

air pollution control practices, including their failures to properly operate, maintain, monitor, and control steam-assisted flares used at six petrochemical manufacturing facilities. Defendant Equistar Chemicals, LP owns and operates facilities located in Channelview, Texas (the “Channelview North Facility”), Corpus Christi, Texas (the “Corpus Christi Facility”), Clinton, Iowa (the “Clinton Facility”), and La Porte, Texas (the “La Porte Equistar Facility”). Defendant LyondellBasell Acetyls, LLC owns and operates a facility located in La Porte, Texas (the “La Porte LyondellBasell Acetyls Facility”). Defendant Lyondell Chemical Company owns and operates a facility located in Channelview, Texas (the “Channelview South Facility”). These six facilities are collectively referred to as the “Defendants’ Facilities.”

3. The Defendants’ alleged Clean Air Act violations resulted in thousands of tons of illegal emissions of volatile organic compounds (VOCs), hazardous air pollutants (HAPs), and other pollutants into the air in the States of Iowa and Texas.

JURISDICTION AND VENUE

4. This Court has jurisdiction over the subject matter of this action pursuant to Clean Air Act Section 113(b), 42 U.S.C. § 7413(b), and 28 U.S.C. §§ 1331, 1345, and 1355. This Court has personal jurisdiction over the Defendants because they do business in the State of Texas and in this judicial district.

5. Venue is proper in this District pursuant to Section 113(b) of the Clean Air Act, 42 U.S.C. § 7413(b), and 28 U.S.C. §§ 1391(b) and (c) and 1395(a), because violations alleged in this Complaint occurred at the Defendants’ Facilities that are located in this District.

NOTICE

6. Notices of violations were given to the Defendants, and to the States of Iowa and Texas, as required by Clean Air Act Section 113(a)(1), 42 U.S.C. § 7413(a)(1). Notice of the

commencement of this action was given to the States of Iowa and Texas as required by Clean Air Act Section 113(b), 42 U.S.C. § 7413(b).

7. The 30-day period required by Clean Air Act Section 113(a), 42 U.S.C. § 7413(a), between the notices of violation provided by the United States and the commencement of this civil action has passed.

AUTHORITY

8. The United States Department of Justice has the authority to bring this action on behalf of the EPA under, *inter alia*, 28 U.S.C. §§ 516 & 519, and under Section 305(a) of the Clean Air Act, 42 U.S.C. § 7605(a).

THE DEFENDANTS AND THE DEFENDANTS' FACILITIES

9. Defendant Equistar Chemicals, LP is a Delaware corporation that does business in the State of Iowa and the State of Texas. At all times relevant to the Complaint, Defendant Equistar Chemicals, LP has owned and operated the Channelview North Facility, Corpus Christi Facility, Clinton Facility, and La Porte Equistar Facility.

10. Defendant LyondellBasell Acetyls, LLC is a Delaware corporation that does business in the State of Texas. At all times relevant to the Complaint, Defendant LyondellBasell Acetyls, LLC has owned and operated the La Porte LyondellBasell Acetyls Facility.

11. Defendant Lyondell Chemical Company is a Delaware corporation that does business in the State of Texas. At all times relevant to the Complaint, Defendant Lyondell Chemical Company has owned and operated the Channelview South Facility.

12. At all times relevant to the Complaint, each of the Defendants has been a “person” within the meaning of Section 302(e) of the Clean Air Act, 42 U.S.C. § 7602(e) and the

applicable federal and state regulations alleged herein.

13. The Defendants' Facilities manufacture petrochemicals, including ethylene and other olefins.

14. At all times relevant to this Complaint, Defendant Equistar Chemicals, LP has owned and operated five steam-assisted flares located at the Channelview North Facility (the East Plant, IPOH, Methanol Continuous, OP1, and OP2 Flares). These five flares are collectively referred to as the "Channelview North Flares."

15. At all times relevant to this Complaint, Defendant Equistar Chemicals, LP has owned and operated three steam-assisted flares located at the Corpus Christi Facility (the BDU, Olefins Cold, and Olefins Hot Flares). These three flares are collectively referred to as the "Corpus Christi Flares."

16. At all times relevant to this Complaint, Defendant Equistar Chemicals, LP has owned and operated a steam-assisted flare located at the Clinton Facility (the "Clinton Flare").

17. At all times relevant to this Complaint, Defendant Equistar Chemicals, LP has owned and operated four steam-assisted flares located at the La Porte Equistar Facility (the AB3, ARU, Hyperzone – Q1, and Olefins QE1 Flares). These four flares are collectively referred to as the "La Porte Equistar Flares."

18. At all times relevant to this Complaint, Defendant LyondellBasell Acetyls, LLC has owned and operated two steam-assisted flares located at the La Porte LyondellBasell Acetyls Facility (the AA and VAM Flares). These two flares are collectively referred to as the "La Porte LyondellBasell Acetyls Flares."

19. At all times relevant to this Complaint, Defendant Lyondell Chemical Company

has owned and operated four steam-assisted flares located at the Channelview South Facility (MTBE Continuous Flare; MTBE Emergency Flare; POSM 1 Continuous Flare; and POSM 2 Continuous Flares). These four flares are collectively referred to as the “Channelview South Flares.”

CLEAN AIR ACT STATUTORY AND REGULATORY BACKGROUND

A. National Ambient Air Quality Standards and New Source Review

i. General

20. Clean Air Act Section 108(a), 42 U.S.C. § 7408(a), requires that the EPA prepare air quality standards for certain air pollutants called “criteria pollutants.” For each criteria pollutant, Clean Air Act Section 109, 42 U.S.C. § 7409, requires that the EPA promulgate national ambient air quality standards (“NAAQS”) that will protect public health and welfare.

21. Pursuant to Clean Air Act Sections 108 and 109, 42 U.S.C. §§ 7408 and 7409, the EPA identified and issued NAAQS for the following criteria air pollutants, as well as for others: ozone, nitrogen oxides (“NO_x”), and carbon monoxide (“CO”). *See* 40 C.F.R. §§ 50.8-50.11 (primary NAAQS); *see also* 40 C.F.R. §§ 50.15 and 50.19 (secondary NAAQS).

22. VOCs readily react in sunlight with NO_x – forming the criteria pollutant ozone.

23. Pursuant to Clean Air Act Section 107(d), 42 U.S.C. § 7407(d), each state is required to designate those areas within its boundaries (known as “air quality control regions”) where the air quality is better or worse than the NAAQS for each criteria pollutant. An area that meets the NAAQS for a particular pollutant is deemed an “attainment” area. An area that does not meet the NAAQS for a particular pollutant is deemed a “non-attainment” area.

24. At all times relevant to this Complaint, Harris County, Texas has been classified

as “in non-attainment” for ozone. The Channelview North Facility, Channelview South Facility, La Porte Equistar Facility, and La Porte LyondellBasell Acetyls Facility are located in Harris County, Texas.

25. At all times relevant to this Complaint, Nueces County, Texas where the Corpus Christi Facility is located has been classified as “in attainment” for ozone.

26. At all times relevant to this Complaint, Clinton County, Iowa where the Clinton Facility is located has been classified as “in attainment” for ozone.

27. At all times relevant to this Complaint, all of the areas in which the Defendants’ Facilities are located have been classified as attainment areas for NO_x and CO.

ii. State Implementation Plans

28. Clean Air Act Section 110, 42 U.S.C. § 7410, requires each state to adopt and submit to the EPA for approval a plan to attain and maintain the NAAQS for each criteria pollutant in each air quality control region within a state. This plan is known as a state implementation plan (“SIP”).

29. A SIP is enforceable by the state in which it is adopted. After a SIP is approved by the EPA, it is also federally enforceable pursuant to Clean Air Act Section 113(b), 42 U.S.C. § 7413(b).

30. Clean Air Act Section 110(a)(2)(C), 42 U.S.C. § 7410(a)(2)(C), requires that each SIP regulate the “modification and construction of any stationary source...as necessary to assure that [NAAQS] are achieved, including [via] a permit program as required in Parts C and D of [Subchapter I of the Clean Air Act].” The Clean Air Act’s requirements for newly constructed and modified sources of criteria air pollutants are often referred to as the “New Source Review”

(or “NSR”) program.

iii. Prevention of Significant Deterioration (“PSD”) Requirements

31. Part C of Subchapter I of the Clean Air Act, 42 U.S.C. §§ 7470-7492, sets forth New Source Review requirements for preventing the significant deterioration of air quality in areas that are attaining NAAQS. *See* 42 U.S.C. § 7470 (Purpose of PSD requirements). The PSD regulations are found at 40 C.F.R. § 52.21 (the “PSD Regulations”).

32. The PSD program’s core requirement is a prohibition that “[n]o major emitting facility...may be constructed in any [attainment] area” unless various requirements are met. *See* 42 U.S.C. § 7475(a). These requirements include, *inter alia*, obtaining a “PSD permit” with emissions limitations based on the “best available control technology” (“BACT”) to control air emissions. *Id.*; *see also* 40 C.F.R. § 52.21(j)-(r). The PSD Regulations also require a demonstration that emissions from a newly constructed or modified facility will not contribute to a violation of a NAAQS. *See* 42 U.S.C. § 7475(a); 40 C.F.R. § 52.21(k).

33. The PSD Regulations define “construction” as “any physical change in or change in the method of operation (including fabrication, erection, installation, demolition, or modification) which would result in a change in actual emissions.” 40 C.F.R. § 52.21(b)(8). “Construction” is also defined to include the “modification” (as defined in Clean Air Act Section 111(a), 42 U.S.C. § 7411(a)) of any source or facility. 42 U.S.C. § 7479(2)(C).

34. “Modification” is defined as “any change in, or change in the method of operation of, a stationary source which increases the amount of any air pollutant emitted by such source or which results in the emission of any air pollutant not previously emitted.” 42 U.S.C. § 7411(a).

35. The PSD Regulations define “major modification” as “any physical change in or

change in the method of operation of a major stationary source that would result in a significant new emission increase of any pollutant subject to regulation under the Act.” 40 C.F.R.

§ 52.21(b)(2)(i).

36. The PSD Regulations set individual thresholds for each criteria pollutant that define whether a net emissions increase of a pollutant is “significant.” *See* 40 C.F.R.

§ 52.21(b)(23)(i). For example, for ozone, “significant” means a net emissions increase of, or the potential of a source to emit 40 tons per year (TPY) or more of VOCs or NO_x. *Id.*

37. In an attainment area, a newly constructed stationary source or a major modification to an existing stationary source must comply with BACT, as defined in 40 C.F.R. § 52.21(b)(12), for each pollutant subject to regulation under the Clean Air Act that it would have the potential to emit in significant amounts or for which the modification would result in a significant net emissions increase. 40 C.F.R. § 52.21(j)(2)-(j)(3).

iv. Non-attainment NSR Requirements

38. Part D of Subchapter I of the Clean Air Act, 42 U.S.C. §§ 7501-7515, sets forth New Source Review requirements for areas that have not attained NAAQS.

39. Clean Air Act Sections 110(a)(2)(C) and (I) and 172(c), 42 U.S.C. §§ 7410(a)(2)(C) and (I) and 7502(c), require that each SIP contain requirements to review and permit newly constructed or modified sources of criteria air pollutants in non-attainment areas (Non-attainment NSR).

40. Clean Air Act Section 173, 42 U.S.C. § 7503, requires that, in order to obtain a permit for the construction or major modification of a major stationary source in a non-attainment area, the owner and operator of the source must, *inter alia*: a) comply with the lowest

achievable emission rate (LAER), as defined in Clean Air Act Section 171(3), 42 U.S.C.

§ 7501(3), and b) obtain federally enforceable emission offsets at least as great as the new or modified source's emissions. *See* 42 U.S.C. §§ 7503(a)-(c); 40 C.F.R. Part 51, Appendix S, Part IV, Conditions 1-4.

41. "Significant" has the same meaning as under the PSD Regulations, except that under the Non-attainment NSR program, lower TPY thresholds may qualify as being significant. 40 C.F.R. § 51.165(a)(1)(x)(B). For example, in areas that are in non-attainment for ozone, lower thresholds may qualify a stationary source of VOCs as a major stationary source. *Id.*

v. PSD and Non-attainment NSR in Iowa and Texas

42. Clean Air Act Section 161, 42 U.S.C. § 7471, requires SIPs to contain emission limitations and such other measures as may be necessary to prevent significant deterioration of air quality in attainment areas. Clean Air Act Sections 110(a)(2)(C) and (I) and 172(c), 42 U.S.C. §§ 7410(a)(2)(C) and (I) and 7502(c), require that each SIP contain requirements to attain the primary NAAQS in non-attainment areas.

43. A state may comply with Clean Air Act Section 161 (for PSD) or with Clean Air Act Sections 172 and 173 (for Non-attainment NSR) if the EPA delegates authority to enforce the respective federal PSD Regulations or Non-attainment NSR regulations to the state. A state may also comply by promulgating its own PSD Regulations or Non-attainment NSR regulations that then must be approved by the EPA as part of the SIP. In order to be approved, the state's PSD Regulations or Non-attainment NSR regulations must be at least as stringent as the requirements set forth at 40 C.F.R. §§ 51.165 (for Non-attainment NSR) or 51.166 (for PSD).

44. The EPA has approved Iowa's PSD and Non-attainment NSR permit programs. *See* 567 Iowa Admin. Code (hereafter, IAC) §§ 33.1, 33.3, 33.9, and 33.10 (PSD program)

(approved Feb. 5, 2019, 84 Fed. Reg. 1,615 (Apr. 17, 2020), 85 Fed. Reg. 21,329 (June 17, 2016), 81 Fed. Reg. 39,585 (May 14, 2007), and 72 Fed. Reg. 27,056)) and 567 IAC §§ 31, 31.3, 31.4, 31.9, and 31.10 (Non-attainment NSR program) (approved 81 Fed. Reg. 62,387 (Sept. 9, 2016), 79 Fed. Reg. 27,763 (May 15, 2014), and 80 Fed. Reg. 33,192 (Aug. 10, 2015)).

45. The EPA has approved Texas' PSD and Non-attainment NSR permit programs. *See* 30 Texas Administrative Code (hereafter, TAC) §§ 116.160-116.163 (PSD program) (approved Sept. 27, 1995, 60 Fed. Reg. 49,781) and 30 TAC §§ 116.150-116.151 (Non-attainment NSR program) (approved Sept. 27, 1995, 60 Fed. Reg. 49,781). *See also* 40 C.F.R. §§ 52.2273 and 52.2303 (EPA approvals of subsequent revisions to Texas PSD and Non-attainment NSR program requirements).

46. At all times relevant to this Complaint, Iowa and Texas have been authorized to issue and enforce PSD and Non-attainment NSR permits.

47. The EPA may enforce violations of Iowa's and Texas' federally approved PSD program and Non-attainment NSR program, as well as violations of permits issued pursuant to those programs. *See* 42 U.S.C. § 7413(b), and 40 C.F.R. § 52.23.

B. New Source Performance Standards

i. General

48. Clean Air Act Section 111(b)(1)(A), 42 U.S.C. § 7411(b)(1)(A), requires the EPA to publish and periodically revise a list of categories of stationary sources that, in the EPA's judgment, cause or contribute significantly to air pollution which may reasonably be anticipated to endanger public health or welfare. These categories correspond to distinct manufacturing processes or equipment within a given industry.

49. Once a category is included on the list, Clean Air Act Section 111(b)(1)(B), 42 U.S.C. § 7411(b)(1)(B), requires the EPA to promulgate a federal “New Source Performance Standard” (“NSPS”) to regulate emissions from new sources within the category.

50. The NSPS are located at 40 C.F.R. Part 60. 40 C.F.R. § 60.1 explains that the provisions of 40 C.F.R. Part 60 “apply to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced after the publication [in Part 60] of any [NSPS] (or, if earlier, the date of publication of any proposed [NSPS]) applicable to that facility.”

51. An “affected facility” is defined as “any apparatus to which a standard is applicable.” 40 C.F.R. § 60.2.

52. Clean Air Act Section 111(e), 42 U.S.C. § 7411(e), prohibits an owner or operator of a new source from operating that source in violation of an NSPS after the effective date of the NSPS applicable to such source.

ii. NSPS Part 60, Subpart A: General Standards

53. Pursuant to Clean Air Act Section 111(b)(1)(B), 42 U.S.C. § 7411(b)(1)(B), the EPA promulgated general regulations that apply to all stationary sources subject to a NSPS, regardless of their industrial category. These general NSPS standards are found at 40 C.F.R. Part 60, Subpart A, §§ 60.1 - 60.19 (“NSPS Subpart A”).

a. *NSPS Part 60, Subpart A: Good Air Pollution Control Practices*

54. Pursuant to 40 C.F.R. § 60.11(d), owners and operators of any affected facility subject to a NSPS must, at all times, including periods of startup, shutdown, and malfunction, to the extent practicable, maintain and operate the affected facility including associated air

pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions.

b. *NSPS Subpart A: Requirements for Flares Used as Control Devices*

55. NSPS Subpart A contains specific regulations that apply to flares that are used as control devices for facilities subject to an NSPS. 40 C.F.R. § 60.18(b)-(f).

56. Among other things, NSPS Subpart A requires that flares must be: a) designed and operated with no visible emissions (40 C.F.R. § 60.18(c)(1)), b) operated with a flame present at all times (40 C.F.R. § 60.18(c)(2)), c) monitored to ensure that they are operated and maintained in conformance with their design (40 C.F.R. § 60.18(d)), and d) operated at all times when emissions are vented to them (40 C.F.R. § 60.18(e)).

57. NSPS Subpart A also requires, among other things, that: a) the net heating value (“NHV”) of gas being combusted in a steam-assisted flare must be 300 British Thermal Units (“BTU”) per standard cubic foot (“scf”) or greater (40 C.F.R. § 60.18(c)(3)(ii)) and b) certain exit velocity requirements must be met for steam-assisted flares (40 C.F.R. § 60.18(c)(4)).

iii. Specific NSPS Categorical Standards

58. Pursuant to Clean Air Act Section 111(b)(1)(A) of the Clean Air Act, 42 U.S.C. § 7411(b)(1)(A), the EPA has promulgated NSPS for the following category of stationary sources, among others:

SOURCE CATEGORY	NSPS REGULATION (40 C.F.R. Part 60)
Standards of Performance for VOC Emissions from the Polymer Manufacturing Industry	Subpart DDD - 40 C.F.R. §§ 60.560-60.566

59. Flares used as a control device for affected facilities subject to 40 C.F.R. Part 60,

Subpart DDD must comply with the requirements of NSPS Subpart A, including 40 C.F.R. §§ 60.11(d) and 60.18. *See* 40 C.F.R. §§ 60.562-1(a)(1)(i)(C) and (ii), 60.562-2, and 60.563(c).

C. Clean Air Act Section 112 Regulation of HAPs Pre-1990

i. Background

60. Clean Air Act Section 112 contains requirements to control emissions of certain HAPs, such as benzene. *See* 42 U.S.C. § 7412 and 40 C.F.R. § 61.01(a). These requirements are known as “national emission standards for hazardous air pollutants” (“NESHAPs”). NESHAPs established before the Clean Air Act was amended in 1990 are promulgated at 40 C.F.R. Part 61.

ii. Part 61, Subpart A: NESHAP General Standards

61. Before it was amended on November 15, 1990 (the “1990 Amendments”), the EPA promulgated general regulations that apply to all stationary sources of HAPs that are subject to the NESHAPs, regardless of their source category. *See* 40 C.F.R. § 61.01(c). These general NESHAP standards are found at 40 C.F.R. Part 61, Subpart A, §§ 61.01-61.19 (“NESHAP Subpart A”).

62. Like NSPS Subpart A, NESHAP Subpart A requires that “the owner and operator of each stationary source [of HAPs] shall maintain and operate the source, including associated equipment for air pollution control, in a manner consistent with good air pollution control practices for minimizing emissions.” 40 C.F.R. § 61.12(c).

iii. Specific Categorical NESHAPs

63. Pursuant to Clean Air Act Section 112, as it existed before the 1990 Amendments, the EPA promulgated NESHAPs for the following category of stationary sources of HAPs:

SOURCE CATEGORY	NESHAP (40 C.F.R. Part 61)
National Emission Standard for Benzene Waste Operations	Subpart FF - 40 C.F.R. §§ 61.340-61.358

64. Flares used as a control device for sources subject to 40 C.F.R. Part 61, Subpart FF must comply with the requirements of 40 C.F.R. §§ 60.18 and 61.12(c). 40 C.F.R.

§ 61.349(a)(2)(iii) and (d).

D. Clean Air Act Section 112 Regulation of HAPs Post-1990

i. Background

65. The Clean Air Act’s 1990 Amendments amended Clean Air Act Section 112 and updated the program for controlling HAPs. *See* H.R. Rep. No. 101-490, 101st Cong., 2d Sess., Part 1 at 324 (1990).

66. The Clean Air Act’s 1990 Amendments established a list of 188 HAPs that Congress determined could cause adverse health or environmental effects. *See* 42 U.S.C. § 7412(b)(1). Pursuant to 42 U.S.C. § 7412(c), the EPA was required to publish a list of all categories and sub-categories of, *inter alia*, major sources of HAPs.

67. After publishing the list of emission sources required by 42 U.S.C. § 7412(c), the Clean Air Act’s 1990 Amendments required the EPA to promulgate regulations establishing emission standards for each category and subcategory of major sources of HAPs. *See* 42 U.S.C. § 7412(d)(1).

68. The emission standards promulgated under Clean Air Act Section 112, 42 U.S.C. § 7412, as amended, are classified as NESHAPs, however, they are often also referred to as “maximum achievable control technology” (“MACT”) standards. The MACT regulations are

found at 40 C.F.R. Part 63.

69. Clean Air Act Section 112, as amended, prohibits any person from operating a stationary source subject to a MACT regulation in violation of such standard after it becomes effective. *See* 42 U.S.C. § 7412(i)(3).

ii. Part 63, Subpart A: General Standards

70. Pursuant to Clean Air Act Section 112, 42 U.S.C. § 7412, as amended, the EPA promulgated regulations that apply to stationary sources of HAPs that are subject to the MACT standards, regardless of their source category. *See* 40 C.F.R. §§ 63.1(b) and (c). These general standards are found at 40 C.F.R. §§ 63.1-63.16 (“MACT Subpart A”).

71. The categorical MACT standards in Part 63 explicitly identify which specific provisions of the MACT Subpart A regulations apply or do not apply to that source category. *See* 40 C.F.R. § 63.1(a)(4).

a. *MACT Subpart A: Good Air Pollution Control Practices*

72. Like the good air pollution control practice requirement of NSPS Subpart A and Subpart A of the NESHAPs, the MACT Subpart A regulations require 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.” 40 C.F.R. § 63.6(e)(1)(i).

b. *MACT Subpart A: Requirements for Flares Used as Control Devices*

73. Like NSPS Subpart A, the MACT Subpart A regulations include requirements that apply to flares that are used as control devices for affected sources subject to a MACT

standard. *See* 40 C.F.R. § 63.11(b). These requirements generally mirror the requirements of 40 C.F.R. § 60.18. *See* 40 C.F.R. § 63.11(b)(1)-(7).

iii. Specific Categorical MACT Standards

74. Pursuant to Clean Air Act Section 112(c), 42 U.S.C. § 7412(c), as amended, the EPA promulgated MACT regulations for the following categories of stationary sources of HAPs:

SOURCE CATEGORY	MACT (40 C.F.R. Part 63)
National Emission Standards for Organic HAPs from the Synthetic Organic Chemical Manufacturing Industry	Subpart F - 40 C.F.R. §§ 63.100-63.107
National Emission Standards for Organic HAPs from the Synthetic Organic Chemical Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater	Subpart G - 40 C.F.R. §§ 63.110-63.123
National Emission Standards for Organic HAPs for Equipment Leaks	Subpart H - 40 C.F.R. §§ 63.160-63.183
National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process	Subpart SS - 40 C.F.R. §§ 63.980-63.999
National Emission Standards for HAPs for Source Categories: Generic Maximum Achievable Control Technology Standards	Subpart YY - 40 C.F.R. §§ 63.1100-63.1114
National Emission Standards for HAPs: Miscellaneous Organic Chemical Manufacturing	Subpart FFFF - 40 C.F.R. §§ 63.2430-63.2550

75. Flares used as control devices for sources subject to 40 C.F.R. Part 63, Subparts F, G, H, YY, and FFFF must comply with the requirements of 40 C.F.R. § 63.11(b). *See* 40 C.F.R. Part 63, Subpart F, Table 3 (applicability for Subpart G); 40 C.F.R. § 63.113(a)(1)(i) (Subpart G); 40 C.F.R. § 63.987(a) (Subpart SS); 40 C.F.R. § 63.1103(e), Table 7 (applicability

for Subpart YY ethylene production sources) (cross-referencing 40 C.F.R. §§ 63.982(b) and, in turn, 63.987(a)); and 40 C.F.R. Part 63, Subpart FFFF, Table 12.

76. Under Part 63, Subpart YY, owners and operators of an ethylene process vent must reduce emissions of organic HAPs by 98 weight-percent, or reduce organic HAPs or total organic compounds (“TOC”) to a concentration of 20 ppmv, whichever is less stringent, by venting emissions through a closed vent system to any combination of control devices, including flares, and meeting the requirements specified in 40 C.F.R. § 63.982(b) and (c)(2). 40 C.F.R. § 63.1103(e)(3) and Table 7 at (d).

77. Flares used as a control device for sources subject to Part 63, Subpart FFFF must comply with the requirement in 40 C.F.R. § 63.6(e)(1)(i) that each flare be maintained and operated “in a manner consistent with good air pollution control practice for minimizing emissions.” *See* 40 C.F.R. Part 63, Subpart FFFF, Table 12.

E. Title V Operating Permits

78. Title V of the Clean Air Act, 42 U.S.C. § 7661-7661f, establishes a permit program for certain stationary sources of air pollution, including major sources subject to Clean Air Act Section 111 (NSPS regulations), Clean Air Act Section 112 (NESHAP/MACT program), or New Source Review requirements. *See* 42 U.S.C. § 7661a(a).

79. The purpose of Title V is to ensure that all “applicable requirements” governing a facility’s compliance with the Clean Air Act, including SIP requirements, are consolidated and expressed in one document – an “operating” permit (*a/k/a* a “Title V permit”). *See* 42 U.S.C. § 7661c(a).

80. Pursuant to Clean Air Act Section 502(b), 42 U.S.C. § 7661a(b), the EPA

promulgated regulations implementing the requirements of Title V and establishing the minimum elements of a Title V permit program to be administered by any state or local air pollution control agency. 57 Fed. Reg. 32250 (July 21, 1992). These regulations are codified at 40 C.F.R. Part 70.

81. Iowa has an EPA-approved Title V program. *See* 567 IAC, Chapter 22 (approved at 60 Fed. Reg. 45,671 (Sept. 1, 1995)). Iowa is therefore authorized to issue and enforce Title V permits in the state of Iowa. The regulations governing Iowa’s Title V air operating permit program are set forth at 567 IAC, Chapter 22 (Controlling Pollution).

82. Texas has an EPA-approved Title V program. *See* 30 TAC, Chapter 122 (approved at 66 Fed. Reg. 63,318 (Dec. 6, 2001)). Texas is therefore authorized to issue and enforce Title V permits in the state of Texas. The regulations governing Texas’ Title V air operating permit program are set forth at 30 TAC, Chapter 122 (Federal Operating Permits Program).

83. Clean Air Act Section 504(a), 42 U.S.C. § 7661c(a), the implementing regulations at 40 C.F.R. § 70.6(a) and (c), and the Title V permit programs of Iowa and Texas require that each Title V permit include, among other things, enforceable emission limitations, compliance schedules, and such other conditions as are necessary to assure compliance with “applicable requirements” of the Clean Air Act and the requirements of the relevant SIP. *See* 567 IAC § 22.108; 30 TAC § 122.142.

84. “Applicable Requirements” are defined to include any relevant NSPS, NESHAP/MACT, and New Source Review requirements. *See* 40 C.F.R. § 70.2; *see also* 567 IAC § 22.100 and 30 TAC § 122.10(I).

85. Clean Air Act Section 502(a), 42 U.S.C. § 7661a(a), and the Title V permit programs of Iowa and Texas prohibit violations of any requirement of a Title V permit. *See* 567 IAC § 22.104; TAC § 122.143(4).

86. Clean Air Act Section 502(a), 42 U.S.C. § 7661a(a), the implementing regulations at 40 C.F.R. §§ 70.1(b) and 70.7(b), and the Title V permit programs of Iowa and Texas provide that no source subject to Title V may operate except in compliance with a Title V permit. *See* 567 IAC § 22.104; 30 TAC § 122.121.

87. Clean Air Act Section 503(c), 42 U.S.C. § 7661b(c), the implementing regulations at 40 C.F.R. § 70.5(a), and the Title V programs of Iowa and Texas provide that each owner and operator of a source subject to Title V permitting requirements must submit a permit application that include various information. *See* 42 U.S.C. § 7661b(b), and 40 C.F.R. §§ 70.5(a) and (c); 567 IAC § 22.105; 30 TAC 122.130-122.134 and 122.142-122.148.

88. Under 40 C.F.R. § 70.5(b) and the Title V permit programs of Iowa and Texas, any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application must, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or correct information. *See* 567 IAC § 22.105; 30 TAC 122.136.

89. All federally approved terms and conditions of a Title V permit are enforceable by the EPA. 42 U.S.C. § 7413(b); 40 C.F.R. § 70.6(b).

E. Enforcement of the Clean Air Act

90. Clean Air Act Sections 113(a)(1) and (a)(3), 42 U.S.C. §§ 7413(a)(1) and (a)(3), authorize the EPA to bring a civil action under Section 113(b), if the EPA finds that any person

has violated or is in violation of, *inter alia*, any requirement or prohibition of a SIP, the NSPS program, the NESHAP/MACT program, a PSD or Non-attainment NSR permit, the Title V permit program, or a Title V permit.

91. Clean Air Act Section 113(b), 42 U.S.C. § 7413(b), authorizes the EPA to initiate a judicial enforcement action for a permanent or temporary injunction to address Clean Air Act violations, as well as to seek civil penalties of up to \$37,500 per day for each violation that occurs between January 13, 2009 and November 2, 2015, and up to \$102,638 per day for each violation that occurs after November 2, 2015. *See* Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461 (note), as amended by 31 U.S.C. § 3701 (note); 40 C.F.R. § 19.4.

GENERAL ALLEGATIONS

92. A flare is a combustion device that uses an uncontrolled volume of ambient air to burn and dispose of gases generated by industrial manufacturing processes. Flares are used at chemical manufacturing processes like the Defendants' Facilities, petroleum refineries, and other types of industrial facilities. Flares constitute "air pollution control equipment" within the meaning of 40 C.F.R. §§ 60.11(d), 61.12(c), and 63.6(e)(1)(i).

93. Gas generated by facility operations that is directed to a flare for combustion is known as "vent gas."

94. Flares are classified by their position (ground-level or elevated) and by the method used to enhance mixing at the flare tip, *e.g.*, steam-assisted, air-assisted, or non-assisted.

95. Flares are designed, in part, to achieve high combustion efficiency of VOCs and HAPs.

96. "Steam-assisted" flares inject steam ("assist-steam") that is piped to the flare tip

to assist in combustion by promoting turbulence within a flare's flame.

97. The steam-to-vent gas ratio (generally referred to as "S:VG") is one operational parameter used to monitor flare operation and combustion efficiency. The NHV of the gases in the combustion zone of a flare ("Combustion Zone Gas") is another operational parameter that is an indicator of flare combustion efficiency.

98. As part of its design, a steam-assisted flare must be operated within a range of steam-to-vent gas ratios that, at one end of the range, avoids smoking through an insufficient S:VG, and at the other end of the range, avoids incomplete combustion due to excessive steaming caused by an excessive S:VG ratio. Both insufficient and excessive S:VG ratios reduce VOC and HAP combustion efficiency below a flare's designed efficiency.

99. Excessive levels of assist-steam will reduce combustion efficiency and may effectively quench or snuff the flame.

100. Good air pollution control practices to minimize emissions from flares include, *inter alia*, combusting essentially all molecules of hydrocarbons (which include VOCs) and HAPs in the vent gas sent to a flare. For assisted flares, good air pollution control practices to minimize emissions from flares requires, *inter alia*, injecting assist-steam at a rate that maximizes flame stability and flare combustion efficiency.

101. At all times relevant to this Complaint, subject to a reasonable opportunity for further investigation and discovery, each of the Defendants' Facilities has been a chemical process plant that has emitted or had the potential to emit at least 100 TPY of NO_x, VOCs, and/or CO.

102. At all times relevant to this Complaint, subject to a reasonable opportunity for

further investigation and discovery, each of the Defendants' Facilities has been a chemical process plant that has emitted or had the potential to emit at least 10 TPY or more of any individual HAP or 25 TPY or more of any combination of HAPs.

103. At all times relevant to this Complaint, subject to a reasonable opportunity for further investigation and discovery, each of the Defendants' Facilities has met the definition of:

- a. "Major emitting facility," as defined by Clean Air Act Section 169(1), 42 U.S.C. § 7479(1), and the implementing NSR regulations;
- b. "Major stationary source," as defined by 40 C.F.R. § 52.21(b)(1)(i)(a);
- c. "Stationary source" as defined by 42 U.S.C. § 7411(a)(3) and the implementing NSPS regulations;
- d. "Major source" of HAPs, as defined by 42 U.S.C. § 7412(a)(1) and the implementing NESHAP and MACT regulations; and
- e. "Major source" as defined by 42 U.S.C. § 7661(a)(2) and the implementing Clean Air Act Title V regulations.

104. At all times relevant to this Complaint, subject to a reasonable opportunity for further investigation and discovery, the Clinton Facility has met the definitions in the federally approved Iowa SIP that adopt, incorporate, and/or implement the programs and regulations listed in ¶ 103.

105. At all times relevant to this Complaint, subject to a reasonable opportunity for further investigation and discovery, the Channelview North, Channelview South, Corpus Christi, La Porte Equistar, and La Porte LyondellBasell Acetyls Facilities have met the definitions in the federally approved Texas SIP that adopt, incorporate, and/or implement the programs and regulations listed in ¶ 103.

106. At all times relevant to this Complaint, subject to a reasonable opportunity for

further investigation and discovery, the Clinton Facility has been subject to the Title V permitting requirements found in 40 C.F.R. Part 70 and the federally approved Iowa SIP.

107. At all times relevant to this Complaint, subject to a reasonable opportunity for further investigation and discovery, the Channelview North, Channelview South, Corpus Christi, La Porte Equistar, and La Porte LyondellBasell Acetyls Facilities have been subject to the Title V permitting requirements in 40 C.F.R. Part 70 and the federally approved Texas SIP.

A. NSPS general allegations

108. At all times relevant to this Complaint, one or more of the La Porte Equistar Flares have been subject to the requirements of NSPS Subpart DDD. 40 C.F.R. § 60.560-1(a)(1).

109. At all times relevant to this Complaint, Defendant Equistar Chemicals, LP has used one or more of the La Porte Equistar Flares as a control device to control continuous emission streams from affected facilities at the La Porte Equistar Facility that are subject to NSPS Subpart DDD. 40 C.F.R. §§ 60.560-1(a)(1)(i)(C) and (ii) and 60.563(c).

B. NESHAP general allegations

110. At all times relevant to this Complaint, the Clinton Flare has been subject to requirements of 40 C.F.R. Part 61, Subpart FF. 40 C.F.R. § 61.349(a)(2)(iii) and (d).

111. At all times relevant to this Complaint, the Clinton Facility has been a chemical manufacturing plant within the meaning of 40 C.F.R. Part 61, Subpart FF. 40 C.F.R. § 61.341. Chemical manufacturing plants as defined by 40 C.F.R. § 61.341, including the Clinton Facility, are affected sources within the meaning of 40 C.F.R. Part 61, Subpart FF. 40 C.F.R. § 61.340(a).

112. At all times relevant to this Complaint, Defendant Equistar Chemicals, LP owned

and operated one or more process units at the Clinton Facility that generated benzene-containing waste streams subject to 40 C.F.R. Part 61, Subpart FF. 40 C.F.R. § 61.342(c).

113. At all times relevant to this Complaint, Defendant Equistar Chemicals, LP has used the Clinton Flare as a control device for benzene-containing waste streams and process units subject to 40 C.F.R. Part 61, Subpart FF.

C. MACT general allegations

114. 40 C.F.R. Part 63, Subparts F, G, and H set forth a group of related Clean Air Act requirements for stationary sources involved in synthetic organic chemical manufacturing (“SOCMI Sources”). This set of regulations is sometimes referred to as the “Hazardous Organic NESHAP” (or “HON”) standards.

115. 40 C.F.R. Part 63 Subpart F provides general applicability criteria for SOCMI Sources, including whether certain SOCMI Sources are, in turn, subject to more specific standards in 40 C.F.R. Part 63 Subpart G (for process vents, storage vessels, transfer operations, and wastewater at SOCMI Sources) and Subpart H (for equipment leaks from SOCMI Sources). 40 C.F.R. § 63.110(a).

116. Owners and operators of SOCMI Sources that are subject to 40 C.F.R. Part 63, Subpart F are required to comply with applicable parts of 40 C.F.R. Part 63, Subpart G and H. 40 C.F.R. § 63.102(a).

117. The affected sources under the HON standards also include equipment required by or used as a method of compliance with 40 C.F.R. Part 63, Subparts F, G or H, including control devices such as flares. 40 C.F.R. § 63.100(e).

118. At all times relevant to this Complaint, one or more of the Channelview North

Flares, Channelview South Flares, Corpus Christi Flares, and La Porte LyondellBasell Acetyls Flares have been subject to the requirements of 40 C.F.R. Part 63, Subparts F, G and/or H.

119. At all times relevant to this Complaint, the Defendants have owned and operated “chemical manufacturing process units” within the meaning of 40 C.F.R. § 63.101(b) at the Channelview North Facility, Channelview South Facility, Corpus Christi Facility, and La Porte LyondellBasell Acetyls Facility.

120. At all times relevant to this Complaint, the Defendants have used one or more of the Channelview North Flares, Channelview South Flares, Corpus Christi Flares, and La Porte LyondellBasell Acetyls Flares as a control device for sources, process vents, and equipment subject to 40 C.F.R. Part 63, Subparts F, G and/or H.

121. At all times relevant to this Complaint, one or more of the Channelview North Flares, Corpus Christi Flares, Clinton Flare, and La Porte Equistar Flares has been subject to the requirements of 40 C.F.R. Part 63, Subpart YY.

122. At all times relevant to this Complaint, Defendant Equistar Chemicals, LP has owned and operated ethylene process vents from continuous ethylene production unit operations, within the meaning of 40 C.F.R. § 63.1103(e)(2) at the Channelview North Facility, Corpus Christi Facility, Clinton Facility, and La Porte Equistar Facility. These process vents are affected sources within the ethylene production category regulated by 40 C.F.R. Part 63, Subpart YY. 40 C.F.R. §§ 63.1100(a), Table 1 and 63.1103(e)(1)(i)(B).

123. At all times relevant to this Complaint, Defendant Equistar Chemicals, LP has owned and operated equipment that contains or contacts organic HAPs, within the meaning of 40 C.F.R. § 63.1101, and is subject to 40 C.F.R. Part 63, Subpart YY. This equipment includes

pumps, compressors, agitators, pressure relief devices, sampling collection systems, open-ended valves or lines, valves, connectors, and/or instrumentation systems in organic HAP service, as defined in 40 C.F.R. § 63.1103, for the ethylene production process unit(s) at the Channelview North Facility, Corpus Christi Facility, Clinton Facility, and La Porte Equistar Facility. This equipment is an affected source regulated by 40 C.F.R. Part 63, Subpart YY. 40 C.F.R. § 63.1103(e)(1)(i)(D).

124. At all times relevant to this Complaint, Defendant Equistar Chemical, LP has used one or more of the Channelview North Flares, Corpus Christi Flares, Clinton Flare, and La Porte Equistar Flares as a control device for process vents and equipment that are subject to 40 C.F.R. Part 63, Subpart YY. 40 C.F.R. § 63.1103(e), Table 7 (for process vents, cross-referencing to: 40 C.F.R. § 63.1034(b)(2)(iii) and, in turn, 40 C.F.R. § 63.987(a)).

D. Title V general allegations

125. At all times relevant to this Complaint, each of the Defendants' Facilities have been subject to a federally enforceable Title V operating permit requiring, *inter alia*, that the Channelview North Flares, Channelview South Flares, Corpus Christi Flares, Clinton Flare, La Porte Equistar Flares, and La Porte LyondellBasell Acetyls Flares comply with the requirements of 40 C.F.R. §§ 60.11(d), 61.12(c), and/or 63.6(e)(1)(i).

126. At all times relevant to this Complaint, each of the Defendants' Facilities have been subject to a federally enforceable Title V operating permit requiring, *inter alia*, that the Channelview North Flares, Channelview South Flares, Corpus Christi Flares, Clinton Flare, La Porte Equistar Flares, and La Porte LyondellBasell Acetyls Flares comply with the requirements of one or more of the following: 40 C.F.R. § 60.18 and/or 40 C.F.R. § 63.11.

FIRST CLAIM FOR RELIEF

(Violation of New Source Review Requirements)

127. Paragraphs 4-47 and 92-105 are re-alleged and incorporated by reference.

128. Subject to a reasonable opportunity for investigation and discovery, at various times from 2009 to the present, the Defendants “commenced construction” of one or more “major modification[s],” as defined in the Clean Air Act, the Iowa SIP, and the Texas SIP, at the Defendants’ Facilities.

129. Subject to a reasonable opportunity for investigation and discovery, the Defendants made physical changes and/or changes in the methods of operation to one or more of the flares identified in Paragraphs 14-19, and/or the closed vent systems (*a/k/a* flare “headers”) that transport gases from manufacturing process units to those flares. Subject to a reasonable opportunity for investigation and discovery, these modifications include changes to the flare stacks, flare tips, main flare headers, and/or process unit sub-headers.

130. Subject to a reasonable opportunity for investigation and discovery, one or more of these modifications resulted in a significant net emissions increase of VOCs, NO_x, and/or CO from one or more of the flares identified in Paragraphs 14-19.

131. The Defendants did not apply for, obtain, or operate pursuant to a PSD permit or a Non-attainment NSR permit, as applicable, for any of these modifications.

132. Subject to a reasonable opportunity for investigation and discovery, the Defendants failed to comply with various requirements of the PSD Regulations for VOCs, NO_x, and/or CO applicable to one or more of the Flares identified in Paragraphs 14-19, including, *inter alia*, failing to: i) comply with BACT on the flare system of one or more flares; ii) demonstrate

that the emissions increases from the modifications would not cause or contribute to violations of air quality standards; and iii) otherwise comply with the requirements of the PSD program, the Iowa SIP, and the Texas SIP.

133. Subject to a reasonable opportunity for investigation and discovery, the Defendants failed to comply with various requirements of the Non-attainment NSR regulations for VOCs applicable to one or more of the flares identified in Paragraphs 14 and 17-19. Subject to a reasonable opportunity for investigation and discovery, Defendants Equistar Chemicals, LP and LyondellBasell Acetyls, LLC failed to, *inter alia*, i) comply with LAER on the flare systems for the flares identified in Paragraphs 14 and 17-19; ii) secure emissions reductions (offsets) from existing sources in the same air quality region where the facility is located such that there would be a reasonable progress toward attainment of the applicable NAAQS; and iii) otherwise comply with the requirements of the Non-attainment NSR regulations and the corresponding implementing provisions of the Texas SIP.

134. Subject to a reasonable opportunity for investigation and discovery, since the time the Defendants commenced construction of the major modifications alleged herein, the Defendants have violated:

- a. 42 U.S.C. § 7475;
- b. 40 C.F.R. §§ 52.21(a)(2)(iii) and 52.21(j)-52.21(r)(5);
- c. 40 C.F.R. Part 51, Appendix S, Part IV, Conditions (i)(a) 1-4; and
- d. The federally enforceable corollary provisions of the Iowa and Texas SIPs to the extent that each adopts, incorporates, and/or implements any of the federal provisions cited in sub-paragraphs 134(a)-(c).

135. Unless restrained by an order of this Court, the violations alleged in this First Claim for Relief will continue.

136. As provided in Clean Air Act Section 113(b), 42 U.S.C. § 7413(b), the violations set forth above subject the Defendants to injunctive relief and civil penalties. *See also* 40 C.F.R. § 19.4.

SECOND CLAIM FOR RELIEF

(Violation of Title V Requirements for New Source Review Violations)

137. Paragraphs 4-47, 78-107, and 128-134 are re-alleged and incorporated by reference.

138. Subject to a reasonable opportunity for investigation and discovery, as alleged in the First Claim for Relief, the Defendants commenced construction of one or more major modifications at the Defendants' Facilities. These activities triggered requirements, *inter alia*, to: i) obtain PSD permits and/or Non-attainment NSR permits establishing emissions limitations that meet BACT or LAER, as applicable, for one or more of the flares identified in Paragraphs 14-19, ii) operate in compliance with BACT or LAER, as applicable, at one or more of these flares, and iii) otherwise comply with the requirements of the PSD or Non-attainment NSR programs, as applicable. Subject to a reasonable opportunity for investigation and discovery, the Defendants failed to comply with these requirements.

139. Subject to a reasonable opportunity for investigation and discovery, the Defendants failed to submit complete and timely applications for Title V operating permits for one or more of the flares identified in Paragraphs 14-19 that, *inter alia*, included enforceable BACT and LAER limits, identified all Applicable Requirements, accurately certified compliance with such requirements, and contained a compliance plan for all Applicable Requirements for which those flares were not in compliance.

140. In the alternative, the Defendants failed to supplement or correct previously

submitted incorrect or incomplete Title V permit applications in order to: i) seek enforceable BACT or LAER limits, as applicable, for one or more of the flares identified in Paragraphs 14-19, ii) identify all Applicable Requirements, iii) accurately certify compliance with such requirements, and iv) include a compliance plan for requirements for which these flares were not in compliance.

141. Subject to a reasonable opportunity for investigation and discovery, the Defendants have operated, and continue to operate, the Defendants' Facilities without having valid Title V operating permits. The Defendants' Title V operating permits failed to require, *inter alia*, compliance with BACT or LAER, as applicable, for one or more of the flares identified in Paragraphs 14-19, failed to identify all Applicable Requirements, and/or failed to contain a compliance plan for coming into compliance with BACT or LAER, as applicable, at these flares.

142. Subject to a reasonable opportunity for investigation and discovery, the Defendants' acts and/or omissions constitute violations of:

- a. 42 U.S.C. §§ 7661a(a), 7661b(c), and 7661c(a);
- b. 40 C.F.R. §§ 70.1(b), 70.5(a)-(c), 70.6(a) and (c), and 70.7(b); and
- c. The federally enforceable corollary provisions of the Iowa and Texas Title V programs that adopt, incorporate, and/or implement any of the federal provisions cited in sub-paragraphs 142(a) and (b).

143. Unless restrained by an order of this Court, the violations alleged in this Second Claim for Relief will continue.

144. As provided in Clean Air Act Section 113(b), 42 U.S.C. § 7413(b), the violations set forth above subject the Defendants to injunctive relief and civil penalties. *See also* 40 C.F.R. § 19.4.

THIRD CLAIM FOR RELIEF

**Violations of NSPS, NESHAP, and MACT Requirements;
Title V Permits that Incorporate these Requirements**

(Failure to Monitor to Ensure Flares are
Operated and Maintained in Conformance with their Design)

145. Paragraphs 4-19, and 48-126 are re-alleged and incorporated by reference.

146. Since at least 2009, the Channelview North Flares, Channelview South Flares, Clinton Flare, Corpus Christi Flares, La Porte Equistar Flares, and La Porte LyondellBasell Acetyls Flares have been subject to one or more of the following Clean Air Act regulations: 40 C.F.R. Part 60, Subpart DDD; 40 C.F.R. Part 61, Subpart FF; and/or 40 C.F.R. Part 63, Subparts F, G, H, SS, YY, and/or FFFF.

147. Since at least 2009, the Channelview North Flares, Channelview South Flares, Clinton Flare, Corpus Christi Flares, La Porte Equistar Flares, and La Porte LyondellBasell Acetyls Flares have been subject to a federally enforceable Title V permit that requires compliance with one or more of the following Clean Air Act regulations: 40 C.F.R. Part 60, Subpart DDD; 40 C.F.R. Part 61, Subpart FF; and/or 40 C.F.R. Part 63, Subparts F, G, H, SS, YY, and/or FFFF.

148. Since at least 2009, the Channelview North Flares, Channelview South Flares, Clinton Flare, Corpus Christi Flares, La Porte Equistar Flares, and La Porte LyondellBasell Acetyls Flares have been subject to the requirements of 40 C.F.R. §§ 60.18(d) and/or 63.11(b)(1).

149. At various times since the first calendar quarter of 2009, the Defendants have failed to perform the following at one or more of the Channelview North Flares, Channelview

South Flares, Clinton Flare, Corpus Christi Flares, La Porte Equistar Flares, and La Porte LyondellBasell Acetyls Flares: i) install and/or properly operate vent gas flow monitors and assist-steam flow monitors; ii) calculate steam-to-vent gas ratios; or iii) have sufficient controls on steam flow to maintain steam-to-vent gas within design parameters.

150. The acts and omissions identified in this Claim for Relief constitute violations of:

- a. Clean Air Act Sections 111(e) and 112, 42 U.S.C. §§ 7411(e) and 7412;
- b. 40 C.F.R. §§ 60.18(d) and 63.11(b)(1);
- c. The provisions of 40 C.F.R. Part 60, Subparts DDD; 40 C.F.R. Part 61, Subpart FF; and/or 40 C.F.R. Part 63, Subparts F, G, H, SS, YY, and/or FFFF that require flares to comply with the requirements identified in sub-paragraphs 150(a) and (b);
- d. The federally enforceable corollary provisions of the Iowa SIP and Texas SIP that adopt, incorporate, and/or implement the federal provisions cited in sub-paragraphs 150(a)-(c);
- e. The terms of the Clean Air Act Title V permits for the Defendants' Facilities that require compliance with the requirements identified in sub-paragraphs 150(a)-(d); and
- f. The prohibition against violating a Clean Air Act Title V permit found at 42 U.S.C. § 7661a(a) and 40 C.F.R. § 70.7(b).

151. Unless restrained by an order of this Court, the violations alleged in this Third Claim for Relief will continue.

152. As provided in Clean Air Act Section 113(b), 42 U.S.C. §§ 7411(b), the violations set forth above subject the Defendants to injunctive relief and civil penalties. *See also* 40 C.F.R. § 19.4.

FOURTH CLAIM FOR RELIEF

Violations of NSPS, NESHAP, and MACT Requirements;
Title V Permits that Incorporate these Requirements

(Failure to Operate Flares Consistent with Good Air Pollution Control Practices)

153. Paragraphs 4-19, 48-125, 146-147, and 149 are re-alleged and incorporated by reference.

154. Since at least 2009, the Channelview North Flares, Channelview South Flares, Clinton Flare, Corpus Christi Flares, La Porte Equistar Flares, and La Porte LyondellBasell Acetyls Flares have been subject to the requirements of 40 C.F.R. §§ 60.11(d), 61.12(c), and/or 63.6(e)(1)(i).

155. At various times since at least the first calendar quarter of 2009, the Defendants operated one or more of the Channelview North Flares, Channelview South Flares, Clinton Flare, Corpus Christi Flares, La Porte Equistar Flares, and La Porte LyondellBasell Acetyls Flares without sufficient NHV in the combustion zone gas.

156. Operating the flares at an insufficient NHV reduced combustion efficiency and resulted in excessive emissions to the atmosphere from the flares of un-combusted and partially-combusted HAPs and hydrocarbons (including VOCs), CO, and other pollutants.

157. At various times since at least the first quarter of 2009, the Defendants operated one or more of the Channelview North Flares, Channelview South Flares, Clinton Flare, Corpus Christi Flares, La Porte Equistar Flares, and La Porte LyondellBasell Acetyls Flares with excessively high S:VG ratios.

158. Operating the flares with excessively high S:VG ratios increased the likelihood of flame quenching or snuffing, reduced flare combustion efficiency, and resulted in excessive

emissions from the flares to the atmosphere of un-combusted and partially-combusted HAPs and hydrocarbons (including VOCs), and other pollutants.

159. Since at least the first calendar quarter of 2009, the Defendants failed to install, or failed to use, sufficient equipment and/or monitoring systems at one or more of the Channelview North Flares, Channelview South Flares, Corpus Christi Flares, Clinton Flare, La Porte Equistar Flares, and La Porte LyondellBasell Acetyls Flares to enable the Defendants to monitor, measure, and/or calculate the NHV in the combustion zone gas of these flares. Moreover, the Defendants failed to add supplemental gas quickly enough or in sufficient amounts to maintain sufficient NHV in the combustion zone gas of these flares.

160. Since at least the first calendar quarter of 2009, at one or more of the Channelview North Flares, Channelview South Flares, Clinton Flare, Corpus Christi Flares, La Porte Equistar Flares, and La Porte LyondellBasell Acetyls Flares, the Defendants failed to:

- i) install or use adequate monitoring to measure the flow of vent gas and/or assist-steam to the flares, ii) calculate and monitor the ratio of the flows of vent gas to assist-steam, and/or iii) install sufficient controls on, or sufficiently control the flow of, assist-steam to enable increasing or decreasing it in order to optimize the S:VG, maintain a sufficient NHV of the combustion zone gas, maximize flame stability, and maintain a high VOC combustion efficiency.

161. The Defendants violated good air pollution control practices by, *inter alia*: i) operating the flares with an insufficient NHV in the combustion zone gas, ii) failing to monitor the NHV in the combustion zone gas of the flares, iii) operating the flares with excessively high S:VG ratios, iv) failing to install monitors sufficient to measure and calculate S:VG ratios at the flares, and/or v) operating the flares without sufficient controls to optimize the assist-steam injection rate.

162. The Defendants' acts and omissions constitute violations of:

- a. Clean Air Act Sections 111(e) and 112, 42 U.S.C. §§ 7411(e) and 7412;
- b. 40 C.F.R. §§ 60.11(d), 61.12(c), and 63.6(e)(1)(i);
- c. The provisions of 40 C.F.R. Part 60, Subparts DDD; 40 C.F.R. Part 61, Subpart FF; and/or 40 CFR Part 63, Subparts F, G, H, SS, YY, and/or FFFF that require flares to comply with the requirements identified in sub-paragraphs 162(a) and (b);
- d. The federally enforceable corollary provisions of the Iowa SIP and Texas SIP that adopt, incorporate, and/or implement the federal provisions cited in sub-paragraphs 162(a)-(c);
- e. The terms of the Clean Air Act Title V permits for the Defendants' Facilities that require compliance with the requirements identified in sub-paragraphs 162(a)-(d); and
- f. The prohibition against violating a Clean Air Act Title V permit found at 42 U.S.C. § 7661a(a) and 40 C.F.R. § 70.7(b).

163. Unless restrained by an order of this Court, the violations alleged in this Fourth Claim for Relief will continue.

164. As provided in Clean Air Act Section 113(b), 42 U.S.C. §§ 7411(b), the violations set forth above subject the Defendants to injunctive relief and civil penalties. *See also* 40 C.F.R. § 19.4.

FIFTH CLAIM FOR RELIEF

Violations of NSPS, NESHAP, and MACT Requirements;
Title V Permits that Incorporate these Requirements

(Combusting Gas in Flares with a NHV of Less than 300 BTU/scf)

165. Paragraphs 4-19, 48-126, 146-147, 149, and 155-161 are re-alleged and incorporated by reference.

166. Since at least 2009, the Channelview North Flares, Channelview South Flares,

Clinton Flare, Corpus Christi Flares, La Porte Equistar Flares, and La Porte LyondellBasell Acetyls Flares have been subject to the requirements of 40 C.F.R. § 60.18(c)(3) and/or 63.11(b)(6).

167. At various times since the first calendar quarter of 2009, the Defendants combusted gas that had a NHV of less than 300 BTU/scf in one of more of the Channelview North Flares, Channelview South Flares, Corpus Christi Flares, Clinton Flare, La Porte Equistar Flares, and La Porte LyondellBasell Acetyls Flares.

168. The acts and omissions identified in this Fifth Claim constitute violations of:

- a. Clean Air Act Sections 111(e) and 112, 42 U.S.C. §§ 7411(e) and 7412;
- b. 40 C.F.R. §§ 60.11(c)(3)(ii) and 63.11(b)(6)(ii);
- c. The provisions of 40 C.F.R. Part 60, Subparts DDD; 40 C.F.R. Part 61, Subpart FF; and/or 40 CFR Part 63, Subparts F, G, H, SS, YY, and/or FFFF that require flares to comply with the requirements identified in sub-paragraphs 168(a) and (b);
- d. The federally enforceable corollary provisions of the Iowa SIP and Texas SIP that adopt, incorporate, and/or implement the federal provisions cited in sub-paragraphs 168(a)-(c);
- e. The terms of the Clean Air Act Title V permits for the Defendants' Facilities that require compliance with the requirements identified in sub-paragraphs 168(a)-(d); and
- f. The prohibition against violating a Clean Air Act Title V permit found at 42 U.S.C. § 7661a(a) and 40 C.F.R. § 70.7(b).

169. Unless restrained by an order of this Court, the violations alleged in this Fifth Claim for Relief will continue.

170. As provided in Clean Air Act Section 113(b), 42 U.S.C. §§ 7411(b), the violations set forth above subject the Defendants to injunctive relief and civil penalties. *See also* 40 C.F.R. § 19.4.

PRAYER FOR RELIEF


WHEREFORE, Plaintiff, the United States, respectfully requests that this Court:

1. Enter judgment in favor of the United States against the Defendants, Equistar Chemicals, LP, LyondellBasell Acetyls, LLC, and Lyondell Chemical Company;
2. Order the Defendants to take all actions necessary to operate the flares at the Defendants' Facilities in compliance with the Clean Air Act requirements that this Complaint alleges the Defendants violated, including the applicable requirements of the Iowa and Texas SIPs;
3. Permanently enjoin the Defendants from operating the flares at the Defendants' Facilities except in accordance with the Clean Air Act and applicable regulatory requirements, including the Iowa and Texas SIPs;
4. Order the Defendants to take other appropriate actions to remedy, mitigate, and offset the harm caused by the alleged Clean Air Act violations, by among other things, requiring the Defendants to address or offset their unlawful emissions;
5. Assess civil penalties of up to \$37,500 per day for each violation occurring between January 13, 2009 and November 2, 2015; and up to \$102,638 per day for each violation occurring after November 2, 2015;
6. Award the Plaintiff its costs of this action; and
7. Grant such other and further relief as the Court deems just and proper.

Respectfully submitted,

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