

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF TEXAS
HOUSTON DIVISION

_____)	
UNITED STATES OF AMERICA,)	
)	
Plaintiff,)	Civil Action No. 4:21-cv-3359
)	
v.)	Judge Hanen
)	
EQUISTAR CHEMICALS, LP;)	Magistrate Judge Stacy
LYONDELLBASELL ACETYLS, LLC;)	
AND LYONDELL CHEMICAL CO.,)	
)	
Defendants.)	
_____)	

FIRST AMENDMENT TO CONSENT DECREE

Plaintiff, the United States of America (“United States”), on behalf of the United States Environmental Protection Agency (“EPA”), and the Defendants, Equistar Chemicals, LP (“Equistar”) and Lyondell Chemical Company (“Lyondell”), by and through their undersigned counsel, respectfully submit for the Court’s approval this First Amendment to the Consent Decree (the “First Amendment”). *See* Consent Decree (ECF Doc. 9). The First Amendment reflects modifications that the Parties have agreed to make to the Consent Decree, which was entered by the Court on January 18, 2022. *See id.*

Paragraph 112 of the Consent Decree allows the Parties to modify the Consent Decree by a written agreement signed by all the Parties. *See* Consent Decree ¶ 112 (Modification) (page 76). Material changes to the Consent Decree must be approved by the Court before they are effective, and this First Amendment could constitute a material change. *See id.*

On September 30, 2013, the EPA issued a Notice of Violation/Finding of Violation (EPA-5-13-IL-43) (the “2013 NOV/FOV”) to the Defendants regarding their petrochemical manufacturing facility located in Morris, Illinois (the “Morris Plant”). *See* Appendix A. Defendants Lyondell and Equistar respectively own and operate the Morris Plant. Defendant LyondellBasell Acetyls, LLC has no ownership or operational interest in the Morris Plant.

In the 2013 NOV/FOV, the EPA alleged that the Defendants violated Clean Air Act requirements at the Morris Plant similar to those alleged in the Complaint, including:

- The New Source Performance Standards (“NSPS”) promulgated at 40 C.F.R. Part 60, Subparts A and VV, pursuant to Section 111 of the Clean Air Act, 42 U.S.C. § 7411;
- The National Emission Standards for Hazardous Air Pollutants (“NESHAPs”) promulgated at 40 C.F.R. Part 61, Subparts A, J, and V and 40 C.F.R. Part 63, Subparts A and EEEE, pursuant to Section 112 of the Clean Air Act, 42 U.S.C. § 7412;

- Requirements of the Clean Air Act’s “Title V” provisions;
- Requirements of the federally enforceable Illinois state implementation plan (SIP); and
- Requirements of the Title V permit for the Morris Plant.

The First Amendment modifies the Consent Decree to include the Morris Plant as a Covered Plant under the Consent Decree, to the extent specified herein. The First Amendment also modifies the Consent Decree to include the Morris Plant’s two Steam-Assisted Flares (the “Olefins Flare” and “Polymers Flare”) as Covered Flares under the Consent Decree, to the extent specified herein. These two Flares are used as safety devices and to control emissions of air pollutants generated by the manufacturing processes at the Morris Plant.

The Defendants do not contest this Court’s jurisdiction to enter and enforce this First Amendment. This Court has jurisdiction over the subject matter of this action and the claims resolved by this First Amendment, pursuant to 28 U.S.C. §§ 1331, 1345, and 1355, and Section 113(b) of the Clean Air Act, 42 U.S.C. § 7413(b).

In or before 2016, Lyondell and Equistar implemented Flare flow reduction improvements at the Olefins Flare. In 2016, Lyondell and Equistar implemented Combustion Efficiency improvements at the Olefins Flare and Polymers Flare, including installing the types of instrumentation and monitoring systems required by Paragraphs 19-20 of the Consent Decree. At the Olefins Flare, Lyondell and Equistar have installed:

- A single pass ultrasonic flow meter to monitor Vent Gas flow;
- An ultrasonic single pass meter to determine steam flow to the Flare;
- A steam flow control valve to control Assist Steam; and
- A gas chromatograph, Fourier Transform Infrared (FTIR) spectrometer, and H2Scan hydrocarbon sensor to monitor Vent Gas composition, which is used to calculate Vent Gas Net Heating Value.

At the Polymers Flare, Lyondell and Equistar have installed:

- Flow meters on the Polymers Flare Vent Gas sub-headers to monitor Vent Gas flow;
- Two (2) vortex flow meters to measure steam flow;
- Infrared smoke detector to adjust steam flow; and
- A gas chromatograph, FTIR spectrometer, and H2Scan hydrocarbon sensor to monitor Vent Gas composition, which is used to calculate Vent Gas Net Heating Value.

As more specifically described in Paragraph 2 (Compliance Requirements for the Morris Plant), the Defendants have agreed to continue operating the monitoring equipment and control technology described above until it is upgraded, and to then operate the upgraded monitoring equipment and control technology required by Paragraph 2(a). The Defendants have also agreed to continue to undertake measures at the Morris Plant that will recover and minimize Waste Gas flows to the Olefins Flare, and that will ensure proper Combustion Efficiency at these two Flares.

The Defendants deny they have violated or continue to violate any of the statutory and regulatory requirements set forth in the 2013 NOV/FOV and deny any liability to the United States arising out of the occurrences alleged in the 2013 NOV/FOV.

The Parties recognize, and the Court by entering this First Amendment finds, that this First Amendment has been negotiated by the Parties in good faith and will avoid litigation between the Parties, and that this First Amendment is fair, reasonable, and in the public interest.

NOW THEREFORE, the United States and the Defendants have reviewed this First Amendment and hereby agree that, upon approval by the Court, the Consent Decree shall be modified as follows:

1. Consent Decree Applicability to the Morris Plant, Olefins Flare, and Polymers Flare.

a. The definition of “Applicable Defendant” in Paragraph 12(a) of the Consent Decree shall mean, with respect to the Morris Plant, Lyondell and Equistar.

b. The definition of “Covered Flares” in Paragraph 12(v) of the Consent Decree shall include the Steam-Assisted Olefins Flare and Steam-Assisted Polymers Flare located at the Morris Plant. These two flares shall be known as the “Morris Flares.”

c. The definition of “Covered Plant” in Paragraph 12(w) of the Consent Decree shall include the “Morris Plant” as an additional Covered Plant. The Morris Plant is an olefins manufacturing facility owned by Lyondell and operated by Equistar, located at 8805 North Tabler Road, Morris, Illinois 60450.

d. The definition of “Waste Gas Minimizing Equipment” in Paragraph 12(bbbb) of the Consent Decree shall include, solely with respect to the Morris Plant, the equipment identified in Appendix B to the First Amendment.

e. The definition of “Waste Gas Minimizing Procedures” in Paragraph 12(cccc) of the Consent Decree shall include, solely with respect to the Morris Plant, the operating procedures and practices identified in Appendix B to the First Amendment.

2. Compliance Requirements for the Morris Plant, Olefins Flare, and Polymers Flare.

a. Replacement and installation of required instrumentation.

- i. By no later than July 6, 2023, at the Olefins Flare, Lyondell and Equistar must install: i) a dual-path flow meter on the Vent Gas header to monitor Vent Gas flow and ii) a dual-path flow meter on the steam

header to monitor Assist Steam flow. These meters must comply with sub-Paragraphs 19(a)-(c) of the Consent Decree.

- ii. By no later than July 6, 2023, Lyondell and Equistar must install a new Supplemental Gas flow meter for the Polymers Flare.
- iii. By no later than July 6, 2023, Lyondell and Equistar must install a video camera at the Olefins Flare and Polymers Flare that is capable of monitoring and recording, in digital format, the flame of and any Smoke Emissions from each of the Flares.
- iv. Once installed, the instruments referenced in this Paragraph must comply and be operated in accordance with Paragraphs 24-26 of the Consent Decree. Once installed, Lyondell and Equistar must use these instruments to comply with the requirements of Section V of the Consent Decree that are applicable to the Olefins Flare and the Polymers Flare.

b. By no later than the later of the First Amendment's Effective Date or July 6, 2023, the Morris Flares must comply with the following requirements in Section V (Compliance Requirements) of the Consent Decree:

- i. Section V.A (Instrumentation and Monitoring Systems):
 1. Paragraph 19 (Vent Gas and Assist Steam Monitoring Systems);
 2. Paragraph 20 (Assist Steam Control Equipment);
 3. Paragraph 21 (Video Camera);
 4. Paragraph 22 (Vent Gas Compositional Monitoring or Direct Monitoring of Net Heating Value of Vent Gas);

5. Paragraph 24 (Instrumentation and Monitoring Systems: Specifications, Calibration, Quality Control, and Maintenance);
 6. Paragraph 25 (Instrumentation and Monitoring Systems: Recording and Averaging Times); and
 7. Paragraph 26 (Instrumentation and Monitoring Systems: Operation).
- ii. Section V.C (Compliance Requirements - Waste Gas Minimization):
 1. Paragraph 33 (Root Cause Analysis for Reportable Flaring Incidents); and
 2. Paragraph 34 (Corrective Action Implementation).
 - iii. Section V.D (Flare Gas Recovery Systems, Other Waste Gas Minimization Equipment and Operational Procedures), as specified in sub-Paragraphs 2(d) and (e) below:
 - iv. Section V.E (Compliance Requirements - Flare Combustion Efficiency).

c. The Morris Plant must comply with the requirements of Consent Decree Section V.F (Compliance Requirements - Fenceline Monitoring Project Requirements) and Appendix 2.2, except that, instead of the compliance deadlines in Appendix 2.2, the following deadlines apply:

- i. The Defendants must submit the written report required by Paragraph 2 in Appendix 2.2 by no later than 270 Days after the Effective Date of the First Amendment.
- ii. The Defendants must comply with all other requirements of Appendix 2.2 by no later than 365 Days after the Effective Date of the First Amendment.

d. Waste Gas Minimizing Equipment and Operational Procedures for the Morris Plant.

Section V.D. of the Consent Decree shall be modified to include the following new sub-Paragraph 36(e):

36(e). Morris Plant Waste Gas Minimizing Equipment and Waste Gas Minimizing Procedures. Before the First Amendment was lodged with the Court, Lyondell and Equistar completed installation and commenced operation of the “Morris Plant Waste Gas Minimizing Equipment and Operational Procedures” required by Appendix B. The Morris Plant Waste Gas Minimizing Equipment and Operational Procedures require Lyondell and Equistar to operate equipment designed to collect certain Waste Gas streams and return them to process. The Morris Plant Waste Gas Minimizing Equipment and Operational Procedures also require Lyondell and Equistar to implement operational practices to collect certain Waste Gas streams and return them to process. Lyondell and Equistar must continue to implement the Morris Plant Waste Gas Minimizing Procedures, and must continue to assure that the Morris Plant Waste Gas Minimizing Equipment is in good working order and can comply with the Operation and Availability Requirements of Paragraph 37, as amended by this First Amendment.

e. Waste Gas Minimizing Equipment and Operational Procedures: Operation and Availability Requirements for the Morris Plant.

- i. The Consent Decree shall be modified to include the following new sub-Paragraph 37(a)(i) for the Morris Plant:

37(a)(i). By no later than the Effective Date of the First Amendment, Lyondell and Equistar must operate each set of Waste Gas Minimizing Equipment required in Appendix B in a manner to minimize Waste Gas to the Morris Flares while ensuring safe chemical plant operations. Lyondell and Equistar also must operate each set of Waste Gas Minimizing Equipment required in Appendix B consistent with good engineering and maintenance practices and in accordance with its design and the manufacturer's specifications.

- ii. The Consent Decree shall be modified to include the following new sub-Paragraph 37(b)(v) for the Morris Plant:

37(b)(v). Morris Plant Waste Gas Minimizing Equipment and Operational Procedures: Operation and Availability Requirements. The Morris Plant Waste Gas Minimizing Equipment, as described in and required by Appendix B to the First Amendment (the Vent Stream Recovery System and the Tank Farm Ethylene Vent Recovery System), must be in operation 98% of the time. The Morris Plant Waste Gas Minimizing Procedures, as described and required by Appendix B to the First Amendment (Flare Minimization Regeneration Procedures) must be implemented during regeneration in 98% of the hours during which regeneration is occurring in each 8,760 hour-period, rolled hourly. Lyondell and Equistar must comply

with Paragraph 37(d)(ii) (Averaging Periods) of the Consent Decree when calculating compliance with the period of time that this sub-Paragraph requires the Morris Plant Waste Gas Minimizing Equipment to be in operation.

f. The Morris Flares are not subject to requirements in Section V (Compliance Requirements) of the Consent Decree that are not enumerated in this Paragraph.

3. Permits for the Morris Plant and Morris Flares. Lyondell and Equistar must comply with Paragraph 48 of the Consent Decree at the Morris Plant as follows:

a. By no later than one year after the First Amendment's Effective Date, Lyondell and Equistar must complete and submit to the necessary air permitting authorities at the Illinois Environmental Protection Agency appropriate applications to incorporate the requirements listed in sub-Paragraph 48.c of the Consent Decree, as applicable to the Morris Plant, into a non-Title V, federally enforceable permit for the Morris Plant, such that the requirements listed in sub-Paragraph 48.c of the Consent Decree: (i) become and remain "applicable requirements" as that term is defined in 40 C.F.R. § 70.2 and (ii) survive the termination of this Consent Decree, as amended.

b. By no later than three years after the First Amendment's Effective Date, Lyondell and Equistar must complete and submit to the necessary permitting authorities at the Illinois Environmental Protection Agency appropriate applications to modify, amend, or revise the Title V permit for the Morris Plant to incorporate the requirements listed in sub-Paragraph 48.c of the Consent Decree, as applicable to the Morris Plant, into the Morris Plant's federally enforceable Title V permit.

c. Except to the extent that Paragraph 48 is modified by this First Amendment, the Morris Plant and Morris Flares must comply with all other requirements in Section VI (Permits) of the Consent Decree.

4. Reporting Requirements. Lyondell and Equistar must comply with Section VIII of the Consent Decree (Reporting Requirements) for the Morris Plant and Morris Flares. The first Semi-Annual Report including the required information about the Morris Plant and Morris Flares is due 60 Days after the first full half year after the Effective Date of the First Amendment (a “half year” runs between January 1 and June 30 and between July 1 and December 31).

5. Stipulated Penalties. Lyondell and Equistar are subject to Section IX of the Consent Decree (Stipulated Penalties) for the Morris Plant and Morris Flares to the same extent as any other Covered Plant and Covered Flare. Violations of the First Amendment are subject to the same stipulated penalties as violations of the Consent Decree Section(s) or Paragraph(s) referenced in the First Amendment.

6. Civil Penalty for the Morris Plant. By no later than 30 Days after the First Amendment’s Effective Date, Lyondell and Equistar, jointly and severally, must pay \$324,000 as a civil penalty. Lyondell and Equistar must pay the civil penalty in accordance with Section IV (Civil Penalty) of the Consent Decree, except that the notices required in Paragraph 15 of the Consent Decree must reference DOJ case number 90-5-2-1-11416/2.

7. Resolution of Claims at the Morris Plant. Entry of the First Amendment by the Court and the payment of the civil penalty required by the preceding Paragraph shall resolve the following:

- a. With respect to emissions of VOCs, NO_x, and CO from the Morris Flares, the civil claims of the United States against Lyondell and Equistar for violations

of the PSD/NNSR Requirements resulting from construction or modification from the date of the pre-Lodging construction or modification until the date of lodging for the First Amendment.

- b. With respect to emissions of VOCs and HAPs from the Morris Flares, the civil claims of the United States against Lyondell and Equistar for violations of the following requirements from the date those claims accrued until the date of lodging for the First Amendment: a) BTU/scf Flared Gas Requirements; and b) General Flare Requirements.
- c. With respect to emissions of VOCs and HAPs from the Morris Flares, the civil claims of the United States against Lyondell and Equistar for violations of Good Air Pollution Control Practice Requirements and Requirements Related to Monitoring, Operation, and Maintenance According to Flare Design, but only to the extent that the claims are based on the Lyondell's and Equistar's use of too much steam in relation to Vent Gas flow. The resolution in this sub-Paragraph extends until the date of lodging for the First Amendment.
- d. The civil claims of the United States against Lyondell and Equistar for the violations Clean Air Act Sections 502(a), 503(c), and 504(a), 42 U.S.C. §§ 7661a(a), 7661b(c), 7661c(a), and of 40 C.F.R. §§ 70.1(b), 70.5(a) and (b), 70.6(a) and (c), and 70.7(b), that are based upon the violations resolved by Paragraph 5(a)-(c) for the time frames set forth in Paragraph 5(a)-(c).
- e. The civil claims of the United States against Lyondell and Equistar for the violations involving the Morris Flares alleged in the 2013 NOV/FOV.

8. Notices. In lieu of Paragraph 107's requirement that notifications, submissions, or communications required by the Consent Decree must be submitted in hard-copy by U.S. mail or courier, the Parties agree to electronic-only submission and receipt of the notifications, submissions, and communications referenced in Section XVI (Notices) of the Consent Decree. The Parties must include the following recipients for all notifications, submissions, or communications required by the Consent Decree, as amended:

As to the United States: eescdcopy.enrd@usdoj.gov
Re: DJ # 90-5-2-1-11593 and 90-5-2-1-11416/2

and as to EPA as set forth below

As to EPA: R5ardreporting@epa.gov
parrish.robert@epa.gov
foley.patrick@epa.gov
stucky.marie@epa.gov
prout.susan@epa.gov

As to the Defendants: Andy Tarrant, Esq.
Senior Counsel – HSE
LyondellBasell
Andy.Tarrant@lyondellbasell.com

9. Effective Date. The Effective Date of this First Amendment is the date upon which this First Amendment is entered by the Court or a motion to approve the First Amendment is granted, whichever occurs first, as recorded on the Court's docket.

10. Public Participation. This First Amendment must be lodged with the Court for a period of not less than 30 Days for public notice and comment in accordance with 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold its consent if the comments regarding the First Amendment disclose facts or considerations indicating that the First Amendment is inappropriate, improper, or inadequate. The Defendants consent to entry of this

First Amendment without further notice and agree not to withdraw from or oppose entry of this First Amendment by the Court or to challenge any provision of the First Amendment, unless the United States has notified the Defendants in writing that it no longer supports entry of the First Amendment.

11. Each undersigned representative of the Defendants and the Assistant Attorney General for the Environment and Natural Resources Division of the Department of Justice certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind the Party or Parties he or she represents to this document.

12. Except to the extent otherwise specified in this First Amendment, the Morris Plant and Morris Flares must comply with all of the Consent Decree's requirements for Covered Plants and Covered Flares as of the First Amendment's Effective Date. Except as specifically provided in the First Amendment, the Parties intend that all terms and conditions of the Consent Decree will remain unchanged and in full effect.

13. All provisions of the Consent Decree that are unaffected by this First Amendment shall operate in conjunction with these new provisions in the same manner and to the same extent as did the language in the original Consent Decree.

14. This First Amendment may be signed in counterparts, and its validity shall not be challenged on that basis.

15. The following appendices are attached to and made part of this First Amendment:

- a. "Appendix A" is the 2013 NOV/FOV.
- b. "Appendix B" is the Morris Waste Gas Minimizing Equipment and Waste Gas Minimizing Procedures.

Dated and entered this _____ Day of _____, 202_____

UNITED STATES DISTRICT JUDGE
SOUTHERN DISTRICT OF TEXAS

Subject to the notice and comment requirements of 28 C.F.R. § 50.7, THE UNDERSIGNED PARTIES enter into this First Amendment to the Consent Decree entered in the matter of the *United States v. Equistar Chemicals, LP et al.* (S.D. Tex.).

FOR THE UNITED STATES OF AMERICA

TODD KIM
Assistant Attorney General
Environment and Natural Resources Division
U.S. Department of Justice

Attorney-in-Charge:



STEVEN D. SHERMER
District of Columbia Bar No. 486394
Senior Attorney
Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, DC 20044-7611
202-514-1134 (Phone)
Steven.Shermer@usdoj.gov

JENNIFER B. LOWERY
United States Attorney
Southern District of Texas

Local Co-counsel:

DANIEL HU
Assistant United States Attorney
SDTX Id No. 7959
Texas Bar No. 10131415
1000 Louisiana St., Suite 2300
Houston, TX 77002
Telephone: (713) 567-9000

Subject to the notice and comment requirements of 28 C.F.R. § 50.7, THE UNDERSIGNED PARTIES enter into this First Amendment to the Consent Decree entered in the matter of the *United States v. Equistar Chemicals, LP et al.* (S.D. Tex.).

FOR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

**ROSEMARIE
KELLEY**

Digitally signed by ROSEMARIE
KELLEY
Date: 2022.07.18 18:38:56 -04'00'

ROSEMARIE A. KELLEY
Director, Office of Civil Enforcement
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

Greene, Mary E

Digitally signed by Greene, Mary E
Date: 2022.07.18 13:04:39 -04'00'

MARY E. GREENE
Director, Air Enforcement Division
Office of Civil Enforcement
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460



Subject to the notice and comment requirements of 28 C.F.R. § 50.7, THE UNDERSIGNED PARTIES enter into this First Amendment to the Consent Decree entered in the matter of the *United States v. Equistar Chemicals, LP et al.* (S.D. Tex.).

**FOR THE UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY, REGION 5**

ROBERT
KAPLAN

 Digitally signed by ROBERT KAPLAN
Date: 2022.06.22 13:21:23 -04'00'

ROBERT A. KAPLAN
Regional Counsel
U.S. Environmental Protection Agency, Region 5

THE UNDERSIGNED PARTIES enter into this First Amendment to the Consent Decree entered in the matter of the *United States v. Equistar Chemicals, LP et al.* (S.D. Tex.).

**FOR EQUISTAR CHEMICALS, LP;
LYONDELLBASELL ACETYLS, LLC;
AND LYONDELL CHEMICAL COMPANY**



JEFFREY KAPLAN
Executive Vice-President and Chief Legal Officer

United States

v.

Equistar Chemicals, LP, et al.

**Appendix A to Consent Decree First Amendment
(2013 EPA NOV)**

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5**

<p>IN THE MATTER OF:</p> <p>LyondellBasell</p> <p>Morris, Illinois</p> <p>Proceedings Pursuant to the Clean Air Act 42 U.S.C. § § 7401 <i>et seq.</i></p>	<p>)</p> <p>)</p> <p>)</p> <p>)</p> <p>)</p> <p>)</p> <p>)</p> <p>)</p> <p>)</p> <p>)</p> <p>)</p>	<p>NOTICE OF VIOLATION and FINDING OF VIOLATION</p> <p>EPA-5-13-IL-43</p>
--	--	--

NOTICE AND FINDING OF VIOLATION

LyondellBasell (you or Lyondell) owns and operates a chemical manufacturing facility at 8805 North Tabler Road, Morris, Illinois (facility). Operations at the facility include an Olefins Unit, a Deethanizer Unit, Linear Low Density Polyethylene lines, Low Density Polyethylene lines, truck loading for a vinyl acetate storage tank, an off-gas treatment system for the Low Density Polyethylene lines, and a wastewater treatment plant. Air emission control equipment for these operations includes two flares, known as the Olefins Flare and the Polymers Flare.

The U.S. Environmental Protection Agency is sending this Notice of Violation and Finding of Violation (NOV/FOV or Notice) because you have failed to operate your flares in accordance with good engineering control practices for minimizing emissions and in accordance with their designs, in violation of the General Provisions to the New Source Performance Standards (NSPS), the NSPS for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, the General Provisions to the National Emission Standards for Hazardous Air Pollutants (NESHAP), the NESHAP for Equipment Leaks (Fugitive Emission Sources) of Benzene, the NESHAP for Equipment Leaks (Fugitive Emission Sources) and the NESHAP for Organic Liquids Distribution (Non-Gasoline). Additionally, failing to operate your flares in accordance with good engineering control practices for minimizing emissions and in accordance with their designs can cause decreased combustion efficiency, resulting in violations of the Illinois State Implementation Plan (Illinois SIP) and the facility's Title V permit. The underlying statutory and regulatory requirements include provisions of the Clean Air Act.

NSPS Subpart A

1. Section 111(b) of the CAA, 42 U.S.C. § 7411(b) requires EPA to publish a list of categories of stationary sources and, within a year after the inclusion of a category of stationary sources in the list, to publish proposed regulations establishing Federal standards of performance for new sources within the source category.

2. On October 15, 1973, EPA promulgated the General Provisions for the Part 60 NSPS standards at 40 C.F.R. Part 60, Subpart A, §§ 60.1 - 60.19. 38 FR 28565; the provisions have been subsequently amended.

3. The NSPS regulations apply to the owner or operator of any stationary source that contains an "affected facility," the construction or modification of which is commenced after the date of publication of any proposed standard applicable to that facility. *See* 40 C.F.R. § 60.1(a).

4. 40 C.F.R. § 60.2 defines an "affected facility" under the NSPS, with reference to a stationary source, as any apparatus to which a standard is applicable.

5. 40 C.F.R. § 60.11(d) requires that "at all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions."

NSPS Subpart VV

6. On October 18, 1983, EPA promulgated the Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry (NSPS Subpart VV). *See* 48 Fed. Reg. 48328. NSPS Subpart VV is codified at 40 C.F.R. § 60.480 *et seq.* The Subpart has been subsequently amended.

7. 40 C.F.R. § 60.480(a)(1) provides that "[t]he provisions of this subpart apply to affected facilities in the synthetic organic chemicals manufacturing industry."

8. 40 C.F.R. § 60.480(a)(2) provides that "[t]he group of all equipment (defined in § 60.481) within a process unit is an affected facility."

9. 40 C.F.R. § 60.481 defines "equipment" as "each pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, valve, and flange or other connector in VOC service and any devices or systems required by this subpart."

10. 40 C.F.R. § 60.482-10(e) provides that "[o]wners or operators of control devices used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs."

NESHAP Subpart J

11. On June 6, 1984, EPA promulgated the National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene (NESHAP Subpart J). *See* 49 Fed. Reg. 23513. NESHAP Subpart J is codified at 40 C.F.R. § 61.110 *et seq.* The Subpart has been subsequently amended.

12. 40 C.F.R. § 61.110(a) provides that "[t]he provisions of this subpart apply to each of the following sources that are intended to operate in benzene service: pumps, compressors,

pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, and control devices or systems required by this subpart.”

13. 40 C.F.R. § 61.112(a) provides that “[e]ach owner or operator subject to the provisions of this subpart shall comply with the requirements of subpart V of this part.”

NESHAP Subpart V

14. On June 6, 1984, EPA promulgated the National Emission Standard for Equipment Leaks (Fugitive Emission Sources) (NESHAP Subpart V). *See* 49 Fed. Reg. 23513. NESHAP Subpart J is codified at 40 C.F.R. § 61.240 *et seq.* The Subpart has been subsequently amended.

15. 40 C.F.R. § 61.240(a) provides that “[t]he provisions of this subpart apply to each of the following sources that are intended to operate in volatile hazardous air pollutant (VHAP) service: pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, and control devices or systems required by this subpart.”

16. 40 C.F.R. § 61.242-11(e) provides that “[o]wners or operators of control devices that are used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their design.”

MACT Subpart A

17. On March 16, 1994, EPA promulgated the General Provisions to the National Emission Standards for Hazardous Air Pollutants from Source Categories (MACT Subpart A). *See* 59 Fed. Reg. 12408. MACT Subpart A is codified at 40 C.F.R. § 63.1 *et seq.* The Subpart has been subsequently amended.

18. 40 C.F.R. § 63.6(e)(1)(i) provides that “[a]t all times, including periods of startup, shutdown, and malfunction, the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.”

MACT Subpart EEEE

19. On February 3, 2004, EPA promulgated the National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline) (MACT Subpart EEEE). *See* 69 Fed. Reg. 5063. MACT Subpart EEEE is codified at 40 C.F.R. § 63.2330 *et seq.* The Subpart has been subsequently amended.

20. 40 C.F.R. § 63.2334(a) provides that “[e]xcept as provided for in paragraphs (b) and (c) of this section, you are subject to this subpart if you own or operate an [organic liquids

distribution] OLD operation that is located at, or is part of, a major source of HAP emissions. An OLD operation may occupy an entire plant site or be collocated with other industrial (e.g., manufacturing) operations at the same plant site.”

21. 40 C.F.R. § 63.2346(a)(4)(vi) provides that “[c]argo tanks and tank cars that deliver organic liquids to a storage tank must be reloaded or cleaned at a facility that utilizes the control techniques specified in paragraph (a)(4)(vi)(A) or (a)(4)(vi)(B) of this section.”

22. 40 C.F.R. § 63.2346(a)(4)(vi)(A) provides that “[t]he cargo tank or tank car must be connected to a closed-vent system with a control device that reduces inlet emissions of total organic HAP by 95 percent by weight or greater or to an exhaust concentration less than or equal to 20 ppmv, on a dry basis corrected to 3 percent oxygen for combustion devices using supplemental combustion air.”

23. 40 C.F.R. § 63.2346(a)(4)(vii) provides that “[t]he owner or operator of the facility where the cargo tank or tank car is reloaded or cleaned must comply with paragraphs (a)(4)(vii)(A) through (D) of this section.”

24. 40 C.F.R. § 63.2346(a)(4)(vii)(B) provides that “[i]f complying with paragraph (a)(4)(vi)(A) of this section, comply with the requirements for a closed vent system and control device as specified in this subpart EEEE. The notification requirements in § 63.2382 and the reporting requirements in § 63.2386 do not apply to the owner or operator of the offsite cleaning or reloading facility.”

25. 40 C.F.R. § 63.2350(b) provides that “[y]ou must always operate and maintain your affected source, including air pollution control and monitoring equipment, according to the provisions in § 63.6(e)(1)(i).”

26. 40 C.F.R. § 63.2378(b) provides that “[y]ou must follow the requirements in § 63.6(e)(1) and (3) during periods of startup, shutdown, malfunction, or nonoperation of the affected source or any part thereof. In addition, the provisions of paragraphs (b)(1) through (3) of this section apply.”

27. 40 C.F.R. § 63.2406 defines “organic liquids distribution (OLD) operation” as “the combination of activities and equipment used to store or transfer organic liquids into, out of, or within a plant site regardless of the specific activity being performed. Activities include, but are not limited to, storage, transfer, blending, compounding, and packaging.”

28. Table 12 of MACT Subpart EEEE provides that the requirements of 40 C.F.R. §§ 63.8(e)(1) and (3) apply to affected sources under MACT Subpart EEEE.

Illinois State Implementation Plan

29. On March 23, 2004, EPA approved Illinois rule 218 (69 Fed. Reg. 13474) as part of the Illinois State Implementation Plan.

30. Illinois SIP Rule 218.431 provides that “[t]he provisions of Sections 218.431 through 218.436 of this Subpart shall apply to [e]very owner or operator of any chemical manufacturing process unit that manufactures, as a primary product, one or more of the chemicals listed in Appendix A of this Part and that chemical manufacturing process unit causes or allows any reactor or distillation unit, either individually or in tandem, to discharge one or more process vent streams either directly to the atmosphere or to a recovery system...”

31. Illinois SIP Rule 218.432(a)(1) provides that “[e]very owner or operator of a source subject to the requirements of this Subpart, as determined by Section 218.431 of this Subpart, shall either: ...Reduce emissions of VOM, less methane or ethane, by 98 weight-percent, or to 20 ppmv, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent.”

Construction Permit 88120019

32. On March 2, 1999, Illinois EPA issued Construction Permit 88120019 to the Morris facility.

33. Condition 2 of Construction Permit 88120019 provides that VOM emissions from the railroad tank car unloading rack, 2 butene storage tanks (BSV-7200 & 85V-7250), 2 hexene storage tanks (BSV-7100 and BSV-7150) and a hexane storage tank (85V-7300) shall not exceed 6.39 tons per year.

Title V

34. Section 502(a) of the Act, 42 U.S.C. § 7661a(a), and 40 C.F.R. § 70.7(b) provide that, after the effective date of any permit program approved or promulgated under Title V of the Act, no source subject to Title V may operate except in compliance with a Title V permit.

35. 40 C.F.R. § 70.7(b) states “...no part 70 source may operate after the time that it is required to submit a timely and complete application under an approved permit program, except in compliance with a permit issued under a part 70 program.”

36. 40 CFR § 52.23 states “[f]ailure to comply with...any approved regulatory provision of a State implementation plan, or with any permit condition or permit denial issued pursuant to approved or promulgated regulations for the review of new or modified stationary or indirect sources, or with any permit limitation or condition contained within an operating permit issued under an EPA-approved program that is incorporated into the State implementation plan, shall render the person or governmental entity so failing to comply in violation of a requirement of an applicable implementation plan and subject to enforcement action under section 113 of the Clean Air Act.”

37. EPA gave final interim approval the Illinois Title V Permit program, effective March 7, 1995. 60 Fed. Reg. 12478 (March 7, 1995). EPA fully approved the Illinois Title V Permit program, effective November 30, 2001. 66 Fed. Reg. 62946 (December 4, 2001). Illinois' Title V Permit program requirements are codified at LAC Title 35, Part 270.

38. The Illinois Environmental Protection Agency (Illinois EPA) issued Title V Permit number 96010018 to the facility on September 7, 2000.

39. Section 5.2.5.a of the Title V Permit provides that “[s]hould this stationary source become subject to a regulation under 40 CFR Parts 60, 61, or 63, or 35 IAC after the date issued of this permit, then the owner or operator shall, in accordance with the applicable regulation(s), comply with the applicable requirements by the date(s) specified and shall certify compliance with the applicable requirements of such regulation(s) as part of the annual compliance certification, as required by 40 CFR Part 70 or 71.

40. Section 7.3.5 of the Title V permit provides that “[t]he flare shall be operated to reduce VOM emissions by 99%.”

41. Section 7.5.6 of the Title V permit provides that emissions from some affected storage tanks receiving material from the railroad unloading rack shall not exceed 6.39 tons of VOM per year. Section 7.5.6 also states that the limit was established in Permit 88120019 pursuant to 35 IAC 203 to “ensure that the construction and/or modification addressed in the aforementioned permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically 35 IAC Part 203.”

Factual Background

42. Lyondell owns and operates a chemical manufacturing facility at 8805 North Tabler Road, Morris, Illinois. The facility includes, among other control equipment, two flares, known as the Olefins Flare and the Polymers Flare. The Polymers Flare was formerly known as the Polypropylene (or PP) Flare.

43. The Morris facility is located in Aux Sable Township, Grundy County. Aux Sable and Goose Townships in Grundy County are currently designated marginal nonattainment for the 8-hour 2008 ozone standard (77 Fed. Reg. 34221). From June 15, 2004 (69 Fed. Reg. 23858) – August 13, 2012 (77 Fed. Reg. 48062), Aux Sable and Goose Townships in Grundy County were designated as a subpart 2 moderate ozone nonattainment area for the 1997 8-hour ozone standard. From 1991 to 2004, Grundy County was designated as a severe nonattainment area for the 1-hour ozone standard (56 Fed. Reg. 56694).

44. In July 1983, EPA released report EPA 600/2-83-052, titled Flare Efficiency Study (1983 Flare Study). This study, partially funded by EPA and the Chemical Manufacturers Association (CMA), included various tests to determine the combustion efficiency and hydrocarbon destruction efficiency of flares under a variety of operating conditions. Certain tests were conducted on a steam-assisted flare provided by John Zink Company. The tests performed included a wide range of steam flows and steam-to-vent gas ratios. The data collected showed decreasing combustion efficiencies when the steam-to-vent gas ratio was above 3.5. The tests showed the following efficiencies at the following steam-to-vent gas ratios:

Pounds of Steam to One Pound of Vent Gas	Combustion Efficiency (%)
3.45	99.7
5.67	82.18
6.86	68.95

The report concluded that excessive steam-to-vent gas ratios caused steam quenching of the flame during the tests which resulted in lower combustion efficiency.

45. On January 23, 2013, EPA issued a Section 114 Information Request to Lyondell. Lyondell submitted responses to the Information Request on March 1, 2013, and April 19, 2013.

46. On June 27, 2013, EPA issued another Section 114 Information Request to Lyondell. Lyondell submitted responses to the Information Request on July 25, 2013, August 14, 2013, and August 27, 2013.

47. Lyondell stated in its April 19, 2013, response to EPA's January 23, 2013 Information Request that prior to December 7, 2010, the Olefins Flare did not have steam flow meters installed. On December 7, 2010, a steam flow meter was installed on the Olefins flare.

48. Lyondell stated in its April 19, 2013, response to EPA's January 23, 2013 Information Request that the steam flow to the Polymers Flare is determined by an orifice-type flow meter, but that the data is "at the bottom end of the accuracy range" and that at times there is no signal because the flow is outside the operating range. Lyondell was unable to determine or provide steam flow rates to the Polymers Flare for any operating periods because of the stated lack of accurate data.

49. In the March 1, 2013 response to EPA's January 23, 2013 Information Request, Lyondell asserted that its Olefins Flare was subject to the following regulations: NSPS Subparts VV and NNN, NESHAP Subparts J, V and FFF, MACT Subparts SS, UU and YY, and IL SIP Rule 218.431 - 218.436.

50. In the March 1, 2013 response to EPA's January 23, 2013 Information Request, Lyondell asserted that its Polymers Flare was subject to the following regulations: NSPS Subparts VV and DDD, MACT Subparts SS, UU, EEEE and FFFF, and IL SIP Rule 218.431 - 218.436.

51. The Ethylene Plant Operating Unit Manual for the Tank Farm states the "[a]ccording to reports and tests performed in ethylene plants, it has been determined that up to 0.4 lbs of steam are needed per pound of flare gas:"

52. The Ethylene Plant is controlled by the Olefins Flare:

53. The Morris LLDPE Plant Operating Unit Manual states that "[e]xcessive Steam to the flare may decrease the destruction efficiency. Steam flow should be controlled using the IR camera for optimization... [a]pproximately 1/2 LB [sic] of steam is required per lb. of hydrocarbon

to eliminate smoke... [o]ur primary concern is to prevent smoking the flare, secondary but equally important, is to not have excessive steam flow as this decreases flare efficiency and waste steam?"

54. The LLDPE Plant is controlled by the Polymers Flare.

55. LLDPE Line 6 has vented to the Polymers Flare since 2009. Prior to 2009 it vented to the LLDPE Plant flare or the Polypropylene Flare, both of which have since been shut down.

56. The comonomer tanks covered by Section 7.5.6 of the facility's Title V permit (85V2100, 85V2150, 85V2200, 85V2250 and 85V2300) vent to the Polymers Flare.

57. Lyondell provided EPA with actual steam-to-vent gas ratios achieved at the Olefins Flare from December 7, 2010 through January 25, 2013. These records show that Lyondell regularly exceeded the ratios recommended by its own documents as well as the amount above which testing has demonstrated decreased combustion efficiency. Specifically, Lydonell's records show that of the 7,462 hours for which steam-to-vent gas ratios were provided, the Olefins Flare has had:

- a. 7,387 hours (99%) during which the steam to vent gas ratio was greater than 0.4;
- b. 3,862 hours (51.8%) during which the steam to vent gas ratio was greater than 3.45;
- c. 1,926 hours (25.8%) during which the steam to vent gas ratio was greater than 5.67; and,
- d. 1,217 hours (16.3%) during which the steam to vent gas ratio was greater than 6.86.

58. Lyondell's data from the Olefins flares indicates that it often operated below 99% combustion efficiency.

59. In its August 14, 2013, response to EPA's June 27, 2013, Information Request, Lyondell reported that in 2008, it sent a total of 1,297,965 pounds of volatile organic compounds to the Polymers Flare from tanks 85V2100, 85V2150, 85V2200, 85V2250 and 85V2300. At 99% destruction efficiency, this would equate to 6.49 tons of volatile organic compounds emitted from the flare.

60. In its August 14, 2013, response to EPA's June 27, 2013, Information Request, Lyondell reported that in 2009, it sent a total of 1,392,627 pounds of volatile organic compounds to the Polymers Flare from tanks 85V2100, 85V2150, 85V2200, 85V2250 and 85V2300. At 99% destruction efficiency, this would equate to 6.96 tons of volatile organic compounds emitted from the flare.

Violations

61. By adding too much steam to the Olefins Flare and failing to monitor steam usage prior to December 7, 2010, Lyondell has failed to operate the flare in conformance with its design, in violation of 40 C.F.R. §§ 60.482-10(e), 61.112(a) and 61.242-11(e).

62. By adding too much steam to the Olefins Flare and failing to monitor steam usage prior to December 7, 2010, Lyondell has failed to operate the flare in a manner consistent with good engineering practices to minimize emissions, in violation of 40 C.F.R. §§ 60.11(d), 63.6(e)(1)(i) and 63.1111(a)(2).

63. By failing to monitor steam usage, Lyondell failed to operate the Polymers Flare in conformance with its design, in violation of 40 C.F.R. § 60.482-10(e).

64. By failing to monitor steam usage, Lyondell has failed to operate the Polymers Flare in a manner consistent with good engineering practices to minimize emissions, in violation of 40 C.F.R. §§ 63.6(e)(1)(i), 63.2350(b) and 63.2378(b).

65. By failing to operate the Olefins Flare to achieve at least 98% destruction efficiency, Lyondell has violated IL SIP Rule 218.432(a)(1).

66. By failing to operate the Olefins Flare to achieve at least 99% destruction efficiency, Lyondell has violated Section 7.3.5 of its Title V permit.

67. By failing to limit emissions from tanks 85V2100, 85V2150, 85V2200, 85V2250 and 85V2300 to less than 6.39 tons of volatile organic matter per year, Lyondell has violated Section 7.5.6 of its Title V Permit.

9/30/13

Date



George T. Czerniak
Acting Director
Air and Radiation Division

CERTIFICATE OF MAILING

I, Loretta Shaffer, certify that I sent a Notice and Finding of Violation, No. EPA-5-13-IL-43, by Certified Mail, Return Receipt Requested, to:

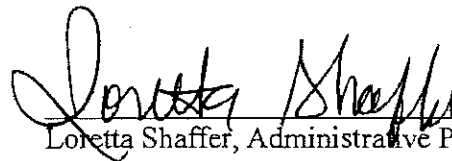
Robert Steele
Environmental Manager
LyondellBasell
Equistar Chemicals, LP
8805 North Tabler Road
Morris, Illinois 60450

I also certify that I sent copies of the Notice of Violation and Finding of Violation by first-class mail to:

Ray Pilapil, Section Manager
Compliance and Systems Management Section
Illinois Environmental Protection Agency
P.O. Box 19506
Springfield, Illinois 62794-9506

On the 1 day of October 2013.

CERTIFIED MAIL RECEIPT NUMBER: 7009 1680 0000 7669 5831



Loretta Shaffer, Administrative Program Assistant
Planning and Administration Section

United States

v.

Equistar Chemicals, LP, et al.

Appendix B to Consent Decree First Amendment

Morris Plant Waste Gas Minimizing Equipment and Operational Procedures

At the Morris Plant the Applicable Defendants must operate the following Waste Gas Minimizing Equipment and perform the following Waste Gas Minimizing Procedures to minimize flaring.

Vent Stream Recovery System – Distillation Towers

The Vent Stream Recovery System collects continuous vent streams from the C2 Splitter Reflux Drum and the C3 Splitter Reflux Drum in the separation section of the Morris Plant. Hydrocarbons in the vents from the C2 and C3 splitters are routed to the Process Gas Compressor for product recovery in the separation section of the ethylene unit. The estimated gas recovery for the Vent Stream Recovery System is 0.8 mscf per Day under normal conditions. During the 98% operating time required by Paragraph 37.b.v of the Consent Decree (as amended by Paragraph 2(e)(ii) of the First Amendment), the gas streams described above must not be routed to a Flare.

Tank Farm Ethylene Vent Recovery System

The Morris Plant employs a cryogenic tank for ethylene surge storage. This cryogenic tank is located in the onsite tank farm. The Tank Farm Ethylene Vent Recovery System compresses vapors generated by ambient heat gain in the cryogenic Ethylene Storage Tank and routes them to the product recovery system in the separation section of the ethylene unit. The estimated gas recovery for the Tank Farm Ethylene Vent Recovery System is approximately 1.2 mscf per Day under normal conditions. During the 98% operating time required by Paragraph 37.b.v of the Consent Decree (as amended by Paragraph 2(e)(ii) of the First Amendment), the gas streams described above must not be routed to a Flare.

Flare Minimization Regeneration Procedures

Molecular sieve desiccant dryers are used in the olefins process to remove moisture and other contaminants from process streams. These dryers require periodic regeneration via temperature swing adsorption, using hot regeneration gases, to desorb the moisture and contaminants. Flare Minimization Regeneration Procedures are employed to optimize the recovery of process fluids to: (i) the Process Gas Compressor System for recovery in the separation section of the ethylene unit and (ii) recovery of regeneration gases to the fuel gas system. These procedures are employed during the regeneration of the Process Gas Dryers and Propylene Dryers. The estimated average gas recovery for the Flare Minimization Regeneration Procedures is 0.3 mscf per Day for normal regeneration cycles. During the 98% operating time required by Paragraph 37.b.v of the Consent Decree (as amended by Paragraph 2(e)(ii) of the First Amendment), the gas streams described above must not be routed to a Flare.