

**UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS**

UNITED STATES OF AMERICA,)
)
Plaintiff,)
and the States of Illinois, Iowa, and)
Louisiana, Plaintiff-Interveners,)
)
)
)
)
v.)
)
EQUISTAR CHEMICALS, LP)
)
)
)
)
)
Defendant.)

Civil No.

CONSENT DECREE

TABLE OF CONTENTS

I. JURISDICTION AND VENUE3

II. APPLICABILITY AND BINDING EFFECT4

III. FACTUAL BACKGROUND.....6

IV. DEFINITIONS.....7

V. CLEAN AIR ACT COMPLIANCE PROGRAM.....9

 A. Protection Of Stratospheric Ozone (“CFC”) – All Covered Facilities.9

 B. Benzene Waste NESHAP – All Covered Facilities.....15

 C. Leak Detection And Repair – All Covered Facilities35

 D. New Source Performance Standards, 40 C.F.R. Part 60, Subpart NNN –
 Morris, Illinois facility.....47

 E. Cooling System Leaks – Prevention, Detection, And Repair – Morris, Illinois
 Facility.48

 F. Flaring – All Covered Facilities.....49

 G. Additional Flare Minimization Projects.....58

VI. COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION
AND LIABILITY ACT (“CERCLA”) AND EMERGENCY PLANNING AND
EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT
 (“EPCRA”)62

 A. Revisions to Spill/Release Reporting Policy.62

VII. CLEAN WATER ACT – ALL COVERED FACILITIES65

 A. Incident Investigation and Corrective Action.....65

 B. Reviews Of Operations Contributing Wastewater To Effluent And Treatment
 Units.....66

 C. Sampling and Analysis Audits at All Covered Facilities.....68

 D. Use of NELAP Accredited Laboratories.69

 E. SPCC Compliance Verification.70

F.	Channelview Wastewater Project	72
VIII.	RESOURCE CONSERVATION AND RECOVERY ACT (“RCRA”)	74
A.	Hazardous Waste Identification.....	74
B.	Surface Impoundments.	75
C.	Third Party Audits.....	76
D.	Potential Offsite Releases.	77
E.	Additional Compliance Program Requirements Applicable To Channelview.	79
IX.	ENVIRONMENTAL MANAGEMENT SYSTEM (“EMS”).....	80
A.	EMS Implementation.....	80
B.	EMS Auditing Provisions	81
X.	GENERAL RECORDKEEPING AND REPORTING REQUIREMENTS.....	85
XI.	CIVIL PENALTY.....	88
XII.	SUPPLEMENTAL ENVIRONMENTAL PROJECTS.....	89
XIII.	STIPULATED PENALTIES	98
XIV.	RIGHT OF ENTRY	104
XV.	FORCE MAJEURE	104
XVI.	DISPUTE RESOLUTION	107
XVII.	EFFECT OF SETTLEMENT	110
XVIII.	GENERAL PROVISIONS.....	120
XIX.	TERMINATION.....	126

TABLE OF APPENDICES

APPENDIX 1	FLARING DEVICES
APPENDIX 2	EMS STANDARD
APPENDIX 3	NOTICE AND PAYMENT PROVISIONS
APPENDIX 4	TABLE OF ACTUAL OR ALLEGED PAST VIOLATIONS OF THE CWA, 33 U.S.C. § 1251 <i>ET SEQ.</i> , BASED ON ALLEGED PAST UNPERMITTED DISCHARGES OF POLLUTANTS OR DISCHARGES OF POLLUTANTS IN EXCESS OF ALLOWABLE PERMIT LIMITS TO NAVIGABLE WATERS OF THE UNITED STATES

WHEREAS, Defendant, Equistar Chemicals, LP (“Equistar”), currently owns and/or operates seven olefins manufacturing plants in Illinois, Iowa, Louisiana and Texas (“Covered Facilities”).

WHEREAS, Plaintiff, the United States of America, on behalf of the United States Environmental Protection Agency (herein, “EPA”), has, simultaneously with the lodging of this Consent Decree, filed a Complaint alleging that Defendant, Equistar, is in violation of certain requirements of the following statutes and state and federal regulations promulgated thereunder at the Covered Facilities: the Clean Air Act (“CAA”), 42 U.S.C. §§ 7401-7671q; the Resource Conservation and Recovery Act (“RCRA”), 42 U.S.C. §§ 6901-6992k; the Clean Water Act (“CWA”), 33 U.S.C. §§1251-1387; the Emergency Planning and Community Right-to-Know Act (“EPCRA”), 42 U.S.C. §§ 11001-11050; and the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”), 42 U.S.C. §§ 9601-9675.

WHEREAS, the States of Illinois, Iowa, and Louisiana (“Plaintiff-Interveners”) have filed Complaints-in-Intervention, joining in the claims alleged by the United States.

WHEREAS, Equistar denies that it has violated and/or continues to violate the foregoing statutory and regulatory provisions and maintains that it has been and remains in compliance with all applicable statutes, regulations and permits and is not liable for civil penalties and injunctive relief as alleged in the Complaint and Complaint(s)-in-Intervention.

WHEREAS, Equistar has worked cooperatively with Plaintiff and Plaintiff-Interveners (collectively, “Plaintiffs”) to structure a comprehensive settlement that will result in improved environmental conditions at and near the Covered Facilities.

WHEREAS, under this Consent Decree, Equistar will undertake injunctive relief that will improve operations and prevent future violations of environmental laws at the Covered Facilities and will result in improvements to air, water and soil quality in the areas where the Covered Facilities are located.

WHEREAS, the Parties agree that: (i) settlement of the matters set forth in the Complaint and Complaint(s)-in-Intervention (filed herewith) and in Section XVII (Effect of Settlement) of this Consent Decree is in the best interest of the Parties; and (ii) entry of this Consent Decree without litigation is the most appropriate means of resolving these matters.

WHEREAS, the Parties recognize, and the Court, by entering the Consent Decree finds, that the Consent Decree has been negotiated at arms length and in good faith and that the Consent Decree is fair, reasonable and in the public interest.

WHEREAS, Equistar consents to the simultaneous filing of the Complaint and Complaint(s)-in-Intervention and lodging of this Consent Decree.

WHEREAS, Equistar has waived any applicable federal or state requirements of statutory notice of the alleged violations.

NOW, THEREFORE, with respect to the matters set forth in the Complaint, Complaint(s)-in-Intervention, and in Section XVII (Effect of Settlement) of the Consent Decree,

and before the taking of any testimony, without adjudication of any issue of fact or law, and upon the consent and agreement of the Parties to the Consent Decree, it is hereby ORDERED AND DECREED as follows:

I. JURISDICTION AND VENUE

1. This Court has jurisdiction over the subject matter of this action and over the Parties pursuant to 28 U.S.C. §§ 1331, 1345 and 1355. In addition, this Court has jurisdiction over the subject matter of this action pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b); Sections 301, 309 and 402 of the CWA, 33 U.S.C. §§ 1311, 1319 and 1342; Section 3008 of RCRA, 42 U.S.C. § 6928; Sections 304 and 313 of EPCRA, 42 U.S.C. §§ 11004 and 11023; and Sections 103 and 113 of CERCLA, 42 U.S.C. §§ 9603 and 9613. The Complaint and Complaint(s)-in-Intervention state claims upon which relief may be granted for injunctive relief and civil penalties against Equistar under the CAA, CWA, RCRA, EPCRA and CERCLA. Authority to bring this suit is vested in the United States Department of Justice by 28 U.S.C. §§ 516 and 519.

2. Venue is proper in the Northern District of Illinois pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b); CWA Section 309(b), 33 U.S.C. § 1319(b); RCRA Section 3008(a), 42 U.S.C. § 6928(a); EPCRA Section 325(b)(3), 42 U.S.C. § 11045(b)(3); CERCLA Section 113(b), 42 U.S.C. § 9613(b); and 28 U.S.C. §§ 1391(b) and (c) and 1395(a).

3. For purposes of this Consent Decree, Equistar consents to the personal jurisdiction of this Court, waives any objections to venue in this District, and does not object to the participation of Plaintiff-Intervenors as parties or intervenors in this action.

4. Notice of the commencement of this action has been given to the State of Illinois, the State of Iowa, the State of Louisiana and the State of Texas in accordance with Section 113(a) of the CAA, 42 U.S.C. § 7413(a) and Section 3008(a)(2) of the RCRA, 42 U.S.C. §6928(a)(2).

II. APPLICABILITY AND BINDING EFFECT

5. The provisions of this Consent Decree shall apply to the Covered Facilities, except to the extent provided in Paragraph 6 below. The provisions of this Consent Decree shall be binding upon the Plaintiffs and Equistar (acting through its officers, employees, agents, successors and assigns).

6. The Lake Charles Facility is not currently in operation and shall not be subject to the applicable requirements of this Consent Decree unless and until all or a portion of the Lake Charles Facility resumes olefins production. If Equistar (or its successor or assign) intends to resume olefins production at the Lake Charles Facility during the time period that this Consent Decree is in effect, it shall notify EPA and the State of Louisiana at least ninety (90) days prior to resumption of olefins production. Unless otherwise agreed upon by the Parties, the Lake Charles Facility shall comply with the applicable requirements of this Consent Decree immediately upon the resumption of olefins productions, except that the Parties shall negotiate a schedule pursuant to which the Lake Charles Facility shall comply with any applicable requirements that can be satisfied only after resumption of operations. If any modifications to this Consent Decree are required to implement Consent Decree requirements at the Lake Charles Facility, the Parties shall seek to modify the Consent Decree in accordance with Paragraph 172 below (Consent Decree Modifications).

7. Plaintiffs and Equistar consent to the entry of the Consent Decree and agree not to contest the validity of the Consent Decree in any subsequent proceeding to implement or enforce its terms.

8. In the event Equistar proposes to sell or transfer all or part of any Covered Facility, Equistar shall advise the proposed purchaser or successor-in-interest in writing of the existence of this Consent Decree and provide such purchaser or successor-in-interest with a copy of the Consent Decree, and shall send a copy of such written notification by certified mail, return receipt requested, to EPA and the State and/or regional environmental protection authority where the facility is located at least thirty (30) days prior to such sale or transfer. This provision does not relieve Equistar from having to comply with any applicable State or local regulatory requirement regarding notice and transfer of facility permits.

9. Except as set forth in this Paragraph, no sale or transfer of ownership or operation shall relieve Equistar of its obligations under this Consent Decree. In the event that Equistar sells or transfers any of its rights, title or interest in any portion of the real property or operations subject to this Consent Decree prior to termination of the Consent Decree, the conveyance shall not release Equistar from any obligation imposed by this Consent Decree for a Covered Facility (or relevant portion thereof) unless the party to whom the rights, title or interest has been transferred agrees, pursuant to a written agreement enforceable by the United States and any applicable Plaintiff-Intervener as third-party beneficiaries of such agreement, to fulfill the obligations of this Consent Decree with respect to such Covered Facility (or relevant portion thereof).

III. FACTUAL BACKGROUND

10. Equistar, a Delaware limited partnership and a wholly-owned subsidiary of Lyondell Chemical Company, is one of the largest producers of ethylene, propylene, and polyethylene in the world, with 16 manufacturing facilities in the United States.

11. Equistar's headquarters is located in Houston, Texas.

12. From October 29 through November 7, and November 18 through 21, 2002, the National Enforcement Investigations Center ("NEIC") within EPA conducted an inspection of Equistar's Morris, Illinois Facility to determine compliance with the CAA, CWA, RCRA, CERCLA, and EPCRA, as well as federal and state implementing regulations. NEIC conducted a similar inspection of Equistar's Channelview, Texas Facility from February 3 through 14, and July 14 through 17, 2003. As a result of the inspections, NEIC and the EPA Regional Offices in Chicago and Dallas identified potential violations under the applicable environmental statutes and implementing regulations.

13. In February 2004, EPA representatives met with Equistar to discuss the potential violations at the Morris and Channelview Facilities. During this meeting, EPA invited Equistar to participate in settlement negotiations to resolve not only the potential violations identified at these two facilities, but to take affirmative steps to improve environmental compliance across the board at all Covered Facilities.

14. In March 2004, Equistar agreed to engage in settlement negotiations regarding the Covered Facilities with EPA and Plaintiff-Intervenors.

15. **General Process Description.** The Covered Facilities produce a range of chemical products from hydrogen to raw pyrolysis gasoline by thermally cracking hydrocarbon feedstocks in high temperature furnaces at the front end of the process. Distillation and other processing equipment separate and refine the mixture into individual products. The primary products are ethylene and propylene, also known as “olefins.”

16. **Pollutants Subject to Regulation.** The Covered Facilities emit or release certain pollutants that are subject to regulation under the CAA, CWA, RCRA, CERCLA and/or EPCRA. These include, but are not limited to, carbon monoxide (“CO”), nitrogen oxides (“NOx”), volatile organic compounds (“VOCs”), particulate matter (“PM”), benzene, toluene, 1,3-butadiene, styrene, ethylbenzene, xylene, naphthalene, total organic carbon (“TOC”), ignitable waste, corrosive waste, and benzene characteristic wastes.

IV. DEFINITIONS

17. Unless otherwise defined herein, terms used in this Consent Decree shall have the meaning given to those terms in the applicable statutes, and the federal and state regulations which implement them.

a. “Area(s) of Concern,” for purposes of Section IX of this Consent Decree, shall mean any area identified during the course of an Environmental Management System (“EMS”) audit that, though it does not constitute nonconformance, in the auditor’s judgment, merits further review or evaluation by Equistar.

b. “Audit Team Leader” shall mean the person assigned the responsibility of coordinating and leading an EMS Audit.

c. “Covered Facilities” shall mean the following areas of the plants owned/leased and operated by Equistar or affiliates:

- (1) Morris, Illinois, 8805 N. Tabler Road, Morris, Illinois 60450;
- (2) Clinton, Iowa, 3400 Anamosa Road, Clinton, Iowa 52732;
- (3) Lake Charles, Louisiana, 4300 Highway 108 South, Sulphur, Louisiana 70663;
- (4) Channelview, Texas, 8280 Sheldon Road, Channelview, Texas 77530 (excluding the Channelview South plant);
- (5) Chocolate Bayou, Texas, twelve (12) miles south of Alvin on FM 2917, Alvin, Texas 77512 (excluding the CBO plant located three (3) miles south of the main Chocolate Bayou plant);
- (6) Corpus Christi, Texas, 1501 McKinzie Road, Corpus Christi, Texas 78409 and 1748 Marvin Berry Road, Corpus Christi, Texas 78410 (including barge dock facility in zip code 78409); and
- (7) La Porte, Texas, 1515 Miller Cut-Off Road, La Porte, Texas 77571.

d. “EMS Audit Finding(s)” shall mean a written summary of all instances of non-conformance with the comprehensive EMS developed pursuant to Subsection IX.A. of this Consent Decree identified during EMS Audits of the Covered Facilities.

e. “Environmental Management System (EMS)” shall mean the comprehensive environmental management system required by and described in Section IX below.

f. “EMS Audit Team(s)” shall mean the team(s) of individual auditors (including the Audit Team Leader) selected by Equistar to conduct EMS audits at the Covered Facilities.

g. “EMS Standard” shall mean the standard set out in Appendix 2.

h. “Entry Date” shall mean the date the Consent Decree is entered by the United States District Court for the Northern District of Illinois.

i. “Flaring Devices” shall mean those devices listed in Appendix 1.

j. “Independent Auditor” shall mean an individual who (1) is familiar with the legal requirements (including any applicable Consent Decree requirements) to be reviewed in the audit and (2) does not work at the Covered Facility subject to the audit.

k. “Root Cause” shall mean the primary or most basic cause of any incident as determined through a process of investigation.

V. CLEAN AIR ACT COMPLIANCE PROGRAM

A. PROTECTION OF STRATOSPHERIC OZONE (“CFC”) – ALL COVERED FACILITIES.

18. **Ozone Depleting Substances (“ODS”) – Applicability and Compliance.** All Covered Facilities shall comply with the requirements of 40 C.F.R. Part 82 (including leak repair

and verification requirements and recordkeeping and reporting requirements) governing the use of ODS, to the extent applicable, by August 1, 2007.

19. **ODS Audits.** Equistar shall conduct a facility-wide ODS Audit at each Covered Facility as set forth in this Paragraph to ensure such facility's compliance with all applicable ODS requirements set out in 40 C.F.R. Part 82. Each ODS Audit shall include:

- a. a review of the records and all relevant information generated since August 1, 2005;
- b. verification of the Covered Facility's inventory of industrial process refrigeration equipment, as defined in 40 C.F.R. § 82.152;
- c. evaluation of the Covered Facility's leak repair and verification program (including verification that repairs were made and technicians were certified);
- d. identification of leaking industrial process refrigeration equipment; and
- e. review of the Covered Facility's recordkeeping and reporting program.

20. **Third Party Audits and Schedule.**

a. Equistar shall retain a third-party auditor to complete each ODS Audit. ODS Audits shall be completed at each Covered Facility by no later than July 1, 2008.

b. **ODS Audit Reports.** As part of the first Annual Report (Section X) due after the completion of each ODS Audit, Equistar shall submit the findings from each ODS Audit Report to EPA. The Annual Report shall include the results of the ODS Audit and disclose all

areas of identified non-compliance. The Annual Report also shall include a schedule for implementing actions to correct any identified non-compliance as soon as practicable and to prevent, to the extent practicable, a recurrence of the cause of such non-compliance.

21. **Replacement Or Retrofit Of Chronically Leaking Refrigeration Appliances.**

a. After Equistar determines that any industrial process refrigeration equipment is chronically leaking, Equistar shall retrofit that equipment to non-ODS refrigerants or shall retire that equipment from service as soon as practicable. In the event that a process shutdown is needed to retrofit or replace chronically leaking equipment, Equistar shall retrofit or replace that chronically leaking equipment within one year.

b. For the purposes of this Subsection V.A. of the Consent Decree, the term “chronically leaking” shall mean any industrial process refrigeration equipment, as defined in 40 C.F.R. § 82.152, that uses an ODS refrigerant and (1) is leaking such that the loss of refrigerant will exceed 35% of the total charge during a consecutive 12-month period, and (2) there have been more than three individual leak rate exceedances in any consecutive 12-month period after August 1, 2007.

c. If Equistar retires chronically leaking industrial process refrigeration equipment, (1) it shall not use the retired equipment anywhere else at a Covered Facility or at any other facility; and (2) all ODS-containing refrigerant from the retired equipment shall be sent for destruction in accordance with 40 C.F.R. § 82.104(h), or reclaimed (as defined in 40 C.F.R. § 82.152), by a certified reclaimer (as defined in 40 C.F.R. § 82.164).

22. **Refrigerant Management Compliance Plan.** By no later than January 1, 2008, Equistar shall develop and implement a Refrigerant Management Compliance Plan for the Covered Facilities. The Refrigerant Management Compliance Plan shall contain the following elements:

a. **Refrigerant Manager.** Equistar shall designate a Refrigerant Manager at each Covered Facility. This Refrigerant Manager shall oversee the development and implementation of the Refrigerant Management Compliance Plan.

b. **Equipment Inventory.** Each Refrigerant Manager at a Covered Facility shall maintain an inventory of all ODS-containing industrial process refrigeration equipment that is in use or is available for use at that facility. The inventory shall include the following information:

(1) the location of each piece of industrial process refrigeration equipment;

(2) the specific identification number or other designator for such equipment (*e.g.*, serial number);

(3) the type of ODS refrigerant in each piece of equipment; and

(4) the quantity of ODS refrigerant each piece of equipment is estimated to hold when at full charge, as defined by 40 C.F.R. § 82.152.

c. **Maintenance of Service Records.** The Refrigerant Manager shall ensure that records are prepared and maintained in either electronic or hard copy format for services

performed on ODS-containing industrial process refrigeration equipment that Equistar identifies or suspects (as evidenced by the need to add refrigerant) is leaking. Service records shall include the following information:

- (1) identification of the equipment serviced;
- (2) identification of the specific leak location(s) and component that is leaking (*e.g.*, gaskets, seals, joints, valves, tubing, coils or condensers);
- (3) amount and type of refrigerant added to the equipment, if any;
- (4) leak rate calculations for any identified leaks (as determined in accordance with 40 C.F.R. § 82.152 (definition of “leak rate”));
- (5) type of repair, if any, performed;
- (6) initial repair verification (at time of repair) and type of verification test used; and
- (7) for equipment using a Class I or Class II ODS, follow-up repair verification (no sooner than 14 days after the initial repair) and type of verification test used.

d. Certifications. The Refrigerant Manager for each Covered Facility shall keep on file in either electronic or hard copy format a copy of the “EPA Section 608 Certification” for all employees or contractor technicians working on ODS-containing industrial process refrigeration equipment at the Covered Facility. Only those employees and contractor

technicians with the proper type of EPA Certification (“Certified Technicians”) are authorized to service ODS-containing industrial process refrigeration equipment.

e. Operating and Maintenance Practices. At each Covered Facility, the following Best Management Practices shall apply:

(1) Except as authorized by 40 C.F.R. § 82.154(a)(2), no ODS-containing refrigerant shall knowingly be vented or released to the atmosphere.

(2) ODS-containing refrigerant shall be purchased, sold, recovered, reclaimed, reused, transferred and/or destroyed in accordance with 40 C.F.R. Part 82.

(3) ODS-containing refrigerant shall be managed in accordance with 40 C.F.R. Part 82.

(4) If a leak of an ODS-refrigerant from any industrial process refrigeration equipment at a Covered Facility is identified or suspected (as evidenced by the need to add refrigerant), the leak rate shall be calculated in accordance with 40 C.F.R. § 82.152 (definition of “leak rate”), repairs shall be made, and verified according to the paragraph below.

f. Leak Repairs and Follow-Up Verification. All leak repairs, verifications and notifications to EPA regarding leak repairs and verifications for ODS-containing industrial process refrigeration equipment shall be made as required by 40 C.F.R. § 82.156.

g. Reporting.

(1) As part of the Annual Reports required by Section X, Equistar shall provide EPA with a list of units that have been replaced or retrofitted pursuant to the requirements of Paragraph 21 (Replacement or Retrofit of Chronically Leaking Refrigeration Appliances).

(2) In the event that EPA notification is required under 40 C.F.R. § 82.156, notification shall be submitted to EPA in accordance with Paragraph 170 (Notice).

B. BENZENE WASTE NESHP – ALL COVERED FACILITIES.

23. In addition to continuing to comply with all applicable requirements of 40 C.F.R. Part 61, Subpart FF (“Benzene Waste NESHP,” “BWON,” or “Subpart FF”), Equistar agrees to undertake the measures set forth in this Subsection V.B. to ensure continuing compliance with Subpart FF and to minimize or eliminate fugitive benzene waste emissions at the Covered Facilities.

24. **Subpart FF Compliance Status.** As of August 1, 2007, Channelview, Clinton, Chocolate Bayou, and Morris Facilities at which the Total Annual Benzene (“TAB”) quantity is greater than 10 Megagrams (“Mg”) are currently complying with the compliance option set forth at 40 C.F.R. § 61.342(c), utilizing the exemptions set forth in 40 C.F.R. § 61.342(c)(2) and (c)(3)(ii) (hereinafter referred to as the “2 Mg Compliance Option”). The LaPorte, Corpus Christi, and Lake Charles Facilities have reported TABs less than 10 Mg/yr.

25. **One-Time Review and Verification of Each Covered Facility’s TAB and Compliance Status.**

a. Phase One of the Review and Verification Process. Equistar shall retain a third party to complete a review and verification of each Covered Facility's TAB. The review and verification for each Facility shall be completed by no later than February 1, 2008. For each Covered Facility with a TAB of 10 Mg or greater, Equistar shall also review and verify the Covered Facility's compliance with the 2 Mg Compliance Option. The review and verification process for each Covered Facility shall include, but not be limited to:

(1) an identification of each waste stream that is required to be included in the Facility's TAB (*e.g.*, slop oil, tank water draws, spent caustic, other sample wastes, maintenance wastes, and turnaround wastes);

(2) a review and identification of the calculations and/or measurements used to determine the flows of each waste stream for the purpose of ensuring the accuracy of the annual waste quantity for each waste stream;

(3) an identification of the benzene concentration in each waste stream, including sampling for benzene concentration at no less than 10 waste streams per Covered Facility, consistent with the requirements of 40 C.F.R. § 61.355(c)(1) and (3); provided, however, that previous analytical data or documented knowledge of waste streams may be used, pursuant to 40 C.F.R. § 61.355(c)(2), for streams not sampled. Streams sampled after January 1, 2006, can be applied toward the waste streams requiring sampling;

(4) an identification of whether or not the waste stream is controlled consistent with the applicable requirements of Subpart FF; and

(5) an identification of any existing noncompliance with the requirements of Subpart FF.

As part of the first Annual Report (Section X) due following the completion of Phase One of the review and verification process, Equistar shall submit to EPA a BWON compliance review and verification report (“Compliance Review and Verification Report”) for each Covered Facility that sets forth the results of Phase One, including but not limited to, the items identified in Subparagraphs (1) through (5) of this Paragraph.

b. Phase Two of the Review and Verification Process. Based on EPA’s review of the BWON Compliance Review and Verification Reports, EPA may select up to 25 additional waste streams at each Covered Facility for additional sampling or re-sampling for benzene concentration. Equistar shall conduct the required sampling under representative conditions and submit the results to EPA within ninety (90) days of receipt of EPA’s request. Equistar shall use the results of this additional sampling to reevaluate the TAB and the uncontrolled benzene quantity and to amend the BWON Compliance Review and Verification Report, as needed. To the extent that EPA requires Equistar to re-sample a waste stream as part of the Phase Two review that Equistar chose to sample as part of the Phase One review, Equistar may average the results of the two sampling events. Equistar shall submit an amended BWON Compliance Review and Verification Report within ninety (90) days of the completion of the required Phase Two sampling, if Phase Two sampling is required by EPA.

26. **Implementation of Actions Necessary to Correct Non-Compliance or to Come Into Compliance.**

a. Amended TAB Reports. If the results of the BWON Compliance Review and Verification Report indicate that the reports required by 40 C.F.R. § 61.357(c) or § 61.357(d) have not been filed or are inaccurate and/or do not satisfy the requirements of Subpart FF, Equistar shall submit, by no later than ninety (90) days after completion of the BWON Compliance Review and Verification Report(s), an amended TAB report to EPA.

b. BWON Corrective Action Measures.

(1) 2 Mg Compliance Option. If the results of the BWON Compliance Review and Verification Report indicate that Equistar is not in compliance with the 2 Mg Compliance Option at any Covered Facility to which such Option applies, Equistar shall submit to EPA, by no later than ninety (90) days after submission of the BWON Compliance Review and Verification Report(s), a BWON Corrective Action Plan that identifies with specificity the compliance strategy and schedule that Equistar shall implement to ensure that the Facility complies with the 2 Mg Compliance Option as soon as practicable. Equistar shall implement the plan according to the schedule provided in such plan.

(2) Covered Facilities with a TAB of Less Than 10 Mg. For the LaPorte, Corpus Christi and Lake Charles Facilities, if the results of the BWON Compliance Review and Verification Report indicate that any of those Covered Facility has a TAB of 10 Mg or greater on a calendar year basis, Equistar shall submit to EPA, by no later than ninety (90) days after submission of the BWON Compliance Review and Verification Report(s), a BWON Corrective Action

Measures Plan that identifies with specificity the compliance strategy and schedule that Equistar shall implement to ensure that the Facility comes into compliance pursuant to one of the following options: (a) the 2 Mg Compliance Option; (b) the 6 Mg Compliance Option (set forth at 40 C.F.R. § 61.342(e)); or (c) reducing the Facility's TAB to less than 10 Mg per year. Regardless of the option that Equistar elects, Equistar must come into compliance as soon as practicable but by no later than twelve (12) months after submission of the BWON Corrective Action Plan. Equistar shall implement the plan according to the schedule provided in such plan.

c. Certification of Compliance. By no later than ninety (90) days after completion of the implementation of all corrective actions, if any, required pursuant to Subparagraph 26.b. (Corrective Action Measures) to come into compliance with the 2 Mg Compliance Option or the 6 Mg Compliance Option or to reduce a Covered Facility's TAB to below 10 Mg per year, Equistar shall submit a report to EPA certifying that, as to the subject Facility, the Facility complies with the Benzene Waste NESHAP.

27. Carbon Canisters. Equistar shall comply with the requirements of this Paragraph 27 at all locations at the Covered Facilities where a carbon canister(s) is utilized as a control device under the Benzene Waste NESHAP.

a. By no later than April 1, 2008, Equistar shall complete installation of primary and secondary carbon canisters at locations currently utilizing single canisters and shall operate them in series. As part of the first Annual Report (Section X) due following completion

of the installation of the dual canisters, Equistar shall notify EPA that installation has been completed. The report shall include: (i) a list of all locations at each Covered Facility where carbon canister systems are used as control devices under Subpart FF; (ii) an indication, for each location, whether there was a pre-existing secondary carbon canister or whether a secondary carbon canister was installed under this Paragraph; and (iii) the installation date of each such secondary canister installed under this Paragraph and the date that each secondary canister was put into operation.

b. For dual carbon canister systems, “breakthrough” between the primary and secondary canister is defined as any reading equal to or greater than 50 ppm VOC or 1 ppm benzene (depending upon the constituent that Equistar decides to monitor) when monitoring on a monthly frequency. If weekly monitoring is required pursuant to Subparagraph 27.d. below, “breakthrough” shall be defined as any reading equal to or greater than 5 ppm benzene.

c. Equistar shall monitor for breakthrough between the primary and secondary carbon canisters monthly, or in accordance with the frequency specified in 40 C.F.R. § 61.354(d), whichever is more frequent. This requirement shall commence: (i) April 1, 2008, where dual carbon canisters are currently installed and put into service prior to April 1, 2008; and (ii) within thirty (30) days after installation of a new dual carbon canister system subsequent to April 1, 2008.

d. If Equistar monitors a canister system for benzene and detects between 1 ppm and 5 ppm benzene between the primary and secondary canisters, then Equistar shall begin monitoring for breakthrough (at 5 ppm benzene) between the primary and secondary carbon

canisters weekly, or in accordance with the frequency specified in 40 C.F.R. § 61.354(d), whichever is more frequent.

e. Equistar shall replace the original primary carbon canister (or route the flow to an appropriate alternative control device) immediately when breakthrough is detected between the primary and secondary canister. The original secondary carbon canister (or a fresh canister) will become the new primary carbon canister and a fresh carbon canister will become the secondary canister. For purposes of this Subparagraph, “immediately” shall mean within eight (8) hours of the detection of a breakthrough for canisters of 55 gallons or less, and within twenty-four (24) hours of the detection of a breakthrough for canisters greater than 55 gallons. In lieu of replacing the primary canister immediately, Equistar may elect to monitor the outlet of the secondary canister beginning on the day the breakthrough between the primary and secondary canister is identified and each calendar day thereafter. This daily monitoring shall continue until the primary canister is replaced. If the constituent being monitored (either benzene or VOC) is detected at the outlet of the secondary canister during this period of daily monitoring, both canisters must be replaced within eight (8) hours of the detection of a breakthrough.

f. Equistar shall maintain a readily-available supply of fresh carbon canisters at all times at each Covered Facility where canisters are used as a control device or shall otherwise ensure that such canisters are readily available to implement the requirements of this Paragraph 27.

28. **Periodic Review of Process Information.** By no later than April 1, 2008, Equistar shall develop and implement written procedures for periodically reviewing process information for each Covered Facility, including, but not limited to, construction projects, to ensure that all new benzene waste streams are included in the Facility's waste stream inventory.

29. **Use of Accredited Laboratories.**

a. To ensure that proper analytical and quality assurance/quality control procedures are followed for Benzene Waste NESHAP samples, by no later than April 1, 2008, Equistar shall ensure that any commercial laboratories that it uses for Benzene Waste NESHAP compliance purposes are accredited by the National Environmental Laboratory Accreditation Program ("NELAP") to analyze such samples during the term of this Consent Decree.

b. By no later than April 1, 2008, Equistar shall submit to EPA:

(1) a list of NELAP accredited commercial laboratories being used for Benzene Waste NESHAP sample analysis and the corresponding Covered Facility for which each laboratory is conducting the analysis; and

(2) documentation that the commercial laboratories used by each Covered Facility are NELAP accredited for each parameter analyzed for purposes of determining compliance with Benzene Waste NESHAP requirements.

30. **Benzene Spills.** As of August 1, 2007, for each spill at each Covered Facility, Equistar shall review the spill to determine if any benzene waste, as defined by Subpart FF, was generated. For each spill involving the release of more than 10 pounds of benzene in a 24 hour

period, Equistar shall: (i) include the benzene waste generated by the spill in the Covered Facility's TAB, as required by 40 C.F.R. § 61.342; and (ii) as appropriate, account for such benzene waste in accordance with the 2 Mg or 6 Mg Compliance Option.

31. **Training.**

a. By no later than April 1, 2008, Equistar shall develop and implement a program for annual (*i.e.*, once every twelve (12) months) training for all employees who draw benzene waste samples for Benzene Waste NESHAP purposes.

b. By no later than April 1, 2008, Equistar shall complete the development of standard operating procedures (where they do not already exist) for all control devices and treatment processes used to comply with the Benzene Waste NESHAP at each Covered Facility. By no later than April 1, 2008, Equistar shall complete an initial training program regarding these procedures for all operators assigned to the relevant equipment. Comparable training shall also be provided to any persons who subsequently become operators, prior to their assumption of this duty. "Refresher" training in these procedures shall be performed on a three-year cycle (*i.e.*, once every thirty-six (36) months).

c. Equistar shall assure that the employees of any contractors hired to perform any of the requirements of this Subsection V.B. are properly trained to implement such requirements that they are hired to perform, as under Subparagraphs 31.a. and b.

32. **Sampling.** Equistar shall conduct sampling as described by this Paragraph at each of the Covered Facilities for the purpose of calculating uncontrolled benzene quantities.

a. Sampling under the 2 Mg Compliance Option.

(1) By no later than March 1, 2008, Equistar shall submit to EPA a sampling plan for each such Covered Facility subject to the 2 Mg Compliance Option. The sampling plan is designed to identify the quarterly benzene quantity in uncontrolled benzene waste streams, including waste/slop/off-spec oil. The plan (the "BWON Sampling Plan") shall include, but need not be limited to:

(i) proposed sampling locations and methods for flow calculations at the "end of line" of uncontrolled benzene waste streams; (ii) quarterly sampling of all uncontrolled waste streams that count toward the 2 Mg/yr calculation and that contain greater than 0.05 Mg/yr of benzene; (iii) monthly sampling of all uncontrolled waste streams that qualify for the 10 ppmw exemption (40 C.F.R. § 61.342(c)(2)) and that contain greater than 0.1 Mg/yr of benzene. For sources of uncontrolled benzene waste streams that are non-routine or otherwise difficult to collect, Equistar shall include a representative number of samples of such uncontrolled waste streams in the BWON Sampling Plan in order to verify that assumptions made in calculating the TAB are reasonable and appropriate. The BWON Sampling Plan may identify commingled, exempt waste streams for sampling, provided Equistar demonstrates that the benzene quantity of those commingled streams will not be underestimated.

(2) Equistar shall commence sampling under its BWON Sampling Plan during the first full calendar quarter following submittal of the Plan.

Equistar shall take, and have analyzed, at least three representative samples from

each identified sampling location. Equistar shall use the average of all samples taken and the identified flow calculations to determine its quarterly benzene quantity in uncontrolled waste streams and to estimate a calendar year value for the Facility.

(3) At the end of each calendar quarter following the commencement of quarterly sampling, Equistar shall calculate a quarterly uncontrolled benzene quantity and shall estimate a projected calendar year uncontrolled benzene quantity based on the quarterly end of line sampling results, non-end of line sampling results, and the approved flow calculations. Equistar shall submit the uncontrolled benzene quantity in the Annual Reports due under Section X of this Decree.

(4) After at least eight (8) quarters of sampling under the BWON Sampling Plan under this Paragraph 32, Equistar may submit a report to EPA that requests a change in the monitoring frequency specified by Subparagraph 32.a. for one or more of the Covered Facilities. If EPA determines, after an opportunity for consultation with Equistar, that the information presented in the report supports a change in the monitoring frequency for one or more of the Covered Facilities, then the monitoring frequency requirement under Subparagraph 32.a. shall be modified in accordance with Paragraph 172 (Consent Decree Modifications).

(5) If changes in processes, operations, or other factors lead Equistar to conclude that its approved BWON Sampling Plan may no longer provide an accurate measure of a Covered Facility's benzene quantity in uncontrolled benzene waste streams, Equistar shall revise its BWON Sampling Plan so that it provides an accurate measure.

b. Sampling for Facilities with an Annual TAB of Less than 10 Mg.

(1) By no later than March 1, 2008, Equistar shall submit to EPA a BWON Sampling Plan for each such Covered Facility with an annual TAB of less than 10 Mg. The sampling plan is designed to identify the annual benzene quantity in benzene waste streams. The plan shall include, but need not be limited to: (i) proposed sampling locations and methods for flow calculations at the "end of line" of benzene waste streams; and (ii) annual sampling of all benzene waste streams that contain greater than 0.05 Mg/yr of benzene. For sources of benzene waste streams that are non-routine or otherwise difficult to collect, Equistar shall include a representative number of samples of such waste streams in the BWON Sampling Plan in order to verify that assumptions made in calculating the TAB are reasonable and appropriate. The BWON Sampling Plan may identify commingled, exempt waste streams for sampling, provided Equistar demonstrates that the benzene quantity of those commingled streams will not be underestimated.

(2) Equistar shall commence sampling under its BWON Sampling Plan during the first full calendar quarter following submittal of the Plan. Equistar shall take, and have analyzed, at least three representative samples from each identified sampling location. Equistar shall use the average of all samples taken and the identified flow calculations to determine the quarterly benzene quantity in uncontrolled waste streams and to estimate a calendar year value for the Facility.

(3) Equistar shall use the sampling results to calculate the quarterly uncontrolled benzene quantity and shall estimate a projected calendar year uncontrolled benzene quantity based on end of line sampling results and the flow calculations. Equistar shall submit the uncontrolled benzene quantity in the Annual Reports due under Section X of this Decree.

(4) After at least 2 years of sampling under the BWON Sampling Plan under this Paragraph 32, Equistar may submit a report to EPA that requests a change in the monitoring frequency specified by Subparagraph 32.b. for one or more of the Covered Facilities. If EPA determines, after an opportunity for consultation with Equistar, that the information presented in the report supports a change in the monitoring frequency for one or more of the Covered Facilities, then the monitoring frequency requirement under Subparagraph 32.b. will be modified in accordance with Paragraph 172 (Consent Decree Modifications).

(5) If changes in processes, operations, or other factors lead Equistar to conclude that its approved BWON Sampling Plan may no longer provide an accurate measure of a Covered Facility's benzene quantity in benzene waste streams, Equistar shall revise its BWON Sampling Plan so that it provides an accurate measure.

c. Sampling under the 6 Mg Compliance Option.

(1) By no later than sixty days after Equistar elects to comply with the 6 Mg Compliance Option for a Covered Facility, Equistar shall submit to EPA a BWON Sampling Plan for each such Covered Facility subject to the 6 Mg Compliance Option. The plan is designed to identify the quarterly benzene quantity in uncontrolled benzene waste streams. The plan shall include, but need not be limited to: (i) proposed sampling locations and methods for flow calculations at the "end of line" of uncontrolled benzene waste streams; and (ii) quarterly sampling of all uncontrolled waste streams that count toward the 6 Mg/yr calculation and that contain greater than 0.05 Mg/yr of benzene. For sources of uncontrolled benzene waste streams that are non-routine or are otherwise difficult to collect, Equistar shall include a representative number of samples of such waste streams in the BWON Sampling Plan in order to verify that assumptions made in calculating the TAB are reasonable and appropriate. The BWON Sampling Plan may identify commingled, exempt waste streams for sampling, provided Equistar demonstrates that the benzene quantity of those commingled streams will not be underestimated.

(2) Equistar shall commence sampling under its BWON Sampling Plan during the first full calendar quarter following submittal of the Plan. Equistar shall take, and have analyzed, at least three representative samples from each identified sampling location. Equistar shall use the average of all samples taken and the identified flow calculations to determine its quarterly benzene quantity in uncontrolled waste streams and to estimate a calendar year value for the Facility.

(3) At the end of each calendar quarter following the commencement of quarterly sampling, Equistar shall calculate a quarterly uncontrolled benzene quantity and shall estimate a projected calendar year uncontrolled benzene quantity based on the quarterly end of line sampling results, non-end of line sampling results, and the flow calculations. Equistar shall submit the uncontrolled benzene quantity in the Annual Reports due under Section X of this Decree.

(4) After at least 8 quarters of sampling under the BWON Sampling Plan under this Paragraph 32, Equistar may submit a report to EPA that requests a change in the monitoring frequency specified by Subparagraph 32.c. for one or more of the Covered Facilities. If EPA determines, after an opportunity for consultation with Equistar, that the information presented in the report supports a change in the monitoring frequency for one or more of the Covered Facilities, then the monitoring frequency requirement under Subparagraph 32.c. will be modified in accordance with Paragraph 172 (Consent Decree Modifications).

d. For purposes of calculating average benzene concentrations under any compliance option, Equistar shall include all sampling results in the calculation unless Equistar provides an explanation as to why any sampling results should be excluded.

33. **Implementation of Corrective Action.**

a. Applicability.

(1) For 2 Mg Compliance Option Facilities. If the calculations in Subparagraph 32.a. indicate that the projected calendar year uncontrolled benzene quantity exceeds 1.5 Megagrams at a Covered Facility subject to the 2 Mg Compliance Option, Equistar shall submit a written report (“BWON Sampling Report”) to EPA that evaluates all relevant information and identifies whether any action should be taken to reduce benzene quantities in its waste streams for the remainder of the calendar year. If additional actions are determined to be necessary to ensure compliance with the 2 Mg Compliance Option at a Covered Facility, Equistar shall include in its written report a BWON Corrective Action Plan that identifies with specificity the compliance strategy and schedule that Equistar shall implement to ensure that the Facility complies with the 2 Mg Compliance Option as soon as practicable. Equistar shall implement the plan according to the schedule provided in such plan.

(2) For Facilities with an Annual TAB of Less than 10 Mg.

i. If the calculations in Subparagraph 32.b. (for facilities with TAB less than 10 Mg) indicate that the projected calendar year

uncontrolled benzene quantity exceeds 7.5 Megagrams at a Covered Facility, Equistar shall submit a written BWON Sampling Report to EPA that evaluates all relevant information and identifies whether any action should be taken to reduce benzene quantities in its waste streams for the remainder of the calendar year. If additional actions are determined to be necessary for the Facility's TAB to remain at less than 10 Mg on an annual basis, Equistar shall include in its written report a BWON Corrective Action Plan that identifies with specificity the compliance strategy and schedule that Equistar shall implement to ensure that the Facility TAB remains below 10 Mg on an annual basis.

- ii. If the calculations in Subparagraph 32.b. (for facilities with TAB less than 10 Mg) indicate that the projected calendar year uncontrolled benzene quantity at a Covered Facility is 10 Mg or greater, Equistar shall submit a written BWON Sampling Report to EPA that provides the calculations. If at any time during a calendar year a Covered Facility's TAB exceeds 10 Mg, such facility shall immediately become subject to the requirements of 40 C.F.R. Part 61, Subpart FF that apply to facilities with a TAB of 10 Mg or greater and the requirements of this Subsection V.B. that apply to Covered Facilities subject to the 2 Mg or 6 Mg Compliance Option.

(3) For 6 Mg Compliance Option Facilities. If the calculations in Subparagraph 32.c. indicate that the quarterly uncontrolled benzene quantity exceeds 1.5 Mg or the projected calendar year uncontrolled benzene quantity exceeds 4.5 Megagrams at a Covered Facility, Equistar shall submit a written BWON Sampling Report to EPA that evaluates all relevant information and identifies whether any action should be taken to reduce benzene quantities in its waste streams for the remainder of the calendar year. If additional actions are determined to be necessary to ensure compliance with the 6 Mg Compliance Option at a Covered Facility, Equistar shall include in its report a BWON Corrective Action Plan that identifies with specificity the compliance strategy and schedule that Equistar shall implement to ensure that the Facility complies with

the 6 Mg Compliance Option as soon as practicable. Equistar shall implement the plan according to the schedule provided in such plan.

b. BWON Sampling Report and Corrective Action Plan. Equistar shall, in any BWON Corrective Action Plan required by this Paragraph, identify: (i) the cause of the potentially elevated benzene quantities; (ii) all corrective actions that Equistar has taken or plans to take to ensure that the cause will not recur; and (iii) an appropriate strategy and schedule that Equistar shall implement to ensure that each Covered Facility subject to the 2 Mg or 6 Mg Compliance Option remains in compliance with that Option; and (iv) an appropriate strategy and schedule that Equistar shall implement to ensure that each Covered Facility with an annual TAB of less than 10 Mg remains below the 10 Mg threshold. If a spill event is the main cause of the potentially elevated benzene quantities, any corrective action shall focus on the spill event and on future measures to minimize and address spills. Equistar shall submit a BWON Sampling Report (including any necessary Corrective Action Plan and schedule) by no later than ninety (90) days after the end of the calendar quarter in which one or more of the conditions specified in Subparagraphs 33.a.(1), (2) or (3) are satisfied.

34. Miscellaneous Inspections and Monitoring. Commencing no later than April 1, 2008, Equistar shall:

a. Conduct monthly visual inspections of and, if appropriate, refill all Subpart FF water traps within the Covered Facilities' individual drain systems;

b. If Equistar utilizes conservation vents, visually inspect all Subpart FF conservation vents or indicators on process sewers for detectable leaks on a weekly basis, reset

any vents where leaks are detected, and record the results of the inspections. After six (6) months of weekly inspections, and based upon an evaluation of the recorded results, Equistar may submit a request to the appropriate EPA Region to modify the frequency of the inspections. EPA shall not unreasonably withhold its consent to such modification. Alternatively, for conservation vents with indicators that identify whether flow has occurred, Equistar may elect to visually inspect such indicators on a monthly basis and, if flow is then detected, Equistar shall then visually inspect that indicator on a weekly basis for four weeks. If flow is detected during normal operation any two of those four weeks, Equistar shall install a carbon canister or other environmentally equivalent controls on that vent until appropriate corrective action(s) can be implemented to prevent such flow. Nothing in this Subparagraph shall require Equistar to monitor conservation vents on fixed roof tanks; and

c. Conduct quarterly monitoring and repair of the oil-water separators consistent with the “no detectable emissions” provision in 40 C.F.R. § 61.347 or quarterly measurements of the oil-water separator secondary seal gap if using the alternative control requirements allowed under § 61.352, if the separator is a control device under Subpart FF.

35. **Recordkeeping and Reporting Requirements for this Subsection V.B.:**

a. As part of the Annual Reports required by Section X or as otherwise required under this Subsection V.B., Equistar shall submit, as and to the extent required, the following information to EPA:

(1) BWON Compliance Review and Verification Reports (under Subparagraph 25.a.), as amended, if necessary (under Subparagraph 25.b.);

- (2) Amended TAB Reports, if necessary (under Subparagraph 26.a.);
 - (3) BWON Corrective Measures Plans, if necessary (under Subparagraph 26.b. and/or Paragraph 33);
 - (4) Certifications of Compliance, if necessary (under Subparagraph 26.c.) (Actions Necessary to Correct Non-Compliance, Certification of Compliance);
 - (5) notification, if necessary, that Equistar has completed the installation of primary and secondary carbon canisters at locations using single canisters prior to April 1, 2008, and is operating the primary and secondary carbon canisters in series (under Subparagraph 27.a. (Carbon Canisters));
 - (6) NELAP laboratory accreditation information (under Paragraph 29);
 - (7) a description of the measures taken, if any, during the preceding twelve (12) month period to comply with the training provisions of Paragraph 31;
 - (8) BWON Sampling Plans (under Subparagraphs 32.a., 32.b. and 32.c.), and revised BWON Sampling Plans, if necessary (under Subparagraphs 32.a., 32.b. and 32.c.);
 - (9) a summary of the sampling results required under Paragraph 32;
- and

(10) BWON Sampling Reports and, if necessary, BWON Corrective Action Plans (under Paragraphs 33).

b. Equistar shall retain records containing the following information during the time period that the Consent Decree remains in effect:

(1) monthly visual individual drain inspection results;

(2) conservation vent monitoring results and installation of alternative control equipment; and

(3) oil/water separator monitoring results.

C. LEAK DETECTION AND REPAIR – ALL COVERED FACILITIES

36. In order to minimize or eliminate fugitive emissions of VOCs, benzene, volatile hazardous air pollutants (“VHAPs”), and organic hazardous air pollutants (“HAPs”) from equipment in light liquid and/or in gas/vapor service, Equistar shall undertake the enhancements identified in this Subsection V.C. to its leak detection and repair (“LDAR”) programs for each of the Covered Facilities under 40 C.F.R. Part 60, Subpart VV; Part 61, Subpart J; Part 63, Subparts F, G, H and UU; and applicable state and local LDAR requirements. The terms “equipment,” “in light liquid service” and “in gas/vapor service” shall have the definitions set forth in the applicable provisions of 40 C.F.R. Part 60, Subpart VV; Part 61, Subpart J; Part 63, Subparts F, G, H and UU and applicable state and local LDAR regulations.

37. **Written Facility-Wide LDAR Program Descriptions.** By no later than January 1, 2008, Equistar shall develop and maintain a set of written LDAR Program Descriptions for

each Covered Facility that will ensure compliance with all federal, state, and local LDAR regulations applicable to each of the Covered Facilities. Equistar shall update the LDAR Program Descriptions as may be necessary to ensure continuing compliance. The LDAR Program Descriptions for each Covered Facility shall include, at a minimum:

- a. an identification of all equipment in light liquid and/or in gas/vapor service that is subject to periodic monitoring requirements via Method 21 under any applicable federal, state, or local LDAR regulation and that has the potential to leak VOCs, HAPs, VHAPs, and benzene within each Covered Facility's process units;
- b. procedures for identifying leaking equipment within each Covered Facility's process units;
- c. procedures for repairing and keeping track of leaking equipment;
- d. procedures for periodically identifying new equipment to be added to and removing out-of-service components from the LDAR program;
- e. procedures for quality assurance/quality control ("QA/QC") reviews of all data generated by LDAR monitoring technicians (as described in Paragraph 44 below); and
- f. a description of each Covered Facility's LDAR monitoring organization and a designation of the person or position responsible for LDAR management and who has the authority to implement LDAR improvements at the Facility, as required by Paragraph 39.

38. **Training.** By no later than April 1, 2008, Equistar shall begin to implement a training program at each Covered Facility which includes the following features:

- a. for personnel newly-assigned to LDAR responsibilities, Equistar shall require LDAR training prior to each employee beginning such work;
- b. for all personnel assigned LDAR responsibilities, Equistar shall provide and require completion of annual LDAR training or require its LDAR contractor to provide such training (initial annual LDAR training for all such personnel shall be completed by no later than April 1, 2008);
- c. for all other Facility operations and maintenance personnel (including contract personnel) who have duties relevant to LDAR, Equistar shall provide and require completion of an initial training program that includes instruction on aspects of LDAR that are relevant to the person's duties (initial LDAR training for all such personnel shall be completed by no later than April 1, 2008); and
- d. for the individuals covered by this Paragraph, "refresher" training in LDAR shall be performed at least once every three (3) years during the term of this Consent Decree.

39. **LDAR Personnel.** By no later January 1, 2008, Equistar shall (i) establish a program that holds each person assigned LDAR responsibilities accountable for LDAR performance and (ii) establish and maintain a person or position at each Covered Facility with responsibility for LDAR management and authority to implement LDAR improvements at the Facility.

40. **LDAR Audits**. Equistar shall implement Facility-wide LDAR Audits – including an Initial LDAR Audit and Regular LDAR Audits – as set forth in this Paragraph to ensure each Covered Facility’s compliance with all applicable LDAR requirements.

a. Each LDAR Audit shall include, but shall not be limited to: (i) performing comparative monitoring; (ii) reviewing records to ensure monitoring and repairs were completed in the required periods; (iii) reviewing component identification procedures, tagging procedures, and data management procedures; (iv) determining whether all equipment subject to LDAR regulation has been included in the LDAR program; and (v) observing LDAR technicians’ calibration and monitoring techniques. During each LDAR Audit, leak rates shall be calculated for each process unit where comparative monitoring was performed.

b. During each LDAR Audit, Equistar shall calculate the following values:

(1) leak percentages based on the number and type of equipment monitored for each process unit where comparative monitoring was performed;

(2) the average leak percentage from facility monitoring, for each equipment type in each unit where comparative monitoring was performed, for the four complete monitoring quarters immediately preceding the audit; and

(3) the ratio of the number calculated in Subparagraph 40.b.(1) to the number calculated in Subparagraph 40.b.(2) for each equipment type and process unit.

c. Initial LDAR Audit. Equistar shall retain a third-party contractor to complete an Initial LDAR Audit for each Covered Facility. An Initial Audit shall be completed for each Covered Facility by no later April 1, 2008.

d. Initial Audit Report. As part of the first Annual Report (Section X) after completion of the Initial Audits, Equistar shall submit an Initial Audit Report to EPA. The Report shall describe the results of the Initial Audit, disclose all areas of identified non-compliance, and certify Equistar's compliance, except for the identified deficiencies.

e. Regular LDAR Audits. Equistar shall conduct Regular LDAR Audits of each Covered Facility's LDAR program using Independent Auditors. Equistar shall complete a Regular LDAR Audit for each Covered Facility by no sooner than January 1, 2010 and no later than December 31, 2010. Equistar shall perform a Regular LDAR Audit of each Covered Facility's LDAR program at least once every three (3) calendar years (with at least 24 months between the Audits) at each Covered Facility during the term of the Consent Decree. Equistar may elect to retain third-parties to undertake a Regular Audit, provided that a Regular LDAR Audit at each Covered Facility occurs on the schedule prescribed by this Subparagraph 40.e.

41. **Implementation of Corrective Action.**

a. If the results of any of the LDAR Audits conducted pursuant to Paragraph 40 identify any deficiencies, Equistar shall implement, as soon as practicable, all steps necessary to correct or otherwise address such deficiencies and to prevent, to the extent practicable, a recurrence of the cause of such deficiencies.

b. For purposes of this Paragraph, the following audit findings shall be deemed causes for corrective action:

(1) A ratio of the leak percentage calculated from the comparative monitoring audit and the average leak percentage for the four (4) complete monitoring quarters immediately preceding the audit, as determined under Paragraph 40 for a specific equipment type in a specific process unit, in excess of 3.0. If the calculated ratio yields an infinite result, Equistar shall assume one leaking valve was found in the process unit through its routine monitoring during the 4-quarter period, and shall repeat the calculation required by Paragraph 40.

(2) A leak percentage determined during the comparative monitoring audit which exceeds the skip-period threshold set for the specific equipment type and process unit, based on the latest complete monitoring performed by Equistar, and allowed under Paragraph 40 of this Consent Decree and federal, state, or local regulations. For example, if Equistar monitoring shows an annual monitoring frequency is allowed by applicable regulations, but a comparative monitoring audit shows a leak percentage in excess of the threshold which allows that annual frequency, Equistar shall be required to monitor at the frequency allowed under the applicable skip-period provisions for process units and equipment with a leak percentage equal to the leak percentage determined during the audit. The comparison requirements of this Paragraph shall not apply for a specific equipment type and process unit when the absolute difference in values between

Subparagraphs 40.b.(1) and 40.b.(2) for the specific equipment type and process unit is less than 0.20.

c. Equistar shall, during the term of this Consent Decree, retain the Initial Audit Report and all other LDAR Audit Reports generated pursuant to Paragraph 40, and shall maintain a written record of all corrective actions that Equistar takes in response to deficiencies identified in any LDAR Audits. After the completion of any LDAR Audit, Equistar shall include the following information in the next Annual Report due under Section X of this Consent Decree: (i) a summary, including findings, of each such LDAR Audit; (ii) a list of corrective actions taken during the reporting period; and (iii) any schedule for implementing future corrective actions.

42. **Internal Leak Definition for Valves and Pumps.** Equistar shall utilize the following internal leak definitions for valves and pumps in light liquid and/or gas/vapor service, unless other permit(s), regulations, or laws require the use of lower leak definitions. First repair attempts must be completed within 5 days of identification of the leak, and final repairs within 15 days of identification of the leak, unless Equistar can place the component on the delay of repair list according to applicable regulations and Paragraph 45 of this consent decree.

a. **Leak Definition for Valves.** By no later than January 1, 2008, for each Covered Facility, Equistar shall utilize an internal leak definition of 500 ppm VOCs for valves in light liquid and/or gas/vapor service at Covered Facilities, excluding pressure relief devices.

b. **Leak Definition for Pumps.** By no later than January 1, 2008, for each Covered Facility, Equistar shall utilize an internal leak definition of 2000 ppm for centrifugal

pumps at the Covered Facilities. Reciprocating pumps, connectors, compressors, and other components shall retain their applicable regulatory leak definition.

43. **LDAR Monitoring Frequency.**

a. Pumps in Light Liquid Service and/or Gas/Vapor Service. When the internal leak definition for pumps becomes applicable under Paragraph 42, and unless more frequent monitoring is required by applicable federal, state and/or local requirements, Equistar shall monitor pumps at the internal leak definition on a monthly basis.

b. Valves in Light Liquid Service and/or Gas/Vapor Service. When the internal leak definition for valves becomes applicable under Paragraph 42, and unless more frequent monitoring is required by applicable federal, state and/or local requirements, Equistar shall monitor valves (other than difficult to monitor or unsafe to monitor valves) at the internal leak definition on a quarterly basis.

c. Skip Monitoring. If any pumps or valves in light liquid service and/or gas/vapor service qualify for skip monitoring under applicable federal, state or local rules, Equistar shall be entitled to implement skip monitoring for such pumps or valves in accordance with the applicable rules, but shall be subject to the additional requirements for skip monitoring as outlined in Paragraph 41 (Implementation of Corrective Action) of this Consent Decree.

d. Use of Infrared Camera for Monitoring. Once every two (2) months commencing on January 1, 2008, Equistar shall conduct LDAR monitoring of process units in hydrocarbon service using an infrared camera.

(1) Leaks from Equipment Subject to Regulation. For any leaks detected from equipment subject to regulation under the provisions cited in Paragraph 36, Equistar shall repair or place such equipment on delay of repair in accordance with the applicable regulations and Paragraph 45 (Delay of Repair) below.

(2) Leaks from Equipment Not Subject to Regulation.

- i. For any leaks detected from currently unregulated equipment, Equistar shall, unless a shorter time period applies under federal, state or local law, (a) make a first attempt at repair within fifteen (15) calendar days of identifying the leak and a second attempt at repair, if necessary, within forty-five (45) calendar days of identifying the leak; or (b) if necessary, place the equipment on delay of repair until the next turnaround at the relevant Covered Facility.
- ii. Additional Corrective Action to Qualify for Treatment Under “Effect of Settlement” Paragraph 147: If, during the first twelve (12) months that an infrared camera is used for monitoring at a Covered Facility in accordance with this Subparagraph 43.d., Equistar identifies a leak from currently unregulated equipment that is an unauthorized release under federal, regional, state or local air and release reporting laws, Equistar shall comply with all applicable release notification requirements under CERCLA §103 and EPCRA § 304 and, within nine (9) months of identifying such leak, take corrective action to either (a) eliminate the release caused by the leak; or (b) submit a written request to obtain authorization for the release from the appropriate governmental authority if the release is unauthorized and will continue. Equistar shall have up to 2 years from the date of the written request to obtain authorization.

44. QA/QC of LDAR Data. By no later than January 1, 2008, for each Covered Facility, Equistar (or a third-party contractor retained by Equistar) shall develop and implement procedures for quality assurance/quality control (“QA/QC”) reviews of all data generated by

LDAR monitoring technicians. Equistar shall ensure that monitoring data provided by monitoring technicians is gathered through the use of data-loggers and reviewed daily for QA/QC. At least once per quarter, Equistar shall perform a QA/QC review of monitoring data collected in the preceding twelve (12) months. The review shall include, but not be limited to, a review of: (i) the number of components monitored per technician; (ii) the time between monitoring events; and (iii) abnormal data patterns.

45. **Delay of Repair.** By no later than January 1, 2008, Equistar shall take the following action for any valve or pump in light liquid service and/or gas/vapor service at any Covered Facility that Equistar intends to place on the “delay of repair” list under applicable regulations: For valves (other than control valves and pressure relief devices) leaking at 10,000 ppm or greater, Equistar shall use any technically feasible repair method prior to placing the valve on the delay of repair list, unless Equistar can demonstrate that there is a safety, mechanical, or major environmental concern posed by repairing the leak in that manner. Equistar shall continue to monitor each leaking valve or pump at the frequency required for non-leaking valves or pumps in that process unit.

46. **Chronic Leakers.** A valve shall be classified as a “chronic leaker” under this Paragraph if it leaks above 5,000 ppm in any consecutive three (3) quarters (based on quarterly monitoring) after the valve was last repaired. Following the identification of a “chronic leaker” valve, Equistar shall replace, repack, or perform similarly effective repairs on the chronic leaker during the next process unit turnaround.

47. **Alternate Leak Detection Method.** In the event that EPA adopts new monitoring technologies (such as infrared imaging) into its LDAR regulations in the future, Equistar may request a modification to this Consent Decree to take advantage of such new regulations. EPA, after an opportunity for consultation with appropriate Plaintiff-Interveners, may approve a change to the LDAR portions of the Consent Decree to allow Equistar to take advantage of the new leak detection technology. Such a revised protocol must be developed and mutually agreed upon in writing by EPA and Equistar as a non-material modification in accordance with Paragraph 172 (Modification).

48. **Reporting and Recordkeeping Requirements for this Section V.C.**

a. As part of the Annual Reports required by Section X or as otherwise required by this Subsection V.C., Equistar shall submit, as and to the extent required, the following information to EPA:

(1) a copy of each Covered Facility's LDAR Program Description under Paragraph 37 (to be submitted in the first Annual Report and thereafter only if the LDAR Program is revised);

(2) a summary of the training that occurred during the relevant reporting year under Paragraph 38;

(3) a summary of any corrective action taken pursuant to Subparagraph 43.d. (Use of Infrared Camera/Corrective Action);

(4) a summary of any lower leak definitions and increased monitoring frequencies that have been implemented according to Paragraphs 42 (Internal Leak Definition for Valves and Pumps) and 43 (LDAR Monitoring Frequency);

(5) a summary of the implementation of QA/QC procedures for review of data generated by LDAR technicians as required by Paragraph 44;

(6) a summary of the audit results obtained during the relevant reporting year and any actions implemented to correct identified compliance deficiencies under Paragraph 40; and

(7) a list of any valves placed on a delay of repair list in accordance with Paragraph 45.

b. Equistar shall retain records containing the following information during the time period that the Consent Decree remains in effect:

(1) the number of valves and pumps present in each process unit during each calendar quarter;

(2) the number of valves and pumps monitored during each monitoring period;

(3) the number of valves and pumps found leaking during each monitoring period;

(4) the number of “difficult to monitor” pieces of equipment monitored during each monitoring period;

(5) a list of all equipment on the “delay of repair” list and the date each component was placed on the list;

(6) the number of first repair attempts not completed within five (5) days and the number of final repairs not completed within fifteen (15) days pursuant to Paragraph 42; and

(7) the number of first repair attempts not completed within fifteen (15) days pursuant to Subparagraph 43.d.(2).i., the number of second repair attempts not completed within forty-five (45) days pursuant to Subparagraph 43.d.(2).i., and the number of components not placed on the delay of repair list pursuant to Subparagraph 43.d.(2) and Paragraph 45.

D. NEW SOURCE PERFORMANCE STANDARDS, 40 C.F.R. PART 60, SUBPART NNN – MORRIS, ILLINOIS FACILITY.

49. As of August 1, 2007, the two deethanizer distillation columns with a vent to the main flare at the ethylene manufacturing plant located at the Morris Facility shall be subject to and comply with the requirements of 40 C.F.R. Part 60, Subpart NNN (Standards of Performance for volatile organic compound emissions from synthetic organic chemical manufacturing industry (“SOCMI”) distillation operations or “NSPS Subpart NNN”). Compliance with Subpart NNN shall include, but not be limited to, the requirements in Paragraph 50 below.

50. By no later than August 1, 2007, Equistar shall submit to Illinois EPA an administratively complete application to modify its Title V permit for the Morris Facility (consistent with applicable requirements in 40 C.F.R. Part 70 or the Illinois-specific rules adopted and approved pursuant to Part 70) to incorporate the requirements of NSPS Subpart NNN. Equistar shall cooperate with Illinois EPA by promptly submitting to the agency all available information that the agency seeks following the agency's receipt of the application to modify the Title V permit.

E. COOLING SYSTEM LEAKS – PREVENTION, DETECTION, AND REPAIR – MORRIS, ILLINOIS FACILITY.

51. Duty to Comply. The elements that follow must be implemented at the Morris Facility and are in addition to, and do not supersede or supplant, any other requirements found in any other CAA regulation (*e.g.*, applicable NESHAP, SIP requirements). Equistar must comply with Section 218.986 of the Illinois State Implementation Plan for the Morris Facility by the Consent Decree Lodging Date.

52. Sampling and Analysis Plan.

a. For all cooling water systems that cool volatile organic liquids or gases (“VOM”), Equistar shall create or modify an existing Cooling Tower VOM Sampling and Analysis Plan (originally dated 3/1/2001 with revision dated 3/15/03) and any amendments directed by Illinois EPA such that the plan requires Equistar, at least three times per week, to perform cooling water sampling and VOM analysis of the sample's headspace.

b. To the extent that Equistar revises the Sampling and Analysis Plan during the term of the Consent Decree, Equistar shall submit a copy of any revision to the plan to both EPA and Illinois EPA.

F. FLARING – ALL COVERED FACILITIES.

53. **Good Air Pollution Control Practices.** Equistar currently owns and/or operates the Flaring Devices identified in Appendix 1 to this Consent Decree. On and after August 1, 2007, Equistar shall at all times and to the extent practicable, including during periods of startup, shutdown, upset and/or Malfunction, implement good air pollution control practices to minimize emissions from its Flaring Devices, in a manner consistent with the requirements imposed by 40 C.F.R. § 60.11(d).

54. **Monitoring.**

a. **Gas Chromatograph-Based Monitoring Systems.**

(1) Equistar currently monitors the Flaring Devices listed in Section I of Appendix 1 using a continuous gas chromatograph-based monitoring system with the ability to speciate the majority of the hydrocarbons in the material being measured (“GC-Based Monitoring System”). Except as provided herein, during the time period that the Consent Decree is in effect, Equistar shall continue to maintain and operate its GC-Based Monitoring Systems for each Flaring Devices in a manner consistent with good management practices.

(2) Equistar shall install and begin operating the GC-Based Monitoring System for each Flaring Device listed in Section II of Appendix 1 by no later than April 1, 2010.

b. Quality Assurance/Quality Control (“QA/QC”). To ensure effective performance and operation of each GC-Based Monitoring System, Equistar shall calibrate all equipment related to such system and perform preventative maintenance on all system equipment in accordance with manufacturer’s recommendations and equipment history based frequency.

c. Alternative Monitoring.

(1) Houston-Galveston SIP Area. Current GC-Based Monitoring Systems are required at the Channelview, Chocolate Bayou, and LaPorte facilities as part of the Texas Commission for Environmental Quality’s (“TCEQ”) Highly Reactive Volatile Organic Compound Rules (“HRVOC rules”). Equistar shall direct any modifications or alternative monitoring proposals for the flares listed in Section I of Appendix 1 for these facilities to TCEQ for approval.

(2) All Other Covered Facilities. Unless otherwise required by other regulations, Equistar may implement an alternative monitoring system at any other Covered Facility with the written approval of EPA and the appropriate Plaintiff-Intervener, provided that the alternative system is equivalent to the GC-Based Monitoring System required by this Consent Decree.

d. Reporting. As part of each Annual Report required under Section X,

Equistar shall provide EPA with:

(1) a status report on the implementation of the GC-Based Monitoring System at each Covered Facility during the time period covered by the Annual Report. For projects in the construction phase, Equistar shall provide a percentage of project completion.

(2) for GC-Based Monitoring Systems not subject to or required by the HRVOC rules, monitoring data gathered by the GC-Based Monitoring Systems at least twice each hour (or more frequently as determined by Equistar in consultation with EPA) during the time period covered by the Annual Report. Such data shall be provided in electronic format and annotated to identify equipment calibrations and any incorrect data;

(3) for GC-Based Monitoring Systems subject to or required by the HRVOC rules, data gathered for purposes of regulatory compliance with such rules shall be provided; and

(4) a list of any identified QA/QC problems that have occurred during the reporting period and the corrections and/or repairs initiated.

e. Additional Corrective Action to Qualify for Treatment Under “Effect of Settlement” Paragraph 151. If, during the first twelve (12) months after commencing GC-Based Monitoring at a Covered Facility, Equistar identifies a release that is unauthorized under federal,

regional, state or local air and release reporting laws, Equistar shall, within nine (9) months of identifying such release, take corrective action to either (i) eliminate the release; or (ii) submit a written request and obtain authorization for the release from the appropriate governmental authority if the release is unauthorized and will continue. Equistar shall have up to 2 years from the date of the written request to obtain authorization. Equistar shall include a summary of any corrective action taken pursuant to this Subparagraph 54.e. in its Annual Report.

55. **NSPS and NESHAP Compliance Methods for Flaring Devices**. For each Flaring Device used to comply with the applicable subparts of 40 C.F.R. Parts 60 and 63, Equistar shall comply with the NSPS Subpart A requirements. For purposes of demonstrating compliance with applicable exit velocity and net heating value limits, Equistar shall:

a. for each one-hour block period, calculate the average net heating value of the gas combusted in a flare according to the equation set out in 40 C.F.R. § 60.18(f)(3). Pilot gas must not be included in the determination of net heating value; and

b. for each one-hour block period, calculate the average actual exit velocity of the flare based on continuous flow rate, temperature, and pressure monitor data as set out in 40 C.F.R. § 60.18(f)(4).

56. **Minimization of Future Flaring Incidents**.

a. Training.

(1) To minimize the number of future Flaring Incidents and the amount emitted during such Flaring Incidents, Equistar shall implement enhanced

operator training for process technicians certified in Covered Facilities units with responsibilities for Tailchase Operations (Paragraph 57). Enhanced operator training shall, at a minimum, include initial training and knowledge assessment when each employee is first assigned relevant job responsibilities, followed by refresher training and knowledge assessment every three (3) years. Equistar shall revise its enhanced operator training, as necessary, to incorporate any good engineering practices identified as a result of Reportable Flaring Incidents (Subparagraph 56.b. below).

(2) Equistar shall maintain records (in either hard copy or electronic form) that document all training provided pursuant to this Subparagraph 56.a.

b. Reportable Flaring Incidents

(1) Root Cause Investigation and Corrective Action

- i. Except as provided in Subparagraph 56.b.(1).iv. below, Equistar shall, as specified by this Subparagraph 56.b.(1) and consistent with the requirements of 40 C.F.R. § 60.11(d), initiate a root cause investigation within twenty-four (24) hours to determine the cause of any Flaring Incident that results in the exceedance of any reportable quantity of any hazardous substance subject to federal or state regulation or the unauthorized release of ethylene or propylene in excess of 1000 pounds within a 24-hour period (“Reportable Flaring Incidents”).
- ii. Within forty-five (45) days after the Reportable Flaring Incident, Equistar shall complete the root cause investigation and take any corrective action necessary to prevent a recurrence of the Reportable Flaring Incident. Corrective action shall include, but is not limited to, interim and/or long-term measures that are consistent with good engineering practice and will minimize the recurrence of a Reportable Flaring Incident from the same root

cause and all significant contributing causes of that Reportable Flaring Incident. To the extent practicable, corrective action shall be completed within forty-five (45) days after the Reportable Flaring Incident.

- iii. The results of the root cause investigation shall be documented in a written report that includes, but is not limited to, an identification of the corrective action taken or to be taken and the schedule for completing such corrective action if it cannot be completed within forty-five (45) days after the Reportable Flaring Incident.
- iv. The requirements set out above in Subparagraphs 56.b.(1).i.-iii. shall not apply with respect to the following types of Reportable Flaring Incidents: (a) Reportable Flaring Incidents associated with planned startup and shutdown where emissions do not exceed the planned amount; and (b) Reportable Flaring Incidents where corrective action previously has been identified but not yet implemented.

(2) Reporting. Semi-annually (in each Annual Report (Section X)

and six (6) calendar months following the submission of each Annual Report), Equistar shall submit the following information to EPA for each Reportable Flaring Incident that occurred during the relevant six-month reporting period:

- i. a description of the Reportable Flaring Incident;
- ii. the date and time of the Reportable Flaring Incident;
- iii. identification of the types and amounts of pollutants flared during the Reportable Flaring Incident;
- iv. the location of or identification number of the Flaring Device at which the Reportable Flaring Incident occurred;
- v. the unit or department of the Covered Facility at which the Reportable Flaring Incident occurred;
- vi. the root cause and/or causal factors of the Reportable Flaring Incident;
- vii. a summary of the corrective actions taken; and

viii. if at the time of the Annual or Semi-Annual Report, corrective action is ongoing, a description of the current status of corrective action measures and the schedule for completing corrective action.

(3) Annual Review. Commencing on January 1, 2008, Equistar shall annually review all Reportable Flaring Incidents from all Covered Facilities that occurred in the preceding twelve (12) month period and their respective root causes and use such information to revise its enhanced operator training as provided by Subparagraph 56.a. above.

c. Reservation. Nothing in this Subsection V.F. (Flaring) shall be construed to limit the right of Equistar to take such corrective actions as it deems necessary and appropriate immediately following a Reportable Flaring Incident or in the period during preparation and review of any reports required under this Paragraph.

d. Stipulated Penalties for Flaring Incidents. Except as provided below, after August 1, 2007, if a Reportable Flaring Incident is a recurrence of the same Root Cause that has resulted in a previous Reportable Flaring Incident, Equistar shall be subject to stipulated penalties upon demand by EPA in accordance with the following stipulated penalty matrix:

Tons Emitted in Flaring Incident	Length of Time from Commencement of Flaring within the Flaring Incident to Termination of Flaring within the Flaring Incident is 3 hours or less	Length of Time from Commencement of Flaring within the Flaring Incident to Termination of Flaring within the Flaring Incident is greater than 3 hours but less than or equal to 24 hours	Length of Time of Flaring within the Flaring Incident is greater than 24 hours
5 Tons or less	\$500 per Ton	\$750 per Ton	\$1,000 per Ton
Greater than 5 Tons, but less than or equal to 15 Tons	\$1,200 per Ton	\$1,800 per Ton	\$2,300 per Ton, up to, but not exceeding, \$27,500 in any one calendar day
Greater than 15 Tons	\$1,800 per Ton, up to, but not exceeding, \$27,500 in any one calendar day	\$2,300 per Ton, up to, but not exceeding, \$27,500 in any one calendar day	\$27,500 per calendar day for each calendar day over which the Flaring Incident lasts

(1) For purposes of any Reportable Flaring Incidents involving the emission of VOCs or volatile organic materials (“VOMs”), the definition of VOCs or VOMs that is effective under relevant State law at the time of the Reportable Flaring Incident shall apply.

(2) For purposes of determining the amount of a hazardous substance, ethylene, or propylene emitted from a Flaring Device during a Reportable Flaring Incident, the Parties shall take into account the destruction removal efficiency (“DRE”) of such Flaring Device or any emission controls on such Flaring Device

as determined under relevant State law at the time of the Reportable Flaring Incident.

e. Offset for Civil Penalties Paid. Subject to the provisions in Subparagraphs 56.e.(1) – (4) below, if a State or local agency with authority to regulate emissions from a Covered Facility makes a penalty demand in connection with the recurrence of a Reportable Flaring Incident by commencing an enforcement action against Equistar for the same incident or Consent Decree violation, the amount of stipulated penalties owed by Equistar to Plaintiffs pursuant to Subparagraph 56.d. for a particular recurrence of a Reportable Flaring Incident may be offset, in whole or in part, by the amount Equistar pays to a State or local agency for the same Reportable Flaring Incident. For example, if the amount of penalties paid to a State or local agency equals or exceeds the amount of stipulated penalties to which Plaintiffs would be entitled pursuant to Subparagraph 56.d., Plaintiffs will not seek any stipulated penalties for the same Reportable Flaring Incident.

(1) For purposes of this Subparagraph 56.e., “commencing an enforcement action” shall mean the issuance of a notice of enforcement, notice of violation, administrative consent order, order on consent or the formal initiation of an administrative or judicial enforcement proceeding concerning such Reportable Flaring Incident.

(2) In the event that a State or local agency with authority to regulate emissions from a Covered Facility commences an enforcement action against Equistar in connection with the recurrence of a Reportable Flaring Incident, any

demand by Plaintiffs for stipulated penalties under Subparagraph 56.d. below, shall be deferred until such enforcement action is resolved or until eighteen (18) months after the Reportable Flaring Incident that gives rise to stipulated penalties under this Consent Decree, whichever occurs earlier.

(3) To the extent that Equistar seeks an offset, in whole or in part, of stipulated penalties demanded by Plaintiffs, Equistar shall bear the burden of (a) identifying the potential for an offset; (b) notifying Plaintiffs of the potential for an offset; and (c) providing Plaintiffs with documentation of civil penalties owed or paid to the State or local agency making the penalty demand.

(4) This offset provision only applies to stipulated penalties under the Consent Decree and does not affect or limit the Plaintiffs' relief if such incident is pursued as a separate enforcement action.

G. ADDITIONAL FLARE MINIMIZATION PROJECTS.

57. Olefins Flare Minimization During Startup and Shutdown (“Tailchase Operations”).

a. Equistar shall install, operate and maintain the following equipment at the following facilities in accordance with the schedule set out in Subparagraph 57.b. below:

(1) Chocolate Bayou Facility: In order to minimize flaring during olefins unit startups, Equistar shall install piping to recycle propylene and ethylene back to the Deethanizer inlet. In order to minimize flaring during olefins

unit shutdowns, Equistar shall install piping to recycle methane purges back to the Charge Gas Compressor suction.

(2) Channelview Facility: In order to minimize flaring during olefins unit startups, Equistar shall install piping to recycle propylene and ethylene back to the Deethanizer inlet. In order to minimize flaring during olefins unit shutdowns, Equistar shall install piping to recycle methane purges back to the Charge Gas Compressor suction.

(3) Clinton Facility: In order to minimize flaring during olefins unit startups, Equistar shall install piping to recycle Deethanizer Overhead or Acetylene Converter outlet flows back to the front end – either to the Furnaces or the Charge Gas Compressor suction. In order to minimize flaring during olefins unit shutdowns, Equistar shall install piping to recycle methane purges back to the Charge Gas Compressor suction.

(4) Corpus Christi Facility: In order to minimize flaring during olefins unit startups, Equistar shall install piping to recycle propylene and ethylene back to the Deethanizer inlet. In order to minimize flaring during olefins unit shutdowns, Equistar shall install piping to recycle methane purges back to the Charge Gas Compressor suction.

(5) LaPorte Facility: In order to minimize flaring during olefins unit startups, Equistar shall install piping to recycle propylene and ethylene back to the Deethanizer inlet. In order to minimize flaring during olefins unit shutdowns,

Equistar shall install piping to recycle methane purges back to the Charge Gas Compressor suction.

(6) Morris Facility: In order to minimize flaring during olefins unit startups, Equistar shall install piping to recycle Deethanizer Overhead or Acetylene Converter outlet flows back to the front end – either to the Furnaces or the Charge Gas Compressor suction. In order to minimize flaring during olefins unit shutdowns, Equistar shall install piping to recycle methane purges back to the Charge Gas Compressor suction.

b. Equipment Installation Schedule.

(1) Except as provided in Subparagraph (2) below, Equistar shall complete the installation of the equipment described in Subparagraph 57.a. above and begin using such equipment during all planned startups and shutdowns where practicable at each Covered Facility in accordance with the following schedule:

- i. Channelview and Morris Facilities: No later than December 31, 2008;
- ii. Clinton and LaPorte Facilities: No later than December 31, 2009; and
- iii. Chocolate Bayou and Corpus Christi Facilities: No later than December 31, 2010.

(2) If the planned turnaround at the Chocolate Bayou Facility at which time the equipment described in Subparagraph 57.a.(1) will be installed is delayed until 2012, the implementation schedule for the Chocolate Bayou Facility shall

become December 31, 2012, provided that Equistar notifies EPA in writing of the delay at least ninety (90) days prior to December 31, 2010.

c. Reporting. As part of each Annual Report (Section X), Equistar shall provide EPA with a list of planned startups and shutdowns during which the equipment described in Subparagraph 57.a. above was used at the Covered Facilities during the twelve (12) month period covered by such Annual Report.

58. **East Plant Butadiene Project at Channelview Facility**. By no later than August 1, 2007, Equistar shall install and begin operating a chilled water condenser on the suction line of the vent compressor C-3005 to minimize flaring at the Channelview Facility. Equistar shall maintain and operate the chilled condenser in a manner consistent with good management practices.

59. **Thermal Oxidizer at La Porte Facility**. Equistar installed a thermal oxidizer at the La Porte Facility on May 21, 2006. By no later than Date of Lodging, Equistar shall maintain and operate the thermal oxidizer to minimize vinyl acetate emissions from the polymer section in a manner consistent with good management practices.

60. **Flare Tip at Morris Facility**. Equistar installed a new flare tip on the Olefins Flare (11MEU801) in or around November 2004. By no later than the Date of Lodging, Equistar shall maintain and operate the new flare tip to minimize emissions from that flare in a manner consistent with good management practices.

VI. COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT (“CERCLA”) AND EMERGENCY PLANNING AND EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT (“EPCRA”)

A. REVISIONS TO SPILL/RELEASE REPORTING POLICY.

61. By no later than October 1, 2007, Equistar shall revise its spill/release reporting system to ensure compliance with applicable requirements of Section 103(a) of CERCLA, 42 U.S.C. § 9603(a), and Section 304 of EPCRA, 42 U.S.C. § 11004 and to provide for the following:

a. Each emergency release notification shall identify:

(1) the date(s) and time(s) that the following entities (to the extent required by law) are orally notified of an emergency release of a reportable quantity: the National Response Center (“NRC”); the appropriate State Emergency Response Commission (“SERC”); and the appropriate Local Emergency Planning Committee (“LEPC”);

(2) the date(s) that written, follow-up reports are sent to the SERC and the LEPC; and

(3) the time when knowledge of the release of a reportable quantity is determined by the facility.

b. The spill/release reporting system shall:

(1) include the telephone numbers and contact names of the individual contacted at the NRC, SERC, and LEPC;

(2) require reporting of reportable quantity releases immediately upon knowledge of exceeding the reportable quantity; and

(3) require the submission of the written follow-up report as soon as practicable after providing the release notification to the SERC and the LEPC.

62. **Incident Investigation and Corrective Action.** For each reportable quantity release of a hazardous substance or extremely hazardous substance, Equistar shall initiate a root cause investigation within twenty-four (24) hours of reporting the release to determine the cause of the release. Within forty-five (45) days after reporting the release, Equistar shall complete the root cause investigation and take any corrective action necessary to prevent a recurrence of a release. To the extent practicable, corrective action shall be completed within forty-five (45) days after the notification of the release. The results of the root cause investigation shall be documented in a written report that includes, but is not limited to, an identification of the corrective action taken or to be taken and the schedule for completing such corrective action if it cannot be completed within forty-five (45) days after the notification of the release.

63. **Training.** By no later than October 1, 2007, Equistar shall review and, if necessary, revise its training procedures to make certain that all employees with any responsibility for emergency release reporting are adequately trained to ensure compliance with CERCLA Section 103, EPCRA Section 304, and EPCRA Section 313, 42 U.S.C. § 11023.

64. **Toxic Release Inventory Reporting.** By no later than August 15, 2007, Equistar shall undertake the following measures:

a. Evaluate the types and quantities of chemicals stored onsite at each Covered Facility. This evaluation shall include a Material Safety Data Sheet (“MSDS”) review to determine whether any Toxic Release Inventory (“TRI”) chemicals subject to EPCRA Section 313 are manufactured, processed or otherwise used onsite in quantities greater than applicable thresholds but have not been included in TRI reports.

(1) For any TRI chemical identified by Equistar as being manufactured, processed or otherwise used onsite in a quantity greater than an applicable TRI threshold but for which TRI reporting has not been made, Equistar shall submit the appropriate TRI form to the EPCRA Section 313 reporting center, the appropriate EPA Regional Office, and the appropriate State office within 90 days after determining that the chemical is subject to TRI reporting.

(2) As part of the first Annual Report (Section X) after completing this evaluation, Equistar shall submit a written report to EPA summarizing the findings from the evaluation.

b. Develop a standardized procedure for calculating the types and quantities of chemicals stored at or released from each Covered Facility (the “Olefins TRI Procedure”). By no later than September 15, 2007 and by no later than July 31st of each year thereafter, employees with responsibility for TRI reporting at each Covered Facility shall meet to review the Olefins TRI Procedure and compare lists of chemicals reported, types and quantities of releases reported, and calculation methods used. Equistar shall investigate any discrepancies identified

through this comparison. To the extent that Equistar identifies any inaccuracies in TRI reports through this comparison, Equistar shall promptly correct such reports.

c. Determine whether:

(1) the presence of any chemicals identified as a result of the evaluation undertaken pursuant to Subparagraph 64.a. above triggers any other reporting obligations under EPCRA Section 313 or other federal statutes;

(2) Equistar's procedures for detecting reportable releases under CERCLA Section 103 and EPCRA Section 304 are adequate to insure timely and accurate reporting; and

(3) Equistar's procedures for calculating thresholds and releases for purposes of EPCRA Section 313 are adequate to insure accurate and timely reporting.

65. Equistar shall be liable for payment of stipulated penalties under Paragraph Subparagraph 124.h. for failure to revise Equistar's spill/release reporting policy as required by Paragraph 61 or to correct a TRI report to the extent required by Subparagraph 64.b.

VII. CLEAN WATER ACT – ALL COVERED FACILITIES

A. INCIDENT INVESTIGATION AND CORRECTIVE ACTION.

66. Within twenty-four (24) hours after discovering an exceedance of an applicable NPDES permit limit ("permit exceedance") has occurred, Equistar shall initiate a root cause investigation to determine the cause of the permit exceedance. Within forty-five (45) days after

discovery of the permit exceedance, Equistar shall complete the root cause investigation and take any corrective action necessary to prevent a recurrence of the permit exceedance. To the extent practicable, corrective action shall be completed within forty-five (45) days after the discovery of the permit exceedance. The results of the root cause investigation shall be documented in a written report that includes, but is not limited to, an identification of any corrective action taken or to be taken and the schedule for completing such corrective action if it cannot be completed within forty-five (45) days after discovery of the permit exceedance.

B. REVIEWS OF OPERATIONS CONTRIBUTING WASTEWATER TO EFFLUENT AND TREATMENT UNITS.

67. All Covered Facilities (Except for Channelview).

a. By no later than October 1, 2007, Equistar shall conduct a review of operations contributing wastewater to the effluent and treatment units at each Covered Facility, except for the Channelview Facility. The reviews shall be conducted for the purposes of updating NPDES permit application line drawing and average flows and treatment information in accordance with 40 C.F.R. § 122.21(g)(2) and 40 C.F.R. § 122.21(g)(3), respectively.

b. Within ninety (90) days after completion of the review, Equistar shall update the line drawings and average flows and treatment information for each Covered Facility.

c. Within thirty (30) days after completion of the updated line drawings and average flows and treatment information, Equistar shall submit updated information to the appropriate NPDES permitting authority for each Covered Facility, as necessary and appropriate.

d. As part of the first Annual Report (Section X) due after completion of the updated line drawings and average flows and treatment information, Equistar shall notify EPA in writing that each review was completed and the line drawings and average flows and treatment information were updated for each Covered Facility, as necessary and appropriate.

68. **Channelview Facility.**

a. Within ninety (90) days after the completion of the Channelview Wastewater Project described in Subsection VII.F. below, Equistar shall conduct a review of operations contributing wastewater to the effluent and treatment units at the Channelview Facility. The review shall be conducted for the purposes of updating NPDES permit application line drawing and average flows and treatment information in accordance with 40 C.F.R. § 122.21(g)(2) and 40 C.F.R. § 122.21(g)(3), respectively.

b. Within ninety (90) days after completion of the review, Equistar shall update the line drawings and average flows and treatment information for the Channelview Facility.

c. Within thirty (30) days after completion of the updated line drawings and average flows and treatment information, Equistar shall submit updated information to the appropriate NPDES permitting authority for the Channelview Facility, as necessary and appropriate.

d. As part of the first Annual Report (Section X) due after completion of the updated drawings and average flows and treatment information, Equistar shall notify EPA that

the review was completed and the line drawings and average flows and treatment information were updated for the Channelview Facility, as necessary and appropriate.

C. SAMPLING AND ANALYSIS AUDITS AT ALL COVERED FACILITIES.

69. Initial Sampling Audits.

a. By no later than August 1, 2008, Equistar shall conduct an Initial Sampling Audit at each Covered Facility that has a NPDES Permit. Each Initial Sampling Audit shall include, but is not limited to, an evaluation of sampling procedures, sample preservation, storage of samples, holding times of the samples, documentation of the sampling and chain of custody.

b. Each Initial Sampling Audit shall be conducted by Independent Auditors or, at Equistar's election, by third-party auditors. As part of the first Annual Report (Section X) due after completion of each Initial Sampling Audit, Equistar shall (1) submit the results of each Initial Sampling Audit to EPA and (2) document that any deficiencies found during the Initial Sampling Audits have been corrected or provide a schedule by which such deficiencies will be corrected.

70. Periodic Sampling Audits.

a. Equistar shall conduct Periodic Sampling Audits at each Covered Facility at least once every three (3) years during the term of this Consent Decree. Each Periodic Sampling Audit shall include, but is not limited to, an evaluation of sampling procedures, sample preservation, storage of samples, holding times of the samples, documentation of the sampling and chain of custody.

b. Each Periodic Sampling Audit shall be conducted by Independent Auditors or, at Equistar's election, third-party auditors.

c. As part of the first Annual Report (Section X) due after completion of each Periodic Sampling Audit, Equistar shall (1) submit the results of each Periodic Sampling Audit to EPA and (2) document that any deficiencies found during the Periodic Sampling Audits have been corrected or provide a schedule by which such deficiencies will be corrected.

D. USE OF NELAP ACCREDITED LABORATORIES.

71. To ensure that proper analytical and quality control procedures are followed for NPDES samples, by no later than January 1, 2008, Equistar shall ensure that any commercial laboratories that it uses for CWA compliance purposes are accredited by NELAP under the CWA to analyze such samples during the term of this Consent Decree.

72. By no later than January 1, 2008, Equistar shall submit to EPA:

a. a list of NELAP accredited commercial laboratories being used for CWA sample analysis and the corresponding Equistar Covered Facility for which each laboratory is conducting the analysis; and

b. documentation that the commercial laboratories used by each Covered Facility are NELAP accredited for each parameter analyzed for purposes of determining compliance with each Covered Facility's NPDES permit.

E. SPCC COMPLIANCE VERIFICATION.

73. Equistar shall conduct a program to verify and provide adequate secondary containment for bulk storage containers of petroleum oil in accordance with 40 C.F.R. Part 112 as specified below. The terms “bulk storage container” and “petroleum oil” shall have the meanings ascribed to them by 40 C.F.R. § 112.2.

74. At each Covered Facility subject to Spill Prevention, Control and Countermeasure requirements under 40 C.F.R. § 112.1, Equistar shall, by no later than October 1, 2007, determine:

a. the secondary containment capacity for each bulk storage container of petroleum oil with an individual capacity of fifty-five (55) gallons or greater; and

b. whether all bulk storage containers of petroleum oil identified Subparagraph 74.a. are constructed with a secondary means of containment for the entire capacity of the largest single container in the containment area plus sufficient freeboard to contain precipitation, as required under 40 C.F.R. § 112.8(c)(2).

75. Secondary Containment Plan.

a. For all bulk storage containers of petroleum oil identified pursuant to Subparagraph 74.b. above as lacking adequate secondary means of containment for the entire capacity of the largest single container in the containment area plus sufficient freeboard to contain precipitation, Equistar, by no later than January 1, 2008, shall develop and submit to EPA a plan (the “Secondary Containment Plan”) to provide adequate secondary containment, as required by 40 C.F.R. § 112.8(c)(2).

b. The Secondary Containment Plan shall include, but is not limited to:

(1) a list, by each Covered Facility subject to SPCC requirements, of all bulk storage containers of petroleum oil without adequate secondary containment;

(2) the storage capacity of each bulk storage containers lacking adequate secondary containment;

(3) the total secondary containment capacity of the bulk storage containers available at each Covered Facility subject to SPCC requirements as determined at the time the Secondary Containment Plan is developed; and

(4) a schedule for providing adequate secondary containment for all bulk storage containers at each Covered Facility subject to SPCC requirements.

c. By no later than July 1, 2009, Equistar shall complete implementation of the Secondary Containment Plan.

d. By no later than July 1, 2009, Equistar shall notify EPA in writing that it has completed implementation of the Secondary Containment Plan and that all bulk storage containers of petroleum oil at each Covered Facility subject to SPCC requirements have a secondary means of containment for the entire capacity of the largest single container in the containment area plus sufficient freeboard to contain precipitation.

e. By no later than September 1, 2009, Equistar shall, for each Covered Facility subject to SPCC requirements, amend each facility's SPCC Plan, as required under 40

C.F.R. § 112.5, to reflect any facility changes made as a result of implementing the Secondary Containment Plan.

F. CHANNELVIEW WASTEWATER PROJECT.

76. In order to minimize air emissions associated with wastewater management and better manage stormwater at the Channelview Facility, Equistar shall upgrade the existing wastewater treatment facility (“Channelview Wastewater Project”) by undertaking the following:

- a. installation of a wastewater stripper system for VOC controls on wastewater from the Hydrocarbons and Utilities areas;
- b. installation of a Corrugated Plate Interceptor (“CPI”) vent recovery system in the Olefins area;
- c. installation of a stormwater segregation system; and
- d. installation of an ECU system (including a new aboveground aeration tank biotreatment system).

77. **Implementation Schedule.**

- a. Equistar installed and began operating the wastewater stripper for VOC controls on wastewater in or around January 2006.
- b. Equistar shall install and begin operating the CPI vent recovery system in the Olefins area on or before April 30, 2008.

c. All other equipment related to the Channelview Wastewater Project shall be completed and operational by no later than April 30, 2008.

78. **Detailed Project Description.**

a. The purpose of the installation of a wastewater stripper system for VOC controls on wastewater from the Hydrocarbons and Utilities areas and the installation of the CPI vent recovery system in the Olefins areas is to improve controls on VOC emissions associated with existing wastewater streams generated by various process operations at the Channelview North Plant. The scope of these improvements generally involves: (i) routing previously uncontrolled wastewater streams containing various concentrations of VOCs to a new wastewater steam stripper; (ii) constructing a redundant steam stripper to ensure uninterrupted treatment of designated streams during steam stripper maintenance activities; and (iii) replacing existing carbon canister treatment of CPI Vents in Olefins with a system that captures these vents and conveys them to the Olefins Steam Superheaters for destruction. Equistar was granted authorization to construct under 30 TAC 116.617 - Standard Permit for Pollution Control Projects. These improvements will result in a significant reduction in VOC emissions and a reduction in odors.

b. The purpose of the installation of the stormwater segregation system and an ECU system (including a new aboveground aeration tank biotreatment system) is to segregate stormwater and wastewater collection and conveyance systems and eliminate wastewater treatment in existing earthen aeration basins. The scope of these improvements generally involves: (i) modifying existing and constructing new stormwater and process wastewater

collection, conveyance and transfer systems throughout the Facility to ensure stormwater and process wastewater segregation; and (ii) installing aboveground aeration and clarification tank systems and associated pumps, piping, electrical and instrumentation in place of the closed earthen aeration basins. Equistar was granted authorization to construct under 30 TAC 116.617 - Standard Permit for Pollution Control Projects. In addition, Equistar notified the Texas Commission on Environmental Quality and obtained a Major Amendment to the Facility's Texas Pollutant Discharge Elimination System ("TPDES") permit. These improvements have the following benefits: (i) reduced VOC emissions from maintenance activities in the East Plant; (ii) improved efficiency and effectiveness of the aerobic treatment process, thereby reducing VOC emissions from the biotreatment process; (iii) enhanced compliance with RCRA land disposal restrictions regulations; (iv) improved systems for segregating stormwater from process water; (v) improved integrity, operability and reliability of the wastewater and stormwater collection, conveyance and transfer systems; and (vi) reduced flooding in the operating areas during high intensity rain events.

VIII. RESOURCE CONSERVATION AND RECOVERY ACT ("RCRA")

A. HAZARDOUS WASTE IDENTIFICATION.

79. Equistar shall perform the activities set out below to ensure that all hazardous waste streams at the Covered Facilities have been properly identified and documented as required pursuant to 40 C.F.R. Part 262.

a. By no later than January 1, 2008, Equistar shall submit a plan to EPA to track all solid waste streams at the Covered Facilities (the "RCRA Tracking Plan"). The RCRA Tracking Plan shall include procedures to accomplish the following:

(1) for each hazardous waste generated at a Covered Facility, identify whether the hazardous waste determination was made using analytical data or process knowledge;

(2) identify all applicable hazardous waste codes that apply to each individual hazardous waste stream;

(3) identify each new solid waste stream generated at a Covered Facility by making a hazardous waste determination and provide EPA with the results of such hazardous waste determination as part of each Annual Report required under Section X; and

(4) maintain all documentation of all hazardous waste determinations as required by 40 C.F.R. Part 262, including, but not limited to, documenting hazardous waste determinations using process knowledge.

b. By no later than January 1, 2008, Equistar shall fully implement the RCRA Tracking Plan. In its first Annual Report, Equistar shall notify EPA in writing that the RCRA Tracking Plan has been fully implemented and Equistar is in full compliance with the RCRA Tracking Plan.

B. SURFACE IMPOUNDMENTS.

80. Except for the surface impoundments at the Channelview Facility that will be closed pursuant to Paragraphs 91-93 of this Consent Decree, Equistar, by no later than June 30, 2008, shall identify all onsite or offsite surface impoundments that received or continued to

receive wastewater streams generated by each Covered Facility subsequent to the Consent Decree Lodging Date.

81. For each surface impoundment identified pursuant to Paragraph 80, Equistar shall:

a. identify all solid and hazardous waste streams generated by Equistar facilities that discharge into the impoundment;

b. perform a hazardous waste determination for each waste stream in accordance with 40 C.F.R. Part 262;

c. document each hazardous waste determination; and

d. submit to EPA the documentation for each hazardous waste determination as part of the first Annual Report due subsequent to June 30, 2008.

C. THIRD PARTY AUDITS.

82. Equistar shall retain a third party to conduct an audit at each Covered Facility to determine compliance with the hazardous waste determination requirements of 40 C.F.R. Part 262 and Paragraphs 79-81 above.

83. Equistar shall complete the audit at each Covered Facility by no later than July 1, 2008.

84. As part of the first Annual Report (Section X) due after completion of the audit, Equistar shall provide a written report to the EPA with the audit findings for the Covered Facilities and a proposed plan and schedule for correcting deficiencies at each Covered Facility.

85. EPA and the applicable Plaintiff-Intervener shall have an opportunity to comment on the proposed plan and schedule for correcting deficiencies; provided, however, that any comments shall be submitted to Equistar for consideration by no later than sixty (60) days after receipt of Equistar's proposed plan and schedule. Equistar shall revise the proposed plan to incorporate EPA's and/or the applicable Plaintiff-Intervenors' comments to the extent necessary and appropriate. If the Parties cannot agree on the content of the plan, EPA shall be entitled to invoke dispute resolution pursuant to Section XVI of this Decree.

86. By no later than the second Annual Report (Section X) due after completion of the audit, Equistar shall submit a written report confirming that all deficiencies identified by the audit have been corrected in accordance with the approved plan.

D. POTENTIAL OFFSITE RELEASES.

87. For each Covered Facility that is not subject to RCRA corrective action as of August 1, 2007, Equistar shall determine the potential for offsite migration of contaminants in accordance with Paragraphs 88-90 below.

88. Site History Report.

a. By no later than January 1, 2008, Equistar shall develop a Site History Report for each Covered Facility. The Site History Report shall contain the following information:

(1) a summary of the prior known use of the property that could indicate the potential for offsite migration (including, but not limited to, information regarding prior manufacturing processes, operating units, waste disposal or other information that could indicate subsurface contamination); and

(2) descriptions of site topography and surrounding area receptors.

b. In the event that information described in Subparagraph 88.a. is already compiled in an investigation report (*e.g.*, RCRA Facility Investigation Report, Affected Property Assessment Report, Site Investigation Report), and that Equistar notifies EPA as part of the Annual Report that the investigation report still accurately reflects site conditions, such investigation report shall satisfy the requirement to develop a Site History Report. Equistar shall identify to EPA the name of the investigation report that meets the requirements of this Subparagraph 88.b.

89. **Hydrogeology Study and Report.**

a. If the Site History Report for a Covered Facility indicates the potential for offsite migration of contamination, Equistar, by no later than December 31, 2008, shall undertake a Hydrogeology Study to quantify the potential for offsite migration of contamination. The primary objective of the Hydrogeology Study is to detect the nature and extent of contamination and risk of migration.

b. In the event that information described in Subparagraph 89.a. is already compiled in an investigation report (*e.g.*, RCRA Facility Investigation Report, Affected Property

Assessment Report, Site Investigation Report) and that Equistar notifies EPA as part of the Annual Report that the investigation report still accurately reflects the potential for offsite migration of contamination, such investigation report shall satisfy the requirement to undertake a Hydrogeology Study. Equistar shall identify to EPA the name of the report that meets the requirements of this Subparagraph 89.b.

c. Within 180 days after completing the Hydrogeology Study, Equistar shall prepare and maintain a written Hydrogeology Report summarizing the findings from the Hydrogeology Study.

90. **Groundwater Monitoring**. If the Hydrogeology Study determines that there is offsite migration or the potential for offsite migration of contamination, Equistar, by no later than December 31, 2009, shall develop and implement a Groundwater Monitoring Program. The Groundwater Monitoring Program shall be based on the installation of groundwater monitoring wells at locations and depths determined as appropriate from the Site Hydrogeology Report or other appropriate investigative reports.

E. ADDITIONAL COMPLIANCE PROGRAM REQUIREMENTS APPLICABLE TO CHANNELVIEW.

91. **East Aeration Basin – Closure**. By no later than April 30, 2008, Equistar shall cease the use of the East Aeration Basin for the treatment of wastewater. Equistar shall subsequently close the East Aeration Basin in accordance with the Texas Risk Reduction Program (“TRRP”), as codified at 30 T.A.C. Chapter 335.

92. **Equalization Basin – Closure.** By no later than April 30, 2008, Equistar shall cease to use and subsequently close the Equalization Basin in accordance with the TRRP.

93. **OP-I and OP-II Aeration Basins – Closure.** By no later than April 30, 2008, Equistar shall cease to use the OP-I and OP-II Aeration Basins for the treatment of wastewater. Equistar shall subsequently close the OP-I and OP-II Aeration Basins in accordance with the applicable closure plans in the Hazardous Waste Permit No. HW-50117.

94. **Minimization of Benzene Waste Discharges.** In order to minimize discharges of benzene waste to the East Aeration Basin, OP-I and OP-II between August 1, 2007, and April 30, 2008, Equistar shall implement operational procedures that include preventative sampling and response to any sampling analysis that indicates the potential for benzene waste to be discharged into one or more of the basins. Equistar shall summarize the actions that have been taken under this Paragraph 94 as part of the first Annual Report due subsequent to January 1, 2008.

IX. ENVIRONMENTAL MANAGEMENT SYSTEM (“EMS”)

A. EMS IMPLEMENTATION.

95. Equistar shall implement an Environmental Management System (EMS) in accordance with the standard set out in Appendix 2 (the “EMS Standard”).

96. Equistar shall conduct a Gap Analysis at each Covered Facility by no later than July 1, 2008. The Gap Analysis will show which elements of the EMS have been implemented and those still requiring implementation. The Gap Analysis for each Covered Facility shall be sent to the EPA by no later than October 1, 2008.

97. Equistar shall fully implement all aspects of the management systems and procedures set out in the EMS Standard at all Covered facilities by no later than January 1, 2009.

98. Equistar shall collect and report data on the Environmental Metrics listed in Paragraph 106 for each Covered Facility on an annual basis. Equistar shall submit these Environmental Metrics data as part of each Annual Report (Section X) submitted to EPA.

B. EMS AUDITING PROVISIONS

99. Equistar shall conduct an EMS Audit at each Covered Facility to assess whether an effective EMS has been implemented.

100. By no later than October 1, 2008, Equistar shall submit an Audit Plan to EPA to conduct the EMS Audits at the Covered Facilities. The Audit Plan shall include a schedule for conducting each EMS Audit and identify the Audit Team Leader and EMS Audit Team members for each EMS Audit. Equistar shall select EMS Audit Team members and the Audit Team Leader for each EMS Audit according to the criteria set out in ISO 19011 (First edition, 2002-10-01) incorporated by reference and made enforceable under this Consent Decree. EMS Audit Teams shall consist of at least two Independent Auditors; provided, however, that each Audit Team shall be of a sufficient size to adequately cover the scope of the audit and the size and complexity of the Covered Facility being audited. Equistar shall notify EPA of any changes from the schedule or changes in identified EMS Audit Team members outlined in the Audit Plan at least ten (10) days before the commencement of each on-site portion of an EMS Audit.

101. EPA and the applicable Plaintiff-Intervener (if any) shall each be allowed to send one representative to observe the EMS Audit at each Covered Facility, provided that the

observers do not interfere with activities required to conduct the EMS Audit or attempt to influence the independent judgment of the EMS Audit Team. At least thirty (30) days prior to a scheduled EMS Audit, EPA and the applicable Plaintiff-Intervener (if any) shall provide Equistar with the name(s) of the individual(s) who will observe.

102. An EMS Audit at each Covered Facility shall be completed between January 1, 2009, and October 1, 2009.

103. Each EMS Audit shall provide for an evaluation of the adequacy of EMS implementation relative to the EMS Standard, from top management down, throughout each major organizational unit at the Covered Facilities, and to identify Areas of Concern. Each EMS Audit shall be conducted in a manner consistent with ISO 19011 (First edition, 2002-10-01). During each EMS Audit, each EMS Audit Team shall assess conformance with the requirements set out in the EMS Standard and shall determine the following:

- a. whether there is a defined system, subsystem, program, or planned task for the respective EMS element;
- b. to what extent the system, subsystem, program, or task has been implemented and is being maintained;
- c. the adequacy of each operation's internal self-assessment procedures for programs and tasks composing the EMS;
- d. whether Equistar is effectively communicating regulatory requirements to affected parts of the organization, contractors, and on-site service providers;

e. whether further improvements should be made to the EMS to conform to the EMS Standard;

f. whether there are observed deviations from Equistar's written requirements or procedures; and

g. whether continual improvement is occurring.

104. **Facility EMS Audit Reports.** Within sixty (60) days following the completion of each EMS Audit, the EMS Team conducting such audit shall prepare an EMS Audit Report. Each EMS Audit Report shall present the Audit Findings and shall contain the following information:

a. the audit's scope, including the period of time covered by the audit;

b. the date(s) the on-site portions of the audit were conducted;

c. the identification of Audit Team members for each Covered Facility;

d. the identification of the regulatory agency representatives (if any)

observing the audit;

e. the distribution for the Covered Facility's EMS Audit Report;

f. a summary of the audit process, including any obstacles encountered;

g. detailed audit findings, including the basis for each finding and each area of concern identified;

h. identification of any audit findings corrected, or Areas of Concern addressed, during the audit and a description of the corrective measures and when they were implemented; and

i. certification by the EMS Audit Team that the EMS Audit was conducted in accordance with the provisions Paragraph 100 above.

Equistar shall submit a copy of each EMS Audit Report to EPA as part of the Annual Report (Section X) due after completion of each EMS Audit Report.

105. **Follow-Up Corrective Measures: Facility Audit Response and Action Plan.**

Equistar shall develop and submit to EPA a response to each EMS Audit Report (the “Facility Audit Response and Action Plan”) as part of the Annual Report (Section X) due after completion of each EMS Audit Report. The Facility Audit Response and Action Plan shall provide (1) a response to the findings and Areas of Concern identified in each EMS Audit Report and (2) an action plan for bringing the applicable Covered Equistar Facility into full conformance with the EMS Standard and fully addressing all Areas of Concern. The Facility Audit Response and Action Plan shall include the results of any root cause analysis, specific deliverables, responsibility assignments, and an implementation schedule for the identified actions and measures, including those that may have already been completed.

106. **Environmental Metrics Data.** During the time period that the Consent Decree is in effect, Equistar shall collect and report to EPA environmental metrics data for purposes of assessing the impacts of EMS implementation at the Covered Facilities.

a. Data To Be Collected. Equistar shall document each incident that (1) involves a release of a hazardous or extremely hazardous substance into the environment in an amount that equals or exceeds a reportable quantity (“RQ”) established by a federal or State agency; or (2) results in a release or discharge from a permitted or authorized emission or discharge point in excess of a permitted or otherwise authorized level.

b. Data Reporting. As part of each Annual Report (Section X), Equistar shall submit the following information for the calendar year covered by such Annual Report: (1) total number of incidents, identified by type of incident specified in Subparagraph 106.a., for each Covered Facility during each month, quarter and year; and (2) the date of each incident.

X. GENERAL RECORDKEEPING AND REPORTING REQUIREMENTS

107. Record Retention. Equistar shall preserve and retain records and documents that demonstrate Equistar’s compliance with the requirements of this Consent Decree until termination of this Consent Decree, unless other regulations require the records to be maintained longer, or unless otherwise agreed between Equistar and the applicable Plaintiffs.

108. Annual Report and Certification.

a. Annual Report Schedule and Content. During the time period that the Consent Decree is in effect, Equistar shall submit an annual report (“Annual Report”) to EPA and the applicable Plaintiff-Intervenors by no later than April 1st of each year. To the extent required by the following Consent Decree provisions, each Annual Report shall contain information relating to the preceding twelve (12) month calendar year period:

(1) Subparagraphs 20.b. (ODS Audit Reports) and 22.g. (list of chronically leaking units replaced) (Protection of Stratospheric Ozone provisions);

(2) Paragraph 35 (Benzene Waste NESHAP Recordkeeping and Reporting Requirements);

(3) Paragraph 48 (Leak Detection and Repair Recordkeeping and Reporting Requirements);

(4) Subparagraphs 54.d. and e. (Implementation of GC-Based Monitoring Systems and Corrective Action), 56.b.(2) (Reportable Flaring Incidents), and 57.c. (Tailchase Operations);

(5) Subparagraphs 64.a.(2) (TRI Evaluations under EPCRA);

(6) Paragraph 67 (CWA reviews and audits for all Covered Facilities except Channelview), Paragraph 68 (CWA reviews and audits for Channelview), Subparagraph 69.b. (CWA Initial Sampling Audits), and Subparagraph 70.c. (CWA Periodic Sampling Audits);

(7) Subparagraphs 79.a.(3) and b. (RCRA Tracking Plan), Subparagraph 81.d. (Surface Impoundments), Paragraphs 84 and 86 (Third Party Audits), Subparagraphs 88.b. and 89.b. (Site History and Hydrogeology Reports), Paragraph 94 (Minimization of Benzene Waste Discharges);

(8) Paragraphs 98 and 106 (EMS Environmental Metrics Data), 104 (EMS Audit Reports), and 105 (Follow-Up Corrective Measures: Facility Audit Response and Action Plan); and

(9) Paragraphs 117.c. and 122 (SEP and PCEP Report).

b. Certification. Equistar's Annual Report shall contain the following certification and shall be signed by a plant manager, a corporate official responsible for plant management or a corporate official responsible for environmental management and compliance at the Covered Facilities covered by the report:

I certify under penalty of law that this information [related to _____ Covered Facilities] was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my directions and my inquiry of the person(s) who manage the system, or the person(s) directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete.

Each such report and certification shall be reviewed and initialed by a corporate official at the vice presidential level or higher. If the signatory is such an official, the report and certification may be peer-reviewed and initialed.

109. **Semi-Annual Report.** During the time period that the Consent Decree is in effect, Equistar shall submit a semi-annual ("Semi-Annual Report") to EPA and the applicable Plaintiff-Interveners by no later than six (6) calendar months following the submission of each Annual Report. Each Semi-Annual Report shall contain the information required by Subparagraph 56.b.(2) (Reportable Flaring Incidents) and shall be certified in accordance with the requirements of Subparagraph 108.b. above.

XI. CIVIL PENALTY

110. Within thirty (30) calendar days of the Entry Date, Equistar shall pay to the Plaintiffs a civil penalty in settlement of environmental claims in the amount of \$2,500,000.

111. Of the total civil penalty set forth in Paragraph 110, \$1,964,200 shall be paid to the United States. \$200,000 of that amount shall be a civil penalty paid to the EPA Hazardous Substances Superfund (“CERCLA payment”). The \$1,764,200 balance owed the United States shall be paid by Electronic Funds Transfer (“EFT”) to the United States Department of Justice, in accordance with current EFT procedures, referencing the USAO File Number and DOJ Case Number 90-5-2-1-08012/1, and the civil action case name and case number of the Northern District of Illinois. The costs of such EFT shall be Equistar’s responsibility. Payment shall be made in accordance with instructions provided to Equistar by the Financial Litigation Unit of the U.S. Attorney’s Office in the Northern District of Illinois. Any funds received after 11:00 a.m. (EST) shall be credited on the next business day. Equistar shall provide notice of payment, referencing the USAO File Number and DOJ Case Number 90-5-2-1-08012/1, and the civil action case name and case number, to the Department of Justice and to EPA, as provided in Paragraph 170 (“Notice”).

112. Of the total civil penalty set forth in Paragraph 110, \$535,800 shall be divided among the States which have filed Complaint(s)-in-Intervention. Equistar shall make payment as follows:

- a. \$178,600 to the State of Illinois;
- b. \$178,600 to the State of Iowa; and
- c. \$178,600 to the State of Louisiana.

Payment to the States shall be made according to the instructions set forth in Appendix 3 to this Consent Decree (Notice and Penalty Payment Provisions).

113. Equistar shall pay statutory interest on any overdue civil penalty or stipulated penalty amount at the rate specified in 28 U.S.C. § 1961(a).

114. Upon entry, this Consent Decree shall constitute an enforceable judgment for purposes of post-judgment collection in accordance with Rule 69 of the Federal Rules of Civil Procedure, the Federal Debt Collection Procedure Act, 28 U.S.C. § 3001-3308, and applicable state law. Each Plaintiff shall be deemed a judgment creditor for purposes of collection of any unpaid amounts of the civil and stipulated penalties and interest.

115. No amount of the civil penalty to be paid by Equistar shall be used to reduce its federal or state tax obligations.

XII. SUPPLEMENTAL ENVIRONMENTAL PROJECTS

116. In accordance with the requirements and schedules set forth in this Section XII, Equistar shall implement Supplemental Environmental Projects (“SEPs”), as described below.

117. **Channelview SEP.**

a. By no later than April 30, 2008, Equistar shall complete implementation of the Channelview Supplemental Environmental Project (“Channelview SEP”) at cost of at least \$6,060,000 in accordance with the requirements of Subparagraphs 116.b.-e.

b. The Channelview SEP is a portion of the Channelview Wastewater Project described in Subsection VII.F. above and consists of installation of a CPI vent recovery system in the Olefins area. The purpose of the Channelview SEP is to improve controls on VOC emissions associated with the CPI vents at the Channelview North Plant (Olefins). The scope of the Channelview SEP involves replacing existing carbon canister treatment of CPI Vents in Olefins with a more reliable system that captures these vents and conveys them to the Olefins Steam Superheaters for destruction. Equistar was granted authorization to construct under 30 TAC 116.617 - Standard Permit for Pollution Control Projects. In addition, Equistar notified the Texas Commission on Environmental Quality and obtained a Major Amendment to the Facility’s Texas Pollutant Discharge Elimination System (“TPDES”) permit. The Channelview SEP has the following benefits: (i) improved reliability in VOC emission reductions compared to existing carbon canister treatment; and (ii) elimination of potential thermal excursions due to VOC adsorption on the carbon.

c. The Annual Report required under Paragraph 122 shall include a description of work undertaken and a summary of all costs incurred to implement the Channelview SEP.

d. Equistar shall insure that, where work is performed by a contractor, all administrative costs, including development and oversight costs, related to the Channelview SEP are reasonable and necessary for the satisfactory completion of the Channelview SEP.

e. For purposes of the Channelview SEP, “satisfactory completion” shall mean completing the project as described in this Decree and spending the full amount of money agreed to for this project.

118. **Plaintiff-Interveners’ Community-Based Environmental Projects (PCEPs).**

In accordance with the schedules set out in this Paragraph, Equistar shall complete implementation of the PCEPs identified below at an aggregate cost of at least \$500,000.

a. Morris, Illinois. In order to promote the goals of the Illinois Environmental Protection Act, 415 ILCS 5/2 (b) 2002, “to restore, protect and enhance the quality of the environment” within the State of Illinois, Equistar shall make the payments as specified and directed below to implement PCEPs within the State of Illinois.

(1) By no later than sixty (60) days following the Entry Date, Equistar shall pay at least \$70,000 to the Minooka Community School District No. 201 to fund the purchase of one new school bus for the School District. The new school bus shall have an engine that is biodiesel fuel-compatible and that meets EPA emission criteria for model year 2007 diesel engines. The new school bus shall replace an older bus (model years 1991-1993), which uses less effective emission control technology.

(2) By no later than sixty (60) days following the Entry Date, Equistar shall pay at least \$50,000 to the Grundy County Emergency Management Agency – Hazmat Team, which serves as the Local Emergency Planning Committee for Grundy County, to fund the purchase of emergency response equipment.

(3) By no later than sixty (60) days following the Entry Date, Equistar shall pay at least \$105,000 to the Illinois EPA Clean School Bus Program by transferring funds to the "IEPA - Special State Projects Trust Fund"), which will be used within Grundy, Kendall, Kankakee, Livingston, or LaSalle counties to reduce emissions from diesel-powered school buses by installing EPA certified oxidation reduction catalysts, particulate filters, or anti-idling technologies.

b. Clinton, Iowa.

(1) By no later than sixty (60) days after the Entry Date, Equistar shall pay at least \$200,000 to fund the creation of a Mississippi River Eco Tourism Center in the City of Camanche, located in Clinton County, Iowa. Payment shall be made to the Clinton County Conservation Foundation. The Center will be managed by the Clinton County Conservation Board (the “Board”) and will be situated on a parcel of land already under a long-term lease to the Board by the U.S. Army Corps of Engineers. The parcel is adjacent to the Upper Mississippi River Fish and Wildlife Area. The Center will provide the opportunity for visitors to learn about the ecosystems of the Mississippi River and provide nature-based recreation opportunities. In addition, the Center will feature a nature center with educational

displays focusing on river wildlife and local river history; a large aquarium for local river fish species; and naturalist-guided river cruises. The Center will also be constructed using environmentally-friendly techniques and materials.

(2) By no later than June 1, 2008, Equistar shall install a permanent roof structure over the hazardous waste container storage area at the Clinton Facility at a cost of at least \$50,000.

c. Lake Charles, Louisiana. By no later than sixty (60) days after the Entry Date, Equistar shall pay at least \$25,000 to the Louisiana Department of Environmental Quality to establish a fund to support post hurricane cleanup and recovery activities (the "Fund"). The Fund shall have a life of five (5) years. Any unspent money remaining in the Fund at the end of five years shall be placed in the Louisiana Hazardous Waste Site Cleanup Fund and/or the Environmental Trust Fund as appropriate. The Fund shall be used for post hurricane cleanup and recovery activities including, but not limited to:

- (1) collection and recycling or disposal of household hazardous wastes;
- (2) collection and disposal of hazardous waste, such as orphan drums and/or hazardous waste generated by municipalities and schools; and
- (3) repairs to municipal wastewater treatment facilities and collection systems damaged by hurricanes.

119. For purposes of the PCEPS, "satisfactory completion" shall mean:

a. Spending the full amount of money agreed to for PCEPs related to the Morris Facility; the Clinton Facility (except for the PCEP involving installation of a permanent roof over the hazardous waste container storage area at the Clinton Facility); and the Lake Charles Facility; and

b. Spending the full amount of money agreed for the installation of a permanent roof structure over the hazardous waste container storage area at the Clinton Facility and completing the installation of the permanent roof structure.

120. If for any reason Equistar completes a SEP or PCEP described in Paragraphs 117 and 118 above, but does not expend all of the project-specific amounts specified in Paragraphs 117 and 118, then Equistar shall, with respect to the difference between the project-specific amounts and the amounts actually expended, use the difference to fund another SEP or PCEP, with the advanced written approval of EPA and the applicable Plaintiff-Intervener as set forth in a material modification to the Consent Decree under Paragraph 172.

121. Equistar hereby certifies that, as of the date of this Consent Decree, Equistar is not required to perform or develop the SEP or PCEPs specified in this Section by any federal, state or local law or regulation; nor is Equistar required to perform or develop the SEP or PCEPs by any other agreement, grant or as injunctive relief in this or any other case. Equistar further certifies that it has not received, and is not presently negotiating to receive, and will not receive in the future, credit in any other enforcement action for such SEP or PCEPs.

122. **SEP and PCEP Report.** For each SEP and PCEP completed under this Section during a particular twelve month calendar period (*i.e.*, January 1st to the following January 1st),

Equistar shall provide, as part of the Annual Report for that period, a SEP and PCEP Completion Report certified in accordance with Subparagraph 108.b. of this Consent Decree and containing the following information:

- (1) a description of the SEP or PCEP as implemented;
- (2) a description of any significant operating problems encountered during the time period covered by the Annual Report and the solutions thereto;
- (3) an itemized summary of all costs incurred for the purpose of implementing the SEP or PCEP; and
- (4) a certification of satisfactory completion of the SEP or PCEP in accordance with the provisions of the Consent Decree; and
- (5) a description of the environmental and public health benefits resulting from implementation of the SEP or PCEP (with a quantification of the benefits and pollutant reductions, if feasible).

XIII. STIPULATED PENALTIES

123. Generally.

a. Equistar shall pay stipulated penalties to the United States and to any applicable Plaintiff-Intervener (where the violation is at a specific facility), split 50% to each, for Equistar's failure to comply with the terms of this Consent Decree as provided herein. Stipulated penalties shall be calculated in the amounts specified in this Section XIII.

b. In no event shall any stipulated penalty assessed against Equistar exceed \$32,500 (or any inflation-adjusted increase in that maximum penalty amount set pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990, as amended by the Debt Collection Improvement Act of 1996) per day for any individual violation of this Consent Decree.

c. Where a single event triggers more than one stipulated penalties provision in this Consent Decree, only the provision providing for the higher stipulated penalty shall apply. In cases where a violation of this Consent Decree is also a violation that provides a basis for potential recovery of civil penalties under federal law and/or an applicable State or local law, the United States and the applicable Plaintiff-Intervener shall each elect between seeking stipulated penalties under this Consent Decree thereby resolving any monetary claim for the underlying violation or commencing a new action for civil penalties under such laws. Notwithstanding the foregoing, the United States and the applicable Plaintiff-Interveners reserve the right to pursue any other non-monetary remedies to which they are legally entitled, including, but not limited to, injunctive relief for violations of the Consent Decree.

d. Accrual of Stipulated Penalties. Stipulated penalties shall begin to accrue on the day after complete performance is due or the day a violation occurs, and shall continue to accrue through the date of completion of performance or the date of demonstrated compliance. Nothing herein shall prevent the simultaneous accrual of separate stipulated penalties for each separate violation of this Consent Decree. Stipulated penalties shall accrue regardless of whether the United States or the applicable Plaintiff-Intervener has notified Equistar of a violation or made a stipulated penalty demand.

e. Payment of Stipulated Penalties. Equistar shall pay stipulated penalties upon written demand by the United States or the applicable Plaintiff-Intervener no later than sixty (60) days after Equistar receives such demand. Demand from either the United States or an applicable Plaintiff-Intervener shall be deemed a demand from both, but the United States and the applicable Plaintiff-Intervener shall consult with each other prior to making a demand. Stipulated penalties shall be paid to the United States in accordance with Paragraph 111 and/or the applicable Plaintiff-Intervener in the manner set forth in Appendix 3 of this Consent Decree. A demand for the payment of stipulated penalties shall identify the particular violation(s) to which the stipulated penalty relates, the stipulated penalty amount the United States or the applicable Plaintiff-Intervener is demanding for each violation (as can be best estimated), the calculation method underlying the demand, and the grounds upon which the demand is based. After consultation with each other, the United States and the applicable Plaintiff-Intervener may, in their unreviewable discretion, waive payment of any portion of the stipulated penalties that may accrue under this Consent Decree.

f. Interest. Interest shall begin to accrue on any unpaid stipulated penalty balance beginning on the thirty-first (31st) day after Equistar's receipt of EPA's and the appropriate Plaintiff-Intervener's demand letter. Interest on any unpaid stipulated penalty amount shall accrue at the rate established pursuant to 28 U.S.C. § 1961(a) and shall be computed daily and compounded annually.

g. Stipulated Penalties Dispute. Should Equistar dispute the United States' and/or an applicable Plaintiff-Intervener's demand for all or part of a stipulated penalty, it may avoid imposition of a stipulated penalty for failure to pay a stipulated penalty under Paragraph

123 (a) by placing the disputed amount demanded by the United States and/or the applicable Plaintiff-Intervener, not to exceed \$50,000, for any given event or related series of events at one Covered Facility, in a commercial escrow account pending resolution of the matter and (b) by invoking the dispute resolution provisions of Section XVI within the time provided in Subparagraph 123.e. for payment of stipulated penalties. If the dispute is thereafter resolved in Equistar’s favor, the escrowed amount plus accrued interest shall be returned to Equistar; otherwise, the United States and the applicable Plaintiff-Intervener shall be entitled to the amount that was determined to be due by the Court, plus the interest that has accrued in the escrow account on such amount.

h. For the purposes of this Section XIII, “per day” shall mean a consecutive 24-hour period; “per week” shall mean any consecutive 7-day period; and “per month” shall mean any consecutive 30-day period.

124. The stipulated penalties shall be determined as follows:

a. Requirement to Pay a Civil Penalty and to Escrow Stipulated Penalties.

Violation	Stipulated Penalty
For failure to timely pay the civil penalty as required by Section XI:	Equistar shall pay an additional \$10,000 per week that full payment is delayed plus interest on the amount overdue at the rate specified in 28 U.S.C. § 1961(a).

b. Protection of Stratospheric Ozone.

Violation	Stipulated Penalty
For failure to conduct ODS Audits as required by Paragraphs 19 and 20:	\$2,500 per month (or any portion thereof).

For failure to replace or retrofit chronically leaking refrigeration appliances as required by Paragraph 21:	For each appliance: \$100 per day for the first 30 days of noncompliance, \$250 per day from the 31 st to 60 th day of noncompliance, and \$750 per day thereafter.
For failure to develop a Refrigerant Management Compliance Plan as required by Paragraph 22:	\$2,500 per month (or any portion thereof).
For failure to conduct leak repairs and follow-up verifications as required by Subparagraph 22.f.:	For each violation: \$100 per day for the first 30 days of noncompliance, \$250 per day from the 31 st to 60 th day of noncompliance, and \$750 per day thereafter.

c. Benzene Waste NESHP.

Violation	Stipulated Penalty
For failure to conduct review and verification of TAB as required by Paragraph 25:	\$7,500 per month (or any portion thereof) for first two months; \$15,000 per month (or any portion thereof) for third month and beyond.
For failure to take actions necessary to correct non-compliance or come into compliance as required by Paragraph 26:	For each violation: \$750 per day for the first 30 days of noncompliance, \$1,500 per day from the 31 st to 60 th day of noncompliance, and \$3,500 per day thereafter.
For failure to review a benzene spill as required by Paragraph 30:	For each benzene spill: \$500.
For failure to install primary and secondary carbon canisters as required by Subparagraph 27.a.:	For each violation, per day: \$250 per day for the first 30 days of noncompliance, \$750 per day from the 31 st to 60 th day of noncompliance, and \$1,000 per day thereafter.
For failure to use accredited laboratories as required by Paragraph 29:	For each sample: \$250.
For failure to conduct sampling as required by Paragraph 32:	For each violation, per day: \$250 per day for the first 30 days of noncompliance, \$750 per day from the 31 st to 60 th day of noncompliance, and \$1,000 per day thereafter.
For failure to take corrective action as required by Paragraph 33:	For each corrective action required: \$7,500 per month (or portion thereof) for first two months; \$15,000 per month (or portion thereof) for third month and beyond.

Violation	Stipulated Penalty
For failure to comply with the miscellaneous inspection and monitoring requirements of Paragraph 34:	For each violation, per day: \$200 per day for the first 30 days of noncompliance, \$350 per day from the 31 st to 60 th day of noncompliance, and \$750 per day thereafter.

d. Leak Detection and Repair.

Violation	Stipulated Penalty
For failure to have written LDAR program descriptions as required by Paragraph 37:	\$7,500 per month (or portion thereof) for the first two months; \$15,000 per month (or portion thereof) for the third month and beyond.
For failure to implement the training program as required by Paragraph 38:	\$5,000 per month (or portion thereof).
For failure to conduct audits and/or corrective actions as required by Paragraph 40 (LDAR Audits) and/or Paragraph 41 (Corrective Action):	\$5,000 per month (or portion thereof) per audit/corrective action.
For failure to implement the internal leak definitions as required by Paragraph 42 or make repairs to components or equipment as required by Paragraph 42 and Subparagraph 43.d.:	\$100 per component, but not greater than \$10,000 per month per process unit.
For failure to implement the monitoring frequencies as required by Paragraph 43:	\$100 per component, but not greater than \$10,000 per month per facility.
For failure to have dataloggers as required by Paragraph 44:	\$5,000 per month (or portion thereof) per facility.
For failure to comply with the delay of repair requirements in Paragraph 45:	\$100 per missed component.
For failure to comply with the chronic leaker requirements in Paragraph 46:	\$2,000 per valve.
If it is discovered that Equistar failed to include all of the components after the Initial Audit under Paragraph 40:	\$175 per component.

Violation	Stipulated Penalty
Failure to use an infrared camera for monitoring as required by Subparagraph 43.d.:	\$5,000 per missed event per process unit.

e. NSPS Subpart NNN – Morris Facility

Violation	Stipulated Penalty
For failure to maintain compliance with NSPS requirements after accepting applicability pursuant to Paragraph 49:	For each violation, per day: \$500 per day for the first 30 days of noncompliance, \$1,500 per day from the 31 st to 60 th day of noncompliance, and \$2,000 per day thereafter.

f. Cooling System Leaks Prevention, Detection and Repair – Morris Facility

Violation	Stipulated Penalty
For failure to sample as required by Paragraph 52:	For each sampling event: \$250

g. Flaring.

Violation	Stipulated Penalty
For failure to install the GC-Based Monitoring Systems as required by Paragraph 54:	For each violation, per flare: \$5,000 per month (or portion thereof) for the first two months; and \$15,000 per month (or portion thereof) for the third month and beyond.
For failure to comply with the requirements in Paragraph 57 (Tailchase Operations):	For each violation: \$5,000 per month (or portion thereof) for the first two months; and \$15,000 per month (or portion thereof) for the third month and beyond.
For each failure to perform a root cause investigation or perform necessary corrective actions as required by Subparagraph 56.b.:	For each violation: \$1,000.
For failure to implement training as required by Paragraph 56.a.:	\$5,000 per month (or portion thereof).

h. CERCLA/EPCRA.

Violation	Stipulated Penalty
-----------	--------------------

Violation	Stipulated Penalty
For failure to revise Equistar's spill/release reporting policy as required by Paragraph 61:	Per day, per violation: 1st through 7th day \$375 8th through 14th day \$750 Beyond 14th day \$2,500
For failure to correct a TRI report to the extent required by Subparagraph 64.b. by September 30 th of each year.	Per day after September 30 th , per violation: 1st through 7th day \$375 8th through 14th day \$750 Beyond 14th day \$2,500

i. CWA.

Violation	Stipulated Penalty
For failure to use accredited laboratories as required by Paragraph 71 (Use of Accredited Laboratories):	For each sample: \$250.
For each failure to perform a root cause investigation or perform necessary corrective actions as required by Paragraph 66:	For each violation: \$1,000.
For failure to conduct reviews of operations contributing wastewater to effluent and treatment units and to update line drawings as required by Paragraphs 67 and 68 or sampling audits as required by Paragraphs 69 and 70:	For each violation, per day: \$250 per day for the first 30 days of noncompliance, \$750 per day from the 31 st to 60 th day of noncompliance, and \$1,000 per day thereafter.
For failure to conduct the SPCC compliance review required by Paragraph 73:	\$2,500 per month (or portion thereof).
For failure to submit and complete implementation of a SPCC containment plan to the extent required by Paragraph 75:	\$2,500 per month (or portion thereof).

j. RCRA.

Violation	Stipulated Penalty
For failure to develop and/or implement a RCRA Tracking Plan as required by Paragraph 79:	\$1,000 per week (or portion thereof).
For failure to conduct third party audits as required by Paragraphs 82:	\$1,000 per month (or portion thereof).
For failure to determine the potential for offsite migration of contaminants as required by Paragraphs 87-90:	For each violation, per day: \$250 per day for the first 30 days of noncompliance, \$500 per day from the 31 st to 60 th day of noncompliance, and \$750 per day thereafter.
For failure to close the East Aeration Basin the Equalization Basin, and OP-I and OP-II Aerations Basins at Channelview as required by Paragraphs 91-93:	\$1,000 per week, per surface impoundment.

k. Environmental Management System.

Violation	Stipulated Penalty
For failure to conduct a Gap Analysis at a Covered Facility as required by Paragraph 96:	For each violation, per day: \$250 per day for the first 30 days of noncompliance, \$750 per day from the 31 st to 60 th day of noncompliance, and \$1,200 per day thereafter.
For failure to conduct an EMS Audit at a Covered Facility as required by Paragraph 99:	\$5,000 per month (or portion thereof).

l. General Recordkeeping and Reporting Requirements.

Violation	Stipulated Penalty
For failure to submit annual reports and to make certifications as required by Subparagraph 108.b., or failure to submit any of the reports or other documents that are required to be submitted under this Consent Decree.	Per required report or document, \$500 per week.

m. Supplemental Environmental Projects.

For failure to perform the Channelview SEP as required by Paragraph 117:	\$2,500 per week.
For failure to perform a PCEP as required by Paragraph 118:	\$1,000 per week, paid to the appropriate Plaintiff-Intervener only (no stipulated penalties will be owed the United States).

XIV. RIGHT OF ENTRY

125. Any authorized representative of EPA or an appropriate federal, state or local air pollution control authority, including independent contractors, upon presentation of proper credentials, shall have a right of entry upon the premises of the Covered Facilities at any reasonable time for the purpose of monitoring compliance with the provisions of this Consent Decree, including inspecting facility equipment, and inspecting and copying all records maintained by Equistar pursuant to the requirements of this Consent Decree. Nothing in this Consent Decree shall limit the authority of the Plaintiffs to conduct tests and inspections under any applicable federal or state law.

XV. FORCE MAJEURE

126. If any event occurs which causes or may cause a delay or impediment to performance in complying with any provision of this Consent Decree, Equistar shall notify the applicable Plaintiffs in writing as soon as practicable, but in any event no later than twenty (20) business days of when Equistar first knew of the event or should have known of the event by the exercise of due diligence. In this notice Equistar shall specifically reference this Paragraph of this Consent Decree and describe the anticipated length of time the delay may persist, the cause or causes of the delay, and the measures taken or to be taken by Equistar to prevent or minimize the delay and the schedule by which those measures will be implemented. Equistar shall adopt all reasonable measures to avoid or minimize such delays.

127. Failure by Equistar to provide timely notice to the applicable Plaintiffs of an event which causes or may cause a delay or impediment to performance shall render this Section XV voidable by the Plaintiffs as to the specific event for which Equistar has failed to comply with such notice requirement, and, if voided, is of no effect as to the particular event involved.

128. The United States on behalf of the Plaintiffs shall notify Equistar in writing regarding Equistar's claim of a delay or impediment to performance as soon as practicable, but in any event within thirty (30) days of receipt of the Force Majeure notice provided under Paragraph 125. If the United States and the appropriate Plaintiffs agree that the delay or impediment to performance has been or will be caused by circumstances beyond the control of Equistar, including any entity controlled by Equistar, and that Equistar could not have prevented the delay by the exercise of due diligence, the Parties shall stipulate to an extension of the required deadline(s) for all requirement(s) affected by the delay by a period equivalent to the delay actually caused by such circumstances or such other period as may be appropriate in light of the circumstances. Equistar shall not be liable for stipulated penalties for the period of any such delay.

129. If the Plaintiffs do not accept Equistar's claim that a delay or impediment to performance is caused by a force majeure event or the Parties cannot agree on the duration of an extension for a force majeure event, to avoid payment of stipulated penalties, Equistar must submit the matter to this Court for resolution within twenty (20) business days after receiving notice of the Plaintiffs' position, by filing a petition for determination with this Court. Once Equistar has submitted this matter to this Court, the Plaintiffs shall have twenty (20) business days to file their response to said petition. If Equistar submits the matter to this Court for

resolution and the Court determines that the delay or impediment to performance has been or will be caused by circumstances beyond the control of Equistar, including any entity controlled by Equistar, and that Equistar could not have prevented the delay by the exercise of due diligence, Equistar shall be excused as to that event(s) and delay (including stipulated penalties), for a period of time equivalent to the delay caused by such circumstances or such other period as may be determined by the court. In the event that the United States and the applicable Plaintiff-Intervener are unable to reach agreement with regard to Equistar's force majeure claim, the position of the United States shall be the Plaintiffs' final position.

130. Equistar shall bear the burden of proving that any delay of any requirement(s) of this Consent Decree was caused by or will be caused by circumstances beyond its control, including any entity controlled by it, and that Equistar could not have prevented the delay by the exercise of due diligence. Equistar shall also bear the burden of proving the duration and extent of any delay(s) attributable to such circumstances. An extension of one compliance date based on a particular event may, but does not necessarily, result in an extension of a subsequent compliance date or dates.

131. Unanticipated or increased costs or expenses associated with the performance of Equistar's obligations under this Consent Decree shall not constitute circumstances beyond the control of Equistar, or serve as a basis for an extension of time under this Part. However, failure of a permitting authority to issue a necessary permit or other required approval in a timely fashion is an event of Force Majeure provided that Equistar can meet its burden of demonstrating that it has taken all steps available to it to obtain the necessary permit or other required approval, including but not limited to:

- a. submitting a timely and complete application;
- b. responding to requests for additional information by the permitting authority in a timely fashion; and
- c. prosecuting appeals of any disputed terms and conditions imposed by the permitting authority in an expeditious fashion.

132. Notwithstanding any other provision of this Consent Decree, this Court shall not draw any inferences nor establish any presumptions adverse to any Party as a result of Equistar delivering a notice of Force Majeure or the Parties' inability to reach agreement.

133. Except as otherwise specified in this Section XV, if an event qualifies as a force majeure event under this Section, Equistar shall not be liable for stipulated penalties resulting from any violations of the Consent Decree caused by the force majeure event.

134. As part of the resolution of any matter submitted to this Court under this Section XV, the Parties by agreement, or this Court, by order, may in appropriate circumstances extend or modify the schedule for completion of work under this Consent Decree to account for the delay in the work that occurred as a result of any delay or impediment to performance agreed to by the Plaintiffs or approved by this Court. Equistar shall be liable for stipulated penalties for its failure thereafter to complete the work in accordance with the extended or modified schedule.

XVI. DISPUTE RESOLUTION

135. The dispute resolution procedure provided by this Section XVI shall be available to resolve all disputes arising under this Consent Decree, except as otherwise provided in Section

XV regarding Force Majeure. Dispute resolution before this Court shall not be available to resolve disputes that arise outside the scope of the Consent Decree, such as to resolve a dispute between a Party and a non-party in another forum.

136. The dispute resolution procedure required herein shall be invoked upon the giving of written notice by one of the Parties to the Consent Decree. Notice shall be given, at a minimum, to the United States, the applicable Plaintiff-Interveners, and Equistar advising of a dispute pursuant to this Section XVI. The notice shall describe the nature of the dispute, and shall state the noticing Party's position with regard to such dispute. The Parties receiving such a notice shall acknowledge receipt of the notice and the Parties shall expeditiously schedule a meeting to discuss the dispute informally not later than fourteen (14) days from the receipt of such notice.

137. Disputes submitted to dispute resolution shall, in the first instance, be the subject of informal negotiations between the United States, the applicable Plaintiff-Interveners and Equistar. Such period of informal negotiations shall not extend beyond thirty (30) calendar days from the date of the first meeting between representatives of the Plaintiffs and Equistar, unless the Parties' representatives agree to shorten or extend this period.

138. In the event that the Parties are unable to reach agreement during such informal negotiation period, the Plaintiffs shall provide Equistar with a written summary of their position regarding the dispute. The position advanced by the Plaintiffs shall be considered binding unless, within forty-five (45) calendar days of Equistar's receipt of the written summary of the Plaintiffs' position, Equistar files with this Court a petition which describes the nature of the

dispute, and includes a statement of Equistar's position and any supporting data, analysis, and documentation relied on by Equistar. The Plaintiffs shall respond to the petition within forty-five (45) calendar days of filing. Equistar shall comply with the Plaintiffs' final position during the dispute resolution process unless otherwise ordered by the Court. In the event that the United States and the applicable Plaintiff-Intervener are unable to reach agreement with regard to Equistar's claim, the position of the United States shall be the Plaintiffs' final position. A dissenting Plaintiff-Intervener may file such other pleadings expressing its position as allowed by the Court.

139. Where the nature of the dispute is such that a more timely resolution of the issue is required, the time periods set out in this Section XVI may be shortened upon order of the Court.

140. Notwithstanding any other provision of this Consent Decree, in dispute resolution, this Court shall not draw any inferences nor establish any presumptions adverse to any Party as a result of invocation of this Section XVI or the Parties' inability to reach agreement. The final position of the Plaintiffs shall be upheld by the Court if supported by substantial evidence in the record as identified and agreed to by all the Parties.

141. As part of the resolution of any dispute submitted to dispute resolution, the Parties, by agreement, or this Court, by order, may, in appropriate circumstances, extend or modify the schedule for completion of work under this Consent Decree to account for the delay in the work that occurred as a result of dispute resolution. Equistar shall be liable for stipulated

penalties for their failure thereafter to complete the work in accordance with the extended or modified schedule.

XVII. EFFECT OF SETTLEMENT

142. **Definitions.** For purposes of this Section XVII, the following definitions apply:

a. “Applicable NESHAP Subpart A Flaring Requirements” shall mean (i) the standards, control, monitoring, testing, reporting and recordkeeping requirements found at 40 C.F.R. Part §§ 63.1 through 63.15 to the extent such requirements are applicable to Flaring Devices; (ii) any applicable state, regional, or local laws, regulations, State Implementation Plan requirements or permits that implement, adopt or incorporate the specific regulatory requirements identified above; and (iii) any state, regional or local laws, regulations or permits imposing hazardous air pollutant monitoring, testing, reporting and recordkeeping requirements on Flaring Devices.

b. “Applicable NSPS Subpart A Flaring Requirements” shall mean (i) the standards, control, monitoring, testing, reporting and recordkeeping requirements found at 40 C.F.R. §§ 60.1 through 60.19 (Subpart A) (general requirements) to the extent such requirements are applicable to Flaring Devices; (ii) any applicable state, regional, or local laws, regulations, State Implementation Plan requirements or permits that implement, adopt or incorporate the specific regulatory requirements identified above; and (iii) any state, regional or local laws, regulations or permits imposing air pollutant monitoring, testing, reporting and recordkeeping requirements on Flaring Devices.

c. “Applicable NSPS Subpart NNN Requirements” shall mean (i) the standards, control, monitoring, testing, reporting and recordkeeping requirements found at 40 C.F.R. §§ 60.660 through 60.668 (Subpart NNN) (Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Distillation Operations); (ii) any applicable state, regional, or local laws, regulations, State Implementation Plan requirements or permits that implement, adopt or incorporate the specific regulatory requirements identified above; and (iii) any state, regional or local laws, regulations or permits imposing standards, monitoring, testing, reporting and recordkeeping requirements for volatile organic compound emissions from synthetic organic chemical manufacturing distillation operations.

d. “Benzene Waste NESHAP Requirements” shall mean (i) the requirements imposed by the National Emission Standard for Benzene Waste Operations, 40 C.F.R. Part 61, Subparts A and FF; (ii) any applicable state, regional, or local laws, regulations, State Implementation Plan requirements or permits that implement, adopt or incorporate the Benzene Waste NESHAP; and (iii) any state, regional or local laws, regulations or permits imposing emission standards and requirements on benzene waste operations.

e. “CERCLA/EPCRA Requirements” shall mean (i) the requirements for a given release of a hazardous substance imposed by Section 103(a) of CERCLA (42 U.S.C. § 9603(a)), the requirements for a given release of an extremely hazardous substance imposed by Section 304 of EPCRA (42 U.S.C. § 11004), the requirements for TRI chemicals imposed by Section 313 of EPCRA (42 U.S.C. § 11023) and EPA’s implementing regulations; (ii) any applicable state, regional, or local laws, regulations, or permits that implement, adopt or

incorporate the specific requirements identified above; and (iii) any state, regional or local laws, regulations or permits imposing hazardous substance and extremely hazardous substance reporting and recordkeeping requirements.

f. “LDAR Requirements” shall mean (i) the requirements relating to equipment in light liquid service and gas and/or vapor service set forth in 40 C.F.R. Part 60, Subparts A and VV; 40 C.F.R. Part 61, Subparts A and J; 40 C.F.R. Part 63, Subparts A, F, G, H and UU; (ii) any applicable state, regional, or local laws, regulations, State Implementation Plan requirements or permits that implement, adopt or incorporate the federal LDAR regulations; and (iii) any state, regional or local laws, regulations or permits imposing leak detection and repair requirements on equipment in light liquid and gas and/or vapor service.

g. “ODS Requirements” shall mean the requirements imposed by the CAA Sections 601 through 618 (42 U.S.C. 7671-7671q) regarding Stratospheric Ozone Protection and the regulations promulgated there under at 40 C.F.R. Part 82; (ii) any applicable state, regional, or local laws, regulations, State Implementation Plan requirements or permits that implement, adopt or incorporate the specific regulatory requirements identified above; and (iii) any state, regional or local laws, regulations or permits imposing stratospheric ozone protection requirements.

143. **Resolution of Liability Regarding Violations Alleged in the Complaints.**

Entry of this Consent Decree shall resolve all civil liability of Equistar to the United States and the applicable Plaintiff-Intervenors for (i) the violations specifically alleged by the United States

in the Complaint filed in this action; and (ii) the violations specifically alleged by Plaintiff-Intervenors in their Complaint(s)-in-Intervention filed in this action.

144. **Resolution of Liability Regarding ODS Requirements.** Entry of this Consent Decree shall resolve all civil liability of Equistar to the United States and the applicable Plaintiff-Intervenors for actual or alleged violations of ODS Requirements (including any actual or alleged CAA Title V violations arising out of or related to actual or alleged violations of ODS Requirements) at the Covered Facilities that either: (i) commenced and ceased prior to the Consent Decree Lodging Date; (ii) commenced prior to the Consent Decree Lodging Date and are corrected pursuant to the requirements of Subsection V.A. (Protection of Stratospheric Ozone – All Covered Facilities); or (iii) are based on events that are identified in the ODS Audit Reports required under Paragraph 19 and are corrected pursuant to the requirements of Paragraph 20.

145. **Resolution of Liability Regarding Benzene Waste NESHAP Requirements.** Entry of this Consent Decree shall resolve all civil liability of Equistar to the United States and the applicable Plaintiff-Intervenors for actual or alleged violations of Benzene Waste NESHAP Requirements (including any actual or alleged CAA Title V violations arising out of or relating to actual or alleged violations of Benzene Waste NESHAP Requirements) at the Covered Facilities that either: (i) commenced and ceased prior to the Consent Decree Lodging Date; (ii) commenced prior to and continued past the Consent Decree Lodging Date and are corrected pursuant to the requirements of Subsection V.B. (Benzene Waste NESHAP – All Covered Facilities); or (iii) commenced after the Consent Decree Lodging Date, provided that the events giving rise to the post-Consent Decree Lodging Date violations are identified in the BWON

Compliance Review and Verification Report required under Paragraph 25, and are corrected pursuant to the requirements of Paragraph 26.

146. **Resolution of Liability Regarding LDAR Requirements.** Entry of this Consent Decree shall resolve the civil liability of Equistar to the United States and the applicable Plaintiff-Interveners for actual or alleged violations of LDAR Requirements (including any actual or alleged CAA Title V violations arising out of or relating to actual or alleged violations of LDAR Requirements) at the Covered Facilities that either: (i) commenced and ceased prior to the Consent Decree Lodging Date; (ii) commenced prior to and continued past the Consent Decree Lodging Date and are corrected pursuant to the requirements of Subsection V.C. (Leak Detection and Repair – All Covered Facilities); or (iii) commenced after the Consent Decree Lodging Date, provided that the events giving rise to the post-Consent Decree Lodging Date violations are identified in the LDAR Initial Audit Report required under Paragraph 40, and are corrected pursuant to the requirements of Paragraph 41.

147. **Resolution of Liability Regarding LDAR – Use of Infrared Camera.** Entry of this Consent Decree shall resolve the civil liability of Equistar to the United States and the applicable Plaintiff-Interveners for actual and alleged violations of federal, regional, or state air and release reporting laws, regulations and permits (including any actual or alleged CAA Title V violations related to such air or release reporting violations) arising out of or relating to any leaks detected from unregulated equipment at the Covered Facilities through the implementation of Subparagraph 43.d. (Use of Infrared Camera for Monitoring) provided that such leaks are identified and corrected pursuant to the requirements of Subparagraph 43.d.(2)(ii).

148. **Reservation of Rights Regarding Benzene NESHAP and LDAR**

Requirements. Notwithstanding the resolution of liability in Paragraphs 144-146, nothing in this Consent Decree precludes the United States and/or the applicable Plaintiff-Interveners from seeking injunctive relief and/or other equitable relief or civil penalties for violations by Equistar of Benzene Waste NESHAP Requirements and LDAR Requirements that commence or continue after the Consent Decree Lodging Date if Equistar fails to identify and address such violations as required by Subsections V.B. and V.C. of this Consent Decree.

149. **Resolution of Liability Regarding Applicable NSPS Subpart NNN**

Requirements at the Morris Facility. With respect to VOC emissions from the two deethanizer distillation columns with a vent to the main flare at the ethylene manufacturing plant located at the Morris Facility, entry of this Consent Decree shall resolve all civil liability of Equistar to the United States and to Plaintiff-Intervener Illinois for actual or alleged violations of Applicable NSPS Subpart NNN Requirements at those emission units (including any actual or alleged CAA Title V violations arising out of or relating to actual or alleged violations of Applicable NSPS Subpart NNN Requirements) that either (i) commenced and ceased prior to the Consent Decree Lodging Date; or (ii) commenced prior to the Consent Decree Lodging Date and are corrected pursuant to the requirements of Subsection V.D. (New Performance Standards, 40 C.F.R. Part 60, Subpart NNN – Morris, Illinois Facility).

150. **Resolution of Liability Regarding Cooling System Leaks – Prevention,**

Detection, and Repair at the Morris Facility. Entry of this Consent Decree shall resolve all civil liability of Equistar to the United States and to Plaintiff-Intervener Illinois for actual or alleged violations of (i) the Clean Air Act, 42 U.S.C. §§ 7401-7671q (including any actual or

alleged CAA Title V violations) arising out of or relating to volatile organic emissions from cooling systems at the Morris Facility; (ii) any applicable state, regional, or local laws, regulations, State Implementation Plan requirements (including, but not limited to, Section 218.986 of the Illinois State Implementation Plan) or permits that implement, adopt or incorporate the specific regulatory requirements identified in (i) above; (iii) any state, regional or local laws, regulations or permits imposing air pollutant monitoring, testing, reporting and recordkeeping requirements applicable to those emission units; and (iv) any CERCLA/EPCRA requirements, provided that such violations either (a) commenced and ceased prior to the Consent Decree Lodging Date; or (b) commenced prior to the Consent Decree Lodging Date and are corrected pursuant to the requirements of Subsection V.E. (Cooling Systems at the Morris Facility).

151. **Resolution of Liability Regarding Flaring Devices.** With respect to emissions from the Flaring Devices identified in Appendix 1, entry of this Consent Decree shall resolve all civil liability of Equistar to the United States and the applicable Plaintiff-Interveners for actual and alleged violations of Applicable NSPS Subpart A Flaring Requirements and Applicable NESHAP Subpart A Flaring Requirements (including any actual or alleged CAA Title V violations arising out of or relating to actual or alleged violations of Applicable NSPS Subpart A Flaring Requirements and Applicable NESHAP Subpart A Flaring Requirements) that either (i) commenced and ceased prior to the Consent Decree Lodging Date; (ii) commenced prior to the Consent Decree Lodging Date and are corrected pursuant to the requirements of Subsection V.F. (Flaring – All Covered Facilities); or (iii) are identified by Equistar as a result of implementing

the requirements of Paragraph 54 and corrected pursuant to the requirements of Subparagraph 54.e. (G-C Based Monitoring – Corrective Action).

152. **Resolution of Liability Regarding CERCLA/EPCRA Requirements.** Entry of this Consent Decree shall resolve all civil liability of Equistar to the United States and applicable Plaintiff-Interveners for actual or alleged violations of CERCLA/EPCRA Requirements at the Covered Facilities that either (i) commenced and ceased prior to the Consent Decree Lodging Date; (ii) commenced prior to the Consent Decree Lodging and are corrected pursuant to the requirements of Subsection VI (CERCLA and EPCRA); and (iii) are identified by Equistar during the first annual review and corrected pursuant to the requirements of Paragraph 64 (TRI Reporting) .

153. **Resolution of Liability Regarding CWA Requirements.** Entry of this Consent Decree shall resolve all civil liability of Equistar to the United States and applicable Plaintiff-Interveners for the following actual or alleged violations of CWA requirements (including any applicable state, regional, or local laws or regulations, or permits that implement, adopt or incorporate the requirements identified herein or that otherwise impose requirements on the discharge of pollutants to state waters) at the Covered Facilities: (i) actual or alleged violations of 40 C.F.R. § 122.21(g)(2) or 122.21(g)(3) that commenced and ceased prior to the Consent Decree Lodging Date; (ii) actual or alleged violations of 40 C.F.R. § 122.21(g)(2) or 122.21(g)(3) that are identified and corrected pursuant to the requirements of Paragraphs 67 (Reviews of Operations Contributing Wastewater to Effluent and Treatment Units for All Covered Facilities (Except for Channelview)) and 68 (Reviews of Operations Contributing Wastewater to Effluent and Treatment Units for the Channelview Facility); (iii) actual or alleged

violations that are based on sampling and analysis deficiencies that are identified in the Initial Sampling Audit Report required by Paragraph 69 and corrected pursuant to the requirements of Subparagraph 69.b.; (iv) actual or alleged violations 40 C.F.R. Part 112 requirements for bulk storage containers of petroleum oil that commenced and ceased prior to the Consent Decree Lodging Date; (v) actual or alleged violations of 40 C.F.R. Part 112 requirements of bulk storage containers of petroleum oil that are identified and corrected pursuant to the requirements of Paragraphs 73-75 (SPCC Compliance Verification); and (vi) actual or alleged violations of the CWA, 33 U.S.C. § 1251 *et seq.*, based on alleged past unpermitted discharge of pollutants or past discharge of pollutants in excess of the allowable permit limits to navigable waters of the United States, as listed in Appendix 4.

154. **Resolution of Liability Regarding RCRA Requirements.** Entry of this Consent Decree shall resolve all liability of Equistar to the United States and applicable Plaintiff-Intervenors for the following actual or alleged RCRA violations (including any applicable state, regional, or local laws or regulations, or permits that implement, adopt or incorporate the requirements identified herein or that otherwise impose requirements on hazardous waste generators) at the Covered Facilities: (i) actual or alleged violations of 40 C.F.R. Part 262 that commenced and ceased prior to the Consent Decree Lodging Date; (ii) actual or alleged violations of 40 C.F.R. Part 262 that commenced prior to the Consent Decree Lodging Date and are corrected pursuant to the requirements of Section VIII (RCRA); and (iii) actual or alleged violations of 40 C.F.R. Part 262 that are based on deficiencies identified in the Third Party Audits required under Paragraph 82 and corrected pursuant to the requirements of Paragraphs 84-86.

155. **Resolution of Liability Regarding Multi-Media Compliance Investigations.**

a. **Morris Facility:** Entry of this Consent Decree shall resolve all civil liability of Equistar to the United States and Illinois for alleged past violations identified by Plaintiffs during or as a direct result of the October/November 2002 multi-media compliance inspections conducted by NEIC at the Morris Facility.

b. **Channelview Facility:** Entry of this Consent Decree shall resolve all civil liability of Equistar to the United States for alleged past violations identified by the Plaintiffs during or as a direct result of the February 2003 and July 2003 multi-media compliance inspections conducted by NEIC at the Channelview Facility.

156. **Reservation of Specific Claims.** The resolution of liability granted by this Consent Decree under this Section XVII specifically excludes, and Plaintiffs expressly reserve their rights to proceed with, any claims under the New Source Review and Prevention of Significant Deterioration provisions of the CAA.

157. **Claim/Issue Preclusion.** In any subsequent administrative or judicial proceeding initiated by the United States or any applicable Plaintiff-Intervener for injunctive relief, penalties, or other appropriate relief relating to Equistar for alleged violations of the CAA, CWA, CERCLA/EPCRA, and RCRA requirements not identified in this Consent Decree and/or the Complaint or Complaint(s)-in-Intervention:

a. Equistar shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, or claim-

splitting. Nor may Equistar assert, or maintain, any other defenses based upon any contention that the claims raised by the United States and the applicable Plaintiff-Intervener(s) in the subsequent proceeding were or should have been brought in the instant case. Nothing in the preceding sentences is intended to affect the ability of Equistar to assert that the claims are deemed resolved by virtue of this Section XVII of the Consent Decree.

b. Except in enforcing Subparagraph 157.a., the United States and the applicable Plaintiff-Intervenors may not assert or maintain that this Consent Decree constitutes a waiver or determination of, or otherwise obviates, any claim or defense whatsoever, or that this Consent Decree constitutes acceptance by Equistar of any interpretation or guidance issued by EPA related to the matters addressed in this Consent Decree.

XVIII. GENERAL PROVISIONS

158. **Other Laws.** Except as specifically provided by this Consent Decree, nothing in this Consent Decree shall relieve Equistar of its obligation to comply with all applicable federal, state and local laws, regulations, and permits. Subject to Section XVII (Effect of Settlement) and except as provided in Section XIII (Stipulated Penalties), nothing in this Consent Decree shall be construed to prevent or limit the Plaintiffs' rights to seek or obtain other remedies or sanctions against Equistar available under other federal, state, or local statutes or regulations in the event that Equistar violates this Consent Decree or the statutes or regulations applicable to violations of this Consent Decree. This shall include the United States' and the applicable Plaintiff-Intervener's rights to invoke the authority of the Court to order Equistar's compliance with the Consent Decree in a subsequent contempt action. In addition, except as otherwise expressly provided in this Consent Decree, nothing in this Consent Decree is intended to eliminate, limit or

otherwise restrict any compliance options, exceptions, exclusions, waivers, variances, or other right otherwise provided or available to Equistar under any applicable statute, regulation, ordinance, regulatory or statutory determination, or permitting process.

159. **Imminent and Substantial Endangerment.** Nothing in this Consent Decree shall be construed to limit the authority of the United States or Plaintiff-Interveners to undertake any action against any person, including Equistar, to abate or correct conditions which may present an imminent and substantial endangerment to the public health, welfare, or the environment.

160. **Audit Policy.** Nothing in this Consent Decree is intended to limit or disqualify Equistar, on the grounds that information was not discovered or supplied voluntarily, from seeking to apply EPA's Audit Policy or any state audit policy to any violations or non-compliance that Equistar discovers during the course of any investigation, audit, or enhanced monitoring that Equistar is required to undertake pursuant to this Consent Decree.

161. **Consent Decree Not A Permit.** This Consent Decree is not a permit. Compliance with the terms of the Consent Decree does not guarantee compliance with any applicable federal, state, local laws, regulations, or permits.

162. **Emission Reduction Credits.**

a. **General Prohibition.** Equistar shall not generate or use any emission reductions, or apply for and obtain any emission reduction credits, that result from any projects conducted or controls required pursuant to this Consent Decree as netting reductions or

emissions offsets in any CAA Prevention of Significant Deterioration, major non-attainment New Source Review and/or synthetic minor permit or permit proceeding.

b. Outside the Scope of the General Prohibition. Nothing in this Consent Decree is intended to prohibit Equistar from seeking to:

(1) utilize or generate netting reductions or emission offset credits resulting from implementation of (i) the East Plant Butadiene Project at the Channelview Facility (Paragraph 58); (ii) the Thermal Oxidizer at the LaPorte Facility (Paragraph 59); of (iii) the Flare Tip at the Morris Facility (Paragraph 60); or

(2) utilize or generate netting reductions or emission offset credits resulting from implementation of this Consent Decree for compliance with any rules or regulations designed to address regional haze or the non-attainment status of any area (excluding Prevention of Significant Deterioration and non-attainment New Source Review, but, including, for example, the Houston/Galveston Area NOx SIP) that apply to the Clinton, Corpus Christi, Lake Charles and Morris Facilities.

163. Changes to Law. In the event that during the term of this Consent Decree there is a change in the statutes or regulations that provide the underlying basis for the Consent Decree such that Equistar would not otherwise be required to perform any of the obligations herein or would have the option to undertake or demonstrate compliance in an alternative or different manner, Equistar may petition the Court for relief from any such requirements, in accordance

with Rule 60 of the Federal Rules of Civil Procedure. However, if Equistar applies to the Court for relief under this Paragraph, the United States and the applicable Plaintiff-Intervener reserve the right to seek to void all or part of the resolution of liability reflected in Section XVII (Effect of Settlement). Nothing in this Paragraph is intended to enlarge the Parties' rights under Rule 60, nor is this Paragraph intended to confer on any Party any independent basis, outside of Rule 60, for seeking such relief. This Paragraph does not apply to Equistar's obligations to complete the supplemental environmental projects referred to in Section XVII of this Consent Decree.

164. **Service of Process.** Equistar hereby agrees to accept service of process by mail with respect to all matters arising under or relating to the Consent Decree and to waive the formal service requirements set forth in Rule 4 of the Federal Rules of Civil Procedure and any applicable local rules of this Court, including, but not limited to, service of a summons. The persons identified by Equistar in Paragraph 170 (Notice) are authorized to accept service of process with respect to all matters arising under or relating to the Consent Decree.

165. **Third Parties.** Except as otherwise provided by law, this Consent Decree does not limit, enlarge or affect the rights of any Party to this Consent Decree as against any third parties. Nothing in this Consent Decree should be construed to create any rights, or grant any cause of action, to any person not a party to this Consent Decree.

166. **Costs.** Each Party to this Consent Decree shall bear its own costs and attorneys' fees through the date of entry of this Consent Decree.

167. **Public Documents.** All information and documents submitted by Equistar to the Plaintiffs pursuant to this Consent Decree shall be subject to public inspection, unless subject to

legal privileges or protection or identified and supported as confidential business information by the Equistar in accordance with the respective federal or state statutes or regulations.

168. **Public Notice and Comments and Federal Approval.** The Parties agree and acknowledge that final approval by the United States and entry of this Consent Decree is subject to the requirements of 28 C.F.R. § 50.7, which provides for notice of the lodging of this Consent Decree in the Federal Register, an opportunity for public comment, and consideration of any comments. The United States reserves the right to withdraw or withhold consent if the comments regarding this Consent Decree disclose facts or considerations which indicate that this Consent Decree is inappropriate, improper or inadequate.

169. **Public Comments – State Approvals.** The parties agree and acknowledge that final approval by the State of Louisiana and entry of this Consent Decree is subject to the requirements of La. R.S. 30:2050.7, which provides for public notice of this Consent Decree in newspapers of general circulation and the official journal of the Parish in which the Lake Charles facility is located, and opportunity for public comment, consideration of any comments, and concurrence by the State Attorney General. The State of Louisiana reserves the right to withdraw or withhold consent if the comments regarding this Consent Decree disclose facts or considerations which indicate that this Consent Decree is inappropriate, improper or inadequate

170. **Notice and Payment Provisions.** Unless otherwise provided herein, notifications to or communications with the Plaintiffs or Equistar shall be deemed submitted on the date they are postmarked and sent either by overnight receipt mail service or by certified or registered mail, return receipt requested. When Equistar is required to submit notices or communicate in

writing under this Consent Decree to EPA relating to one of the Covered Facilities, it shall also submit a copy of that notice or other writing to the applicable Plaintiff-Intervener for the Covered Facility located in that state. Except as otherwise provided herein, written notification to or communication with the Plaintiffs or Equistar, and payment of penalties shall be in accordance with Appendix 3 to this Consent Decree (Notice and Penalty Payment Provisions).

171. **Change of Notice Recipient.** Any Party may change either the notice recipient or the address for providing notices to it by serving all other Parties with a notice setting forth such new notice recipient or address.

172. **Consent Decree Modifications.** The Consent Decree contains the entire agreement of the Parties and shall not be modified by any prior oral or written agreement, representation or understanding. Prior drafts of the Consent Decree shall not be used in any action involving interpretation of the Consent Decree. Non-material modifications to this Consent Decree shall be in writing and shall be effective when signed by EPA, the applicable Plaintiff-Intervener and Equistar. For purposes of this Paragraph, non-material modifications include, but are not limited to: (i) any modifications to the frequency of reporting obligations; and (ii) any modifications to schedules that do not extend the ultimate date for compliance with Consent Decree requirements. The United States will file non-material modifications with the Court on a periodic basis. Material modifications to this Consent Decree shall be in writing, signed by EPA, the applicable Plaintiff-Intervener and Equistar, and shall be effective upon approval by the Court.

173. **Continuing Jurisdiction.** The Court retains jurisdiction of this case after entry of this Consent Decree to enforce compliance with the terms and conditions of this Consent Decree and to take any action necessary or appropriate for its interpretation, construction, execution, or modification. During the term of this Consent Decree, any Party may apply to the Court for any relief necessary to construe or effectuate this Consent Decree.

XIX. TERMINATION

174. Except as provided in Paragraph 175 below, this Consent Decree shall be subject to termination upon motion by any Party after Equistar satisfies all requirements of this Consent Decree and has operated in full compliance with the Consent Decree for a period of twelve (12) months. At such time, if Equistar believes that it is in compliance with the requirements of this Consent Decree, and has paid the civil penalty and any stipulated penalties required by this Consent Decree, then Equistar shall so certify to the Plaintiffs. Unless the Plaintiffs object in writing with specific reasons within forty-five (45) days of receipt of the certification, the Court shall order that this Consent Decree be terminated on Equistar's motion. If the Plaintiffs object to Equistar's certification, then the matter shall be submitted to the Court for resolution under Section XV ("Dispute Resolution") of this Consent Decree. In such case, Equistar shall bear the burden of proving that this Consent Decree should be terminated.

175. **Tailchase Operations at Chocolate Bayou Facility.** In the event that the schedule for installing and implementing Tailchase Operations at the Chocolate Bayou is extended until December 31, 2012 in accordance with Paragraph 57, Equistar may seek to terminate all Consent Decree requirements other than the requirements in Subsection V.F. (Flaring) as they apply to Chocolate Bayou, provided that Equistar follows the procedures set out in Paragraph 174 above.

176. Continuing obligations under the Consent Decree shall cease as to all Consent Decree requirements that are the subject of an unopposed motion to terminate or the Court's order to terminate the Consent Decree.

So entered in accordance with the foregoing this _____ day of _____, 2007.

United States District Court Judge
Northern District of Illinois

United States and the States of Illinois, Iowa, and Louisiana v. Equistar Chemicals, LP.

FOR PLAINTIFF, UNITED STATES OF AMERICA:

Date: _____

Ronald J. Tenpas
Acting Assistant Attorney General
Environment and Natural Resources Division
U.S. Department of Justice
10th & Pennsylvania Avenue, N.W.
Washington, DC 20530

Date: _____

DIANNE M. SHAWLEY
Senior Counsel
Environment and Natural Resources Division
U.S. Department of Justice
601 D Street, N.W.
Washington, DC 20004

PATRICK FITZGERALD
United States Attorney
219 S. Dearborn Street, Fifth Floor
Chicago, IL 60604

United States and the States of Illinois, Iowa, and Louisiana v. Equistar Chemicals, LP.

FOR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY:

GRANTA Y. NAKAYAMA
Assistant Administrator
Office of Enforcement and Compliance
Assurance
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

DATE

OF COUNSEL FOR THE U.S. ENVIRONMENTAL PROTECTION AGENCY:

BRUCE FERGUSSON
Attorney-Advisor
U.S. EPA
Office of Regulatory Enforcement
(2248A)
1200 Pennsylvania Ave, N.W.

MARCIA E. MONCRIEFFE
Assistant Regional Counsel
Air & Toxic Branch
U.S. EPA Region VI
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733
Washington, DC 20460

SUSAN PROUT
Associate Regional Counsel
U.S. Environmental Protection Agency,
Region 5
77 West Jackson Blvd
Chicago, Illinois 60604-3590

JULIE MURRAY
Assistant Regional Counsel
U.S. EPA Region 7
901 N. 5th Street
Kansas City, Kansas 66101

United States and the States of Illinois, Iowa, and Louisiana v. Equistar Chemicals, LP.

FOR PLAINTIFF-INTERVENER THE STATE OF IOWA:

DAVID R. SHERIDAN
Assistant Attorney General
Environmental Law Division
Lucas State Office Building
321 E. 12th Street, Room 018
Des Moines, Iowa 50319

Phone: (515) 281-6714
Fax: (515) 242-6072

DATE

United States and the States of Illinois, Iowa, and Louisiana v. Equistar Chemicals, LP.

FOR PLAINTIFF-INTERVENER THE STATE OF ILLINOIS:

United States and the States of Illinois, Iowa, and Louisiana v. Equistar Chemicals, LP.

FOR PLAINTIFF-INTERVENER THE STATE OF LOUISIANA:

FOR DEFENDANT, EQUSTAR CHEMICAL COMPANY:

Date: _____

JAMES W. BAYER
Senior Vice President
Manufacturing and Health, Safety and Environment
One Houston Center
1221 McKinney Street
Houston, TX 77252-2583

APPENDIX 1

FLARING DEVICES AT COVERED FACILITIES

I. Flares Already Subject To GC-Based Monitoring

<u>Site</u>	<u>Equipment ID</u>	<u>Description</u>
Channelview	AIT 38152	OP-1 Flare
	AIT 48152	OP-2 Flare
	AIT 322202	POLY BD Flare
	AIT 2500	IPOH Flare
	AIT 17070	East Plant Flare
	AIT 06015	Alky Flare
LaPorte	075AIT 72827	QE-1 Flare
	022AIT 6017	AB-3 Flare
	075AIT 38647	ARU Flare
	028AIT 3288	O-1 Flare
	13AIT-2510	VAM Flare
Chocolate Bayou	319 AIT 3	Olefins Flare
	319 AIT 4	Sour Gas Flare

II. Additional Flares That Will Be Subject To GC-Based Monitoring

<u>Site</u>	<u>Equipment ID</u>	<u>Description</u>
Chocolate Bayou	318Z3	Hydrocarbons Flare
Clinton	B-2401	Ethylene Plant Flare
Corpus Christi	L2019A	Olefins Hot Flare
	L2019B	Olefins Cold Flare
	D10.004	BDU Flare
Morris	11MEU801	Ethylene plant Flare
	46SP2003	Polypropylene Plant Flare
	81FL-2900	Linear Low Density Flare
LaPorte	AAFLARE	Acetic Acid Flare Header

III. Flares Not Subject to GC-Based Monitoring

<u>Site</u>	<u>Equipment ID</u>	<u>Description</u>
Corpus Christi	D10.0904	C4 Dock Flare
	L-6013	Benzene Dock Flare

APPENDIX 2 EMS STANDARD

I. SCOPE AND APPLICATION

1. SCOPE: This standard defines the management systems that must be in place to ensure that facilities operate in accordance with applicable environmental laws.
2. FIELD OF APPLICATION: This standard applies to the Covered Facilities.

II. REFERENCES

3. LAWS AND REGULATIONS: Applicable environmental laws and regulations.

III. DEFINITIONS

4. REGULATORY COMMITMENT: A commitment made to regulatory authorities requiring process modifications or the expenditure of company resources.
5. RELEASE: Any emission, effluent, spill, discharge or disposal to the air, land, or water, of any pollutant or contaminant, whether routine or accidental, at or from a facility.
6. REMEDIATION: The multi-phase process which ensures timely, cost-effective, and environmentally-sound response to an affected location.

IV. REQUIREMENTS

7. MANAGEMENT COMMITMENT:

a. A policy statement confirming commitment to environmental compliance and continuous improvement has been issued, publicized to employees, and made available to the public.

b. Systems are in place to inform employees and contractors of facility environmental policies and procedures and to ensure compliance with applicable government regulations.

c. A system is in place to identify and supply the resources necessary to achieve compliance.

8. TRAINING: Systems are in place to ensure that employees are trained to recognize and understand compliance requirements for their areas of responsibility including environmental consequences of deviation.

9. INCIDENT REPORTING, INVESTIGATION, AND CORRECTIVE ACTION:

a. A system shall be in place for the reporting and investigation of all environmental incidents.

b. A system for addressing and documenting the closure of all action items generated by investigations shall be implemented.

10. COMPLIANCE MANAGEMENT PROCESS – DETERMINATION OF APPLICABILITY: A system is in place that identifies and documents the applicability of environmental regulations, commitments and permit conditions for affected facilities.

11. IDENTIFICATION AND COMMUNICATION OF REQUIREMENTS:

- a. A system is in place to identify compliance requirements and assign responsibility for execution.
- b. A system is in place to formally communicate requirements to responsible individuals.
- c. A system is in place to ensure consistent interpretation of compliance requirements.

12. PROCEDURES:

- a. Procedures shall be developed and communicated, including environmental procedures, operating procedures, and maintenance and inspection procedures.
- b. Environmental critical equipment and effective environmental and maintenance processes shall be identified and incorporated into applicable environmental, operating, and maintenance and inspection procedures.
- c. A process for developing, approving, and implementing procedures shall be implemented.

13. DETERMINATION OF COMPLIANCE STATUS:

- a. A system is in place to determine the compliance status of the facility on a periodic basis.

b. The compliance status of the facility is reviewed with management as appropriate.

14. CORRECTIVE ACTION: A system is in place to assure that appropriate action is taken in response to identified non-compliance conditions or conditions which represent unacceptable business risk. The system will ensure prompt communication and coordination with appropriate management groups for resolution.

15. MANAGEMENT OF CHANGE:

a. A system is in place to identify regulatory changes that impact the facilities. The impacts of the changes will be assessed and incorporated into the compliance management process as necessary.

b. A system is in place to determine applicable environmental requirements and company standards for facility changes.

c. The impact on the community of the facility's construction and operations is considered in site selection and plant layout and major plant modifications.

d. Significant new releases or significant changes to the release inventory are identified and evaluated according to Paragraph 16 (Release Inventory).

e. A system is in place to ensure that pollution prevention practices and environmental stewardship are incorporated into the design and operation of projects at the earliest stage of development or engineering.

f. A system is in place to verify and document that facility changes comply with applicable regulatory requirements, permit application representations, and company standards prior to operation.

16. RELEASE INVENTORY:

a. A release inventory is established at each facility. This inventory is updated at least annually.

b. The environmental, health and safety effects of releases are evaluated. The evaluation is updated as appropriate.

17. WASTE MANAGEMENT:

a. Each facility used for treatment, storage or disposal (TSD) of waste will be audited for acceptability prior to initial use and on a periodic basis.

b. Written agreements with waste transporters and TSDs are in place and reviewed as appropriate for technical and legal acceptability.

18. REMEDIATION:

a. A system is in place to identify on-site and off-site remediation liabilities.

b. Remediation activities are incorporated into the compliance management process.

V. REPORTS AND RECORDKEEPING

19. REPORTS AND RECORDKEEPING:

- a. A release inventory is maintained for each facility.
- b. A waste generation inventory is maintained for each facility.
- c. Documentation of the applicability of environmental regulations and permit conditions is maintained.

**APPENDIX 3
NOTICE AND PAYMENT PROVISIONS**

As to the United States:

Payment of Penalties to the United States shall be made in accordance with Paragraph 111 of the Consent Decree.

Contact persons for notices:

Chief, Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611, Ben Franklin Station
Washington, DC 20044-7611

United States Attorney
Northern District of Illinois
219 S. Dearborn Street, Fifth Floor
Chicago, IL 60604

As to the U.S. Environmental Protection Agency:

Contact person for notices:

Director
Special Litigation And Policy (MAIL STOP?)
Office of Enforcement and Compliance Assurance
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20004

With copies to the EPA Regional office where the Covered Facility is located:

U.S. EPA Region 5

Contact person for notices:

Compliance Tracker
US EPA Region 5
77 W. Jackson Blvd AE-17J
Chicago, IL 60604

EPA Region 6:

Contact person for notices:

Chief, Air, Toxics, and Inspection Coordination Branch (6EN-A)
Compliance Assurance and Enforcement Division
U.S. Environmental Protection Agency, Region 6
1445 Ross Avenue
Dallas, Texas 75202

U.S. EPA Region 7

Contact person for notices:

Richard Tripp ARTD/APCO
U.S. EPA Region 7
901 N. 5th St.
Kansas City, KS 66101

As to Plaintiff-Intervener, the State of Illinois:

Payment of penalties: Payment shall be made by corporate check made payable to the "Illinois EPA for deposit into the Illinois Environmental Protection Trust Fund" and shall be sent by first class mail to:

Illinois Environmental Protection Agency
Fiscal Services
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

The name, case number and the Defendant's Federal Employer Identification Number ("FEIN") shall appear on the face of the corporate check. A copy of the corporate check shall be sent to:

Zemeheret Bereket-Ab
Assistant Attorney General
Environmental Bureau
188 West Randolph 20th FL
Chicago, Illinois 60601

As to Plaintiff-Intervener, the State of Illinois: (cont.)

Correspondence, Reports and Other Documents:

Zemeheret Bereket-Ab
Assistant Attorney General
Environmental Bureau
188 West Randolph 20th FL
Chicago, Illinois 60601

Maureen Wozniak
Assistant Counsel
Division of Legal Counsel
Illinois EPA
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

Manager, Compliance Section
Illinois EPA
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

Marcus Hatch
Illinois EPA
Field Operations Section
9511 W. Harrison
DesPlaines, Illinois 60016

As to Plaintiff-Intervener, the State of Iowa:

Payment of penalties: A corporate check must be made to the order of “The State of Iowa” and mailed to:

David R. Sheridan
Assistant Attorney General
Environmental Law Division
Lucas State Office Building
321 E. 12th Street, Room 018
Des Moines, IA 50319

As to Plaintiff-Intervener, the State of Iowa: (cont.)

Contact person for notices:

Brian Hutchins, Supervisor
Air Compliance Section
Air Quality Bureau, Iowa DNR
7900 Hickman Rd., Suite 1
Urbandale, IA 50322

As to Plaintiff-Intervener, the State of Louisiana:

Payment of penalties: Payment of the civil penalties and of any stipulated penalties owed to the State of Louisiana shall be made by corporate check made payable to the “Louisiana Department of Environmental Quality” and sent to Darryl Serio, Fiscal Director, Office of Management and Finance, LDEQ, P.O. Box 4303, Baton Rouge, Louisiana 70821-4303.

Contact Person for Notices:

Peggy M. Hatch
Administrator, Enforcement Division
Office of Environmental Compliance
Louisiana Department of Environmental Quality
P. O. Box 4312
Baton Rouge, Louisiana 70821-4312

As to Equistar:

Contact Person for Notices:

Steven D. Cook
Equistar Chemicals, LP
One Houston Center
1221 McKinney Street
Houston, TX 77252-2583

APPENDIX 4

Table of Actual or Alleged Past Violations of the CWA, 33 U.S.C. § 1251 *et seq.*, Based on Alleged Past Unpermitted Discharges of Pollutants or Discharges of Pollutants in Excess of Allowable Permit Limits to Navigable Waters of the United States

Facility	Month and Year	Outfall No.	Parameter and Other Details
Corpus Christi	June 2003	001	Naphthalene, 2,4-dimethylphenol, and phenol (daily average and daily maximum)
Corpus Christi	August 2003	001	Oil and grease (daily average)
Corpus Christi	May 2004	001	Copper (daily average and daily maximum)
Corpus Christi	January 2005	001	Total suspended solids (daily maximum)
Channelview	January 2000	001	NH-N (daily maximum)
Channelview	January 2000	004	Total organic compounds (daily maximum)
Channelview	February 2000	001	Chlorine (daily maximum) (7 events)
Channelview	February 2000	002	pH (maximum)
Channelview	March 2000	001	pH (maximum)
Channelview	March 2000	001	pH (minimum)
Channelview	March 2000	001	Chlorine (daily minimum and/or daily maximum) (18 events)
Channelview	April 2000	001	Chlorine (daily minimum and/or daily maximum) (8 events)
Channelview	May 2000	001	Chlorine (daily minimum and/or daily maximum) (6 events)
Channelview	June 2000	001	Chlorine (daily minimum and/or daily maximum) (10 events)
Channelview	July 2000	001	Chlorine (daily maximum) (20 events)
Channelview	August 2000	001	Chlorine (daily maximum) (5 events)
Channelview	October 2000	001	Chlorine (daily minimum) (2 events)
Channelview	October 2000	002	pH (maximum)
Channelview	January 2001	001	Total suspended solids (daily maximum)
Channelview	February 2001	001	pH (maximum)
Channelview	April 2001	001	Chlorine (daily maximum)
Channelview	May 2001	001	Chlorine (daily minimum)
Channelview	June 2001	001	Chlorine (daily minimum) (2 events)
Channelview	August 2001	001	Copper (daily average and daily maximum) (3 events)
Channelview	October 2001	001	Copper (daily maximum)
Channelview	November 2001	001	Zinc (daily average)
Channelview	February 2002	001	NH-N (daily average)
Channelview	March 2002	001	Copper (daily average and daily maximum) (2 events)
Channelview	June 2002	001	Total suspended solids (daily

Facility	Month and Year	Outfall No.	Parameter and Other Details
			maximum)
Channelview	July 2002	004	pH (maximum)
Channelview	September 2002	001	Copper (2 daily maximum events and 1 daily average event)
Channelview	September 2002	001	Flow (daily average)
Channelview	October 2002	001	Copper (daily maximum)
Channelview	January 2003	001	Copper (daily average and daily maximum)
Channelview	February 2003	001	Copper (daily average and daily maximum)
Channelview	March 2003	003	pH (maximum)
Channelview	April 2003	001	Copper (daily average and daily maximum)
Channelview	May 2003	001	Copper (daily average and daily maximum)
Channelview	May 2003	002	Total organic compounds (daily maximum)
Channelview	June 2003	001	Flow (daily average)
Channelview	June 2003	003	pH and quarterly total organic compound samples not taken
Channelview	July 2003	001	Flow (daily average)
Channelview	August 2003	001	Flow (daily average)
Channelview	September 2003	001	Copper (daily maximum)
Channelview	February 2004	001	Chlorine (daily maximum and monthly maximum)
Channelview	February 2004	004	Total organic compounds (daily maximum)
Channelview	June 2004	002	Unauthorized wastewater diversion
Channelview	October 2004	002	Total organic compounds (daily maximum)
Channelview	December 2005	001	pH > 60 min (4 events)
Channelview	June 2006	004	pH (daily minimum-maximum range)
Channelview	November 2006	001	pH (daily minimum-maximum range)
Channelview	December 2006	001	pH (minimum)

Clinton	July 2005	001	Biochemical oxygen demand (daily and monthly average) (NPDES permit owner: Veolia)
Clinton	December 2004	001	Naphthalene (daily average) (NPDES permit owner: Veolia)
LaPorte	July 2005	001	Biochemical oxygen demand (daily maximum)
LaPorte	November 2005	001	Biochemical oxygen demand (daily maximum)
LaPorte	March 2006	001	Biochemical oxygen demand (daily maximum)

LaPorte	January 2002	004	Chlorine (daily maximum)
LaPorte	August 2002	003	Pellet/oil sheen to county ditch
LaPorte	October 2002	003	Discharge more than trace amount of visible solids to ditch
LaPorte	October 2002	003	Discharge of visible oil
LaPorte	October 2002	003	Discharge more than trace amount of visible solids to ditch
LaPorte	December 2002	003	Discharge more than trace amount of visible solids to ditch
LaPorte	December 2002	003	Total suspended solids (daily average)
LaPorte	January 2003	005	pH (daily minimum-maximum range)
LaPorte	February 2003	003	Aluminum (daily average)
LaPorte	February 2003	003	Zinc (daily average, daily maximum)
LaPorte	February 2003	005	pH (daily minimum-maximum range)
LaPorte	April 2003	003	Total suspended solids (daily average and daily maximum); discharge of visible oil
LaPorte	June 2003	003	Total suspended solids (daily maximum and daily minimum); discharge of visible oil
LaPorte	June 2003	003	Discharge of visible oil
LaPorte	June 2003	003	Total suspended solids (daily average)
LaPorte	June 2003	005	pH (daily minimum-maximum range)
LaPorte	June 2003	003	Discharge more than trace amount of visible solids to ditch
LaPorte	July 2003	003	Total suspended solid (daily average)
LaPorte	July 2003	003	Discharge more than trace amount of visible solids to ditch
LaPorte	August 2003	003	Discharge more than trace amount of visible solids to ditch
LaPorte	September 2003	003	Discharge of visible oil
LaPorte	October 2003	003	Total suspended solids (daily average)
LaPorte	February 2004	004	Chlorine (daily average)
LaPorte	April 2004	004	Chlorine (daily average)
LaPorte	May 2004	003	Total suspended solids (daily average)
LaPorte	December 2004	101	Chlorine (daily minimum)
LaPorte	March 2005	104	Chlorine (daily minimum)
LaPorte	May 2005	104	Chlorine (daily minimum)
LaPorte	September 2005	003	Biochemical oxygen demand (daily average)
LaPorte	November 2005	104	Total suspended solids (daily average)
LaPorte	December 2005	003	Total suspended solids (daily average)
LaPorte	October 2006	003	Total organic compounds (daily average)
Chocolate Bayou	September 2004	101	Chloroform (daily average and daily maximum)
Chocolate Bayou	September 2005	001, 002, 003, 004,	Failure to sample or gather data as a

		005, 006, 007, 101	result of Hurricane Rita evacuation
Chocolate Bayou	October 2005	101	Fecal coliform (daily maximum)
Chocolate Bayou	July 2006	002	Oil and grease (daily maximum)
Chocolate Bayou	July 2006	007	pH (daily maximum)
Chocolate Bayou	December 2006	003	Oil and grease (daily maximum) and failure to comply with notification requirement in Special Condition 7.c. of permit
Morris	January 2000	001-0	1,2 Dichloroethane (daily average)
Morris	May 2000	001-0	Toluene (daily average) (2 events)
Morris	May 2000	001-0	Toluene (daily maximum) (1 event)
Morris	May 2000	001-0	Benzene (daily average and daily maximum) (2 events)
Morris	May 2000	003-0	pH (maximum)
Morris	May 2000	003-0	Oil and grease (daily average and daily maximum)
Morris	June 2000	006	Unpermitted discharge of benzene
Morris	July 2000	003-0	Oil and grease (daily average and daily maximum)
Morris	July 2000	005-1	Total suspended solids (daily maximum)
Morris	March 2001	005-0	Total suspended solids (daily maximum)
Morris	March 2001	002	Unpermitted discharge of benzene
Morris	August 2001	001-0	Acenaphthene (daily average) (2 events)
Morris	August 2001	001-0	Fecal coliform (maximum)
Morris	August 2001	007-0	Halogens (daily maximum)
Morris	September 2001	005-0	Total suspended solids (daily maximum) (2 events)
Morris	October 2002	002, 004, 005	Sample storage refrigerators were at > 4 degrees Celsius
Morris	May 2003	005	pH (daily minimum-maximum range)
Morris	December 2003	005	Total suspended solids (daily maximum)
Morris	January 2004	007	TRH/halogens (daily maximum)
Morris	April 2004	005	Total suspended solids (monthly average and daily maximum)
Morris	August 2004	005	Total suspended solids (daily average)
Morris	July 2005	005	Total suspended solids (daily average)
Morris	March 2006	001	Total suspended solids (daily maximum) (2 events)
Morris	July 2006	007	Temperature exceeded permitted maximum
Morris	December 2006	004	Oil and grease (monthly average, daily average and daily maximum)
Morris	December 2006	005	Dimethylphthalate (daily average)

Morris	December 2006	005	4-Nitrophenol (daily average)
Morris	December 2006	006	Oil and grease (monthly average, daily average and daily maximum)