entitled to be enrolled in a bilingual educational program.

- **If you determine that you must meet the alternative language notice requirements, you are responsible for ensuring that the publication in the alternative language is complete and accurate in that language.** Since the most common bilingual programs are in Spanish, the TCEQ has provided example Spanish notice templates for your use. All italic notes should be replaced with the corresponding Spanish translations for the specific application and published in the alternative language publication. Electronic versions of the Spanish templates are available through the Air Permits Division Web site at www.tceq.texas.gov/goto/air/publicnotice.

- If you are required to publish notice in a language other than Spanish, you must translate the entire public notice at your own expense.

Public Comment Period

- The public comment period will last at least **30 calendar days after publication of the last notice**.

- The comment period will be longer if the last day of the public comment period ends on a weekend or a holiday. In this case, the comment period will end on the next business day.

- The comment period for the permit may lengthen depending on whether a public meeting is held. If a public meeting is held, the comment period will be extended to the later of either the date of the public meeting or the end of the second notice period.

Proof of Publication

- Check each publication to ensure that the articles were accurately published. If a notice was not published correctly you may be required to republish.

- For each newspaper in which you published, you must submit proof of publication that shows the notice, the date of publication, and the name of the newspaper to the Office of the Chief Clerk within **10 business days** after the date of publication. Acceptable proofs of publication are 1) copies of the published notice or 2) the original newspaper clippings of the published notice. If you choose to submit copies of the published notice to the Office of the Chief Clerk, copies must be on standard-size 8½'' x 11'' paper and must show the actual size of the published notice (do not reduce the image when making copies). Published notices longer than 11'' must be copied onto multiple 8½'' x 11'' pages. Please note, submitting a copy of your published notice could result in faster processing of your application. It is recommended that you maintain original newspaper clippings or tear sheets of the notice for your records.

- You must submit an **original affidavit of publication for air permitting and alternate language affidavit of publication for air permitting (if applicable)** to the Office of the Chief Clerk within **30 calendar days** after the date of publication. **You must use the enclosed affidavit forms.** The affidavits must clearly identify the applicant's name and permit number. You are encouraged to submit the affidavit with the proof of publication described above.

- You must submit the ***Public Notice Verification Form (Form TCEQ-20244)*** to the Office of the Chief Clerk within **10 business days** of the end of this public comment period. You must use this form to certify that you have met bilingual notice requirements. **This form is available at www.tceq.texas.gov/permitting/air/nav/air_publicnotice.html.**

- The **original affidavits of publication, *Public Notice Verification Form,* and acceptable proof of publication of the published notices** must be mailed to:

Texas Commission on Environmental Quality
Office of the Chief Clerk, MC-105
Attn: Notice Team
P.O. Box 13087
Austin, Texas 78711-3087

- Please ensure that the affidavit(s) you send to the Chief Clerk is/are originals and that all blanks on the affidavit are filled in correctly. Photocopies of affidavits will not be accepted.

- Photocopies of newspaper clippings, affidavits, and verifications must also be sent to those listed on the enclosed *Notification List* within the deadlines specified above.

Failure to Publish and Submit Proof of Publication

You must meet all publication requirements. **If you fail to publish the notice or submit proof of publication *on time,*** the TCEQ may suspend further processing on your application or take other actions.

Sign Posting

It is recommended that the signs that were put in place prior to publication of the first notice remain in place and be legible and visible until 30 days after publication of the *Notice of Application and Preliminary Decision* (either English or alternative language notice, whichever is later).

Application in a Public Place

- You must provide a copy of the complete application (including any subsequent revisions) and the executive director's preliminary decision (including the draft permit), at a public place for review and copying by the public. This place must be in the county in which the facility is located or proposed to be located.

- A public place is one that is publicly owned or operated (ex: libraries, county courthouses, or city halls.)

- This copy must be accessible to the public for review and copying. The copy must be available beginning on the first day of newspaper publication and remain in place until the commission has taken action on the application or the commission refers issues to the State Office of Administrative Hearings.

- If the application is submitted to the TCEQ with information marked as "CONFIDENTIAL," you are required to indicate which specific portions of the application are not being made available to the public. These portions of the application must be accompanied with the following statement: "Any request for portions of this application that are marked as confidential must be submitted in writing, pursuant to the Public Information Act, to the Texas Commission on Environmental Quality, Public Information Coordinator, MC-197, P.O. Box 13087, Austin, Texas 78711-3087."

- You must submit verification of file availability using the ***Public Notice Verification Form (Form TCEQ-20244)*** within **10 business days** after end of the publications' designated comment period. Do not submit the form verifying that the application was in a public place until after the comment period is complete. If a public meeting is held or second notice is required causing the public comment period to be extended, at a later date you will be required to verify that the application was in a public place during the entire public comment period. **This form is available at www.tceq.texas.gov/permitting/air/nav/air_publicnotice.html.**

General Information

When contacting the Commission regarding this application, please refer to the permit number at the top of the *Notice of Application and Preliminary Decision*.

If you have questions or need assistance regarding publication requirements, please contact the Office of the Chief Clerk at (512) 239-3300 or the project reviewer listed in the cover letter.

TCEQ-Office of the Chief Clerk
MC-105 Attn: Notice Team
P.O. Box 13087
Austin, Texas 78711-3087

Applicant Name: Equistar Chemicals, LP
Permit No.: 9423
Application Received Date: March 29, 2019

AFFIDAVIT OF PUBLICATION FOR AIR PERMITTING

STATE OF TEXAS §
COUNTY OF _____ §

BEFORE ME, the undersigned authority, on this day personally appeared

_____, who being by me duly sworn, deposes and says that (s)he is *(Name of Person Representing Newspaper)*

the _____ of the _____
(Title of Person Representing Newspaper) *(Name of the Newspaper)*

that said newspaper is generally circulated in _____, Texas;
(The municipality or nearest municipality to the location of the facility or the proposed facility)

that the enclosed notice was published in said newspaper on the following date(s):

_____

_____
(Newspaper Representative's Signature)

Subscribed and sworn to before me this the _____ day of _____, 20_____
to certify which witness my hand and seal of office.

_____
Notary Public in and for the State of Texas

[Affix Seal]

_____
Print or Type Name of Notary Public

_____
My Commission Expires

TCEQ-Office of the Chief Clerk
MC-105 Attn: Notice Team
P.O. Box 13087
Austin, Texas 78711-3087

Applicant Name: Equistar Chemicals, LP
Permit No.: 9423
Application Received Date: March 29, 2019

ALTERNATIVE LANGUAGE AFFIDAVIT OF PUBLICATION FOR AIR PERMITTING

STATE OF TEXAS §
COUNTY OF _____ §

BEFORE ME, the undersigned authority, on this day personally appeared

_____, who being by me duly sworn, deposes and says that (s)he is (*Name of Person Representing Newspaper)*

the _____ of the _____;
(Title of Person Representing Newspaper) *(Name of the Newspaper)*

that said newspaper is generally circulated in _____, Texas;
*(The **municipality or county** in which the facility or proposed facility is located)*

that the enclosed notice was published in said newspaper on the following date(s):

_____

_____
(Newspaper Representative's Signature)

Subscribe and sworn to before me this the _____ day of _____, 20_____
to certify which witness my hand and seal of office.

_____
Notary Public in and for the State of Texas

[Affix Seal]

_____
Print or Type Name of Notary Public

_____
My Commission Expires

Notification List

It is the responsibility of the applicant to furnish the following offices with copies of the notices published, the *Affidavit of Publication for Air Permitting, the Alternative Language Affidavit of Publication for Air Permitting (if applicable)*, and a completed copy of the *Public Notice Verification Form (Form TCEQ-20244)*. Acceptable proof of publication and originals of any affidavits and Form TCEQ-20244 should be sent to the Texas Commission on Environmental Quality, Office of the Chief Clerk, MC-105, P.O. Box 13087, Austin, Texas 78711-3087.

Electronic copies should be submitted via email to the U.S. Environmental Protection Agency (EPA), **Region 6** at R6AirPermitsTX@EPA.gov. Please contact Ms. Aimee Wilson (wilson.aimee@epa.gov) at (214) 665-7596 if you have any questions pertaining to electronic submittals to the EPA.

Hard copies should be sent to the following:

Texas Commission on Environmental Quality
Office of Air
Air Permits Division, MC-163
Mr. Rahim Momin
P.O. Box 13087
Austin, Texas 78711-3087

Texas Commission on Environmental Quality
Houston Regional Office
5425 Polk St Ste H
Houston, Texas 77023-1452

Chief Health Inspector
Health Department
City of Pasadena
PO Box 672
Pasadena, Texas 77501-0672

Director
Harris County
Pollution Control Services
101 South Richey Ste H
Pasadena, Texas 77506

6. DRAFT NSR PERMIT NO. 9423

Special Conditions

Permit Numbers 9423 and N202

Emission Standards

1. This permit authorizes emissions only from those points listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates," and the facilities covered by this permit are authorized to emit subject to the emission rate limits on that table and other operating requirements specified in the special conditions.

2. Non-fugitive emissions from relief valves, safety valves, or rupture discs of gases containing volatile organic compounds (VOC) at a concentration of greater than 1 percent are not authorized by this permit unless authorized on the MAERT. Any releases directly to atmosphere from relief valves, safety valves, or rupture discs of gases containing VOC at a concentration greater than 1 weight percent are not consistent with good practice for minimizing emissions.

Federal Applicability

3. These facilities shall comply with all applicable requirements of the U. S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources promulgated in Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60): **(09/18)**

    A. Subpart A, General Provisions;

    B. Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced After January 5, 1981, and on or Before November 7, 2006; and

    C. Subpart DDD, Standards of Performance for VOC Emissions from the Polymer Manufacturing Industry.

4. These facilities shall comply with all applicable requirements of the EPA regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories in 40 CFR Part 63: **(09/18)**

    A. Subpart A, General Provisions; and

    B. Subpart FFFF, National Emission Standard for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing.

Emission Standards and Operational Specifications

5. Carbon Compound Waste Gas Streams

    A. All VOC vents having a concentration of 100 ppmw VOC in polypropylene or greater shall be vented to a control device.

    B. Except as may be provided for in the special conditions of this permit, all waste gas from point sources containing VOC and/or other organic compounds (hydrocarbons and/or hydrocarbon derivatives excluding carbon dioxide) shall be routed to one of the two flares or a combination of the two flares, Emission Point Nos. (EPNs) 30 and 34. Each flare shall operate with no less than 99 percent efficiency in disposing of the carbon compounds captured by the collection system. The waste gas streams shall include process vents, analyzer vents, and steam jet exhausts. Storage tank vents, cooling tower exhaust, and

process fugitive emissions are excluded from this requirement. This condition does not authorize upset emissions. Any other exception to this condition requires prior review and approval by the Texas Commission on Environmental Quality (TCEQ) Executive Director, and such exceptions may be subject to strict monitoring requirements. **(12/10)**

C. Back-Up Control Scenario

During periods when the C-Line, D-Line, or E-Line Recycle Gas Compressor is not in operation, all process vents normally routed to the recycle gas compressor shall be routed to one of the flares (EPNs 30 or 34). This scenario shall be limited to no more than 2.06 million standard cubic feet (MMscf) of total VOC vent flow per rolling 12-month period. Records of the occurrence, duration, and vent flow for this scenario and all associated emissions shall be maintained in a permanent form suitable for inspection for at least the last two years by TCEQ personnel or any local air pollution control agencies having jurisdiction. **(11/18)**

6. Flares, EPNs 30 and 34, shall be designed and operated in accordance with the following requirements:

A. The flare systems shall be designed such that the combined assist natural gas and waste stream to each flare meets the 40 CFR § 60.18 specifications of minimum heating value and maximum tip velocity under normal, upset, and maintenance flow conditions.

The heating value and velocity requirements shall be satisfied during operations authorized by this permit. Flare testing per 40 CFR § 60.18(f) may be requested by the appropriate regional office to demonstrate compliance with these requirements.

B. The flare shall be operated with a flame present at all times and/or have a constant pilot flame. The pilot flame shall be continuously monitored by a thermocouple or an infrared monitor. The time, date, and duration of any loss of pilot flame shall be recorded. Each monitoring device shall be accurate to, and shall be calibrated at a frequency in accordance with, the manufacturer's specifications

C. The flare shall be operated with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours. This shall be ensured by the use of steam or air assist to the flare. **(03/10)**

D. The permit holder shall comply with the highly reactive volatile organic compound (HRVOC) monitoring requirements specified in 30 TAC §115, Subchapter H.

7. The following requirements apply to capture systems for the plant flare system:

A. Either conduct a once a month visual, audible, and/or olfactory inspection of the capture system to verify there are no leaking components in the capture system; or verify the capture system is leak-free by inspecting in accordance with 40 CFR Part 60, Appendix A, Test Method 21 once a year. Leaks shall be indicated by an instrument reading greater than or equal to 500 ppmv above background.

B. The control device shall not have a bypass.

C. If any of the above inspections is not satisfactory, the permit holder shall promptly take necessary corrective action. Records shall be maintained documenting the performance and results of the inspections required above. **(03/10)**

8. Supplement fuel used in the flares, EPNs 30 and 34, shall be limited to pipeline-quality, sweet natural gas containing no more than five grains of total sulfur per 100 dry standard cubic feet (dscf) or propane. Use of any other fuel shall require prior approval of the Executive Director of the TCEQ. **(07/19)**

9. Particulate matter (PM) grain loading from any vent shall not exceed 0.01 grain per dscf of air.

10. The following requirements apply to the pressure monitoring for the Railcar Loading ELX (EPN 133) bag filter (baghouse), when the loading facility is operational:

    A. The differential pressure across each baghouse shall be continuously monitored and be recorded at least once an hour. The pressure drop shall be greater than 0.11 inches of water pressure and shall not exceed 5.0 inches of water pressure. If the differential pressure drop falls below the minimum of 0.11 inches of water, Equistar shall troubleshoot the system and take the appropriate actions (for example, investigate possible leaks, inspect for damage, etc.) to ensure the system is working properly as designed. (**04/20)**

    B. Each monitoring device shall be calibrated at frequency in accordance with the manufacturer's specifications or at least annually, whichever is more frequent, and shall be accurate to within $\pm$ 5 percent of span.

    C. Quality assured (or valid) data must be generated when the baghouses are operating except during the performance of a daily zero check. Loss of data due to periods of monitor breakdown, out-of-control operations (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in hours) that the bag filter (baghouse) operated (during railcar loading) over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded.

11. All PM filter systems shall effectively capture emissions from associated equipment and prevent particulate emissions from escaping. The PM filter systems shall be maintained free of holes, cracks, and other conditions that would reduce the collection efficiency of the emission capture system.

12. The filtered vents covered by this permit shall not operate unless filters and associated equipment are maintained in good working order and operating during normal facility operations. The following steps shall be performed, at a minimum, to ensure proper operation of each filtered vent:

    A. All filter vents shall be inspected for visible emissions once each day.

    B. When there are visible emissions from any one filtered vent, the operation associated with that particular filtered vent shall be isolated and shut down in a timely and orderly manner. The isolated filter system shall be tested and inspected. Failed or damaged parts shall be repaired or replaced.

    C. A spare-parts filter inventory will be maintained on site. **(09/18)**

    D. Records shall be maintained of all inspections and maintenance performed. **(09/18)**

13. Loading emissions from the propane recovery facility shall be minimized by the use of a vapor return line during loading service.

14. Total VOC emitted to the atmosphere downstream of the polymer dryer through product loadout shall not exceed 80 pounds of VOC/million (MM) pounds of high density polypropylene pellets. **(03/10)**

Cooling Towers

15. The cooling towers (EPNs 99, 146, and 151) shall be operated and monitored for VOC leakage in accordance with the following: **(07/19)**

    A. The cooling tower water shall be monitored continuously for VOC leakage from heat exchangers in accordance with the requirements of 30 TAC Chapter 115, Subchapter H, Division 2. The results of the monitoring, cooling water flow rate, and maintenance activities on the cooling water system shall be recorded. The rolling 12-month cooling water emission rate shall be recorded on a monthly basis.

    B. Cooling water VOC concentrations above 0.08 ppmw indicate faulty equipment. Equipment shall be maintained so as to minimize VOC emissions into the cooling water. Faulty equipment shall be repaired at the earliest opportunity but no later than the next scheduled shutdown of the process unit in which the leak occurs.

    C. The permit holder shall comply with all other applicable HRVOC monitoring requirements specified in 30 TAC §115, Subchapter H.

    Emissions from the cooling tower are not authorized if the VOC concentration of the water returning to the cooling tower exceeds 0.5 ppmw. The VOC concentrations above 0.5 ppmw are not subject to extensions for delay of repair under this permit condition. The results of the monitoring and maintenance efforts shall be recorded.

16. When the startup of the C-line and D-line expansion is complete, PM emissions from the cooling towers (EPNs 99, 151, and 155) shall be operated and monitored in accordance with the following conditions. Prior to that time, EPNs 99 and 151 shall follow the requirements of Special Condition 17 and EPN 155 is authorized by PBR. **(04/20)**

    A. Cooling towers shall each be equipped with drift eliminators having manufacturer's design assurance of 0.001% drift or less. Drift eliminators shall be maintained and inspected at least annually. The permit holder shall maintain records of all inspections and repairs.

    B. Total dissolved solids (TDS) shall not exceed 14,000 parts per million by weight (ppmw) for EPN 155 and 2,500 ppmw for EPNs 99 and 151. Dissolved solids in the cooling water drift are considered to be emitted as PM, PM_{10}, and $PM_{2.5}$ as represented in the permit application calculations.

    C. The conductivity and flow rate of the cooling water shall be measured and recorded once a day. Alternately, the design maximum cooling water flow rate may be used in lieu of measuring the flow rate of the cooling water.

        (1) A conversion factor of 0.70 has been demonstrated and shall be used to convert conductivity values to total dissolved solid concentrations, unless a new correlation factor has been established in accordance with paragraph (2).

        (2) The permit holder shall validate the TDS-to-conductivity correlation factor for each cooling tower once each calendar year. If the ratio of concurrently sampled TDS and conductivity is more than 10% higher than the established factor, the permit holder

shall increase TDS monitoring to weekly until a new correlation factor can be established using the average of nine consecutive weekly TDS-to-conductivity ratios determined provided the highest ratio is not more than 10% larger than the smallest ratio.

D. Cooling water sampling shall be representative of the cooling tower feed water and shall be conducted using approved methods.

(1) The analysis method for TDS shall be EPA Method 160.1, ASTM D5907, or SM 2540 C (SM - 19th edition of Standard Methods for Examination of Water) or an equivalent method as approved the TCEQ Executive Director. Water samples should be capped upon collection, and transferred to a laboratory area for analysis.

(2) The analysis method for conductivity shall be either ASTM D1125-95A (field or routine laboratory testing) or ASTM D1125-95B (continuous monitor) or an equivalent method. as approved the TCEQ Executive Director The analysis may be conducted at the sample site or with a calibrated process conductivity meter. If a conductivity meter is used, it shall be calibrated at least annually. Documentation of the method and any associated calibration records shall be maintained.

(3) Alternate sampling and analysis methods may be used to comply with D(1) and D(2) with written approval from the TCEQ Regional Director.

(4) Records of all instrument calibrations and test results and process measurements used for the emission calculations shall be retained.

E. Emission rates of PM, PM_{10} and $PM_{2.5}$ shall be calculated using the measured conductivity and the ratio or correlation of TDS to conductivity measurements, the design drift rate and the daily maximum and average actual cooling water circulation rate for the short term and annual average rates. Alternately, the design maximum cooling water flow rate may be used for all calculations. Emission records shall be updated monthly.

F. Quality-assured (or valid) conductivity or flow rate data must be generated when the cooling towers are operating. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in days) that the cooling towers operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded.

17. The following requirements shall apply to cooling tower (EPN 146): **(09/18)**

A. The conductivity and flow rate of the cooling water shall be measured and recorded once a day. A conversion factor of 0.70 has been demonstrated and shall be used to convert conductivity values to total dissolved solid concentrations. Dissolved solids in the cooling water drift are considered to be emitted as PM_{10}. The rolling 12-month cooling water PM_{10} emission rate shall be recorded on a monthly basis.

B. Quality-assured (or valid) conductivity data must be generated when the cooling towers are operating. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in days) that the cooling towers operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded.

Storage Tanks and Loading

18. All lines and connectors for Waste Oil Loading from Tank D-885 shall be visually inspected for any defects prior to hookup. Lines and connectors that are visibly damaged shall be removed from service. Operations shall cease immediately upon detection of any liquid leaking from the lines or connections. **(09/18)**

19. When the startup of the C-line and D-line expansion is complete or December 2021, whichever comes first, Waste Oil liquid loading from Tank D-885 shall be operated in accordance with the following requirements: **(09/18)**

    A. All Waste Oil liquid loading from Tank D-885 shall be submerged and rolling 12-month throughput records shall be updated on a monthly basis for each material loaded.

    B. Waste Oil Loading from Tank D-885 (EPN 98) is limited to rates of 4,053 gallons per hour and 130,992 gallons on a rolling 12-month basis.

    C. Loading emissions shall be vented to one of the two flares, EPNs 30 and 34, or a combination of the two flares or shall be vapor-balanced back to Tank D-885.

    D. Each tank truck shall pass vapor-tight testing every 12 months using the methods described in Title 40 Code of Federal Regulations Part 60 (40 CFR 60), Subpart XX. The permit holder shall not allow a tank truck to be filled unless it has passed a leak-tight test within the past year as evidenced by a certificate which shows the date the tank truck last passed the leak-tight test required by this condition and the identification number of the tank truck.

20. Storage tanks (EPNs D-6850 and T-5104C) throughput and service are subject to the following: **(DATE)**

Tank Identifier	Service	Rolling 12 Month Throughput (gallons)
D-6850	organic peroxide	150,000
T-5104C	organic peroxide	100,000

The permit holder shall maintain a record of tank throughput for the previous month and the past consecutive 12 month period for each tank.

21. Upon 18 months after issuance of the September 26, 2018 (i.e. March 25, 2020) amendment to this permit, storage tank throughput for the Mineral Oil tanks (EPNs 143,144, and 160) shall each be limited to 307,429 gallons per rolling 12-month. **(07/19)**

22. Upon 18 months after issuance of the September 26, 2018 (March 25, 2020) amendment to this permit, storage tanks listed below are subject to the requirements in paragraphs A and B: **(07/19)**

C-Line	EPNs: 40, 109, 110, 112, 113, 114, 143, 144, 160
D-Line	EPNs: 38, 103, 104, 105, 106, 107

A. Except for labels, logos, etc. not to exceed 15 percent of the tank total surface area, uninsulated tank exterior surfaces exposed to the sun shall be white or unpainted aluminum.

B. The permit holder shall maintain a record of tank throughput for the previous month and the past consecutive 12-month period for each tank.

Fugitive Leak Detection and Repair Programs

Piping, Valves, Flanges, Pumps, and Compressors - Intensive Directed Maintenance - 28MID

23. The following requirements apply to piping, valves, connectors, pumps, agitators, and compressors containing or in contact with fluids that could reasonably be expected to contain greater than or equal to 10 weight percent VOC at any time. **(09/18)**

A. The requirements of paragraphs F and G shall not apply (1) where the VOC has an aggregate partial pressure or vapor pressure of less than 0. 044 pounds per square inch, absolute (psia) at 68°F or (2) where the operating pressure is at least 5 kilopascals (0.725 psi) below ambient pressure. Equipment excluded from this condition shall be identified in a list or by one of the methods described below to be made available upon request.

The exempted components may be identified by one or more of the following methods:

(1) piping and instrumentation diagram (PID);

(2) a written or electronic database or electronic file;

(3) color coding;

(4) a form of weatherproof identification; or

(5) Designation of exempted process unit boundaries.

B. Construction of new and reworked piping, valves, pump systems, agitators, and compressor systems shall conform to applicable American National Standards Institute (ANSI), American Petroleum Institute (API), American Society of Mechanical Engineers (ASME), or equivalent codes.

C. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical. New and reworked buried connectors shall be welded.

D. To the extent that good engineering practice will permit, new and reworked valves and piping connections shall be so located to be reasonably accessible for leak-checking during plant operation. Difficult-to-monitor and unsafe-to-monitor valves, as defined by Title 30 Texas Administrative Code Chapter 115 (30 TAC Chapter 115), shall be identified in a list to be made available upon request. The difficult-to-monitor and unsafe-to-monitor valves may be identified by one or more of the methods described in Paragraph A above. If an unsafe to monitor component is not considered safe to monitor within a calendar year, then it shall be monitored as soon as possible during safe to monitor times. A difficult to monitor component for which quarterly monitoring is specified may instead be monitored annually.

E. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. Gas or hydraulic testing of the new and reworked piping connections at no less than normal operating pressure shall be performed prior to returning the components to service or they shall be monitored for leaks

using an approved gas analyzer within 15 days of the components being returned to service. Adjustments shall be made as necessary to obtain leak-free performance. Connectors shall be inspected by visual, audible, and/or olfactory means at least weekly by operating personnel walk-through.

Each open-ended valve or line shall be equipped with an appropriately sized cap, blind flange, plug, or a second valve to seal the line. Except during sampling, both valves shall be closed. If the isolation of equipment for hot work or the removal of a component for repair or replacement results in an open ended line or valve, it is exempt from the requirement to install a cap, blind flange, plug, or second valve for 72 hours. If the repair or replacement is not completed within 72 hours, the permit holder must complete either of the following actions within that time period:

(1) a cap, blind flange, plug, or second valve must be installed on the line or valve; or

(2) the open-ended valve or line shall be monitored once for leaks above background for a plant or unit turnaround lasting up to 45 days with an approved gas analyzer and the results recorded. For all other situations, the open-ended valve or line shall be monitored once by the end of the 72 hours period following the creation of the open ended line and monthly thereafter with an approved gas analyzer and the results recorded. For turnarounds and all other situations, leaks are indicated by readings of 500 ppmv and must be repaired within 24 hours or a cap, blind flange, plug, or second valve must be installed on the line or valve.

F. Accessible valves shall be monitored by leak-checking for fugitive emissions at least quarterly using an approved gas analyzer with a directed maintenance program. Sealless/leakless valves (including, but not limited to, welded bonnet bellows and diaphragm valves) and relief valves equipped with a rupture disc upstream or venting to a control device are not required to be monitored. For valves equipped with rupture discs, a pressure-sensing device shall be installed between the relief valve and rupture disc to monitor disc integrity. All leaking discs shall be replaced at the earliest opportunity but no later than the next process shutdown.

A check of the reading of the pressure-sensing device to verify disc integrity shall be performed at least quarterly and recorded in the unit log or equivalent. Pressure-sensing devices that are continuously monitored with alarms are exempt from recordkeeping requirements specified in this paragraph.

An approved gas analyzer shall conform to requirements listed in Method 21 of 40 CFR part 60, appendix A. The gas analyzer shall be calibrated with methane. In addition, the response factor of the instrument for a specific VOC of interest shall be determined and meet the requirements of Section 8 of Method 21. If a mixture of VOCs is being monitored, the response factor shall be calculated for the average composition of the process fluid. A calculated average is not required when all of the compounds in the mixture have a response factor less than 10 using methane. If a response factor less than 10 cannot be achieved using methane, then the instrument may be calibrated with one of the VOC to be measured or any other VOC so long as the instrument has a response factor of less than 10 for each of the VOC to be measured.

A directed maintenance program shall consist of the repair and maintenance of components assisted simultaneously by the use of an approved gas analyzer such that a minimum concentration of leaking VOC is obtained for each component being maintained. A first attempt to repair the leak must be made within 5 days. Records of the first attempt to repair

shall be maintained. Replaced components shall be re-monitored within 15 days of being placed back into VOC service.

G. All new and replacement pumps, compressors, and agitators shall be equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal. These seal systems need not be monitored and may include (but are not limited to) dual pump seals with barrier fluid at higher pressure than process pressure, seals degassing to vent control systems kept in good working order, or seals equipped with an automatic seal failure detection and alarm system. Submerged pumps or sealless pumps (including, but not limited to, diaphragm, canned, or magnetic-driven pumps) may be used to satisfy the requirements of this condition and need not be monitored.

All other pump, compressor, and agitator seals shall be monitored with an approved gas analyzer at least quarterly.

H. Damaged or leaking valves, connectors, compressor seals, pump seals, and agitator seals found to be emitting VOC in excess of 500 parts per million by volume (ppmv) or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. A leaking component shall be repaired as soon as practicable, but no later than 15 days after the leak is found. If the repair of a component would require a unit shutdown that would create more emissions than the repair would eliminate, the repair may be delayed until the next scheduled shutdown. All leaking components which cannot be repaired until a scheduled shutdown shall be identified for such repair by tagging. A listing of all components that qualify for delay of repair shall be maintained on a delay of repair list. The cumulative daily emissions from all components on the delay of repair list shall be estimated by multiplying by 24 the mass emission rate for each component calculated in accordance with the instructions in 30 TAC 115.782 (c)(1)(B)(i)(II). The calculations of the cumulative daily emissions from all components on the delay of repair list shall be updated within ten days of when the latest leaking component is added to the delay of repair list. When the cumulative daily emission rate of all components on the delay of repair list times the number of days until the next scheduled unit shutdown is equal to or exceeds the total emissions from a unit shut down as calculated in accordance with 30 TAC 115.782 (c)(1)(B)(i)(I), the TCEQ Regional Manager and any local programs shall be notified and may require early unit shut down or other appropriate action based on the number and severity of tagged leaks awaiting shutdown. This notification shall be made within 15 days of making this determination.

In lieu of the monitoring frequency specified in paragraph F, valves in gas and light liquid service may be monitored on a semiannual basis if the percent of valves leaking for two consecutive quarterly monitoring periods is less than 0.5 percent.

Valves in gas and light liquid service may be monitored on an annual basis if the percent of valves leaking for two consecutive semiannual monitoring periods is less than 0.5 percent.

If the percent of valves leaking for any semiannual or annual monitoring period is 0.5 percent or greater, the facility shall revert to quarterly monitoring until the facility again qualifies for the alternative monitoring schedules previously outlined in this paragraph.

I. The percent of valves leaking used in paragraph I shall be determined using the following formula:

$$(Vl + Vs) \times 100/Vt = Vp$$

Where:

Vl = the number of valves found leaking by the end of the monitoring period, either by Method 21 or sight, sound, and smell.

Vs = the number of valves for which repair has been delayed and are listed on the facility shutdown log.

Vt = the total number of valves in the facility subject to the monitoring requirements, as of the last day of the monitoring period, not including nonaccessible and unsafe-to-monitor valves.

Vp = the percentage of leaking valves for the monitoring period.

J. Records of repairs shall include date of repairs, repair results, justification for delay of repairs, and corrective actions taken for all components. Records of instrument monitoring shall indicate dates and times, test methods, and instrument readings. The instrument monitoring record shall include the time that monitoring took place for no less than 95% of the instrument readings recorded. Records of physical inspections shall be noted in the operator's log or equivalent.

K. Compliance with the requirements of this condition does not assure compliance with requirements of 30 TAC Chapter 115, an applicable New Source Performance Standard, or an applicable National Emission Standard for Hazardous Air Pollutants and does not constitute approval of alternative standards for these regulations.

Annual Inspection of Connectors - 28CNTA

24. In addition to the weekly physical inspection required by Item E of Special Condition 22, all connectors in gas/vapor and light liquid service shall be monitored annually with an approved gas analyzer in accordance with Items F thru J of Special Condition 22. Alternative monitoring frequency schedules ("skip options") of Title 40 Code of Federal Regulations Part 63, Subpart H, National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks, may be used in lieu of the monitoring frequency required by this permit condition. Compliance with this condition does not assure compliance with requirements of applicable state or federal regulation and does not constitute approval of alternative standards for these regulations. This condition shall be effective when the startup of the C-line and D-line expansion is complete. **(07/19)**

Piping, Valves, Flanges, Pumps, and Compressors in Natural Gas Service – 28PI

25. Except as may be provided for in the special conditions of this permit, the following requirements apply to the above-referenced equipment: **(09/18)**

A. Construction of new and reworked piping, valves, pump systems, and compressor systems shall conform to applicable American National Standards Institute (ANSI), American Petroleum Institute (API), American Society of Mechanical Engineers (ASME), or equivalent codes.

B. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical.

C. To the extent that good engineering practice will permit, new and reworked valves and piping connections shall be so located to be reasonably accessible for leak-checking during plant operation. Non-accessible valves, as defined in Title 30 Texas Administrative Code (30 TAC) Chapter 115, shall be identified in a list to be made available upon request.

D. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter.

E. Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve. Except during sampling, the second valve shall be closed.

F. All piping components shall be inspected by visual, audible, and/or olfactory means at least weekly by operating personnel walk-through.

G. Damaged or leaking valves, connectors, compressor seals, and pump seals found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. A leaking component shall be repaired as soon as practicable, but no later than 15 days after the leak is found. If the repair of a component would require a unit shutdown, the repair may be delayed until the next scheduled shutdown. All leaking components which cannot be repaired until a scheduled shutdown shall be identified for such repair by tagging. At the discretion of the TCEQ Executive Director or designated representative, early unit shut down or other appropriate action may be required based on the number and severity of tagged leaks awaiting shutdown.

H. Date and time of each inspection shall be noted in the operator's log or equivalent. Records shall be maintained at the plant site of all repairs and replacements made due to leaks. These records shall be made available to representatives of the TCEQ upon request.

I. This condition shall be effective when the startup of the C-line and D-line expansion is complete.

Sampling

26. Ongoing compliance with VOC emission limits for the polyolefin product handling systems shall be determined by calculation using monthly production rates and monthly average sampling and testing of the polyolefin for residual VOC immediately after the dryer (for non-visbroken products) and after peroxide injection, immediately after the extruder (for visbroken products). **(DATE)**

The permit holder shall sample and test the polyolefin product from the reactor train for residual VOC during production of visbroken and non-visbroken production grades of polyolefin as follows:

A. Collect three samples of polyolefin products every month when the reactor is running the entire month. When the reactor is not running during the month, collect a sample each week the reactor is running.

B. Samples of polyolefin products shall be taken immediately after the dryer (for non-visbroken products) and after the peroxide injection, immediately after the extruder (for visbroken products) to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere.

C. Sampling and testing of the polyolefin products shall be performed using a headspace analysis method approved by the executive director per 30 TAC §116. 115 (b)(2)(C), which measures the ppmw that might evolve off the product. Alternate sampling and testing methods shall be approved by the TCEQ regional office.

D. Hourly uncontrolled residual VOC emissions shall be calculated by multiplying the monthly average residual VOC concentration (ppmw) with the monthly average hourly production rate. Calculations shall take into account any changes in product type during the month.

E. The permit holder shall maintain an emissions record to calculate uncontrolled residual VOC emissions in pounds (lbs) on a calendar month basis by multiplying the average of the

residual VOC (ppmw), by the production for the month, while taking into account any changes in product type during the month.

F. The rolling 12-month average residual VOC emissions in tons per year for polyolefin production shall be sum of the uncontrolled residual VOC emissions for the current month and the preceding 11-month period divided by the total polyolefin production for the current month and preceding 11-month period.

G. Polymer production rates and monitoring records for at least the past five years shall be maintained at the plant and made available upon request to TCEQ personnel. The compliance records shall include (but are not limited to):

(1) Date and time of each sample.

(2) Actual plant production rate at the time of sampling and monthly average production rates.

(3) Product number and melt index

(4) Measured total VOC concentration (ppmw) in the polyolefin products resulting from the analysis specified in Special Conditions 25.A to 25.C.

(5) Polymer handling emissions shall be calculated by the VOC concentration multiplied by monthly average production rate.

(6) Calculated average uncontrolled residual VOC emissions in lbs/month.

(7) Calculated rolling 12-month average residual VOC emissions in pounds per million pounds of product (lb/MMlbs).

(8) Calculated total rolling 12-month residual VOC emissions in tons per year.

Production Limitation

27. The production lines listed below shall not exceed the corresponding production rates: **(09/18)**

Production Line	Hourly Rate* (pounds per hour)	Annual Rate (million pounds per year)
HPP-3 Unit (C-line)	80,000	701
HPP-4 Unit (D- Line)	80,000	701
HPP-5 Unit (E-Line)	120,000	750

The copolymers and homopolymers produced on the C-Line and D-Line shall comply with the hourly throughput constraints contained in the Table 2 Material Balance submitted in the permit amendment application (PI-1 Form signed June 29, 2017). Monthly production records shall be maintained which indicate the pounds of polyolefin product produced each month as well as a year-to-date rolling average.

This shall be effective upon the startup of the C-line and D-line expansion. Prior to that, the following production rates apply:

Production Line	Hourly Rate* (pounds per hour)	Annual Rate (million pounds per year)
HPP-3 Unit (C-line)	65,000	500
HPP-4 Unit (D- Line)	65,000	500
HPP-5 Unit (E-Line)	120,000	750

Maintenance, Startup, and Shutdown Activities

28. This permit authorizes the emissions for the planned maintenance, startup, and shutdown (MSS) activities summarized in the MSS Activity Summary (Attachment C) attached to this permit.

    Attachment A identifies the inherently low emitting MSS activities that may be performed at the plant. Emissions from activities identified in Attachment A shall be considered to be equal to the potential to emit represented in the permit application. The estimated emissions from the activities listed in Attachment A must be revalidated annually. This revalidation shall consist of the estimated emissions for each type of activity and the basis for that emission estimate.

    Routine maintenance activities, as identified in Attachment B, may be tracked through work orders or the equivalent. Emissions from activities identified in Attachment B shall be calculated using the number of work orders or the equivalent that month and the emissions associated with that activity identified in the permit application.

    The performance of each planned MSS activity not identified in Attachments A or B and the emissions associated with it shall be recorded and include at least the following information:

    A. the process unit at which emissions from the MSS activity occurred, including the emission point number and common name of the process unit;

    B. the type of MSS activity and the reason for the planned activity;

    C. the common name and the facility identification number, if applicable, of the facilities at which the MSS activity and emissions occurred;

    D. the date and time of the MSS activity and its duration;

    E. the estimated quantity of each air contaminant, or mixture of air contaminants, emitted with the data and methods used to determine it. The emissions shall be estimated using the methods identified in the permit application, consistent with good engineering practice.

    All MSS emissions shall be summed monthly and the rolling 12-month emissions shall be updated on a monthly basis. **(09/18)**

29. Process units and facilities with the exception of those identified on Attachment A shall be depressurized, emptied, degassed, and placed in service in accordance with the following requirements: **(07/19)**

    A. The process equipment shall be depressurized to a control device or a controlled recovery system prior to venting to atmosphere, degassing, or draining liquid. Equipment that only contains material that is liquid with VOC partial pressure less than 0.5 psia at the normal process temperature and 95ºF may be opened to atmosphere and drained in accordance

with Paragraph C of this special condition. The vapor pressure at 95ºF may be used if the actual temperature of the liquid is verified to be less than 95ºF and the temperature is recorded.

B. If mixed phase materials must be removed from process equipment, the cleared material shall be routed to a knockout drum or equivalent to allow for managed initial phase separation. If the VOC partial pressure is greater than 0.50 psia at either the normal process temperature or 95ºF, any vents in the system must be routed to a control device or a controlled recovery system. The vapor pressure at 95ºF may be used if the actual temperature of the liquid is verified to be less than 95ºF and the temperature is recorded. Control must remain in place until the VOC concentration is less than 10,000 ppmv or the process equipment has been closed to the atmosphere.

C. All liquids from process equipment or storage vessels must be removed to the maximum extent practical prior to opening equipment to commence degassing and/or maintenance. Liquids must be drained into a closed vessel or closed liquid recovery system unless prevented by the physical configuration of the equipment. If it is necessary to drain liquid into an open pan or sump, the liquid must be covered or transferred to a covered vessel within one hour of being drained.

D. If the VOC partial pressure is greater than 0.50 psia at the normal process temperature or 95ºF, facilities shall be degassed using good engineering practice to ensure air contaminants are removed from the system through the control device or controlled recovery system to the extent allowed by the process equipment or storage vessel design. The vapor pressure at 95ºF may be used if the actual temperature of the liquid is verified to be less than 95ºF and the temperature is recorded. The facilities to be degassed shall not be vented directly to atmosphere, except as necessary to establish isolation of the work area or to monitor VOC concentration following controlled depressurization. The directly venting to the atmosphere shall be minimized to the maximum extent practicable and actions taken recorded. The control device or recovery system utilized shall be recorded with the estimated emissions from uncontrolled degassing calculated using the methods that were used to determine allowable emissions for the permit application.

(1) For MSS activities identified in Attachment B, the following option may be used in lieu of (2) below. The facilities being prepared for maintenance shall not be vented directly to atmosphere until the VOC concentration has been verified to be less than 10 percent of the lower explosive limit (LEL) per the site safety procedures.

(2) The locations and/or identifiers where the purge gas or steam enters the process equipment or storage vessel and the exit points for the exhaust gases shall be recorded. If the process equipment is purged with a gas, two system volumes of purge gas must have passed through the control device or controlled recovery system before the vent stream may be sampled to verify acceptable VOC concentration prior to uncontrolled venting. The VOC sampling and analysis shall be performed using an instrument meeting the requirements of Special Condition 29. The sampling point shall be upstream of the inlet to the control device or controlled recovery system. The sample ports and the collection system must be designed and operated such that there is no air leakage into the sample probe or the collection system downstream of the process equipment or vessel being purged. If there is not a connection (such as a sample, vent, or drain valve) available from which a representative sample may be obtained, a sample may be taken upon entry into the system after degassing has been completed. The sample shall be taken from inside the vessel so as to minimize any air or dilution from the entry point. The facilities shall be degassed to a control device or

controlled recovery system until the VOC concentration is less than 10,000 ppmv as measured using Method 21 or 10 percent of the LEL as measured by LEL monitor. Documented site procedures used to de-inventory equipment to a control device for safety purposes (i.e., hot work or vessel entry procedures) that achieve at least the same level of purging may be used in lieu of the above.

E. Gases and vapors with VOC partial pressure greater than 0.50 psia may be vented directly to atmosphere if all the following criteria are met:

(1) It is not technically practicable to depressurize or degas, as applicable, into the process; and

(2) There is not an available connection to the plant control system (flare) or there is no vent in the component that can connect to the plant control system; or

(3) There is no more than 50 lb of air contaminant to be vented to atmosphere during shutdown or startup, as applicable.

All instances of venting directly to atmosphere per paragraph.E of this condition must be documented when occurring as part of any MSS activity. The emissions associated with venting without control must be included in the work order or equivalent for those MSS activities identified in Attachment B.

30. Air contaminant concentration shall be measured using an instrument/detector meeting one set of requirements specified below: **(09/18)**

A. The VOC concentration shall be measured using an instrument meeting all the requirements specified in EPA Method 21 (40 CFR 60, Appendix A) with the following exceptions:

(1) The instrument shall be calibrated within 24 hours of use with a calibration gas such that the response factor of the VOC (or mixture of VOCs) to be monitored shall be less than 2.0. The calibration gas and the gas to be measured, and its approximate response factor shall be recorded.

(2) Sampling shall be performed as directed by this permit in lieu of Section 8.3 of Method 21. During sampling, data recording shall not begin until after two times the instrument response time. The date and time shall be recorded, and VOC concentration shall be monitored for at least 5 minutes, recording VOC concentration each minute. As an alternative, the VOC concentration may be monitored over a five-minute period with an instrument designed to continuously measure concentration and record the highest concentration read. The highest measured VOC concentration shall be recorded and shall not exceed the specified VOC concentration limit prior to uncontrolled venting.

B. Colorimetric gas detector tubes may be used to determine air contaminant concentrations if they are used in accordance with the following requirements.

(1) The air contaminant concentration measured as defined in (3) is less than 80 percent of the range of the tube and is at least 20 percent of the maximum range of the tube.

(2) The tube is used in accordance with the manufacturer's guidelines.

(3) At least 2 samples taken at least 5 minutes apart must satisfy the following prior to uncontrolled venting:

measured contaminant concentration (ppmv) < release concentration.

Where the release concentration is:

10,000*mole fraction of the total air contaminants present that can be detected by the tube.

The mole fraction may be estimated based on process knowledge. The release concentration and basis for its determination shall be recorded.

Records shall be maintained of the tube type, range, measured concentrations, and time the samples were taken.

C. Lower explosive limit measured with a lower explosive limit detector. **(04/20)**

(1) The permit holder shall use an LEL detector, which shall be calibrated within 30 days of use with a certified gas mixture of methane, propane or pentane gas, as required site safety procedures. Records of the calibration date/time and calibration result (pass/fail) shall be maintained. The monitor will provide a conservative LEL reading to ensure that the VOC concentration is significantly below 10,000 ppmv, the level the VOC concentration is required to reach before degassing operations can be vented to the atmosphere.

(2) A functionality test shall be performed on each detector within 24 hours of use, using the same certified gas standard used for calibration, per site safety procedures. The LEL monitor shall read values that are within the calibration gas manufacturer's recommended acceptable range. If the daily functionality test results are not within the manufacturer's acceptable range, a full calibration shall be performed. Records, including the date/time and test results, shall be maintained.

31. If the removal of a component for repair or replacement results in an open-ended line or valve, the open-ended line is exempt from the requirement to install a cap, blind flange, plug, or second valve for 72 hours. If the repair or replacement is not completed within 72 hours, the permit holder must complete either of the following actions within that time period: the line or valve must have a cap, blind flange, plug, or second valve installed; or the permit holder shall verify that there is no leakage from the open-ended line or valve. The open-ended line or valve shall be monitored on a weekly basis in accordance with the applicable NSR permit condition for fugitive emission monitoring except that a leak is defined as any VOC reading greater than background. Leaks must be repaired within 24 hours or a cap, blind flange, plug, or second valve must be installed on the line or valve. The results of this weekly check and any corrective actions taken shall be recorded.

32. The MSS activities represented in the permit application may be authorized under permit by rule only if the procedures, emission controls, monitoring, and recordkeeping are the same as those required by this permit. **(03/10)**

33. Control devices required by this permit for emissions from planned MSS activities are limited to the two flares (EPNs 30 and 34) meeting the requirements of Special Conditions 5 through 8 of this permit.

Controlled recovery systems identified in this permit shall be vented to an operating plant process or to a collection system that is vented through the plant flare system meeting the requirements of Special Conditions 5 through 8 of this permit. **(09/18)**

Alternative Means of Control

34. The use of an infrared camera in place of a gas analyzer for monitoring leaks from fugitive emission components designated as difficult to monitor for emissions sources regulated by 30 TAC Chapter 115, Subchapter H as applicable, including 30 TAC §115.358(e) and §115.781(b)(7)(B) is allowed in lieu thereof provided that the provisions of the Alternative Means of Control Plan (AMOC) approved by the Executive Director of the Texas Commission on Environmental Quality (TCEQ) on September 4, 2015 (AMOC-6) are followed. **(04/16)**

Volatile Organic Compound Emission Offsets

35. This Nonattainment New Source Review (NNSR) permit is issued/approved based on the requirement that the permit holder offset the project emission increase for facilities authorized by this permit prior to the commencement of operation, through participation in the TCEQ Emission Banking and Trading (EBT) Program in accordance with the rules in 30 TAC Chapter 101, Subchapter H. **(04/16)**

36. The permit holder shall use 19.3 tpy of VOC emission credits from TCEQ Credit Certificate Numbers 2878 and 2895 to offset the 14.83 tpy VOC project emission increase for the facilities authorized by this permit at a ratio of 1.3 to 1.0. **(04/16)**

Permits by Rule Incorporated by Reference

37. The following sources and/or activities are authorized under a Permit by Rule (PBR) by Title 30 Texas Administrative Code Chapter 106 (30 TAC Chapter 106). These lists are not intended to be all inclusive and can be altered without modifications to this permit. **(09/18)**

Authorization	Source or Activity
30 TAC 106.371 (effective March 14, 1997, amended September 4, 2000)	CLX Cooling Tower (EPN 150)

Date: TBD

Attachment A

Permit Numbers 9423 and N202

Inherently Low Emitting Activities

	Emissions				
Activity	**VOC**	**NO_x**	**CO**	**PM**	**H_2S/SO_2**
C/D/E-Line Filter Changes	x				
Monomer Supplier Proving	x				
C/D/E-Line Instrument Maintenance (repair/replace)	x				
Polymer Line Off-Gas Purification Regeneration	x				

Date: September 26, 2018

Attachment B

Permit Numbers 9423 and N202

Routine Maintenance Activities

Bullet Pump Maintenance
C/D/E-Line Compressor Maintenance
C/D/E-Line Pump Maintenance
Polymer Line Maintenance
Bullet Area Maintenance
E-Line Gas Phase Reactor Cleaning
Polymer Line Compressor Maintenance
Catalyst Cleaning/Replacement
CO Column Regeneration

Date: September 26, 2018

Attachment C

Permit Numbers 9423 and N202

MSS Activity Summary

Facilities	Description	Emissions Activity	EPN
See Attachment A	Low Emitting Facilities	See Attachment A	Atmosphere
E-Line	shutting down and restarting polymer line to change product type	vent to flares	30 + 34
C-Line	shutting down polymer line, replacing catalyst, and restarting	vent to flares	30 + 34
C-Line, D-Line, and E-Line	shutting down polymer lines to clean catalyst system	vent to flares	30 + 34
Bullet Area, C-Line, D-Line, and E-Line	shutting down polymer lines to perform maintenance, such as storage tank maintenance, valve repair and replacement, and piping maintenance	vent to flares until VOC concentration meets the requirements of Special Condition 28D, then vent to atmosphere	30 + 34, MSS44
E-Line	shutting down polymer line to clean the gas phase reactor vessel	vent to flares until VOC concentration meets the requirements of Special Condition 28D, then vent to atmosphere	30 + 34, MSS56
Off-Gas Regeneration System	shutting down off-gas regeneration system to replace valves, instrumentation, or drying bed material	vent to flares	30 + 34
CO columns	shutting down CO columns. heating columns and purging them with nitrogen	vent to flares	30 + 34
C-Line, D-Line, and E-Line	shutting down polymer lines for compressor maintenance	vent to flares until VOC concentration meets the requirements of Special Condition 28D, then vent to atmosphere	30 + 34, MSS 46, MSS47, MSS48
C-Line, D-Line, E-Line, and Bullet Area	shutting down facilities for pump maintenance	vent to flares until VOC concentration meets the requirements of Special Condition 28D, then vent to atmosphere	30 + 34, MSS49, MSS50, MSS51, MSS52

C-Line, D-Line, and E-Line	shutting down polymer lines due to lack of sales	vent to flares until VOC concentration meets the requirements of Special Condition 28D, then vent to atmosphere	30 + 34, MSS53, MSS54, MSS55
C-Line, D-Line, and E-Line	shutting down polymer lines for maintenance and restarting them	vent to flares until VOC concentration meets the requirements of Special Condition 28D, then vent to atmosphere	30 + 34, MSS41, MSS42, MSS43
C-Line, D-Line, and E-Line	shutting down polymer lines to perform maintenance on downstream equipment	vent to flares	30 + 34

Date: July 26, 2019

Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 9423 and N202

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
EPNs Common to C-Line, D-Line, and E-Line				
30 + 34	LOG Flare (EPN 30) and Elevated Flare (EPN 34) (7)	VOC (6) (11)	153.73	77.69
		Ethylene (11)	153.73	77.69
		Propylene (11)	153.73	77.69
		NO_x (11)	24.84	19.89
		CO (11)	200.80	160.74
		SO_2 (11)	0.79	2.46
		VOC (6) (10)	143.70	75.50
		Ethylene (10)	143.70	75.50
		Propylene (10)	143.70	75.50
		NO_x (10)	19.71	10.40
		CO (10)	159.40	84.07
		SO_2 (10)	0.78	2.13
98	D-885 Waste Oil Loading	VOC (11)	0.06	<0.01
		VOC (10)	2.02	0.06
PP-ANALYZER	HRVOC Analyzer Vents	VOC	0.05	0.22
		NO_x	0.01	0.01
		CO	0.01	0.01
Cooling Towers				
99	West Marley Cooling Tower	VOC (5) (6)	1.89	6.20
		Ethylene	1.89	6.20
		Propylene	1.89	6.20
		PM	0.59	1.94
		PM_{10}	0.33	1.09

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		$PM_{2.5}$	<0.01	<0.01
146	East Marley Cooling Tower	VOC (5) (6)	0.57	2.49
		Ethylene	0.57	2.49
		Propylene	0.57	2.49
		PM	0.18	0.77
		PM_{10}	0.18	0.77
		$PM_{2.5}$	0.18	0.77
151	Excel Marley 3 Cooling Tower	VOC (5) (6)	1.28	5.58
		Ethylene	1.28	5.58
		Propylene	1.28	5.58
		PM	0.40	1.75
		PM_{10}	0.22	0.98
		$PM_{2.5}$	<0.01	<0.01
155	DLX Cooling Tower (12)	PM (11)	0.14	0.15
		PM_{10} (11)	0.02	0.07
		$PM_{2.5}$ (11)	<0.01	<0.01
C-Line EPNs				
39	D-3106 Catalyst Handling Drum	VOC	<0.01	<0.01
40	D-3504 Stabilizer Addition Drum	VOC	<0.01	<0.01
		PM	0.01	0.01
		PM_{10}	0.01	0.01
		$PM_{2.5}$	0.01	0.01
109	D-3103 TEAL Seal Pot Drum	VOC	<0.01	<0.01
110	D-3105 Oil and Grease Mixing	VOC	<0.01	<0.01
111	D-3107 Hydraulic Oil Drum	VOC	<0.01	<0.01
112	D-3110A Donor Storage Drum	VOC	<0.01	<0.01

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
113	D-3110B Donor Storage Drum	VOC	<0.01	<0.01
114	TK-3111 Donor Storage Drum	VOC	<0.01	<0.01
35	Fugitives (5)	VOC	5.17	22.65
143	Mineral Oil Tank	VOC	0.05	<0.01
144	Mineral Oil Tank	VOC	0.05	<0.01
160	Mineral Oil Tank	VOC	0.01	0.01
149	D-3106B Catalyst Handling Drum	VOC	<0.01	<0.01
D-Line EPNs				
37	D-4106 Catalyst Unloading	VOC	<0.01	<0.01
38	D-4504 Stabilizer Addition	VOC	<0.01	<0.01
		PM	0.01	0.01
		PM_{10}	0.01	0.01
		$PM_{2.5}$	0.01	0.01
41	Fugitives (5)	VOC	3.67	16.07
103	D-4105 Oil and Grease Mixing	VOC	<0.01	<0.01
104	D-4110A Donor Storage Drum	VOC	<0.01	<0.01
105	D-4110B Donor Storage Drum	VOC	<0.01	<0.01
106	TK-4111 Donor Storage Drum	VOC	<0.01	<0.01
107	D-4103 TEAL Seal Pot	VOC	<0.01	<0.01
156	D4107 Hydraulic Oil Drum	VOC	<0.01	<0.01
E-Line EPNs				
50A	Catalyst Handling	VOC	0.42	0.03
50B	Catalyst Handling	VOC	0.42	0.04
51	Stabilizer Addition	VOC	0.01	0.01
124	TEAL Seal Pot	VOC	0.01	0.01
125	Oil and Grease Mixing	VOC	0.01	0.01

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
126	Hydraulic Oil Drum	VOC	0.01	0.01
127	Donor Storage Drum	VOC	0.02	0.01
128	Donor Storage Drum	VOC	0.02	0.01
129	Donor Storage Drum	VOC	0.02	0.01
135	Additive Surge Drum	VOC	0.01	0.01
52	Fugitives (5)	VOC	7.73	33.78
147	Additive Storage	VOC	0.06	0.01
148	Additive Storage	VOC	0.02	0.01
EPNs Common to C-Line, D-Line, and E-Line Polymer Transfer, Extrusion and Loading				
120	M-574 Bag Filter	VOC	(8)	(8)
		PM	0.21	0.90
		PM_{10}	0.21	0.90
		$PM_{2.5}$	0.21	0.90
122	M-2574 Bag Filter	VOC	(8)	(8)
		PM	0.21	0.90
		PM_{10}	0.21	0.90
		$PM_{2.5}$	0.21	0.90
102	Railcar Loading/VOC Residual	VOC	(8)	(8)
116	Railcar Loading (Flake)	VOC	(8)	(8)
152	DLX Flake Transfer	VOC	(8)	(8)
		PM	0.13	0.56
		PM_{10}	0.13	0.56
		$PM_{2.5}$	0.13	0.56
153	DLX Pellet Silos	VOC	(8)	(8)
154	DLX Railcar Loading	VOC	(8)	(8)
		PM	0.20	0.88
		PM_{10}	0.20	0.88
		$PM_{2.5}$	0.20	0.88

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
14C	Pellet Transfer System	VOC	(8)	(8)
		PM	0.06	0.26
		PM_{10}	0.06	0.26
		$PM_{2.5}$	0.06	0.26
131	Pellet Transfer System	VOC	(8)	(8)
		PM	0.10	0.43
		PM_{10}	0.10	0.43
		$PM_{2.5}$	0.10	0.43
132	Railcar Loading CLX	VOC	(8)	(8)
		PM	0.05	0.20
		PM_{10}	0.05	0.20
		$PM_{2.5}$	0.05	0.20
133	Railcar Loading ELX	VOC	(8)	(8)
		PM	0.69	2.25
		PM_{10}	0.69	2.25
		$PM_{2.5}$	0.69	2.25
D-6850	DLX/ELX Peroxide Feed Tank	VOC	<0.01	<0.01
T-5104C	CLX Peroxide Feed Tank	VOC	<0.01	<0.01
E-CAP (8)	VOC Emission Cap for EPNs 120, 122, 102,116, 152, 153, 154, 14C, 131, 132, and 133	VOC (11)	9.75	19.39
		VOC (10)	3.02	9.29
		Acetone	7.36	26.19
PP-WWTR	Polypropylene Waste Water	VOC	1.95	0.87
Maintenance, Startup, and Shutdown Activities				
30 + 34	LOG Flare and Elevated Flare MSS Activities (7)	VOC (6)	540.00	(9)
		Ethylene	265.00	(9)
		Propylene	540.00	(9)
		NO_x	74.50	(9)
		CO	602.14	(9)

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
MSS41	C-Line Maintenance Shutdown	VOC	15.48	0.06
MSS42	D-Line Maintenance Shutdown	VOC	15.48	0.06
MSS43	E-Line Maintenance Shutdown	VOC	26.22	0.10
MSS44	Bullets Area Maintenance Shutdown	VOC	26.22	0.01
MSS45	Monomer Supplier Proving	VOC	0.01	0.01
MSS46	C-Line Compressor Maintenance	VOC	0.01	0.01
MSS47	D-Line Compressor Maintenance	VOC	0.01	0.01
MSS48	E-Line Compressor Maintenance	VOC	0.01	0.01
MSS49	C-Line Pump Maintenance	VOC	0.06	0.01
MSS50	D-Line Pump Maintenance	VOC	0.06	0.01
MSS51	E-Line Pump Maintenance	VOC	0.06	0.01
MSS52	Bullet Pump Maintenance	VOC	0.06	0.01
MSS53	C-Line Commercial Shutdown	VOC	15.48	0.06
MSS54	D-Line Commercial Shutdown	VOC	15.48	0.06
MSS55	E-Line Commercial Shutdown	VOC	26.22	0.10
MSS56	E-Line Gas Phase Reactor Cleaning	VOC	11.04	0.14
MSS57	C-Line Filter Changes	VOC	0.03	0.01
MSS58	D-Line Filter Changes	VOC	0.03	0.01
MSS59	E-Line Filter Changes	VOC	0.03	0.01
MSS60	C/D/E Instrument Maintenance (repair/replace)	VOC	0.01	0.01

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.
(2) Specific point source name. For fugitive sources, use area name or fugitive source name.
(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
NO_x - total oxides of nitrogen
SO_2 - sulfur dioxide
PM - total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$, as represented
PM_{10} - total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$, as represented
$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in diameter

Emission Sources - Maximum Allowable Emission Rates

CO - carbon monoxide

(4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.
(5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
(6) The allowable emission rates for individual VOC species from this EPN are included in the total VOC emission rates.
(7) Emission rates shown are combined totals for EPN 30 and EPN 34.
(8) The combined total VOC emissions for all EPNs with this note shall not exceed the emission rates indicated for EPN E-CAP.
(9) The combined annual allowable emission limits for these EPNs are specified on Page 1.
(10) These emission rates will be in effect until the completion of the C-Line and D-Line upgrade. After that time, all emission values denoted with "(10)" will no longer be authorized
(11) These emission rates will be in effect upon completion of the C-Line and D-Line upgrade.
(12) The DLX Cooling Tower (EPN 155) will be authorized by PBR prior to the completion of the C-Line and D-Line upgrade.

Date: TBD