UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF TEXAS

UNITED STATES of AMERICA, Plaintiff, and the NORTHWEST AIR POLLUTION AUTHORITY OF THE STATE OF WASHINGTON, Plaintiff-Intervener, v. EQUILON ENTERPRISES LLC, Defendant.	)	Civil Action No.

CONSENT DECREE

WHEREAS, Plaintiff, the United States of America (hereinafter "Plaintiff" or "the United States"), on behalf of the United States Environmental Protection Agency (herein, "EPA"), has simultaneously filed a Complaint and lodged this Consent Decree against Equilon Enterprises LLC, (hereinafter "Equilon" or "Company"), for alleged environmental violations at four petroleum refineries owned and operated by the Company;

WHEREAS, the United States has initiated a nationwide, broad-based compliance and enforcement initiative involving the petroleum refining industry;

WHEREAS, the parties agree that the installation of equipment and implementation of controls pursuant to this Consent

Decree will achieve major improvements in air quality control;

WHEREAS, Equilon has not answered or otherwise responded to the Complaint in light of the settlement memorialized in this and other Consent Decrees;

WHEREAS, the United States' Complaint alleges that Equilon has been and is in violation of certain provisions of the Clean Air Act (the "Act"), 42 U.S.C. §7401 et seq. and its implementing regulations;

WHEREAS, the Northwest Air Pollution Authority of the State of Washington has filed a Complaint in Intervention ("Plaintiff-Intervener"), alleging that Equilon was and is in violation of the applicable Clean Air Act State Implementation Plan ("SIP"), and other state environmental statutory and regulatory requirements;

WHEREAS, Equilon has denied and continues to deny the violations alleged in each of the Complaints and maintains its defenses to the violations alleged;

WHEREAS, Equilon has, in the interest of settlement, agreed to undertake installation of air pollution control equipment and enhancements to air pollution management practices at its four refineries to reduce air emissions;

WHEREAS, projects undertaken pursuant to this Consent Decree are for the purposes of abating or controlling atmospheric pollution or contamination by removing, reducing, or preventing

the creation of emission of pollutants ("pollution control facilities") and as such, may be considered for certification as pollution facilities by federal, state or local authorities.

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

WHEREAS, Equilon has identified and self-reported certain potential violations of environmental statutes and agreed that settlement of these issues is the most expeditious method to resolve these potential violations;

WHEREAS, the United States, Plaintiff-Intervener, and Equilon have agreed that settlement of this action is in the best interest of the parties and in the public interest, and that entry of this Consent Decree without further litigation is the most appropriate means of resolving this matter; and

WHEREAS, the United States, Plaintiff-Intervener, and Equilon have consented to entry of this Consent Decree without trial of any issues;

NOW, THEREFORE, without any admission of fact or law, and without any admission of the violations alleged in the Complaints, it is hereby ORDERED AND DECREED as follows:

I. JURISDICTION AND VENUE

1. The Complaints state a claim upon which relief can be granted against the Company under Sections 113 and 167 of the Act, 42 U.S.C. §§ 7413 and 7477, and 28 U.S.C. § 1355. This Court

has jurisdiction of the subject matter herein and over the parties consenting hereto pursuant to 28 U.S.C. § 1345 and pursuant to Sections 113 and 167 of the CAA, 42 U.S.C. §§ 7413 and 7477.

2. Venue is proper under Section 113(b) of the Act, 42 U.S.C. § 7413(b), and under 28 U.S.C. § 1391(b) and (c).

II. APPLICABILITY

3. The provisions of this Consent Decree shall apply to and be binding upon the United States, the Northwest Air Pollution Authority of the State of Washington, and upon the Company as well as the Company's officers, employees, agents, successors and assigns, and shall apply to Equilon's refineries for the life of the Consent Decree. In the event Equilon proposes to sell or transfer any of its refineries subject to this Consent Decree, it shall advise in writing to such proposed purchaser or successor-in-interest of the existence of this Consent Decree and provide a copy of the Consent Decree, and shall send a copy of such written notification by certified mail, return receipt requested, to EPA before such sale or transfer, if possible, but no later than the closing date of such sale or transfer. This provision does not relieve the Company from having to comply with any applicable state or local regulatory requirement regarding notice and transfer of facility permits.

III. FACTUAL BACKGROUND

4. Equilon operates four (4) petroleum refineries for the manufacture of various petroleum-based products, including gasoline, diesel, and jet fuels, and other marketable petroleum by-products.

5. Equilon owns and operates refineries located as follows:
Bakersfield, California
Los Angeles, California
Martinez, California
Puget Sound, Washington

Equilon also owns the Lube Units located in Deer Park, Texas, that are covered by this Consent Decree.

6. Petroleum refining involves the physical, thermal and chemical separation of crude oil into marketable petroleum products.

7. The petroleum refining process at Equilon's four refineries results in emissions of significant quantities of criteria air pollutants, including nitrogen oxides ("NO_x"), carbon monoxide ("CO"), particulate matter ("PM"), sulfur dioxide ("SO_2"), as well as volatile organic compounds ("VOCs") and hazardous air pollutants ("HAPs"), including benzene. The primary sources of these emissions are the fluid catalytic cracking units ("FCCUs"), process heaters and boilers, the sulfur recovery plants, the wastewater treatment system, fugitive emissions from leaking components, and flares throughout the refinery.

IV. REDUCTIONS OF NOx EMISSIONS FROM FLUIDIZED CATALYTIC CRACKING

UNITS ("FCCUs")

Program Summary: Equilon shall implement a program to reduce NOx emissions with the optimization of its existing Selective Non-Catalytic Reduction ("SNCR") system at the Martinez, California FCCU, and the application of NOx adsorbing catalyst additive and Low NOx CO combustion promoter at the Los Angeles, California, and Puget Sound, Washington, FCCUs. Equilon shall incorporate lower NOx emission limits into operating permits and will demonstrate future compliance with the lower emission limits through the use of continuous emissions monitoring systems ("CEMS"). Equilon does not operate an FCCU at its Bakersfield, California, refinery.

A. SNCR OPTIMIZATION: MARTINEZ, CALIFORNIA, FCCU.

8. By no later than June 30, 2001, Equilon shall begin a four-year study to optimize the performance of the SNCR system to minimize NOx emissions from the Martinez FCCU ("Optimization Study").

9. Equilon shall submit a protocol for the Optimization Study to EPA that includes a consideration of operating parameters of Attachment 1 to the Consent Decree. As part of the Optimization Study, Equilon shall evaluate the effect of the operating parameters identified in Attachment 1 to the Consent Decree and shall monitor NOx emissions and the operating parameters to identify optimum operating levels for the parameters that minimize the NOx emissions.

10. Equilon shall submit the results of the optimization study to EPA in a written report no later than sixty (60) days after the completion of the study. The report shall identify operating parameter levels that result in maximum reductions of

NOx emissions from the Martinez FCCU. The report shall include, at a minimum, the following information:

(a) Regenerator flue gas temperature and flow rate;
(b) Coke burn rate;
(c) FCCU feed rate;
(d) FCCU feed sulfur content;
(e) CO boiler firing rate and fuel type;
(f) Total fresh catalyst addition rate;
(g) Reductant addition rates, where applicable;
(h) Temperature profiles; and
(i) Hourly average NOx and O_2 concentration.

11. As required in Paragraph 10(i), Equilon shall determine the NOx and O_2 concentrations at the point of emission to the atmosphere by CEMS. As required in Paragraph 10(i), Equilon shall determine the O_2 concentrations, after combustion in the CO Boiler, by process analyzer(s) calibrated in accordance with the manufacturer's recommendations, where analyzer(s) are installed. Equilon shall report the data or measurements to EPA in electronic format.

B. <u>SNCR Outlet Emission Limits</u>.

12. As part of its Optimization Study report, Equilon shall propose to EPA, short and long-term concentration based limits, each at 0% oxygen, and rolling averaging times (i.e. 3-hour, 12-hour, or 24-hour for short term rolling averages and 365-day for a long term rolling average) for FCCU NOx emissions, for optimized operation of the control system consistent with the provisions of Paragraphs 8 through 11. Equilon shall comply with the limits it proposes immediately upon submission of its

Optimization Study report to EPA, until such time as Equilon is required to comply with the emissions limits set by EPA, pursuant to Paragraphs 13 and 14.

13. EPA will use the CEMS data collected during the Optimization Study and all other available and relevant information to establish a limit for Nox emissions from the Martinez FCCU. EPA may establish Nox concentration limits on a short term (e.g., 3-hour, 12-hour, or 24-hour) rolling average and a long term (e.g., 365-day) rolling average basis, each at 0%. EPA will determine the NOx concentration limits and averaging times for the FCCU based on the level of performance during the Optimization Study, a reasonable certainty of compliance, and any other available pertinent information.

14. EPA will notify Equilon of its determination of NOx concentration limits and averaging times for each unit, and Equilon shall immediately operate its SNCR system at Martinez so as to comply with the established operating parameter levels.

C. Demonstrating Compliance with SNCR Operating Parameter Levels.

15. Beginning no later than June 30, 2001, Equilon shall use NOx CEMS to monitor performance of the FCCU and the SNCR system at Martinez and after June 30, 2005 to monitor compliance with the terms and conditions of this Consent Decree. Equilon

shall make CEMS data available to EPA upon demand as soon as practicable. Equilon's release from liability pursuant to Part XV (Effect of Settlement) at the Martinez FCCU shall be contingent upon Equilon satisfying the requirements of Paragraphs 12 through 15. In the event that the Bay Area Air Quality Management District ("BAAQMD") staff, the BAAQMD Hearing Board, or a court of competent jurisdiction, should finally determine that this Consent Decree prohibits or limits the ability of Martinez to generate, bank or use Interchangeable Emission Reduction Credits ("IERCs") as defined in BAAQMD Regulation 2, Rule 9, from emission reductions at the Martinez FCCU, then the provisions of Paragraphs 8 through 16 above shall be null and void, as if they had not been applicable to the Martinez FCCU NOx emissions and the release from liability under Part XV (Effect of Settlement) of this Consent Decree shall not apply to the Martinez FCCU NOx emissions. Equilon shall provide written notice to EPA of the determination within 60 days of its receipt.

16. Equilon shall install, certify, calibrate, maintain, and operate all CEMS required by this Consent Decree in accordance with the requirements of 40 C.F.R. §§ 60.11, 60.13 and Part 60 Appendix A, B, and F. These CEMS will be used to demonstrate compliance with emission limits.

D. Applications of Use of NOx Adsorbing Catalyst Additive and Low NOx CO Promoter ("Additives") in the FCCU at Los Angeles,

California and Puget Sound, Washington.

17. By no later than December 31, 2001, Equilon shall begin to add NOx adsorbing catalyst additive and low NOx CO promoter to the Puget and Los Angeles FCCUs in accordance with Attachment 2 to this Consent Decree, which is incorporated herein by reference, to establish the optimized catalyst additive addition rate. Equilon may opt to take emission limits as provided in Paragraph 29 in place of the requirements of Paragraphs 17 through 28.

18. Equilon will demonstrate the performance of the catalyst additives at the optimized addition rate over a twelve-month period to yield the lowest NOx concentration feasible from the Puget and Los Angeles FCCUs at that optimized rate. The twelve-month demonstrations at the optimized rate shall begin no later than March 31, 2002.

E. Additives Optimization.

19. By no later than 30 days prior to beginning the twelve month demonstrations, Equilon shall notify EPA in writing of the optimized additives addition rate with an explanation and the supporting data that demonstrates that the requirements of Attachment 2 have been met in establishing the optimized rates. During each demonstration, Equilon shall add catalyst additive at the optimized rate.

20. No later than sixty (60) days after the completion of

each 12-month demonstration, Equilon shall report to EPA the results of each demonstration. The reports shall include, at a minimum, the following information:

(a) Regenerator flue gas temperature and flow rate;
(b) Coke burn rate;
(c) FCCU feed rate;
(d) FCCU feed sulfur content;
(e) CO boiler firing rate and fuel type;
(f) Total fresh catalyst addition rate;
(g) SO2 and NOx adsorbing catalyst additive addition rate;
(h) Low-NOx and conventional CO promotor addition rates;
(i) Temperature profiles; and
(j) Hourly average NOx and O_2 concentrations at the point of emission to the atmosphere, and at the inlet to the CO boiler system.

21. As required in Paragraph 20(j), Equilon shall determine the NOx and O_2 concentrations at the point of emission to the atmosphere by CEMS. As required in Paragraph 20(j), Equilon shall determine the O_2 concentrations, after combustion in the CO Boiler, by process analyzer(s) calibrated in accordance with the manufacturer's recommendations, where analyzer(s) are installed. Equilon shall report the data or measurements to EPA in electronic format.

F. FCCU (Additives) Emission Limits.

22. As part of each report required by Paragraph 20, Equilon shall propose to the EPA short and long term concentration based limits, each at 0% oxygen, and rolling averaging times (i.e., 3-hour, 12-hour, or 24-hour for short term rolling averages and 365-day for a long term rolling average) for

FCCU NOx emissions, consistent with the provisions of Paragraphs 19 through 21. Equilon shall comply with the limits it proposes beginning immediately upon submission of each report to EPA, until such time as Equilon is required to comply with the emissions limits set by EPA pursuant to Paragraphs 24 and 25.

23. During the SRU turnaround at Puget in 2004 the NOx limits established under Paragraphs 22, 24 and 25 shall not apply to the FCCU provided that good air pollution control practices to minimize emissions are maintained during that turnaround.

24. EPA will use the CEMS data collected during the demonstration and all other available and relevant information to establish limits for NOx emissions from the Puget and Los Angeles FCCUs. EPA may establish NOx concentration limits based on a short term (e.g., 3-hour) rolling average and a long term (e.g., 365-day) rolling average, each at 0% oxygen. EPA will determine the NOx concentration limits and averaging times for the FCCU based on the level of performance during the demonstration, a reasonable certainty of compliance, and any other available pertinent information.

25. EPA will notify Equilon of its determination of NOx concentration limits and averaging time for the Puget FCCU and the Los Angeles FCCU, and Equilon shall immediately, or within 30 days if EPA's NOx concentration limit is more stringent than Equilon's proposed limit, operate the Puget and Los Angeles FCCUs

so as to comply with the established emission limits.

G. Demonstrating Compliance with FCCU (Additives) Emission Limits.

26. Beginning no later than June 30, 2001, Equilon shall use a NOx CEMS to monitor performance of the Puget and Los Angeles FCCUs and subsequently, the catalyst additives, and to report compliance with the terms and conditions of this Consent Decree.

27. Equilon shall make CEMS data available to EPA upon demand as soon as practicable.

28. Equilon shall install, certify, calibrate, maintain, and operate all CEMS required by this Consent Decree in accordance with the requirements of 40 C.F.R. §§ 60.11, 60.13 and Part 60 Appendix A, B and F. These CEMS will be used to demonstrate compliance with emission limits.

H. NOx Emission Limits for Los Angeles FCCU.

29. By no later than July 31, 2001, Equilon shall notify EPA that it will either: (a) begin the catalyst additives program to establish NOx emissions limits at it Los Angeles FCCU pursuant to Paragraphs 17 through 25; or (b) by September 30, 2001, operate its Los Angeles FCCU so that NOx emissions from this unit do not exceed 40 ppmvd based on a 24-hour rolling average basis and 20 ppmvd based on a 365-day rolling average basis, each at 0% oxygen.

30-32. (Reserved).

V. REDUCTIONS OF SO_2 EMISSIONS FROM FCCUs

Program Summary: Equilon shall implement a program to reduce SO_2 emissions from refinery FCCUs by the installation and operation of a Wet Gas Scrubber ("WGS") at its Puget Sound, Washington, FCCU. Equilon shall optimize its current use of SO2 Adsorbing Catalyst Additive in the FCCUs at the Los Angeles and Martinez, California refineries. Equilon shall incorporate lower SO2 emission limits into operating permits and will demonstrate future compliance with the lower emission limits through the use of CEMS. Equilon does not operate an FCCU at its Bakersfield, California, refinery.

A. Installation and Operation of WGS on the Puget Sound, Washington FCCU.

33. By no later than December 31, 2006, Equilon shall complete installation and begin operation of a WGS on emissions from the Puget FCCU. Equilon shall design and operate the WGS to achieve an SO_2 concentration of 25 ppmvd or lower on a 365-day rolling average basis and 50 ppmvd on a 7-day rolling average basis, each at 0% oxygen.

B. Demonstrating Compliance with SO2 Emission Limits

34. By no later than June 30, 2001, Equilon shall use an SO_2 CEMS to monitor performance of the FCCU and, subsequently, performance of the WGS and to report compliance with the terms and conditions of this Consent Decree. Equilon shall make CEMS data available to EPA upon demand as soon as practicable. 35. Equilon shall install, certify, calibrate, maintain, and operate all CEMS required by this Consent Decree in accordance with the requirements of 40 C.F.R. §§ 60.11, 60.13 and Part 60 Appendix A, B, and F. These CEMS will be used to demonstrate compliance with

emission limits.

C. Application of SO2 Adsorbing Catalyst Additive at the Los Angeles and Martinez, California, FCCUs.

36. By no later than September 30, 2001, Equilon shall begin to add SO2 adsorbing catalyst additive to the Los Angeles and Martinez FCCUs in accordance with Attachment 2 to this Consent Decree, which is incorporated herein by reference, to establish the optimized catalyst additive addition rate.

37. Equilon will demonstrate the performance of the catalyst additive at the optimized addition rate over a twelve-month period to yield the lowest SO2 concentration feasible from the FCCU at that optimized rate. The twelve-month demonstration at the optimized rate shall begin no later than March 31, 2002.

D. Additives Optimization.

38. By no later than 30 days prior to beginning the twelve month demonstration, Equilon shall notify EPA in writing of the optimized additive addition rate for each FCCU with an explanation and the supporting data that demonstrates that the requirements of Attachment 2 have been met in establishing the optimized rates. During the demonstration, Equilon shall add catalyst additive at the optimized rate.

39. No later than sixty (60) days after the completion of the 12-month demonstration, Equilon shall report to EPA the results of the demonstration for each FCCU. The report shall include, at a minimum, the following information:

(a) Regenerator flue gas temperature and flow rate;
(b) Coke burn rate;
(c) FCCU feed rate;
(d) FCCU feed sulfur content;
(e) CO boiler firing rate and fuel type;
(f) Total fresh catalyst addition rate;
(g) SO2 and NOx adsorbing catalyst additive addition rate;
(h) Reductant addition rates;
(i) Temperature profiles; and
(j) Hourly average SO2 and O_2 concentrations.

40. As required in Paragraph 39(j), Equilon shall determine the SO2 and O2 concentrations at the point of emission to the atmosphere by CEMS. As required in Paragraph 39(j), Equilon shall determine the O_2 concentrations, after combustion in the CO Boiler, by process analyzer(s) calibrated in accordance with the manufacturer's recommendations, where analyzer(s) are installed. Equilon shall report the data or measurements to EPA in electronic format.

E. <u>FCCU (Additives) Emission Limits</u>.

41. As part of its report required by Paragraph 39, Equilon shall propose to the EPA short and long term concentration based limits, each at 0% oxygen, and rolling averaging times (i.e. 7-day short term rolling averages and 365-day for a long term rolling average) for SO2 emissions from the Los Angeles and Martinez FCCU consistent with the provisions of Paragraphs 38 - 40. Equilon shall comply with the limits it proposes for each FCCU beginning immediately upon submission of its report to EPA, until such time as Equilon is required to comply with the

emissions limits set by EPA, pursuant to Paragraphs 42 and 43.

42. EPA will use the CEMS data collected from each FCCU during the demonstration and all other available and relevant information to establish limits for SO2 emissions from the Los Angeles and Martinez FCCUs. EPA may establish SO2 concentration limits based on a short term (e.g., 7-day) rolling average and a long term (i.e., 365-day) rolling average, each at 0% oxygen. EPA will determine the SO2 concentration limits and averaging times for the FCCUs based on the level of performance during the demonstration, a reasonable certainty of compliance, and any other available pertinent information.

43. EPA will notify Equilon of its determination of SO2 concentration limits and averaging time for the units, and Equilon shall immediately, or within 30 days if EPA's NOx concentration limit is more stringent than Equilon's proposed limit, operate the Los Angeles and Martinez FCCUs so as to comply with the established emission limits.

F. Demonstrating Compliance with FCCU (Additives) Emission Limits.

44. Beginning no later than June 30, 2001, Equilon shall use a SO2 CEMS to monitor performance of the Los Angeles and Martinez FCCUs, and subsequently, the catalyst additives, and to report compliance with the terms and conditions of this Consent Decree.

45. Equilon shall make CEMS data available to EPA upon

demand as soon as practicable.

46. Equilon shall install, certify, calibrate, maintain, and operate all CEMS required by this Consent Decree in accordance with the requirements of 40 C.F.R. §§ 60.11, 60.13 and Part 60 Appendix A, B and F. These CEMS will be used to demonstrate compliance with emission limits.

G. <u>FCCU REGENERATOR NSPS SUBPARTS A and J APPLICABILITY</u>.

47(a). Equilon's FCCU Regenerators at the refineries identified at Paragraph 5 shall be affected facilities subject to the requirements of NSPS Subpart A and J for each relevant pollutant by the dates specified below:

Los Angeles:

SO2	- 12/31/01
PM	- 12/31/06
CO	- 9/30/02
Opacity	- 9/30/02

Martinez:

SO2	- 12/31/01
PM	- upon lodging
CO	- upon lodging
Opacity	- 12/31/01

Puget:

SO2	- 12/31/06
PM	- upon lodging
CO	- upon lodging
Opacity	- Alternate Monitoring Plan by 12/31/06

47(b). Lodging of this Consent Decree shall constitute notification in accordance with 40 C.F.R. §60.7.

47(c). The performance testing required under 40 C.F.R. §60.8 shall be presumed to be either the initial RATA or the first RAA as required by 40 C.F.R. 60 Appendix F (which is made

applicable by this Consent Decree).

VI. PROGRAM ENHANCEMENTS RE: BENZENE WASTE NESHAP

Program Summary: Equilon shall undertake refinery-wide audits of each of the refineries identified in Paragraph 5 to determine its compliance with all Benzene Waste NESHAP requirements and to take corrective action where any areas of non-compliance are identified. In addition, Equilon shall undertake the following refinery-wide measures, as enhancements to its existing programs, to minimize or eliminate fugitive benzene waste emissions at the refineries.

A. Current Compliance Status.

48. In addition to the provisions of the enhanced program set forth in this Part VI, Equilon shall immediately upon lodging of this Consent Decree:

(a) With the exception of Bakersfield, Equilon's refineries shall comply with the compliance option set forth at 40 C.F.R. § 61.342(e) (herein referred to as the "6BQ compliance option".

(b) Bakersfield is two (2) facilities for purposes of the Benzene Waste NESHAP. Equilon claims that the Total Annual Benzene ("TAB") quantity from facility waste at its Bakersfield, California, refinery(ies), is less than 10 megagrams per year ("Mg/yr"), and is/are not currently subject to the control requirements of 40 C.F.R. §61.342(b) and

(c) The Bakersfield refinery(ies) shall comply with the sampling requirements for exempt refineries with TABs less than or equal to 10 Mg/yr in accordance with Paragraph 74 of this Consent Decree.

B. Compliance Status Changes.

49. From the date of lodging of this Consent Decree through termination, Equilon shall not change the compliance status of

any facility from the 6BQ compliance option to the 2Mg compliance option. In addition, if at anytime from the date of lodging of this Consent Decree to its termination date, Bakersfield refinery(ies) are determined to have TABs greater than 10 Mg/yr, Equilon shall not utilize the 2Mg compliance option. Equilon shall otherwise consult with EPA and Plaintiff-Intervener before making any change in compliance strategy not expressly prohibited by this Paragraph and all changes must be accomplished in accordance with the regulatory provisions set forth in the Benzene Waste NESHAP. **C. General Refinery-wide Compliance Audits.**

50. Beginning no later than June 30, 2001, Equilon shall undertake refinery-wide audits of each refinery's compliance with the Benzene Waste NESHAP, to include, at a minimum, each of the audit requirements set forth in Paragraphs 52-53, below. Within 30 days of its completion of each audit, Equilon shall report to EPA and Plaintiff-Intervener any areas of non-compliance identified as a result of the general, refinery-wide audits and shall submit in writing a proposed schedule for correcting the non-compliance.

51. Equilon shall certify to the United States and Plaintiff-Intervener, that the audit and any related corrective action have been completed and that all Equilon refineries are in compliance. The United States will review Equilon's

certification and will respond with written concurrence. Equilon's release from liability at all refineries for all past civil claims related to its compliance with the Benzene Waste NESHAP through the date of lodging of this Consent Decree, as specified in Part XVII (Effect of Settlement), and release for those violations which Equilon self-discloses as a result of its audits, will take effect upon the United States' concurrence with Equilon's audit and compliance certification.

D. Waste Streams Audits

52. Equilon shall conduct an audit of each facility's waste stream inventory and TAB calculation. Sampling of the waste streams is not required for the first phase of the audit. Equilon may use previous analytical data or documented knowledge of waste streams, 40 C.F.R. § 61.355(c)(2). The audit shall include, but not be limited to:

(a) An accounting of each waste stream at each facility (e.g., slop oil, tank water draws, spent caustic, desalter rag layer dumps, desalter vessel process sampling points, other sample wastes, maintenance wastes, and turnaround wastes); and

(b) A review of the methods used to determine annual waste quantities.

E. Schedule for Waste Streams Audits.

53. Equilon shall conduct the audits required by Paragraph 52, above, in accordance with the following schedule:

(a) By no later than January 31, 2002, Equilon shall conduct the first phase of the audits at each of its refineries. This shall include, but not be limited to, a review of each

facility's waste operations to ensure all waste streams are accounted for, and a review of flow calculation and/or measurements for each waste stream.

(b) Based on EPA's review of each preliminary audit report, EPA will submit to Equilon a list of up to twenty (20) waste streams per facility for sampling for benzene concentration.

(c) Equilon shall sample all waste streams identified by EPA no later than ninety (90) days from the date of receipt of EPA's list of waste streams for sampling.

(d) Equilon shall use the results of the sampling conducted pursuant to Paragraphs 52 and 53 to calculate the TAB or uncontrolled benzene quantities for the respective facilities. Equilon shall submit the final results of this audit, including the final TAB calculations, to EPA no later than ninety (90) days after the date of completion of the sampling.

F. Carbon Canisters.

54. Equilon shall comply with the requirements of Paragraphs 55 through 62 at all locations where a carbon canister(s) is utilized as the control device under the Benzene Waste NESHAP.

55. For all canisters that are operated as part of a primary and secondary system, "breakthrough" is defined as any reading of 50 ppm volatile organic compounds ("VOC"). For all canisters that are operated as part of a single canister system, "breakthrough" is defined as any VOC reading above background.

56. At locations where Equilon uses a water scrubber and carbon canister in series, the requirements for single canister systems apply.

57. Primary and Secondary Carbon Canisters. By no later than January 31, 2002, Equilon shall install primary and secondary carbon canisters and operate them in series, or in the alternative it may install a water scrubber and carbon canister operated in series.

58. Within 7 days of installation of each secondary carbon canister, Equilon shall monitor for breakthrough between the primary and secondary carbon canisters at times when there is actual flow to the carbon canister, in accordance with the frequency specified in 40 C.F.R. § 61.354(d).

59. Equilon shall replace the primary carbon canisters with fresh carbon canisters immediately when VOC breakthrough is detected in accordance with 40 C.F.R. § 61.354(d). The original secondary carbon canister will then become the new primary carbon canister. For this Paragraph, "immediately" shall mean eight (8) hours for canisters of 55 gallons or less, twenty-four (24) hours for canisters between 55 gallons up to 20,000 lbs., and 48 hours for canisters 20,000 lbs. or larger.

60. For canisters 20,000 lbs. or larger, once breakthrough is detected, Equilon shall make every effort to shut off the flow to the canister system until the replacement canister is in place. If Equilon is unable to shut off the flow to the canister system before the primary canister is replaced, then Equilon shall monitor the inlet and outlet to the secondary canister on

an hourly basis until the replacement canister is in place.

61. Utilizing single carbon canisters. Beginning no later than the date of lodging of this Consent Decree, Equilon shall monitor for breakthrough from a single carbon canister at times when there is actual flow to the carbon canister, in accordance with the frequency specified in 40 C.F.R. § 61.354(d).

62. For locations where single canisters are utilized, canisters will be replaced when breakthrough is determined within eight (8) hours for canisters with historical replacement intervals of two weeks or less or within twenty-four (24) hours for canisters with a historical replacement interval of more than two weeks.

G. Annual Program.

63. Equilon shall establish an annual program of reviewing process information for each facility, including but not limited to construction projects, to ensure that all new benzene waste streams are included in each facility's waste stream inventory.

H. Laboratory Audits.

64. Equilon shall conduct audits of all laboratories that perform analysis of its benzene waste NESHAP samples to ensure that proper analytical and quality assurance/quality control procedures are followed.

65. No later than January 1, 2002, Equilon shall conduct the audit(s) of the laboratories used by 2 of its refineries.

Equilon shall complete audits of the laboratories used by the remaining refineries by June 30, 2002.

66. During the life of this Consent Decree, Equilon shall conduct subsequent laboratory audits for each refinery every two (2) years, or prior to using a new lab for analysis of benzene samples.

I. Benzene Spills.

67. Equilon shall account for all benzene wastes generated through spills in its TAB calculations. At refineries with TABs greater than 10 Mg/yr, Equilon shall review all reportable spills within each facility to determine if benzene waste was generated.

68. Equilon shall account for all benzene wastes generated through spills that are not managed solely in controlled waste management units in its 2 Mg/yr or 6 Mg/yr calculation, as appropriate.

J. Training.

69. By no later than June 30, 2001, Equilon shall develop and implement annual training for all employees required to take benzene waste samples.

70. By no later than December 31, 2001, Equilon shall establish standard operating procedures for all control equipment used to comply with the Benzene Waste NESHAP and include them in annual training for operators assigned to this equipment.

71. As part of Equilon's training program, Equilon must

ensure that contractors hired to perform the requirements of this Section of this Consent Decree are properly trained to implement all provisions at each facility.

K. Waste/Slop Oil Management.

72. By no later than January 1, 2002, Equilon shall maintain records of waste/slop oil movements for waste streams (organic or aqueous) which are not controlled.

73. General Sampling. Equilon, Motiva, and Deer Park Refining Limited Partnership (DPRLP), in consultation with EPA, and appropriate state personnel, will select one of the nine refineries which they own at which to conduct a preliminary evaluation to identify potential sample locations, determine "end of line benzene" sample locations, and review available oil movement transfer documentation to assist Equilon, Motiva and DPRLP with preparation for their sampling.

L. Sampling (less than 10 Mg/yr).

74. For the Bakersfield refinery(ies), which has a TAB of less than 10 Mg/yr, Equilon shall:

(a) Conduct annual sampling of all waste streams that contributed 0.05 Mg/yr or more to the previous year's TAB calculation; and

(b) Conduct a quarterly "end of the line" benzene determination. By no later than September 30, 2001, Equilon shall submit a plan to EPA for approval that contains proposed sampling locations and methods for flow calculations to be used in the quarterly benzene determination. The sampling shall begin during the first full calendar quarter after Equilon receives written approval from EPA of the Bakersfield sampling plan required by this Paragraph.

M. Sampling (6 Mg/yr).

75. Equilon shall conduct a quarterly "end of the line" benzene determination for refineries that are complying with the 6 Mg/yr compliance option (40 C.F.R. § 61.342(e)).

76. Within two (2) months of Equilon's consultation with EPA as required by Paragraph 73, but no later than September 30, 2001, Equilon shall submit a plan to EPA for approval that contains proposed sampling locations and methods for flow calculations to be used in the quarterly benzene determination.

77. The sampling shall begin during the first full calendar quarter after Equilon receives its respective written approval from EPA of the sampling plans required by this Section.

78. Beginning no later than the first full calendar quarter following EPA's approval under Paragraph 77, Equilon shall sample quarterly all uncontrolled waste streams that count toward the 6 Mg/yr calculation and contain greater than 0.05 Mg/yr of benzene.

N. Miscellaneous Measures.

79. Equilon shall manage all groundwater remediation conveyance systems in accordance with the Benzene Waste NESHAP 40 C.F.R. § 61.342 (a) (3).

80. Equilon shall implement the following compliance measures at all refineries that have a TAB greater than 10 Mg/yr:

(a) Conduct monthly visual inspections of all water traps within its individual drain systems;

(b) Identify and mark all area drains that are stormwater drains;

(c) Where installed, monitor all conservation vents on process sewers for detectable leaks on a weekly basis; and

(d) Conduct quarterly monitoring at the controlled oil/water separators in benzene service in accordance with 40 C.F.R. §61.347.

81. Equilon shall account for and include in the TAB all slop oil recovered from its oil/water separators or sewer system until recycled or put into a feed tank, in accordance with 40 C.F.R. § 61.342(a). For refineries with a TAB greater than 10 Mg/yr, all tanks handling waste benzene, except where Equilon can demonstrate that the tank is otherwise exempt under 40 C.F.R. § 61.342, shall meet the control standards specified (40 C.F.R. §§ 61.343 or 61.351).

O. <u>Projects/Investigations</u>.

82. By no later than January 31, 2002, Equilon shall evaluate the following at each facility including, but not limited to, each project's feasibility and estimated cost for implementation:

(a) Installation of closed loop sampling devices on all sampling points on waste and process streams that are greater than 10 ppmw benzene and contain greater than 0.01 megagrams per year (Mg/yr) benzene; and

(b) Installation of new sample points at all locations where routine process sampling points are not easily accessible.

83. Equilon shall submit a report summarizing the results of the evaluations of the projects identified in Paragraph 82

above, within one-hundred twenty (120) days after the date of completion of each study. These reports shall include at a minimum, the feasibility of each project, the estimated cost of completion, Equilon's decision as to whether or not to implement each project at each facility, and the basis for deciding not to implement the project at each facility, as appropriate.

P. Quarterly Reports.

84. Beginning the first full calendar quarter after the date of lodging of this Consent Decree, Equilon shall submit a report to EPA and Plaintiff-Intervener that includes the information requested in Paragraphs 88 through 93, for each of its refineries, and the specific progress information requested in Paragraphs 85 through 87, as appropriate. The quarterly report shall be due no later than thirty days after the end of each calendar quarter.

85. Canisters and Water Scrubbers. Equilon shall submit a project completion report to EPA upon completing the installation of all of the secondary carbon canisters or water scrubbers at each facility. This report shall be included in the first quarterly report following completion and shall include a list of all locations within the facility where secondary canisters or water scrubbers were installed, the installation date of each secondary canister or water scrubbers, and the date that each secondary canister or water scrubbers was put into operation.

86. Audits. Equilon shall submit a report to EPA summarizing the results of the initial lab audits upon its completion for each facility specified in Paragraphs 64 - 65. This report shall be included in the first quarterly report following completion and shall include, at a minimum, identification of all labs audited, a description of the methods used in the audit, and the results of the audit.

87. Training. As part of its quarterly reports, Equilon shall include a report to EPA and Plaintiff-Intervener that details the training it will implement at each facility pursuant to Paragraphs 69 through 71 above.

88. Equilon shall include in its Quarterly report the results of the quarterly sampling conducted pursuant to Paragraph 78 (6Mg sampling) above. This shall include a list of all waste streams sampled and all results of benzene analysis for each waste stream.

89. For all refineries, Equilon shall include in its Quarterly Reports the results of the quarterly end of the line sampling conducted pursuant to Paragraphs 74(b) and 75 above.

90. Equilon shall use all sampling results and approved flow calculation methods pursuant to Paragraphs 74 (b) and 75, above, to calculate and include in its Quarterly Report a quarterly and a projected calendar year value against the 2Mg or 6BQ compliance options.

91. Quarterly Calculations. If the quarterly calculation for any facility made pursuant to Paragraph 90 exceeds: (a) 0.5 Mg for refineries complying with the 2 Mg compliance option, or (b) 1.5 Mg for refineries complying with the 6 BQ compliance option, Equilon shall include in its Quarterly Report a summary and schedule of the activities planned to minimize benzene wastes at the facility for the rest of the calendar year to ensure that the calendar year calculation complies with the 2Mg or 6BQ compliance options.

92. Projected Annual Calculations. If any projected annual calculation for any facility made pursuant to Paragraph 90, above, exceeds 6 Mg for refineries complying with the 6 BQ compliance option, Equilon shall include in its Quarterly Report a summary and schedule of the activities planned to minimize benzene wastes at the facility to ensure that the calendar year calculation complies with the Benzene Waste NESHAP.

93. Equilon shall identify all labs used during the quarter for analysis of benzene waste samples and provide the date of the most recent audit of each lab.

VII. PROGRAM ENHANCEMENTS RE: LEAK DETECTION AND REPAIR

Program Summary: Equilon shall undertake audits of the components in light liquid and gaseous service at each of its refineries to determine compliance with all of the requirements of the Leak Detection and Repair ("LDAR") regulations and to correct any areas of non-compliance. In addition, Equilon shall undertake the following enhancements to its LDAR program consisting of refinery-wide measures to minimize or eliminate

fugitive emissions from components in light liquid and gaseous service at its refineries in accordance with the schedule set forth below.

94(a). The requirements of this Part shall only apply to components in light liquid and gaseous service.

A. Written Refinery-Wide Program.

94(b). By no later than September 30, 2001, Equilon shall develop and maintain a written refinery-wide program for LDAR compliance at its refineries and shall implement this program refinery-wide. Each refinery-wide program shall include at a minimum:

(a) An overall refinery-wide leak rate goal that will be achieved on a process unit-by-process unit basis. Results of daily monitoring shall be communicated to appropriate unit supervisors;

(b) Identification of all valves and pumps that have the potential to leak volatile organic compounds or hazardous air pollutants within process areas that are owned and maintained by each refinery;

(c) Procedures for identifying leaking pumps and valves;

(d) Procedures for repairing and tracking leaking components;

(e) Procedures for identifying and including new valves and pumps in the LDAR program; and

(f) A process for evaluating new and replacement equipment to promote consideration and installation of equipment that will minimize leaks and/or eliminate chronic leakers.

B. Training.

95. By no later than March 31, 2002, Equilon shall

implement the following training programs at each covered facility:

(a) For new LDAR personnel, Equilon shall provide and require LDAR training prior to each employee beginning work in the LDAR group;

(b) For all LDAR personnel, Equilon shall provide and require completion of annual LDAR training; and

(c) For all other refinery operations and maintenance personnel (including contract personnel), Equilon shall provide and require annual review courses including relevant aspects of the LDAR program.

C. LDAR Audits.

96. Beginning no later than June 30, 2001, Equilon shall undertake refinery-wide audits of each refinery's compliance with the LDAR regulations, to include, at a minimum, each of the audit requirements set forth in Paragraph 98. Within 30 days of completion of each audit, Equilon shall report to EPA and Plaintiff-Intervener any areas of non-compliance identified as a result of its refinery-wide audits and submit in writing a proposed compliance schedule for correcting the non-compliance.

97. Within 60 days of completing the audits, Equilon shall certify to EPA that the audit and any related corrective action has been completed and that all Equilon refineries are in compliance or on a compliance schedule. The United States will review Equilon's certification and will respond with written concurrence. Equilon's release from liability as specified in Part XV (Effect of Settlement), for all past civil claims related

to its compliance with the LDAR requirements through the date of lodging of this Consent Decree at all refineries, and a release for those violations which Equilon self-discloses as a result of its audits, will take effect upon the United States' concurrence with Equilon's audit and compliance certification.

98. Audit Program. Equilon's LDAR audit program shall, at a minimum, focus on comparative monitoring, records review, tagging, data management, and observation of the LDAR technicians' calibration and monitoring techniques. During the audits, leak rates shall be calculated for each process unit where comparative monitoring was performed. These leak rates shall be based on the total number of valves in the process unit, rather than the total number of valves monitored during the audit. For process units complying with the Sustainable Skip Period Program, in accordance with Attachment 3 to this Consent Decree, Equilon shall use the leak rates calculated during the audit to determine if more frequent monitoring is required.

99. External Audits. Equilon shall conduct an external audit of each refineries' LDAR program at least once every four (4) years. The first external audit for half of the refineries shall be conducted no later than one year from the date of lodging of this Consent Decree. The remaining refineries shall be audited within two years of the date of lodging of this Consent Decree.

100.(a) Internal Audits. Equilon shall conduct internal audits of each refinery's LDAR program according to the broad framework approved by EPA. These audits shall be conducted by the personnel familiar with the LDAR Program and its requirements from one or more of the nine (9) refineries operated by Equilon, Motiva, or Deer Park Refining Limited Partnership. The first of these internal LDAR audits shall be held no later than two years from the date of the initial external audit required in Paragraph 99 above, and held every four years thereafter for the life of this Consent Decree.

100.(b) Alternative. As an alternative to the internal audits required by Paragraph 100(a), above, Equilon may elect to perform external audits instead, provided that an audit of each refinery occurs every two (2) years.

D. Pump Leak Definition.

101. By no later than March 31, 2003, Equilon shall utilize an internal leak definition of 2000 ppm for all pumps at Equilon refineries, other than Martinez, where a 500 ppm leak definition shall apply, and Los Angeles, where a 1000 ppm leak definition shall apply. Equilon may continue to report leak rates against the applicable regulatory leak definition, or use the lower leak definition for regulatory reporting purposes. Pumps shall be monitored monthly.

E. Valve Leak Definition.

102. By no later than March 31, 2003, Equilon shall utilize an internal leak definition of 500 ppm for all valves, excluding pressure relief devices, at all Equilon refineries, other than Martinez, where a 100 ppm leak definition shall apply. Equilon may continue to report leaks against the applicable regulatory leak definition, or use the lower leak definition for regulatory reporting purposes.

F. Repairs.

103. Equilon shall track, repair, and re-monitor all leaks above the internal leak definitions of 2000 ppm for pumps and 500 ppm for valves, except at Martinez and/or Los Angeles, where the regulatory leak definitions are lower, then the regulatory leak definitions shall apply for purposes of this Paragraph, provided, however, that Equilon shall have thirty (30) days to make repairs and re-monitor leaks that are greater than these internal leak definitions and less than regulatory leak definition.

104. Beginning no later than June 30, 2001, Equilon shall make a "first attempt" at repair on any valve that has a reading greater than 100 ppm of VOC or hazardous air pollutant, excluding control valves, pumps, and components that LDAR personnel are not authorized to repair.

105. After commencing the "first attempt at repair program," Equilon shall record, track and re-monitor leaks above the internal leak definitions as specified above in Paragraphs

101 and 102. However, Equilon shall immediately re-monitor all valves that LDAR personnel attempted to repair to ensure that the leaks have not been made worse. If Equilon can demonstrate with sufficient monitoring data that "first attempt" repair at 100 ppm worsens leaks, after 2 years Equilon may request that the United States reconsider or amend this requirement.

G. LDAR Monitoring Frequency.

106. By no later than March 31, 2003, Equilon shall implement more frequent monitoring of all valves by choosing one of the following options on a process-unit-by-process-unit basis:

(a) Quarterly monitoring with no ability to skip periods. This option cannot be chosen for process units subject to the HON or the modified-HON option in the Refinery MACT; or

(b) Sustainable Skip Period Program, as set forth in Attachment 3 to this Consent Decree, which is incorporated herein by reference.

(c) For units complying with the Sustainable Skip Period, previous process unit monitoring results may be used to determine the initial skip period interval provided that each valve has been monitored using the 500 ppm leak definition.

107. For process units complying with the Sustainable Skip Period Program set forth in Paragraph 106(b), above, EPA or the State or local agency may require Equilon to implement more frequent monitoring of valves if the leak rate determined during an EPA, State or local inspection demonstrates that more frequent monitoring is appropriate. In evaluating whether the leak rate

demonstrates that more frequent monitoring of valves is appropriate, EPA, the State, or the local agency will determine the leak rate based on the total number of valves in the process unit, rather than the total number of valves monitored during the inspection.

108. Process units monitored in the Sustainable Skip Period Program alternative method may not revert to quarterly monitoring if the most recent monitoring period demonstrates that more than two percent of the valves were found leaking.

H. Dataloggers.

109. By no later than March 31, 2003, Equilon shall use dataloggers and/or electronic data storage for LDAR monitoring, in accordance with operational specifications to be proposed by Equilon and approved by EPA.

110. Equilon will have the ability to use paper logs where necessary or more feasible (i.e., small rounds, re-monitoring, or when dataloggers are not available or broken); any manually recorded monitoring data shall be transferred to the electronic database, in accordance with Paragraph 111, within 7 days of monitoring.

111. By no later than March 31, 2001, Equilon shall create and maintain an electronic database for storage and reporting of data. Equilon shall ensure that the collected monitoring data includes a time/date stamp, operator identification, and

instrument identification for all monitoring events.

I. LDAR Data QA/QC.

112. Beginning no later than March 31, 2001, Equilon shall conduct a daily quality assurance/quality control ("QA/QC") review of all data after receiving the data from the LDAR monitoring technicians. This review shall include such things as: number of components monitored per technician, time between monitoring events, and abnormal data patterns.

J. LDAR Personnel.

113. By no later than June 30, 2001, Equilon shall establish a program that will hold LDAR personnel accountable for LDAR performance. Equilon shall maintain a position within each facility (or under contract) responsible for LDAR coordination, with the authority to implement improvements.

K. Monitoring After Turnaround or Maintenance.

114. Equilon shall have the option of monitoring affected valves and pumps within process unit(s) after completing a documented maintenance, startup, or shutdown activity without having the results of the monitoring count as a scheduled monitoring activity, provided that Equilon monitor according to the following schedule:

(a) For events involving 1000 or fewer valves and pumps, Equilon shall monitor within one (1) week of the documented maintenance, start-up, or shutdown activity;

(b) For events involving greater than 1000 but fewer than 5000

valves and pumps, Equilon shall monitor within two (2) weeks of the documented maintenance, start-up, or shutdown activity; and

(c) For events involving greater than 5000 pumps and valves, Equilon shall monitor within four (4) weeks of the documented maintenance, start-up, or shutdown activity.

L. Calibration

115. All calibrations of LDAR monitoring equipment shall be conducted using methane as the calibration gas in accordance with 40 C.F.R. Part 60, EPA Reference Test Method 21.

M. Calibration Drift Assessment.

116. Beginning no later than June 30, 2001, Equilon shall conduct calibration drift assessments of the LDAR monitoring equipment, at a minimum, at the end of each monitoring shift.

117(a). The calibration drift assessment shall be conducted, at a minimum, using a 500 ppm calibration gas and a calibration gas representing the highest regulatory leak definition at the refinery.

117(b). If any calibration drift assessment after the initial calibration shows a negative drift of more than 10% from the previous calibration, Equilon shall re-monitor all valves and pumps that were monitored since the last calibration, and had readings greater than 100 ppm.

N. Delay of Repair.

118. Beginning no later than June 30, 2001, for any valve

Equilon is allowed under the applicable regulations to place on the "delay of repair" list for repair, Equilon shall:

(a) Require sign-off by the unit supervisor that the component is technically infeasible to repair without a process unit shutdown, before the component is eligible for inclusion on the "delay of repair" list;

(b) Establish a leak level of 50,000 ppm at which it will undertake extraordinary efforts to fix the leaking valve rather than put the valve on the "delay of repair" list, unless Equilon can demonstrate that there is a safety or major environmental concern posed by repairing the leak in this manner. For valves, extraordinary efforts or repairs shall be defined as non-routine repair methods, such as the drill and tap;

(c) Include valves that are placed on the "delay of repair" list in its scheduled LDAR monitoring, and make extraordinary repairs if leak reaches 50,000 ppm; and

(d) Undertake extraordinary efforts to repair valves that have been on the "delay of repair" list for a period of 3 years and leaking at a rate of 10,000 ppm, unless Equilon can demonstrate that there is a safety or major environmental concern posed by repairing the leak in this manner.

O. Recordkeeping and Reporting Requirements For Part VII

119. Quarterly Progress Reports. Equilon shall maintain and submit the following information as part of the quarterly progress report submitted pursuant Part X (General Recordkeeping, Report Retention, and Reporting) (or less often if so indicated). Reports are to be submitted to EPA and to Plaintiff-Intervener:

(a) Equilon shall report on an annual basis the results of the audits conducted pursuant to Paragraphs 98 - 100. Equilon shall include in these reports a description of changes it plans based on the results of the audits. These reports shall be due on or before January 31 of each year during the life of this Consent Decree. Equilon shall maintain the audit results from Paragraphs 96 - 100 and documentation of any corrective action implemented for the life of this

Consent Decree. The audit results shall be made available to the EPA, State and local authorities upon request;

(b) As part of its first progress report required by this Consent Decree, Equilon shall submit a certification that it has implemented the calibration drift assessments described in Paragraphs 116, 117(a), and 117(b);

(c) As part of its first progress report required by this Consent Decree, Equilon shall include a certification that it has implemented the "delay of repair" requirements described in Paragraph 118;

(d) In its first progress report due under this Consent Decree, Equilon shall submit a certification that the first attempt repair program as described in Paragraphs 104 - 105 has been implemented;

(e) As part of the first progress report submitted after June 30, 2001, Equilon shall include a description of the accountability programs that are developed pursuant to Paragraph 113;

(f) As part of the first progress report required to be submitted after June 30, 2001, Equilon shall submit a status report on the use of dataloggers and/or electronic data storage for data monitoring as required by Paragraphs 109 - 111;

(g) As part of the first progress report required to be submitted after September 30, 2001, Equilon shall include a copy of the written LDAR program for each refinery developed pursuant to Paragraph 94;

(h) In the first progress report due after the training program required by Paragraph 95 has been implemented at each refinery, Equilon shall submit a description of the various training programs and a certification that the training has been implemented; and

(i) Quarterly Monitoring Reports. Equilon shall submit quarterly monitoring reports to EPA with the results of the LDAR monitoring performed pursuant to this Consent Decree. This report shall include:

(1) A list of the process units monitored during the quarter;

(2) Whether each process unit is complying with quarterly monitoring or the Sustainable Skip Period program;

(3) The number of valves and pumps monitored in each unit;

(4) The number of valves and pumps found leaking;

(5) The number of "difficult to monitor" components monitored;

(6) The projected month of the next monitoring event for that unit; and

(7) A list of all valves and pumps currently on the delay of repair list and the date each component was put on such list.

VIII. PROGRAM ENHANCEMENTS RE: NSPS SUBPARTS A AND J SO2 EMISSIONS FROM SULFUR RECOVERY PLANTS ("SRP") AND FLARING

PROGRAM SUMMARY: Beginning immediately upon the lodging of this Consent Decree, Equilon agrees to take the following measures at all of its SRPs and certain flaring devices at the refineries identified in Paragraph 5. Equilon shall eliminate all reasonably preventable SO2 emissions from flaring. Equilon will implement procedures for root cause analysis of acid gas flaring incidents at all refineries. Equilon shall strive to extend the duration between SRP maintenance shutdowns (unscheduled or scheduled) to three years or greater.

A. DEFINITIONS.

120. Unless otherwise expressly provided herein, terms used in this Part shall have the meaning given to those terms in the Clean Air Act, 42 U.S.C. §§ 7401 et seq., and the regulations promulgated thereunder. In addition, the following definitions shall apply to the terms contained within this Part of this Consent Decree:

(a) "Acid Gas" shall mean any gas that contains hydrogen sulfide and is generated at a refinery by the regeneration of an

amine scrubber solution;

(b) "AG Flaring" shall mean, for purposes of this Consent Decree, the combustion of Acid Gas and/or Sour Water Stripper Gas in a Flaring Device. Nothing in this definition shall be construed to modify, limit, or affect EPA's authority to regulate the flaring of gases that do not fall within the definitions contained in this Decree of Acid Gas or Sour Water Stripper Gas;

(c) "AG Flaring Device" shall mean any device at the Refinery that is used for the purpose of combusting Acid Gas and/or Sour Water Stripper Gas, except facilities in which gases are combusted to produce elemental sulfur or sulfuric acid. The combustion of Acid Gas and/or Sour Water Stripper Gas occurs at the following locations:

Bakersfield, (CA): Area 1, Area 2 Low Pressure and Area 3

Los Angeles, (CA): SRP

Martinez, (CA): Opcen Hydrocarbon, LOP, Clean Fuels (LGRO)

Puget Sound, (WA): East, North and South

(d) "AG Flaring Incident" shall mean the continuous or intermittent flaring/combustion of Acid Gas and/or Sour Water Stripper Gas that results in the emission of sulfur dioxide equal to, or greater than five-hundred (500) pounds in a twenty-four (24) hour period; provided, however, that if five-hundred (500) pounds or more of sulfur dioxide have been emitted in a twenty-four (24) hour period and Flaring continues into subsequent, contiguous, non-overlapping twenty-four (24) hour period(s), each period of which results in emissions equal to, or in excess of five-hundred (500) pounds of sulfur dioxide, then only one AG Flaring Incident shall have occurred. Subsequent, contiguous, non-overlapping periods are measured from the initial commencement of Flaring within the AG Flaring Incident.

(e) "Day" shall mean a calendar day.

(f) "Hydrocarbon Flaring" shall mean, for purposes of this Consent Decree, the combustion of refinery process gases, except for Acid Gas and/or Sour Water Stripper Gas and/or

Tail Gas, in a Hydrocarbon Flaring Device. Nothing in this definition shall be construed to modify, limit, or affect EPA's authority to regulate the flaring of gases that do not fall within the definitions contained in this Decree.

(g) "Hydrocarbon Flaring Device" shall mean, a flare device used to safely control (through combustion) any excess volume of a refinery process gas other than Acid Gas or Tail Gas. To the extent that the refinery utilizes Flaring Devices that are functionally equivalent and are in the same service as those specified above, those Flaring Devices shall be covered under this Decree. Hydrocarbon flaring occurs at the following locations:

Bakersfield, (CA): Area 1 and Area 3

Martinez, (CA): Flexigas, Opcen Hydrocarbon, Clean Fuels (LGRO), and VRS 1, 2, and 3

Deer Park, (TX): Lubes

Additional Flaring Devices subject to this definition may be identified pursuant to the audits that required pursuant to Paragraph 121(a).

(h) "Hydrocarbon Flaring Incident" or HC Flaring Incident, shall mean the continuous or intermittent flaring of refinery process gases, except for Acid Gas or Sour Water Stripper Gas or Tail Gas, at a Hydrocarbon Flaring Device, that results in the emissions of sulfur dioxide equal to, or greater than the flare's existing federally enforceable permit level on a 24-hour basis, or greater than or equal to five-hundred (500) pounds in a twenty-four hour period where no permitted emissions level exists.

(i) "Malfunction" shall mean any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(j) "Root Cause" shall mean the primary cause of an AG or Hydrocarbon Flaring Incident as determined through a process of investigation; provided, however, that if a Flaring Incident encompasses multiple releases of sulfur dioxide, the "Root Cause" may encompass multiple primary causes.

(k) "Scheduled Maintenance" of an SRP shall mean any shutdown of

an SRP that Equilon schedules at least ten (10) days in advance of the shutdown for the purpose of undertaking maintenance of that SRP.

(l) "Shutdown" shall mean the cessation of operation of an affected facility for any purpose.

(m) "Sour Water Stripper Gas" or "SWS Gas" shall mean the gas produced by the process of stripping or scrubbing refinery sour water.

(n) "Startup" shall mean the setting in operation of an affected facility for any purpose.

(o) "Sulfur Recovery Plant" shall mean the devices at Equilon's Refineries identified as:

Bakersfield, (CA): SRU 1,2, and 3;

Los Angeles, (CA): #300,#600,#700, and #750;

Martinez, (CA): SRU 1, 2, 3, and 4;

Puget, (WA): SRP (SRU 1, 2, and 3).

(p) "Tail Gas" shall mean exhaust gas from the Claus trains and the tail gas treating unit ("TGTU") section of the SRP;

(q) "Tail Gas Incident" shall mean, for the purpose of this Consent Decree, combustion of Tail Gas that either: (i) is combusted in a flare and results in 500 pounds of sulfur dioxide emissions in a 24 hour period; or (ii) is combusted in a monitored incinerator and the amount of sulfur dioxide emissions in excess of the 250 ppm limit on a rolling twenty-four hour average exceeds 500 pounds. However, such emissions shall not be considered a TGI where exempt under NSPS Subparts A and J.

(r) "Upstream Process Units" shall mean all amine contactors, amine scrubbers, and sour water strippers at the refinery, as well as all process units at the refinery that produce gaseous or aqueous waste streams that are processed at amine contactors, amine scrubbers, or sour water strippers.

B. FLARE NSPS SUBPARTS A and J APPLICABILITY.

121 (a). By no later than June 30, 2001, Equilon shall

develop and submit for EPA approval a protocol for audits of the pre-1973 flares, including flares at the following locations:

Bakersfield (CA): Area 2 (74y-3) and Area 2 (74y-4);

Los Angeles (CA): Main Plant #1 and #2, SRP;

Martinez, (CA): LOP and LPG;

Puget (WA): East, North, and South;

Deer Park, (TX): LHT

Equilon shall begin the audits by September 30, 2001. Within 30 days of completing each audit, Equilon shall submit the audit results to EPA, identify the flares for which it will accept NSPS Subpart J applicability and propose a schedule for achieving compliance. Equilon shall submit notifications as required by 40 C.F.R. §60.7 to EPA when it has achieved compliance for each particular flare. Such notifications shall be included in Equilon's next quarterly report following compliance, as required under Part XII.

121 (b). Within twelve(12) months of the date of lodging of this Consent Decree, Puget shall submit to EPA a Hydrocarbon Flaring Study ("HFS") of the HC Flaring Incidents at the Puget facility, for EPA review and approval. The study shall include, at a minimum:

1. Identification of all major sources of HC Flaring Incidents;

2. Methods to reduce the number and duration of HC

Flaring Incidents and of the quantity of pollutants emitted through HC Flaring;

3. Proposed method (s) to effect such reductions; and

4. A schedule for implementation of the emission reduction methods.

Puget shall implement the proposed emission reduction methods by December 31, 2006. Puget shall comply with the corrective action requirements of Paragraphs 130, and 136-140 with respect to HC Flaring after the earlier of December 31, 2006, or the implementation of these reduction methods.

121(c). In the first quarterly report following implementation of the HC Flaring reduction methods, Puget shall report on the implementation of the changes. In all subsequent reports, Puget shall provide information on HC Flaring Incidents as required in Paragraph 134 of this Consent Decree.

C. SRP NSPS SUBPARTS A and J APPLICABILITY.

122(a). Immediately upon lodging of this Consent Decree, Equilon's Claus Sulfur Recovery Plants ("SRP") identified at Paragraph 120(o) shall be subject to and will continue to comply with the applicable provisions of NSPS Subparts A and J.

122(b). Immediately upon lodging of this Consent Decree, Equilon agrees that all emission points (stacks) to the atmosphere for tail gas emissions from each of its Claus Sulfur Recovery Plants will continue to be monitored and reported upon

as required by 40 C.F.R. §§ 60.7(c), 60.13, and 60.105. This requirement is not applicable to the AG Flaring Devices identified in Paragraph 120(c).

122(c). Notwithstanding the above, the Martinez refinery shall meet the SRU CEMs certification requirements of 40 C.F.R. §§ 60.13 and 60.105 by September 30, 2002.

123. Equilon shall re-route all SRP sulfur pit emissions from the refineries identified at Paragraph 5, such that all sulfur pit emissions to the atmosphere are either eliminated, or included and monitored as part of the applicable SRP's emissions subject to the NSPS Subpart J limit for SO2, a 12-hour rolling average of 250 ppmvd SO2 at 0% oxygen, as required by 40 C.F.R. § 60.104(a)(2). Equilon agrees to re-route all sulfur pit emissions by the earlier of December 31, 2003, or the first turnaround of the applicable Claus Train occurring six (6) months after the date of lodging of this Consent Decree.

124. During the life of this Consent Decree, Equilon shall continue to conduct SRP emissions monitoring with CEMS at all of the emission points unless an SO2 alternative monitoring procedure has been approved by EPA, per 40 C.F.R. § 60.13(i), for any of the emission points.

125. During the life of this Consent Decree, for the purpose of determining compliance with the SRP emission limits, Equilon shall apply the "start-up/shutdown" provisions set forth in NSPS

Subpart A to the Claus Sulfur Recovery Plant and not to the independent start-up or shut-down of its corresponding control device(s) (e.g., TGTU). However, the malfunction exemption set forth in NSPS Subpart A shall apply to both the Claus Sulfur Recovery Plant and its control device(s) (e.g., TGTU).

D. SULFUR RECOVERY PLANT OPTIMIZATION.

126. An SRP optimization study, if required to be implemented under this Part, shall meet the following requirements:

(e) detailed evaluation of plant design and capacity, operating parameters and efficiencies - including catalytic activity, and material balances;

(b) An analysis of the composition of the acid gas and sour water stripper gas resulting from the processing of sour crude slate;

(c) A thorough review of each critical piece of process equipment and instrumentation within the Claus train that is designed to correct deficiencies or problems that prevent the Claus train from achieving its optimal sulfur recovery efficiency and expanded periods of operation;

(d) Establishment of baseline data through testing and measurement of key parameters throughout the Claus train;

(e) Establishment of a thermodynamic process model of the Claus train;

(f) For any key parameters that have been determined to be at less than optimal levels, initiation of logical, sequential, or stepwise changes designed to move such parameters toward their optimal values;

(g) Verification through testing, analysis of continuous emission monitoring data or other means, of incremental and cumulative improvements in sulfur recovery efficiency, if any;

(h) Establishment of new operating procedures for long term efficient operation; and

(i) Each study shall be conducted to optimize the performance of the Claus trains in light of the actual characteristics of the feeds to the SRUs.

E. PAST FLARING ANALYSIS

127. Equilon shall identify causes of AG Flaring at all of its refineries for AG Flaring Incidents that occurred from May 31, 1996 through May 31, 2001. Equilon has implemented (or is in the process of identifying and implementing) corrective actions to minimize the number and duration of AG Flaring Incidents.

128. By no later than September 30, 2001, Equilon shall submit to the EPA regional office in which the Equilon facility is located, and the appropriate State office, a report which contains an examination of all past AG Flaring for the period of five years prior to the date of lodging of this Consent Decree ("Past Flaring Incident Analysis Report"). The Past Flaring Incident Analysis Report shall contain for each AG Flaring Incident identified:

(a) The date and time that the AG Flaring Incident started and ended;

(b) An estimate of the quantity of sulfur dioxide emitted and the calculations used to determine that quantity;

(c) An analysis that sets forth the Root Cause, where available, and all contributing causes of that AG Flaring Incident, identifying those causes that are malfunctions;

(d) An analysis of the corrective actions, if any, that were taken to reduce the likelihood of a recurrence of a AG

Flaring Incident resulting from the same Root Cause, where available or contributing causes in the future. The analysis shall identify the implementation dates of the corrective actions, and a description of the effectiveness of the corrective action(s) in addressing the Root Cause;

(e) If corrective action(s) had not been taken to address the Root Cause of a AG Flaring Incident, where available, or it is determined that the corrective action(s) that had been taken has (have) not been effective in eliminating AG Flaring Incidents arising from the same root cause, and Equilon concludes that corrective action(s) is (are) required, the report shall include a description of the action(s) and, if not already completed, a schedule for its (their) implementation, including proposed commencement and completion dates. If Equilon concludes that corrective action is not required, the report shall explain the basis for that conclusion;

(f) Identification of possible Root Causes, where available, of AG Flaring Incidents which Equilon believes should not be considered Malfunctions. Such identified Root Causes for acid and sour water stripper gas flaring shall be added to the list of agreed upon non-malfunctions, identified in Paragraph 145 (a) (1); and

(g) Identification of all periods of time for which records are not available or inadequate for determining the cause of past acid and sour water stripper gas flaring incidents, with a description of the search undertaken to locate such records, and an explanation for the unavailability of such records.

129. Upon the completion of the corrective actions identified in the Past Flaring Incident Analysis Report, Equilon shall certify to the EPA regional office in which the Equilon facility is located, and the appropriate State office, that it has completed any and all corrective actions identified in the Past Flaring Incident Analysis Report.

F. <u>FUTURE FLARING</u>.

130. With the exception of Puget as set forth in Paragraph 121(b), by no later than June 1, 2001, and continuing for the life of this Consent Decree, Equilon shall implement procedures at its refineries for evaluating whether future AG Flaring Incidents, HC Flaring Incidents, and Tail Gas Incidents are due to Malfunctions. The procedures require Root Cause Analysis and Corrective Action for all types of flaring and stipulated penalties for AG Flaring Incidents or Tail Gas Incidents if the Root Causes were not due to Malfunctions.

G. HYDROCARBON FLARING.

131. Equilon agrees for purposes of this Consent Decree that HC Flaring Devices identified at Paragraph 120(g) are subject to NSPS Subpart J as fuel gas combustion devices, in addition to being emergency control devices for quick and safe release of malfunction gases.

132. Equilon shall comply with 40 C.F.R. §60.11(d) to ensure NSPS compliance at all refinery flares with the NSPS obligation to implement good air pollution control practices for minimizing flaring activity.

133. Equilon's hydrocarbon flares which are not equipped with flare gas recovery systems, and which are affected facilities, shall meet the emission limitation, monitoring or other requirements for refinery fuel gas found in 40 C.F.R. §§ 60.104 and 60.105 or alternative monitoring protocols approved

pursuant to 40 C.F.R. § 60.13(i) no later than December 31, 2003.

134(a). By no later than December 31, 2001, Equilon shall submit a plan for addressing Hydrocarbon Flaring at the Los Angeles, Bakersfield, and Martinez refineries. The plan shall identify waste streams and flaring devices and shall select one of the options set forth below for each hydrocarbon flare. Equilon shall implement the selected option at each refinery for each hydrocarbon flare by no later than December 31, 2003 or such other date that EPA may approve:

(i) Installation, operation and maintenance of flare gas recovery systems;

(ii) Re-routing of hydrocarbon streams away from any hydrocarbon flaring devices, during the first turnaround of the applicable process units following 6 months from the date of lodging of this Consent Decree, but no later than December 31, 2003 or such other date that EPA may approve; or

(iii) Monitoring of hydrocarbon streams for compliance with NSPS 40 C.F.R. § 60.104(a)(1) if Equilon chooses to continue to route hydrocarbon streams to any hydrocarbon flaring device.

134(b). For HC Flaring Incidents, Equilon shall follow the Investigation and Reporting, and Correction Action procedures in Paragraphs 136 - 141.

H. TAIL GAS INCIDENTS.

135. For Tail Gas Incidents, Equilon shall follow the same investigative, reporting, corrective action and assessment of stipulated penalty procedures as outlined in Paragraph 136 for AG Flaring. Those procedures shall be applied to TGTU shutdowns, bypasses of a TGTU, unscheduled shutdowns of a SRP or other

miscellaneous unscheduled SRP events which results in a Tail Gas Incident, with the exceptions that the provisions of Paragraph 151 would not apply to a Tail Gas Incident, and Tail Gas Incidents would not be counted in the tally of AG Flaring Incidents under Paragraph 151.

I. REQUIREMENTS RELATED TO ALL FLARING.

136. INVESTIGATION AND REPORTING. No later than thirty (30) days following the end of an AG Flaring Incident, Tail Gas Incident or HC Flaring Incident (hereinafter "Flaring Incident"), Equilon shall submit a report to the applicable EPA Regional Office and applicable State Agency that sets forth the following:

(a) The date and time that the Flaring Incident started and ended. To the extent that the Flaring Incident involved multiple releases either within a twenty-four (24) hour period or within subsequent, contiguous, non-overlapping twenty-four (24) hour periods, Equilon shall set forth the starting and ending dates and times of each release;

(b) An estimate of the quantity of SO2 that was emitted and the calculations that were used to determine that quantity;

(c) The steps, if any, that Equilon took to limit the duration and/or quantity of SO2 emissions associated with the Flaring Incident;

(d) A detailed analysis that sets forth the Root Cause and all contributing causes of that Flaring Incident, to the extent determinable;

(e) An analysis of the measures, if any, that are available to reduce the likelihood of a recurrence of a Flaring Incident resulting from the same Root Cause or contributing causes in the future. The analysis shall discuss the alternatives, if any, that are available, the probable effectiveness and cost of the alternatives, and whether or not an outside consultant should be retained to assist in the analysis. Possible design, operational, and maintenance changes shall

be evaluated. If Equilon concludes that corrective action(s) is (are) required under Paragraph 137, the report shall include a description of the action(s) and, if not already completed, a schedule for its (their) implementation, including proposed commencement and completion dates. If Equilon concludes that corrective action is not required under Paragraph 137, the report shall explain the basis for that conclusion;

(f) A statement that:

(1) Specifically identifies each of the grounds for stipulated penalties in Paragraphs 142 and 143 of this Decree and describes whether or not the Flaring Incident falls under any of those grounds;

(2) Describes which Paragraph 145(a) or (b) applies, and why, if a Flaring Incident falls under Paragraph 145 of this Decree;

(3) States whether or not Equilon asserts a defense to the Flaring Incident, and if so, a description of the defense if a Flaring Incident falls under either Paragraph 143 or Paragraph 145(b);

(4) To the extent that investigations of the causes and/or possible corrective actions still are underway on the due date of the report, a statement of the anticipated date by which a follow-up report fully conforming to the requirements of Paragraphs 136(d) and (e) will be submitted; provided, however, that if Equilon has not submitted a report or a series of reports containing the information required to be submitted under this Paragraph within 45 days (or such additional time as EPA may allow) after the due date for the initial report for the Flaring Incident, the stipulated penalty provisions of Paragraph 151 shall apply, but Equilon shall retain the right to dispute, under Part XIV (Dispute Resolution) of this Consent Decree, any demand for stipulated penalties that was issued as a result of Equilon's failure to submit the report required under this Paragraph within the time frame set forth. Nothing in this Paragraph shall be deemed to excuse Equilon from its investigation, reporting, and corrective action obligations under this Part for any Flaring Incident, which occurs after a subject Flaring Incident for which Equilon has requested an extension of time under this Paragraph.

(5) To the extent that completion of the implementation of corrective action(s), if any, is not finalized at the time of the submission of the report required under this Paragraph, then, by no later than 30 days after completion of the implementation of corrective action(s), Equilon shall submit a report identifying the corrective action(s) taken and the dates of commencement and completion of implementation.

J. CORRECTIVE ACTION.

137. In response to any Flaring Incident, Equilon, as expeditiously as practicable, shall take such interim and/or long-term corrective actions, if any, as are consistent with good engineering practice to minimize the likelihood of a recurrence of the Root Cause and all contributing causes of that Flaring Incident. If the Root Cause is identified as a process problem isolated within an SRP, then Equilon shall perform, as an aspect of its corrective action, an Optimization Study of the affected SRP pursuant to Paragraph 126 of this Consent Decree and implement the results of that Optimization Study.

138. If EPA does not notify Equilon in writing within sixty (60) days of receipt of the report(s) required by Paragraph 136 (a) that it objects to one or more aspects of Equilon's proposed corrective action(s), if any, and schedule(s) of implementation, if any, then that (those) action(s) and schedule(s) shall be deemed acceptable for purposes of Equilon's compliance with Paragraph 137 of this Consent Decree.

139. EPA does not, however, by its agreement to the entry

of this Consent Decree or by its failure to object to any corrective action that Equilon may take in the future, warrant or aver in any manner that any of Equilon's corrective actions in the future will result in compliance with the provisions of the Clean Air Act or its implementing regulations. Notwithstanding EPA's review of any plans, reports, corrective measures or procedures under this Section, Equilon shall remain solely responsible for compliance with the Clean Air Act and its implementing regulations.

140. If EPA does object, in whole or in part, to Equilon's proposed corrective action(s) and/or its schedule(s) of implementation, or, where applicable, to the absence of such proposal(s) and/or schedule(s), it shall notify Equilon of that fact within sixty (60) days following receipt of the report(s) required by Paragraph 136 above. If Equilon and EPA cannot agree within thirty (30) days on the appropriate corrective action(s), if any, to be taken in response to a particular AG Flaring Incident, either Party may invoke the Dispute Resolution provisions of Part XIV of this Decree.

141. Nothing in this Part shall be construed as a waiver of EPA's rights under the Act and its regulations for future violations of the Act or its regulations nor to limit Equilon's right to take such corrective actions as it deems necessary and appropriate immediately following an AG Flaring Incident or in

the period during preparation and review of any reports required under this Part.

K. AG FLARING AND TAIL GAS INCIDENTS AND STIPULATED PENALTIES.

142. Stipulated Penalties. The stipulated penalty provisions of Paragraph 151 shall apply to any AG Flaring or Tail Gas Incidents for which the Root Cause was one or more of the following acts, omissions, or events. Except for a Force Majeure event, Equilon shall have no defenses to demand for stipulated penalties for an AG Flaring or Tail Gas Incident falling under this Paragraph:

(a) Error resulting from careless operation by the personnel charged with the responsibility for the SRPs, TGTUs, or Upstream Process Units; and/or

(b) A failure of equipment that is due to a failure by Equilon to operate and maintain that equipment in a manner consistent with good engineering practice.

143. The stipulated penalty provisions of Paragraph 151 shall apply to any AG Flaring or Tail Gas Incident that either:

(a) Results in emissions of sulfur dioxide at a rate of greater than twenty (20) pounds per hour continuously for three (3) consecutive hours or more; or

(b) Causes the total number of AG Flaring or Tail Gas Incidents per refinery in a rolling twelve (12) month period to exceed five (5).

144. Defenses. In response to a demand by EPA for stipulated penalties, Equilon shall be entitled to assert a Malfunction defense with respect to any AG Flaring or Tail Gas

Incident falling under Paragraph 143. In the event that a dispute arising under Paragraph 143 is brought to the Court pursuant to the Dispute Resolution provisions of this Decree, nothing in this Paragraph is intended or shall be construed to deprive Equilon of its view that Startup, Shutdown, and upset defenses are available for all Flaring Incidents, nor to deprive EPA of its view that such defenses are not available. In the event that an AG Flaring or Tail Gas Incident under both Paragraphs 142 and 143, then 142 shall apply.

145. With respect to any Flaring Incident other than those identified in Paragraphs 142 and 143, the following provisions apply:

(a) First Time: If the Root Cause of the AG Flaring or Tail Gas Incident was not a recurrence of the same Root Cause that resulted in a previous AG Flaring Incident that occurred since the effective date of this Decree for the refineries;

(1) If the Root Cause of the AG Flaring or Tail Gas Incident was sudden, infrequent, and not reasonably preventable through the exercise of good engineering practice, then that cause shall be designated as an agreed-upon malfunction for purposes of reviewing subsequent AG Flaring Incidents;

(2) If the Root Cause of the AG Flaring or Tail Gas Incident was not sudden and infrequent, and was reasonably preventable through the exercise of good engineering practice, then Equilon shall implement corrective action(s) pursuant to Paragraph 137;

(b) Recurrence: If the Root Cause is a recurrence of the same Root Cause that resulted in a previous AG Flaring or Tail Gas Incident that occurred since the Effective Date of this Consent Decree, then Equilon shall be liable for stipulated

penalties under Paragraph 151 of this Decree unless:

(1) the AG Flaring or Tail Gas Incident resulted from a Malfunction,

(2) the Root Cause previously was designated as an agreed-upon malfunction under Paragraph 145 (a)(1), or

(3) the AG Flaring or Tail Gas Incident was a recurrence of an event that Equilon had previously developed a corrective action plan for and for which it had not yet completed implementation.

(c) Provided, however, that in the event that a dispute arising under Paragraph 145(b)is brought to the Court pursuant to the Dispute Resolution provisions of this Decree, nothing in this Paragraph is intended or shall be construed to deprive Equilon of its view that Startup, Shutdown, and Malfunction upset defenses are available for AG Flaring and Tail Gas Incidents, nor to deprive the United States of its view that such defenses are not available.

(d) Other than for a Malfunction or Force Majeure, if no AG Flaring and Tail Gas Incident occurs at a refinery for a rolling 36 month period following lodging of this Consent Decree, then the stipulated penalty provisions of Paragraph 151 no longer apply. EPA may elect to reinstate the stipulated penalty provision if Equilon has a flaring event which would otherwise be subject to stipulated penalties. EPA's decision to reinstate the stipulated penalty provision shall not be subject to dispute resolution. Once reinstated, the stipulated penalty provision shall continue for the remaining life of this Consent Decree.

L. MISCELLANEOUS.

146. Calculation of the Quantity of Sulfur Dioxide Emissions resulting from AG or Hydrocarbon Flaring. For purposes of this Consent Decree, the quantity of SO2 emissions resulting from AG or HC Flaring shall be calculated by the following formula:

Tons of SO2 = [FR][TD][ConcH2S][8.44 x 10-5].

The quantity of SO2 emitted shall be rounded to one decimal

point. (Thus, for example, for a calculation that results in a number equal to 10.050 tons, the quantity of SO2 emitted shall be rounded to 10.1 tons.) For purposes of determining the occurrence of, or the total quantity of SO2 emissions resulting from, an AG Flaring Incident that is comprised of intermittent AG Flaring, the quantity of SO2 emitted shall be equal to the sum of the quantities of SO2 flared during each such period of intermittent AG Flaring.

147. Calculation of the Rate of SO2 Emissions during AG or HC Flaring. For purposes of this Consent Decree, the rate of SO2 emissions resulting from AG or Hydrocarbon Flaring shall be expressed in terms of pounds per hour, and shall be calculated by the following formula:

ER = [FR][ConcH2S][0.169].

The emission rate shall be rounded to one decimal point. (Thus, for example, for a calculation that results in an emission rate of 19.95 pounds of SO2 per hour, the emission rate shall be rounded to 20.0 pounds of SO2 per hour; for a calculation that results in an emission rate of 20.05 pounds of SO2 per hour, the emission rate shall be rounded to 20.1.)

148. Meaning of Variables and Derivation of Multipliers used in the Equations in Paragraphs 146 and 147:

ER = Emission Rate in pounds of Sulfur Dioxide per hour

FR = Average Flow Rate to Flaring Device(s) during Flaring, in standard cubic feet per hour

TD = Total Duration of Flaring in hours

ConcH2S = Average Concentration of Hydrogen Sulfide in gas during Flaring (or immediately prior to Flaring if all gas is being flared) expressed as a volume fraction (scf H2S/scf gas)

8.44 x 10-5 = [lb mole H2S/379 scf H2S][64 lbs SO2/lb mole H2S][Ton/2000 lbs]

0.169 = [lb mole H2S/379 scf H2S][1.0 lb mole SO2/1 lb mole H2S][64 lb SO2/1.0 lb mole SO2]

The flow of gas to the AG or HC Flaring Device(s) ("FR") shall be as measured by the relevant flow meter. Hydrogen sulfide concentration ("ConcH2S") shall be determined from the SRP feed gas analyzer. In the event that either of these data points is unavailable or inaccurate, the missing data point(s) shall be estimated according to best engineering judgment. The report required under Paragraph 136 shall include the data used in the calculation and an explanation of the basis for any estimates of missing data points.

149. Calculation of the Quantity of SO2 Emissions Resulting from a Tail Gas Incident. For the purposes of this Consent Decree, the quantity of SO2 emissions resulting from a Tail Gas Incident shall be calculated by one of the following methods, based on the type of event:

(a) If the Tail Gas Incident is combusted in a flare the SO2 emissions are calculated using the methods outlined in Paragraph 146 above, or

(b) If the Tail Gas Incident is an event exceeding the 250 ppmvd (NSPS J limit) from a monitored SRP incinerator, then the following formula applies:

ER_{TGI} = [$FR_{Inc.}$] [Conc. SO2 - 250] [0.169 x 10^{-6}] [TD_{TGI}]

Where:

ER_{TGI} = Emissions from Tail Gas at the SRP incinerator, SO2 lbs. over a 24 hour period

$FR_{Inc.}$ = Incinerator Exhaust Gas Flow Rate (standard cubic feet per hour) (actual stack monitor data or engineering estimate based on the acid gas feed rate to the SRP)

Conc. SO2 = Actual SO2 concentration (CEM data) in the incinerator exhaust gas, ppmvd at 0% O2 and average over 24 hour.

0.169 x 10^{-6} = [lb mole of SO2 / 379 SO2] [64 lbs SO2 / lb mole SO2] [1x 10^{-6}]

TD_{TGI} = Total duration (hours) when the Incinerator CEM was exceeding 250 ppmvd at 0% O2 on a rolling twelve hour average, in a 24 hour period.

In the event the Conc. SO2 data point is inaccurate or not available or a flow meter for FR_{Inc}, does not exist or is inoperable, then estimates will be used based on best engineering judgment.

150. Any disputes under the provisions of this Part shall be resolved in accordance with the Part XVII (Dispute Resolution) of this Decree.

M. <u>STIPULATED PENALTIES UNDER THIS PART</u>.

151. Equilon shall be liable for the following stipulated penalties for violations of the requirements of this Part. For

each violation, the amounts identified below apply on the first day of violation, and are calculated for each incremental period of violation (or portion thereof):

(a) AG Flaring Incidents for which Equilon is liable under this Part. Nothing in this Part shall be understood to subject Equilon to stipulated penalties for HC Flaring Incidents.

Tons Emitted in AG Flaring or Tail Gas Incidents	**Length of Time from Commencement of Flaring within the AG Flaring or Tail Gas Incidents to Termination of Flaring within the AG Flaring or Tail Gas Incidents is 3 hours or less**	**Length of Time from Commencement of Flaring within the AG Flaring or Tail Gas Incidents to Termination of Flaring within the AG Flaring or Tail Gas Incidents is greater than 3 hours but less than or equal to 24 hours**	**Length of Time of Flaring within the AG Flaring or Tail Gas Incidents 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 calculating stipulated penalties pursuant to this SubParagraph, only one cell within the matrix shall apply. Thus, for example, for an AG Flaring Incident in which the AG Flaring starts at 1:00 p.m. and ends at 3:00 p.m., and for which 14.5 tons of sulfur dioxide are emitted, the penalty would be $17,400 (14.5 x $1,200); the penalty would not be $13,900 [(5 x $500) + (9.5 x $1200)].

(2) For purposes of determining which column in the table set forth in this SubParagraph applies under circumstances in which AG Flaring occurs intermittently during an AG Flaring or Tail Gas Incident, the AG Flaring shall be deemed to commence at the time that the AG Flaring that triggers the initiation of an AG Flaring or Tail Gas Incident commences, and shall be deemed to terminate at the time of the termination of the last episode of AG Flaring within the AG Flaring or Tail Gas Incident. Thus, for example, for AG Flaring within an AG Flaring Incident that (i) starts at 1:00 p.m. on Day 1 and ends at 1:30 p.m. on Day 1; (ii) recommences at 4:00 p.m. on Day 1 and ends at 4:30 p.m. on Day 1; (iii) recommences at 1:00 a.m. on Day 2 and ends at 1:30 a.m. on Day 2; and (iv) no further AG Flaring occurs within the AG Flaring Incident, the AG Flaring within the AG Flaring Incident shall be deemed to last 12.5 hours -- not 1.5 hours -- and the column for AG Flaring of "greater than 3 hours but less than or equal to 24 hours" shall apply.

(b) For those corrective action(s) which Equilon is required to undertake following Dispute Resolution, then, from the 91st day after EPA's receipt of Equilon's report under Paragraph 128 and 136 of this Decree until the date that either (i) a final agreement is reached between EPA and Equilon regarding the corrective action or (ii) a court order regarding the corrective action is entered:

$5,000 per month

(c) Failure to complete any corrective action under Paragraph 128(e) and 137 of this Decree in accordance

with the schedule for such corrective action agreed to by Equilon or imposed on Equilon pursuant to the Dispute Resolution provisions of this Decree (with any such extensions thereto as to which EPA and Equilon may agree in writing):

$5,000 per week

M. Certification.

152. All notices, reports or any other submissions required of Equilon by this Part shall contain the following certification:

> "I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and that I have made a diligent inquiry of those individuals immediately responsible for obtaining the information and that to the best of my knowledge and belief, the information submitted herewith is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

153. The reporting requirements set forth in this Part do not relieve Equilon of its obligation to any State, local authority, or EPA to submit any other reports or information required by the CAA, or by any other state, federal or local requirements.

IX. PERMITTING

154. Construction. Equilon agrees to apply for and make all reasonable efforts to obtain in a timely manner all appropriate federally enforceable permits (or construction permit waivers) for the construction of the pollution control technology required to meet the above pollution reductions.

155. Operation. As soon as practicable, but in no event later than 60 days following a final determination of concentration limits, Equilon shall apply for and make all reasonable efforts to incorporate the concentration limits required by this Consent Decree into New Source Review ("NSR") and other applicable, federally enforceable, permits for these facilities.

156. NSPS Applicability. Equilon shall apply to incorporate NSPS applicability into the relevant permits.

X. GENERAL RECORDKEEPING, RECORD RETENTION AND REPORTING

157. For the purposes of this Consent Decree, any requirement for the Company to consult, obtain approval of or submit any type of information to EPA or the Untied States, including reports, analyses, or data, shall be construed as imposing identical requirements from the Company to the Plaintiff-Intervener. Equilon shall retain all records required to be maintained in accordance with this Consent Decree for a period of five (5) years unless other regulations require the records to be maintained longer.

158. Beginning with the first full calendar quarter after entry of this Consent Decree, the Company shall submit a calendar quarterly progress report ("calendar quarterly report") to EPA and Plaintiff-Intervener within 30 days after the end of each

calendar quarter during the life of this Consent Decree. In addition to any other information specifically required to be submitted per other Parts of this Consent Decree, this report shall contain the following:

(a) progress report on the implementation of the requirements of Parts IV and IX (Compliance Programs) above;

(b) a summary of all Hydrocarbon Flaring Incidents;

(c) a summary of the emissions data as required by Parts IV and IX , of this Consent Decree for the calendar quarter; and

(d) a description of any problems anticipated with respect to meeting the Compliance Programs of Parts IV and IX of this Consent Decree.

159. The calendar quarterly report shall be certified by a refinery manager or company official responsible for environmental management and compliance at the refineries covered by the report, as follows:

> "I certify under penalty of law that this information 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."

XI. STIPULATED PENALTIES

160. Equilon shall pay stipulated penalties to the United States and Plaintiff-Intervener, for each failure by the Company

to comply with the terms of this Consent Decree; provided, however, that the United States or Plaintiff-Intervener may elect to bring an action for contempt in lieu of seeking stipulated penalties for violations of this Consent Decree.

161. For each violation, the amounts identified below shall apply on the first day of violation, shall be calculated for each incremental period of violation (or portion thereof), and shall be doubled beginning on the fourth consecutive, continuing period of violation, except such doubling shall not apply to Subparagraphs (f), (g), and (i). In the alternative, at the option of the United States or Plaintiff-Intervener, stipulated penalties shall equal 1.2 times the economic benefit of Equilon's delayed compliance, if this amount is higher than the amount calculated under this Paragraph. In addition and for purposes of assessing stipulated penalties for a failure to comply with a concentration-based, rolling average emission limit established under Parts IV.B, IV.F, IV.H, V.A, or V.E, an actionable violation will occur when there is noncompliance with such limit for 5% or more of each such unit's operating time during any calendar quarter.

(a) Requirements for NOX emission reductions from FCCUs:

(i) Failure to conduct SNCR Optimization Study, as required by Section A: $30,000 per month

(ii) Failure to conduct NOX additive

demonstrations, as required by Section D: $30,000 per month per refinery

(iii) If applicable, failure to conduct Additive Optimization Study, as required by Section E: $30,000 per month per refinery

(iv) Failure to install, calibrate, maintain and operate properly CEMS, as required by Section or G: $2,500 per month per CEMS;

(v) Failure to comply with emission limits, as required by Section B or F: $1,500 per day per emission limit per emission point

(vi) Failure to submit timely reports, as required by Section A, E or H: $1,000 per week per report

(b) Requirements for SO2 emission reductions from FCCUs and an FCU (Part V):

(i) Failure to comply with emission limits, as required by Section A, B or E: $1,500 per day per emission limit per emission point

(ii) Failure to install wet gas scrubbers (WGS), as required by Section A: $100,000 per quarter per scrubber

(iii) Failure to timely conduct optimization studies, as required by Section C or D: $5000 per month per unit

(iv) Failure to install, calibrate, maintain and operate properly CEMS, as required by Section B or F: $2,500 per month per CEMS;

(v) Failure to submit timely reports, as required by Section D: $1,000 per week per report

(c) Requirements for Benzene Waste NESHAP program enhancements (Part VII):

(i) Failure to timely conduct initial audit, as required by Section C, or other audits, as required by Section D, E or H: $5,000 per month per audit

(ii) Failure to timely sample, as required by Section L or M: $5,000 per week or $30,000 per quarter, per stream (whichever amount is greater, but not to exceed $150,000 per refinery per quarter)

(iii) Failure to timely install secondary carbon canisters or water scrubbers, as required by Section F: $5,000 per week per canister or scrubber

(iv) Failure to timely replace carbon canisters, as required Section F: $1,000 per day per canister

(v) Failure to monitor for breakthrough, as required by Section F: $1,000 per week per canister

(vi) Failure to perform monitoring, as required by Section N: $500 per monitoring event

(vii) Failure to develop and timely implement training program or to establish standard operating procedures, as required by Section J: $10,000 per quarter per refinery

(viii) Failure to mark segregated stormwater drains, as required by Section N: $1,000 per week per drain

(ix) Failure to meet the requirements of Sections G, I or K: $500 per week per section

(x) Failure to timely submit complete reports under Section O or P: $1,000 per week per report

(xi) If after the audit and development of the Compliance Plan it is discovered by an EPA or state investigator or inspector, or their agent, that Equilon failed to include all benzene waste streams in its TAB, for each waste stream that is:

less than 0.03 Mg/yr - $500
between 0.03 and 0.1 Mg/yr - $1500
between 0.1 and 0.5 Mg/yr - $6000

greater than 0.5 Mg/yr - $12,000

(d) Requirements for Leak Detection and Repair program enhancements (Part VII):

(i) Failure to have a written LDAR program, as required by Section A: $3,000 per week

(ii) Failure to timely develop training program, as required by Section B: $10,000 per month

(iii) Failure to timely conduct internal or external audit, as required by Section C: $5,000 per month per audit

(iv) Failure to timely implement internal leak definition, as required by Section E: $10,000 per month per process unit

(v) Failure to develop and timely implement first attempt at repair program, as required by Section F: $10,000 per month

(vi) Failure to implement and begin more frequent monitoring program, as required by Section G: $10,000 per month per process unit

(vii) Failure to timely monitor, as required by Section G: $5,000 per week per process unit

(viii) Failure to have dataloggers and electronic storage, as required by Section H: $5,000 per month per refinery

(ix) Failure to implement subcontractor requirements (if required) under this Part: $5,000 per month per refinery

(x) Failure to timely establish LDAR accountability, as required by Section J: $5,000 per month per refinery

(xi) Failure to conduct calibration drift assessment or to remonitor components (if and as required), as required by Section M: $100 per day per refinery

(xii) Failure to attempt to minimize a component

being placed or continuing to be on the "delay of repair" list, as required b y Section N: $5,000 per component

(xiii) Failure to timely submit reports required under this Part: $1,000 per week per report

(xiv) If after the audit and development of the Compliance Plan it is discovered by an EPA or state investigator or inspector, or their agent, that Equilon failed to include all required components in its LDAR program: $250 per component

(e) Requirements Applicable to SRPs and Flaring (Part VIII):

(i) Failure to comply with emission limits identified or referred to in Section B:

Number of rolling 12-hr average exceedances within calendar day	Penalty per rolling 12-hr average exceedance
1-12	$ 350
Over 12	$ 750

(ii) Failure to comply with any other emission limits identified or referred to in Part VIII: $1,000 per day per refinery

(iii) Operation of the SRP during scheduled maintenance of its associated TGTU: $25,000 per SRP per day per refinery

(iv) Failure to address sulfur-pit emissions, as required by Section B: $5,000 per quarter per sulfur-pit

(v) Failure to conduct an SRP Optimization Study, if required by Section C, or to implement such Study's recommendations: $5,000 per month per SRP

(vi) Failure to timely submit any report required by Part VIII, or for submitting any report that does not conform to the requirements of Part VIII: $1,000 per week per report

(vii) Failure to timely submit any plan required by Part VIII, or for submitting any plan that does not conform to the requirements of Part VIII: $1,000 per week per report

(viii) Failure to timely implement any selected option(s) required in a required plan or Part VIII: $1,000 per day per refinery

(ix) Failure to monitor emissions as required under Part VIII: $1,000 per day per refinery

(f) Requirements for Permitting (Part IX):

Failure to timely submit a complete permit application: $1,000 per week per unit

(g) Requirements for Reporting and Recordkeeping (Part X): Failure to timely submit a report required under Part X: $1,000 per week per report

(h) Failure to escrow stipulated penalties, as required by this Part: $10,000 per week per penalty

162. Equilon shall pay such stipulated penalties only upon written demand by the United States or Plaintiff-Intervener no later than thirty (30) days after Equilon receives such demand. Such demand will identify to which government agencies payment must be made. Stipulated penalties shall be apportioned between the United States and Plaintiff-Intervener, 50% to each. Such payment shall be made to the United States and to Plaintiff-Intervener in the following manner:

(a) Stipulated Penalties owed the United States. The Companies shall pay the civil penalties 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 90-5-2-1-07209, and the civil action case name and case

number of the Southern District of Texas. The costs of such EFT shall be the Companies' responsibility. Payment shall be made in accordance with instructions provided to the Companies by the Financial Litigation Unit of the U.S. Attorney's Office in the Southern District of Texas. Any funds received after 11:00 a.m. (EST) shall be credited on the next business day. The Companies shall provide notice of payment, referencing the USAO File Number and DOJ Case Number 90-5-2-1-07209, and the civil action case name and case number, to the Department of Justice and to EPA, as provided in Paragraph 194 (Notice).

(b) Stipulated Penalties Owed Plaintiff-Intervener the Northwest Air Pollution Authority. Payment shall be made by check to the following address: Northwest Air Pollution Authority, 1600, South Second Street, Mount Vernon, WA 98273-5202. Accompanying correspondence shall reference the Northwest Air Pollution Authority Notice of Violation number when available.

163. Should Equilon dispute its obligation to pay part or all of a stipulated penalty, it may avoid the imposition of the stipulated penalty for failure to pay a penalty due to the United States or Plaintiff-Intervener, by placing the disputed amount demanded by the United States or Plaintiff-Intervener, not to exceed $50,500 for any given event or related series of events at any one refinery, in a commercial escrow account pending resolution of the matter and by invoking the Dispute Resolution provisions of Part XVI within the time provided in this Paragraph for payment of stipulated penalties. If the dispute is thereafter resolved in Equilon's favor, the escrowed amount plus accrued interest shall be returned to the Company, otherwise the United States or Plaintiff-Intervener shall be entitled to the escrowed amount that was determined to be due by the Court plus the

interest that has accrued on such amount, with the balance, if any, returned to the Company.

164. The United States and Plaintiff-Intervener reserve the right to pursue any other remedies to which they are entitled, including, but not limited to, additional injunctive relief for Equilon's violations of this Consent Decree. Nothing in this Consent Decree shall prevent the United States or Plaintiff-Intervener from pursuing a contempt action against Equilon and requesting that the Court order specific performance of the terms of the Decree. Nothing in this Consent Decree authorizes Plaintiff-Intervener to take action or make any determinations under this Consent Decree regarding Equilon refineries outside their state.

165. Election of Remedy. The United States and Plaintiff-Intervener will not seek both stipulated penalties and civil penalties for the same actions or occurrences as those constituting a violation of the Consent Decree.

XII. RIGHT OF ENTRY

166. Any authorized representative of the EPA or an appropriate state agency, including independent contractors, upon presentation of credentials, shall have a right of entry upon the premises of the Equilon refineries identified in Paragraph 5 at any reasonable time for the purpose of monitoring compliance with the provisions of this Consent Decree, including inspecting plant

equipment, and inspecting and copying all records maintained by Equilon required by this Consent Decree. Nothing in this Consent Decree shall limit the authority of EPA and Plaintiff-Intervener to conduct tests and inspections under Section 114 of the Act, 42 U.S.C. § 7414, or any other statutory and regulatory provision.

XIII. FORCE MAJEURE

167. If any event occurs which causes or may cause a delay or impediment to performance in complying with any provision of this Consent Decree, Equilon shall notify the United States and Plaintiff-Intervener in writing as soon as practicable, but in any event within twenty (20) business days of when Equilon first knew of the event or should have known of the event by the exercise of due diligence. In this notice Equilon 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 Equilon to prevent or minimize the delay and the schedule by which those measures will be implemented. Equilon shall adopt all reasonable measures to avoid or minimize such delays.

168. Failure by Equilon to comply with the notice requirements of Paragraph 167 as specified above shall render this Part voidable by the United States and Plaintiff-Intervener

as to the specific event for which Equilon has failed to comply with such notice requirement, and, if voided, it shall be of no effect as to the particular event involved.

169. The United States and Plaintiff-Intervener shall notify Equilon in writing regarding their claim of a delay or impediment to performance within twenty (20) business days of receipt of the Force Majeure notice provided under Paragraph 167.

170. If the United States and Plaintiff-Intervener agree that the delay or impediment to performance has been or will be caused by circumstances beyond the control of Equilon, including any entity controlled by it, and that they 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. Such stipulation may be filed as a modification to this Consent Decree by agreement of the parties pursuant to the modification procedures established in this Consent Decree. Equilon shall not be liable for stipulated penalties for the period of any such delay.

171. If the United States and Plaintiff-Intervener do not accept Equilon' claim of a delay or impediment to performance, it must submit the matter to this Court for resolution to avoid

payment of stipulated penalties, by filing a petition for determination with this Court. In the event that the United States and Plaintiff-Intervener do not agree, the position of the United States on the Force Majeure claim shall become the final Plaintiffs' position. Once Equilon has submitted this matter to this Court, the United States and Plaintiff-Intervener shall have twenty (20) business days to file its response to the petition. If Equilon 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 Equilon, including any entity controlled by it, and that it could not have prevented the delay by the exercise of due diligence, Equilon shall be excused as to that event(s) and delay (including stipulated penalties), for all requirements affected by the delay for a period of time equivalent to the delay caused by such circumstances or such other period as may be determined by the Court.

172. Equilon 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 it could not have prevented the delay by the exercise of due diligence. Equilon 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.

173. Unanticipated or increased costs or expenses associated with the performance of Equilon's obligations under this Consent Decree shall not constitute circumstances beyond its control, or serve as a basis for an extension of time under this Part.

174. 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 Equilon delivering a notice of Force Majeure or the parties' inability to reach agreement.

175. As part of the resolution of any matter submitted to this Court under this Part, 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 United States and Plaintiff-Intervener or approved by this Court. Equilon shall be liable for stipulated penalties for its failure thereafter to complete the work in accordance with the extended or modified schedule.

XIV. DISPUTE RESOLUTION

176. The dispute resolution procedure provided by this Part shall be available to resolve all disputes arising under this Consent Decree, except as otherwise provided in Part XIV regarding Force Majeure, provided that the party making such application has made a good faith attempt to resolve the matter with the other party.

177. The dispute resolution procedure required herein shall be invoked upon the giving of written notice by one of the parties to this Consent Decree to another advising of a dispute pursuant to this Part. The notice shall describe the nature of the dispute, and shall state the noticing party's position with regard to such dispute. The party or 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.

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

179. In the event that the parties are unable to reach

agreement during such informal negotiation period, the United States and Plaintiff-Intervener shall provide the Company with a written summary of its position regarding the dispute. The position advanced by the United States and Plaintiff-Intervener shall be considered binding unless, within thirty (30) calendar days of the Company's receipt of the written summary of the United States and Plaintiff-Intervener's position, the Company files with this Court a petition which describes the nature of the dispute. In the event that the United States and Plaintiff-Intervener are unable to reach agreement with regard to Company's claim, the position of the United States shall be the Plaintiffs' final position.

180. 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 Part may be shortened upon motion of one of the parties to the dispute.

181. Notwithstanding any other provision of this Consent Decree, in dispute resolution, this Court shall neither draw any inferences nor establish any presumptions adverse to either party as a result of invocation of this Part or the parties' inability to reach agreement.

182. In resolving the dispute between the parties, the position of the United States and Plaintiff-Intervener shall be upheld if supported by substantial evidence in the record of

decision of the matter.

183. As part of the resolution of any dispute submitted to dispute resolution, the parties by agreement, or this Court by order, in appropriate circumstances, may 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. Equilon shall be liable for stipulated penalties for its failure thereafter to complete the work in accordance with the extended or modified schedule.

XV. EFFECT OF SETTLEMENT

184. This Consent Decree constitutes full settlement of and shall resolve all civil liability of the Company to the United States and the Plaintiff-Intervener for the violations alleged in the United States' and Plaintiff-Intervener's Complaints and all civil liability of the Company for any violations at the refineries based on events that occurred during the relevant time period under the following statutory and regulatory provisions: the New Source Performance Standards ("NSPS"), 40 C.F.R. Part 60, Subpart J for FCCU regenerators, SRPs, and flares specifically listed in Paragraph 120(g) (definition of "Hydrocarbon Flaring Devices"), and the relevant state and local regulations which incorporate and/or implement the above-listed federal regulations for the FCCU regenerators, SRPs and those flares specifically listed in Paragraph 120(g), (definition of "Hydrocarbon Flaring

Devices"). For purposes of this Paragraph, the "relevant time period" shall mean the period beginning when the United States' claims and/or Plaintiff-Intervener's claims under the statutes and regulations identified in this Paragraph accrued through the date of entry of the Consent Decree.

185(a): NSPS Subpart A and J Audits. Equilon's complete performance of the audits and submission of notifications of compliance pursuant to Paragraph 121(a) constitutes full settlement of and shall resolve all past civil liability of Equilon to the United States and the Plaintiff-Intervener for those flares for which Equilon accepts applicability under NSPS Subpart J, through the date of the demonstrated or certified compliance.

185(b). Benzene Waste and LDAR Audits. Equilon's complete performance of the audits and submission of its certification of compliance pursuant to the Benzene Waste and LDAR Programs in this Consent Decree, constitutes full settlement of and shall resolve all civil liability of the Company to the United States and the Plaintiff-Intervener for any violations at the refineries based on events that occurred during the relevant time period under the following statutory and regulatory provisions, and those violations which Equilon self-discloses as a result of its audits: Leak Detection and Repair ("LDAR"), 40 C.F.R. Part 60, Subparts VV and GGG, and 40 C.F.R. Part 63, Subparts F, H, and

CC; and National Emission Standards for Hazardous Air Pollutants ("NESHAP") for Benzene, 40 C.F.R. Part 61, Subparts FF, J and V pursuant to Section 112(d) of the Act. For purposes of this Paragraph, the "relevant time period" shall mean the period beginning when the United States' claims and/or Plaintiff-Intervener's claims under the statutes and regulations identified in this Paragraph accrued through the date of lodging of this Consent Decree.

186. This Consent Decree shall resolve all civil liability under the Prevention of Significant Deterioration ("PSD") requirements at Part C of the Act, and the regulations promulgated thereunder at 40 C.F.R. § 52.21 (the "PSD" rules), and the Plan Requirements for Non-Attainment Areas at Part D of the Act, and the regulations promulgated thereunder at 40 C.F.R. §§ 51.165(a) and (b), Part 51, Subpart S, and § 52.24 and the California and Washington state or local agency regulations which incorporate and/or implement those rules for any increase in SO2 and NOX emissions resulting from Equilon's construction, modification, or operation of the FCCUs and FCU at the refineries occurring prior to lodging of this Consent Decree, and increases in PM and PM_{10} at all FCCUs which have or will installed Electrostatic Precipitator ("ESP") or will install a WGS for control of particulate emissions.

187. During the life of this Consent Decree, the units

described in Paragraph 186 shall be on a compliance schedule and any modification to these units, as defined in 40 C.F.R. § 52.21, which is not required by this Consent Decree is beyond the scope of this release.

188. This Consent Decree is not a permit; compliance with its terms does not guarantee compliance with any applicable federal, state or local laws or regulations. Nothing in this Consent Decree shall be construed to be a ruling on, or determination of, any issue related to any federal, state or local permit.

XVI. GENERAL PROVISIONS

189. Other Laws. Except as specifically provided by this Consent Decree, nothing in this Consent Decree shall relieve the Company of its obligation to comply with all applicable federal, state and local laws and regulations. Subject to Paragraph 165 (Election of Remedy), nothing contained in this Consent Decree shall be construed to prevent, alter or limit the ability of the United States' and Plaintiff-Intervener's rights to seek or obtain other remedies or sanctions available under other federal, state or local statutes or regulations, by virtue of Equilon's violation of this Consent Decree or of the statutes and regulations applicable to violations of this Consent Decree. This shall include the United States' and Plaintiff-Intervener's right to invoke the authority of the Court to order Equilon's

compliance with this Consent Decree in a subsequent contempt action.

190. Third Parties. This Consent Decree does not limit, enlarge or affect the rights of any party to this Consent Decree as against any third parties.

191. Costs. The United States, Plaintiff-Intervener, and Equilon shall each bear their own costs and attorneys' fees. Costs and attorney's fees reimbursable by the Company to the Plaintiff-Intervener under state law shall be paid for by Equilon as a portion of the civil penalties accessed pursuant to the Consent Decree in U.S. v. Equilon, Enterprises, et. al, (Heater and Boiler agreement with the Alliance), Paragraphs 40 and 41, lodged with this Court simultaneously with this Consent Decree.

192. Public Documents. All information and documents submitted by Equilon to the United States and Plaintiff-Intervener pursuant to this Consent Decree shall be subject to public inspection, unless subject to legal privileges or protection or identified and supported as business confidential by the Company in accordance with 40 C.F.R. Part 2, or any equivalent state statutes and regulations.

193. Public Comments. 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.

194. Notice. Unless otherwise provided herein, notifications to or communications with the United States and Plaintiff-Intervener or Equilon 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 Equilon is required to submit notices or communicate in writing under this Consent Decree to EPA relating to one of the refineries identified in Paragraph 5, Equilon shall also submit a copy of that notice or other writing to the Plaintiff-Intervener, for the refinery located in that state. Except as otherwise provided herein, when written notification or communication is required by this Consent Decree, it shall be addressed as follows:

As to the United States:
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
Southern District of Texas
c/o U.S. Marshal Service
U.S. Courthouse
515 Rusk
Houston, Texas 77002

As to the U.S. Environmental Protection Agency:

Director
Air Enforcement Division (2242A)
Office of Enforcement and Compliance Assurance
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20004

With copies to:

EPA Region 9:

Director, Air Division (AIR-1)
U.S. Environmental Protection Agency
75 Hawthorne Street
San Francisco, CL 94105

Attn: John Kim (AIR-5)

EPA Region 10:

Director
Office of Air Quality (OAQ-107)
U.S. EPA - Region 10
1200 Sixth Avenue
Seattle, WA 98101

As to Equilon:

Judy Moorad
Vice President
Safety, Health and Environment
Equiva Services, LLC
12700 Northborough Drive
NAX 300N
Houston, TX 77067-2508

As to Plaintiff-Intervener the Northwest Air Pollution Authority:

Northwest Air Pollution Authority
1600 South Second Street
Mount Vernon, WA 98273-5202

195. All EPA approvals or comments required under this Decree shall come from EPA, AED at the address listed in

Paragraph 194 (Notice). All Plaintiff-Intervener approvals shall come from the offices identified in Paragraph 194.

196. 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.

197. The information required to be maintained or submitted pursuant to this Consent Decree is not subject to the Paperwork Reduction Act of 1980, 44 U.S.C. §§ 3501 et seq.

198. This Consent Decree shall be binding upon all Parties to this action, and their successors and assigns. The undersigned representative of each Party to this Consent Decree certifies that he or she is duly authorized by the Party whom he or she represents to enter into the terms and bind that Party to them.

199. Modification. This Consent Decree may be modified only by the written approval of the United States, Plaintiff-Intervener, and Equilon, or by Order of the Court.

200. 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.

201. This Consent Decree constitutes the entire agreement and settlement between the Parties.

XVII. TERMINATION

202. This Consent Decree shall be subject to termination upon motion by the United States, the Plaintiff-Intervener, or Equilon after the Company satisfies all requirements of this Consent Decree. The requirements for termination include payment of all stipulated penalties that may be due to the United States or the Plaintiff-Intervener under this Consent Decree, installation of control technology systems as specified herein and the performance of all other Consent Decree requirements, the receipt of all permits specified herein, and EPA's receipt of the first calendar quarterly progress report following the conclusion of Equilon's operation for at least one year of all units in compliance with the emission limits established herein. At such time, if Equilon believes that it is in compliance with the requirements of this Consent Decree and the permits specified herein and has paid any stipulated penalties required by this Consent Decree, then it shall so certify to the United States and the Plaintiff-Intervener, and unless any of the Plaintiffs object in writing with specific reasons within 120 days of receipt of the certification, the Court shall order that this Consent Decree

be terminated on Equilon's motion. If any Plaintiff objects to Equilon's certification, then the matter shall be submitted to the Court for resolution under Part XV (Dispute Resolution) of this Consent Decree. In such case, Equilon shall bear the burden of proving that this Consent Decree should be terminated.

So entered in accordance with the foregoing this_____day of _____, 200__.

_____

United States District Court Judge
for the Southern District of Texas

FOR PLAINTIFF, UNITED STATES OF AMERICA:

_____ Date_____

John Cruden,
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
1425 New York Avenue, N.W.
Washington, DC 20005

Mervyn Mosbacker
United States Attorney

By: _____ Date_____

Gordon M. Speights Young
Assistant United States Attorney
Southern District of Texas
P.O. Box 61129
Houston, TX 77208

FOR U.S. ENVIRONMENTAL PROTECTION AGENCY:

_____ Date _____

SYLVIA LOWRANCE
Assistant Administrator
Office of Enforcement and Compliance
Assurance
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

For Northwest Air Pollution Authority, A Washington Municipal Corporation:

By : _____

Laughlan H. Clark
Visser, Zender and Thurston, P.S.
1700 D Street
P.O. Box 5226
Bellingham, WA 98227

ATTACHMENT 1
SNCR OPERATING CRITERIA
for EQUILON

All air pollution control equipment designed pursuant to this attachment will be designed and built in accordance with regulatory requirements that may apply.

I. Selective Non-Catalytic Reduction

A. Operating Considerations (required for consideration by Paragraph 9)

1. Reductant Addition

a. Reductant Addition Rates
b. Ammonia Slip

2. Flue Gas Characteristics

a. Outlet NOx Concentration
b. Flue Gas Volumetric Flow
c. Inlet/Outlet Temperature Range
d. Outlet SO_2 Concentration
e. Outlet CO/H2O/O2 Concentrations
f. Outlet Particulate Loading and Characteristics

3. Efficiency

a. Outlet NOx Concentration
b. Removal Efficiency

ATTACHMENT 2
DETERMINING CATALYST ADDITIVE ADDITION RATES
for EQIULON

I. Establishing Optimized Low-NOx CO Promoter Usage

At least 60 days prior to beginning the program to establish the optimized catalyst addition rate Equilon shall propose for EPA approval the catalyst additive selected. The maximum catalyst addition rate may need to be adjusted upwards based on the effectiveness of catalyst additive proposed by Equilon relative to other commercially available catalyst additives.

The routine usage of conventional CO promoter shall be optimized at the typical mix (i.e., based on historical usage) of conventional CO promoter activities, to minimize the usage, and eliminate over usage, of conventional CO promoter while retaining the basic effectiveness of CO promoter. Usage of low-NOx CO promoter shall replace usage of conventional CO promoter at the established minimized rate as normalized for different activities (as represented by the supplier) between the conventional CO promoter and Low-NOx CO promoter. The basic effectiveness of low-NOx CO promoter at the minimized and normalized rate shall be evaluated to determine whether the following basic criteria are met:

- Afterburn is controlled and regenerator temperature and CO levels are adequately maintained;
- Temperature excursions are brought under control adequately; and
- A measurable NOx reduction occurs.

If the low-NOx CO promoter cannot meet the basic criteria, its addition rate shall be increased up to a maximum of two times the minimized and normalized conventional CO promoter rate at the typical mix (i.e., based on historical usage) of conventional CO promoter activities to establish the optimized rate. If at two times the minimized and normalized conventional CO promoter rate, the low-NOx CO promoter is not effective in meeting the basic criteria, the usage of the low-NOx CO promoter may be discontinued.

II. Establishing Optimized NOx Adsorbing Catalyst Additive Addition Rates

At least 60 days prior to beginning the program to establish the optimized catalyst addition rate Equilon shall propose for EPA approval the catalyst additive selected. The maximum catalyst addition rate and incremental pick-up factor may need to be adjusted upwards based on the effectiveness of catalyst

additive proposed by Equilon relative to other commercially available catalyst additives.

Initial NOx adsorbing catalyst additive addition rate shall be 0.25 weight percent of total catalyst addition rate. Once steady state has been achieved, the effect on NOx emissions of this rate shall be evaluated. To established the optimized addition rate, NOx adsorbing catalyst additive addition shall be increased at increments of 0.25 weight percent of total catalyst additions up to 1.0 weight percent, and, once steady state has been achieved for each increment, the effect on NOx emissions and annual cost shall be evaluated. With EPA's approval, the Paragraph 18 schedule requirements may be changed based on the time required to reach steady state at each of the catalyst addition rates tested. If at any increment of NOx adsorbing catalyst addition, the total annualized cost-effectiveness of the NOx adsorbing catalyst additive used exceeds $10,000 per ton of NOx removed as measured from an uncontrolled baseline, or the incremental pick-up factor is less than 1.8 pounds of NOx removed level per pound of catalyst additive, the NOx adsorbing catalyst additive addition rate used to determine the final emission limit shall remain at that level. If the pickup factor at 0.25 weight percent of total catalyst added is less than 1.8 pounds of NOx removed per pound of catalyst additive, Equilon may apply for EPA approval to use a lower catalyst additive addition rate or to forego further catalyst usage and the requirements of paragraphs 18-25.

III. Establishing Optimized SO_2 Adsorbing Catalyst Additive Addition Rates

At least 60 days prior to beginning the program to establish the optimized catalyst addition rate Equilon shall propose for EPA approval the catalyst additive selected. The maximum catalyst addition rate and incremental pick-up factor may need to be adjusted upwards based on the effectiveness of catalyst additive proposed by Equilon relative to other commercially available catalyst additives.

Initial SO_2 adsorbing catalyst additive addition rate shall be 2.5 weight percent of total catalyst addition rate. Once steady state has been achieved, the effect on SO_2 emissions of this rate shall be evaluated. To established the optimized addition rate, the SO_2 adsorbing catalyst additive addition shall be increased at increments of 0.5 weight percent of total catalyst additions up to a maximum 5.0 weight percent as determined below, and, once steady state has been achieved for each increment, the effect on SO_2 emissions and annual cost shall

be evaluated. With EPA's approval, the Paragraph 18 schedule requirements may be changed based on the time required to reach steady state at each of the catalyst addition rates tested. The maximum optimized SO_2 catalyst additive addition rate shall be the lowest of the following addition rates expressed as a monthly average:

(1) the addition rate at which the FCCU meets 25 ppmvd SO_2 (at 0% O2) on a 365-day rolling average and 50 ppmvd SO_2 (at 0% O2) on a 7-day rolling average bases in which case Equilon shall agree to accept a limits of 25 ppmvd SO_2 (at 0% O2) on a 365-day rolling average and 50 ppmvd SO_2 (at 0% O2) on a 7-day rolling average bases at the conclusion of the demonstration period;

(2) the addition rate at which Equilon demonstrates to EPA's satisfaction that increasing the addition rate by an additional 0.5 % (by weight) of total catalyst addition rate results in an incremental reduction of SO_2 of less than 2 pounds of SO_2 per pound of additive (the incremental pick-up factor), but in no event less than 2.5 % (by weight) of total catalyst addition rate; or

(3) a maximum addition rate of 5.0 % by weight of total catalyst additions, except that if the addition of SO_2 adsorbing catalyst additive at this maximum rate limits the FCCU feedstock processing rate or conversion capability in a manner that cannot be reasonably compensated for by the adjustment of other parameters, the maximum addition rate shall be reduced to a level at which the additive no longer interferes with the FCCU processing or conversion rate; provided, however, that the maximum addition rate shall not be less than 2.5 % (by weight). If the pickup factor at 2.5 weight percent of total catalyst added is less than 2.0 pounds of SO2 removed per pound of catalyst additive, Equilon may apply for EPA approval to use a lower catalyst additive addition rate or to forego further catalyst usage and the requirements of paragraphs 37-43.