

UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF TEXAS

UNITED STATES of AMERICA,)
)
Plaintiff, and the)
)
STATES OF DELAWARE, and)
LOUISIANA,)
Plaintiff-Interveners,)
)
v.) Civil Action
) No.
MOTIVA ENTERPRISES LLC,)
)
Defendant.)
_____)

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, Motiva Enterprises LLC, (hereinafter "Motiva" or "Company"), for alleged environmental violations at four petroleum refineries owned and operated by Motiva;

WHEREAS, the United States and the intervening States have initiated a broad-based compliance and enforcement initiative across the United States involving the petroleum refining industry;

WHEREAS, Motiva's, EPA's, and the intervening States'

Consent Decree

primary goal in this Consent Decree is to address particular areas of concern: Control of fugitive emissions, elimination of excess flaring, and reduction of nitrogen oxides ("NOx") and sulfur dioxide ("SO2") emissions from refinery process units in which Motiva has agreed to undertake major and extensive program enhancements involving both installation of air pollution control equipment and establishment of strict management practices to reduce air emissions from its refineries;

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, and also that certain actions that Motiva has agreed to take are expected to achieved advances in technology and methodology for air pollution control;

WHEREAS, the parties acknowledge that this process, which was initiated by Motiva, is an innovative approach to resolve potential compliance issues while simultaneously advancing the goals of the Clean Air Act;

WHEREAS, Motiva 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 Motiva has been and is in violation of certain provisions of the Clean Air Act (the "CAA"), 42 U.S.C. §7401 et seq., and its

implementing regulations, at the four refineries identified in Paragraph 5;

WHEREAS, the United States' Complaint further alleges that Motiva has been and is in violation of certain provisions of the Resource Conservation and Recovery Act, ("RCRA"), 42 U.S.C. §§6901, et seq., and its implementing regulations at the Convent, Louisiana, and Port Arthur, Texas, refineries.

WHEREAS, the United States' Complaint further alleges that Motiva has been and is in violation of certain provisions of the Toxic Substances Control Act, ("TSCA"), 15 U.S.C. §§ 2601, et seq., and its implementing regulations at the Port Arthur, Texas, refinery.

WHEREAS, the States of Delaware and Louisiana have filed Complaints in Intervention ("Plaintiff-Interveners"), alleging that Motiva was and is in violation of the applicable Clean Air Act State Implementation Plans ("SIPs"), and other state environmental statutory and regulatory requirements;

WHEREAS, the Texas Natural Resource Conservation Commission ("TNRCC") has expressed general approval of the terms of this Consent Decree;

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

WHEREAS, Motiva 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 purpose of abating or controlling atmospheric pollution or contamination by removing, reducing, or preventing the creation or emission of pollutants ("pollution control facilities") and as such, may be considered for certification as pollution control facilities by federal, state or local authorities

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

WHEREAS, Motiva 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-Interveners, and Motiva 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-Interveners, and Motiva 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 Motiva under Sections 113 and 167 of the CAA, 42 U.S.C. §§ 7413 and 7477; Section 3008 of RCRA, 42 U.S.C. §6928; Section 16(4)(b) of TSCA, 15 U.S.C. § 2615(4)(b), 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, Section 3008 of RCRA, 42 U.S.C. §6928; Section 16(4)(b) of TSCA, 15 U.S.C. § 2615(4)(b), and 28 U.S.C. § 1355.

2. Venue is proper under Section 113(b) of the CAA, 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 States of Delaware and Louisiana, and upon Motiva as well as the Motiva's officers, employees, agents, successors and assigns, and shall apply to Motiva's refineries for the life of the Decree. In the event Motiva 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 Motiva from having to comply with any applicable state or local regulatory requirement regarding notice and transfer of facility permits.

III. FACTUAL BACKGROUND

4. Motiva 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. Motiva owns and operates refineries located as follows:

Delaware City, Delaware
Norco, Louisiana
Convent, Louisiana
Port Arthur, Texas

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

7. The petroleum refining process at Motiva's four refineries results in emissions of significant quantities of criteria air pollutants, including nitrogen oxides ("NOX"), carbon monoxide ("CO"), particulate matter ("PM"), sulfur dioxide ("SO2"), 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"), the fluid coking unit (at Delaware City, only), 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 NO_x EMISSIONS FROM
FLUIDIZED CATALYTIC CRACKING UNITS ("FCCUs")
and FLUID COKER UNIT ("FCU")**

Program Summary: Motiva shall implement a program to reduce NO_x emissions with the installation and operation of Selective Non-Catalytic Reduction ("SNCR") systems at the Norco FCCU and the Delaware City FCU. In addition, Motiva shall apply the use of NO_x reducing catalyst additives at the Convent and Delaware City FCCUs. Motiva shall incorporate lower NO_x emission limits into operating permits and will demonstrate future compliance with the lower emission limits through the use of continuous emissions monitoring systems ("CEMS").

A. SNCR APPLICATIONS: Norco, Louisiana, FCCU, and Delaware City, Delaware, FCU.

8. By no later than December 31, 2004, Motiva shall complete installation and begin operation of SNCR systems or alternative technology as approved by EPA to achieve the same or greater emission reductions (hereinafter referred to as "SNCR systems"), on emissions from its Norco FCCU and Delaware City FCU. Motiva shall design the SNCR systems for the Norco FCCU and Delaware City FCU to reduce NO_x emissions as much as feasible.

9. By no later than June 30, 2003, or 18 months prior to each proposed installation, whichever is earlier, Motiva shall submit to EPA the process design specifications for the SNCR

systems at the Norco FCCU and Delaware City FCU. Motiva and EPA agree to consult on the development of the proposed process design specifications for each SNCR system prior to submission of Motiva's final proposal.

10. The proposed process design specifications shall, at a minimum, consider the design parameters identified in Attachment 1 to this Consent Decree, which is incorporated herein by reference. EPA will provide comments to Motiva within (60) sixty days of receipt of the process design specifications. Within sixty (60) days of receipt of EPA's comments on the proposed design, Motiva shall modify the proposal to address EPA's comments, and submit the design to EPA for final approval. Upon receipt of EPA's final approval, Motiva shall implement the design. Motiva shall notify EPA of any substantial changes to the design of the SNCR that may affect the performance of the SNCR.

B. SNCR Optimization Study.

11. By no later than March 31, 2005, or 3 months after the installation and start-up of the SNCR systems, whichever is earlier, Motiva shall begin a six-month study to optimize the performance of the SNCR systems to minimize NOx emissions from the Norco FCCU and Delaware City FCU, ("Optimization Study").

12. Motiva shall submit a protocol for the Optimization Study to EPA that includes a consideration of the operating parameters identified in Attachment 1 of this Consent Decree. As

part of the Optimization Study, Motiva shall evaluate the effect of the operating parameters identified in Attachment 1 and shall monitor NOx emissions and the operating parameters to identify optimum operating levels for the parameters that minimize the NOx emissions.

13. Motiva 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 the relevant operating parameters and their levels that result in the minimization of NOx emissions from the Norco FCCU and Delaware City FCU. 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) Low-NOx and conventional CO promotor addition rates, where applicable;
- (h) Reductant addition rates, where applicable;
- (i) Temperature profiles; and
- (j) Hourly average NOx and O2 concentration.

14. As required in Paragraph 13 (j), Motiva shall determine the NOx and O2 concentrations at the point of emission to the atmosphere by CEMS. As required in Paragraph 13 (j), Motiva shall determine the O2 concentrations, after combustion in the CO Boiler, by process analyzer(s) calibrated in accordance with the manufacturer's recommendations, where analyzer(s) are installed.

Motiva shall report the data or measurements to EPA in electronic format.

C. SNCR Outlet Emission Limits.

15. As part of its Optimization Study report, Motiva 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 and FCU NOx emissions, for optimized operation of the control system consistent with the provisions of Paragraphs 11 - 14. Motiva shall comply with the limits it proposes beginning immediately upon submission of its Optimization Study report to EPA, until such time as Motiva is required to comply with the emissions limits set by EPA, pursuant to Paragraphs 16 and 17.

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

information.

17. EPA will notify Motiva of its determination of NOx concentration limits and averaging times for each unit, and Motiva shall immediately, or within 30 days if EPA's NOx concentration limit is different from Motiva's proposed limit, operate its SNCR systems at the Norco FCCU and the Delaware City FCU so as to comply with the established emissions limits.

D. Demonstrating Compliance with SNCR Emission limits.

18. Beginning no later than September 30, 2001, Motiva shall use a NOx CEMS to monitor performance of the FCCU, and subsequently the SNCR systems, and to report compliance with the terms and conditions of this Consent Decree. Motiva shall continue to use the existing NOx CEMS to monitor performance of the Delaware City FCU. Motiva shall make CEMS data available to EPA upon demand as soon as practicable.

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

E. Use of NOx Adsorbing Catalyst Additives ("Additives") in the FCCUs at Port Arthur, Texas, Convent, Louisiana, and Delaware City, Delaware.

20. By no later than September 30, 2001, Motiva shall begin to add NOx adsorbing catalyst additive to the Port Arthur,

Convent and Delaware City FCCUs in accordance with Attachment 2 to this Consent Decree, which is incorporated herein by reference, to establish the optimized catalyst additive addition rate.

21. Motiva 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 FCCUs at that optimized rate. The twelve-month demonstration at the optimized rate shall begin no later than February 28, 2002.

F. Additives Optimization.

22. By no later than thirty (30) days prior to beginning the twelve month demonstration, Motiva shall notify EPA in writing of the optimized additives addition rates 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, Motiva shall add catalyst additive at the optimized rate.

23. No later than sixty (60) days after the completion of the twelve-month demonstrations, Motiva shall report to EPA the results of each demonstration. 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 (Delaware City only);

- (f) Total fresh catalyst addition rate;
- (g) NOx adsorbing catalyst additive addition rate;
- (h) Low-NOx and conventional CO promotor addition rates, if applicable;
- (i) Temperature profiles (Delaware City only); and
- (j) Hourly average NOx and O2 concentration.

24. As required in Paragraph 23(j), Motiva shall determine the NOx and O2 concentrations at the point of emission to the atmosphere by CEMS. As required in Paragraph 23(j), and where applicable Motiva shall determine the O2 concentrations, after combustion in the CO Boiler, by process analyzer(s) calibrated in accordance with the manufacturer's recommendations, where analyzer(s) are installed. Motiva shall report the data or measurements to EPA in electronic format.

G. FCCU (Additives) Emission Limits.

25. As part of its report required by Paragraph 23, Motiva 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 and FCU NOx emissions, consistent with the provisions of Paragraphs 22 through 24. Motiva shall comply with the limits it proposes beginning immediately upon submission of its report to EPA, until such time as Motiva is required to comply with the emissions limits set by EPA pursuant to Paragraphs 26 and 27.

26. 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 Port Arthur, Convent and Delaware City FCCUs. EPA may establish NOx concentration limits based on a short term (e.g., 3-hour) rolling average and a long term (i.e., 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.

27. EPA will notify Motiva of its determination of NOx concentration limits and averaging times for each unit, and Motiva shall immediately, or within 30 days if EPA's NOx concentration limit is different from Motiva's proposed limit, operate the Port Arthur, Convent and Delaware City FCCUs so as to comply with the emission limits established by EPA.

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

28. Beginning no later than June 30, 2001, Motiva shall use a NOx CEMS to monitor performance of the Port Arthur, Convent and Delaware City FCCUs and subsequently, the performance of the catalyst additives, and to report compliance with the terms and conditions of this Consent Decree.

29. Motiva shall make CEMS data available to EPA upon demand as soon as practicable.

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

I. NOx Emission Limits for Port Arthur, Texas, FCCU.

31. By no later than July 31, 2001, Motiva shall notify EPA that it will either: (a) begin the catalyst additives program to establish NOx emissions limits at its Port Arthur FCCU pursuant to Paragraphs 20 through 27; or (b) by September 30, 2001, operate its Port Arthur FCCU so that NOx emissions from that unit do not exceed 20 ppmvd on a 365-day rolling average basis and 40 ppmvd on a 3-hour rolling average basis, each at 0% oxygen.

32 -34. (Reserved). Motiva shall continue to use a NOx CEMS to monitor performance of the Port Arthur FCCU and to report compliance with the terms and conditions of the Consent Decree.

V. REDUCTIONS OF SO₂ EMISSIONS FROM FCCUs and FCU

Program Summary: Motiva shall implement a program to reduce SO₂ emissions from refinery FCCUs by the installation and operation of three new Wet Gas Scrubbers ("WGSs") at its Convent, Louisiana FCCU, and its Delaware City, Delaware FCCU and FCU. Motiva shall continue to operate the existing WGS on its FCCUs at the Norco, Louisiana refinery, and the Port Arthur, Texas, refinery. Motiva shall incorporate lower SO₂ emission limits into operating permits and will demonstrate future compliance with the lower emission limits through the use of CEMS.

A. Installation and Operation of WGS on the Convent, Louisiana, and Delaware City FCCU, and Delaware City FCU.

35. By no later than the dates specified, Motiva shall complete installation and begin operation of a WGS on emissions from the following FCCUs and FCU:

- (a) Regenerative WGS on Delaware City FCU - December 31, 2003;
- (b) Regenerative WGS on Delaware City FCCU - December 31, 2004; and
- (c) WGS on Convent FCCU - December 31, 2006

B. WGS Design and Operation.

36. Motiva shall design and operate the WGS at the Convent, Louisiana refinery to achieve an SO₂ 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.

37. Motiva shall design the regenerative WGS on the FCU at the Delaware City, Delaware refinery to achieve an SO₂ exit concentration of 168 ppmvd on a 365-day rolling average basis and 196 ppmvd on a 7-day rolling average basis, each at 0% oxygen, and 93 percent removal of SO₂ based on an SO₂ inlet concentration of 2800 ppmvd on a 7-day rolling average basis. Additional limits for H₂SO₄/PM-10 shall be based on a percent removal and uncontrolled inlet concentration similar to the approach used for SO₂ in Paragraph 48.

38. (Reserved).

39. Motiva shall design the regenerative WGS on the FCCU at the Delaware City refinery to achieve an SO₂ exit concentration

of 25 ppmvd on a 365-day rolling average basis and 50 ppmvd on a 7-day rolling average basis, each at 0% oxygen, except as provided below in Paragraphs 42 and 43.

40. By no later than 18 months prior to the installation of the regenerative WGS for the Delaware City FCU and FCCU, Motiva shall submit to EPA the process design specifications for each system. Motiva and EPA agree to consult on the development of the proposed process design specifications for each regenerative WGS system prior to submission of Motiva's final proposal.

41. Motiva's proposed designs for the Delaware City FCCU and FCU shall consider at a minimum the design parameters identified in Attachment 1 to this Consent Decree, which is incorporated herein by reference. EPA will provide comments to Motiva within (60) sixty days of receipt of the process design specifications. Within sixty (60) days of receipt of EPA's comments on the proposed design, Motiva shall modify the proposed design to address EPA's comments, and submit the design to EPA for final approval. Upon receipt of EPA's final approval of the design, Motiva shall implement the design. Motiva shall notify EPA of any substantial changes to the design of the Regenerative WGS systems that may affect the performance of the Regenerative WGS systems.

C. Alternative Regenerative WGS Design.

42. If the total installed cost for the Regenerative WGS at

the Delaware City FCCU designed to meet the requirements of Paragraph 39 is more than 5% of the current (at the time of design) total installed cost for a regenerative WGS designed to achieve 50 ppmvd on a 365-day rolling average and 65 ppmvd on a 7-day rolling average basis, each at 0% oxygen and 95 percent removal of SO₂ based on an SO₂ inlet concentration of 1000 ppmvd on a 365-day rolling average basis and 1300 ppmvd on a 7-day rolling average basis, then Motiva shall propose an alternative to the 25/50 ppmvd design target emission levels.

43. If the total installed cost of the 25/50 ppmvd WGS is less than or equal to 105% of the 50/65 ppmvd design WGS then Motiva shall design to the 25/50 levels. However, if the total installed cost of the 25/50 ppmvd WGS is greater than 105% of the total installed cost of the 50/65 ppmvd WGS, then Motiva shall make any incremental design improvements that are possible within the 5% increase of the current total installed capital cost. The incremental design improvements shall be chosen such that they result in maximum SO₂ control. However, the regenerative WGS for the FCCU must be designed to a minimum of 65 ppmvd SO₂ on a 7-day rolling average at 0% O₂ and 95% removal of SO₂ based on an SO₂ inlet concentration of 1300 ppmvd on a 7-day rolling average basis. Upon EPA's approval of the incrementally improved design emission level, Motiva shall proceed with the preparation of process design specifications for a regenerative WGS system

designed to meet the new alternative design emission level and removal and shall submit those design specifications to EPA for approval in accordance with and on the schedules provided for in Paragraphs 40 and 41.

D. Delaware City FCCU and FCU Regenerative WGS Optimization Study.

44. For any WGS design except that which will be designed and operated at 25 ppmvd and 50 ppmvd as specified in Paragraph 39, Motiva shall conduct a six-month study to optimize the performance of each regenerative WGS to minimize SO₂ emissions from the Delaware FCCU and FCU ("Optimization Study"). By no later than three (3) months after the completion of the installation of each Regenerative WGS, Motiva shall begin the Optimization Study.

45. Motiva shall submit a protocol for the Optimization Study to EPA that includes consideration of the operating parameters of Attachment 1 to the Consent Decree. As part of the Optimization Study, Motiva shall evaluate the effect of the operating parameters identified in Attachment 1 to the Consent Decree and shall monitor SO₂ emissions and the operating parameters to identify optimum operating levels for the parameters that maximize the reductions of the SO₂ emissions.

46. Motiva 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 the relevant operating parameters and their levels that result in the maximum reductions of SO2 emissions from the FCCUs and FCU, and include, at a minimum, the following information:

- (a) Regenerator flue gas temperature and flow rate;
- (b) Coke burn rate;
- (c) FCCU and FCU feed rate;
- (d) FCCU and FCU feed sulfur content;
- (e) CO boiler firing rate and fuel type;
- (f) Scrubber liquor flow and pH;
- (g) Scrubber pressure drop; and
- (h) Hourly average SO2 and O2 concentrations at the point of emission to the atmosphere, and at the inlet to the regenerative WGS.

47. As required in Paragraph 46(h), Motiva shall determine the SO2 and O2 concentrations at the point of emission to the atmosphere and at the inlet to the Regenerative WGS by a CEMS. Motiva shall report the data or measurements to EPA in electronic format.

E. Determining SO2 Emission Limits for Delaware City FCU and FCCU.

48. As part of the Optimization Study report required by Paragraph 46, Motiva shall propose to EPA SO2 concentration limits and percent reduction requirements 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 for optimized operation of the control systems consistent with the provisions of Paragraphs 44 - 46. Due to unknown capabilities regarding the ultimate efficiency of regenerative WGS as compared to typical WGS, the

following approach shall be used by EPA and Motiva for setting the limits for the Delaware City FCCU and FCU. The concentration limits shall be based on the percent SO2 reductions derived through the optimization program as follows for the Delaware City FCCU and FCU regenerative WGS:

$$\begin{aligned} \text{FCCURA7} &= (1 - \text{FCCUOPR}/100) \times 1300 \\ \text{and} \\ \text{FCCURA365} &= (1 - \text{FCCUOPR}/100) \times 1000 \end{aligned}$$

FCCURA7 = rolling 7-day average ppmvd at 0% O2 for FCCU
 FCCURA365 = rolling 365-day average ppmvd at 0% O2 for FCCU
 FCCUOPR = optimized percent reduction for FCCU

$$\begin{aligned} \text{FCURA7} &= (1 - \text{FCUOPR}/100) \times 2800 \\ \text{and} \\ \text{FCURA365} &= (1 - \text{FCUOPR}/100) \times 2400 \end{aligned}$$

FCURA7 = rolling 7-day average ppmvd at 0% O2 for FCU
 FCURA365 = rolling 365-day average ppmvd at 0% O2 for FCU
 FCUOPR = optimized percent reduction for FCU

Motiva shall comply with the percent reduction and concentration based limits it proposes beginning immediately upon submission of its report to EPA, until such time as Motiva is required to comply with the emissions limits set by EPA, pursuant to Paragraphs 49 and 50.

49. EPA will use the CEMS data collected during the optimization study and all other available and relevant information to establish optimized percent reduction for the Delaware City FCCU and the FCU. The optimized percent reduction will be used in accordance with the procedure of the preceding

Paragraph to derive the short and long-term concentration based SO2 emission limits for the Delaware City FCCU and FCU. However, the emission limits for the regenerative WGS for the FCCU must be at a minimum 65 ppmvd SO2 on a 7-day rolling average at 0% O2 and 95% removal of SO2 based on an SO2 inlet concentration of 1300 ppmvd on a 7-day rolling average basis.

50. EPA will notify Motiva of its determination of the optimized SO2 percent removal and derived concentration limits for the Delaware City FCCU and FCU, and, Motiva shall immediately, or within 30 days of such notice if EPA's optimized SO2 percent removal and derived concentration limits are different from Motiva's proposed limits, operate its regenerative WGS systems at the FCCU and FCU so as to comply with the established emissions limits.

F. Demonstrating Compliance with SO2 Emission Limits for the Convent and Delaware City FCCUs and the Delaware FCU.

51. By no later than June 30, 2001, Motiva shall use an SO2 CEMS to monitor performance of the FCCUs, FCU, and, subsequently, each WGS and regenerative WGS, and to report compliance with the terms and conditions of this Consent Decree. Motiva shall make CEMS data available to EPA upon demand as soon as practicable.

52. Motiva 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 Appendices A, B, and F. These CEMS will be used to demonstrate

compliance with emission limits.

G. SO2 Emission Limits for Norco, Louisiana and Port Arthur, Texas, FCCU.

53. By no later than June 30, 2001, Motiva shall operate its FCCUs at the Norco, Louisiana and Port Arthur, Texas refineries so that SO2 emissions from these units do not exceed 25 ppmvd based on a 365-day rolling average and 50 ppmvd based on a 7-day rolling average, each at 0% oxygen. Until December 31, 2006, the FCCU at Port Arthur shall be exempt from the 25 ppmvd based on a 365-day rolling average and 50 ppmvd based on a 7-day rolling average limits during periods of CO boiler forced outages provided that good air pollution control practices are implemented during those periods.

54. Motiva shall use an SO2 CEMS to measure SO2 emissions from the Norco, Louisiana and Port Arthur FCCU and to report compliance with the terms and conditions of the Consent Decree.

55. CEMS data shall be made available to EPA upon demand as soon as practicable.

56. Motiva shall 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 Appendices A, B, and F. These CEMS will be used to demonstrate compliance with emission limits.

H. FCCU REGENERATOR NSPS SUBPARTS A and J APPLICABILITY.

57(a). Motiva'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:

Convent:

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

Delaware City:

SO2 - 12/31/04
PM - 12/31/04
CO - 9/30/02
Opacity - Alternative Monitoring Plan by 12/31/04

Norco:

SO2 - upon lodging
PM - upon lodging
CO - upon lodging
Opacity - Alternative Monitoring Plan by 12/31/01

Port Arthur:

SO2 - 12/31/06
PM - 12/31/06
CO - 12/31/06
Opacity - Alternative Monitoring Plan by 12/31/06

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

57(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 NESHP

Program Summary: Motiva shall undertake refinery-wide audits of each of the refineries identified in Paragraph 5 to determine its compliance with all Benzene Waste NESHP requirements and to take corrective action where any areas of non-compliance are

identified. In addition, Motiva 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.

58. In addition to the provisions of the enhanced program set forth in this Part, Motiva shall immediately upon lodging of this Consent Decree comply with the compliance options specified below at the Port Arthur, Texas, Delaware City, Delaware, and Norco, Louisiana, refineries, and shall demonstrate compliance at the Convent, Louisiana, refinery in accordance with the schedule set forth in the LADEQ Consolidated Compliance Order & Notice of Potential Penalty (No. AE-CN-00-0009) or any amendments thereto:

- (a) Motiva's Delaware City, Delaware, and Port Arthur, Texas, refineries shall comply with the compliance option set forth at 40 C.F.R. § 61.342(c), utilizing the exemptions set forth in 40 C.F.R. § 61.342(c)(2) and (c)(3)(ii) (herein referred to as the "2Mg compliance option").
- (b) Motiva's Norco and Convent, Louisiana, 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. Compliance Status Changes.

59. From the date of lodging of this Consent Decree through termination, Motiva shall not change the compliance status of any facility from the 6BQ compliance option to the 2Mg compliance option. Motiva shall otherwise consult with EPA and the appropriate 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.

60. Beginning no later than June 30, 2001, Motiva 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 62 and 63, below. Within 30 days of its completion of each audit, Motiva shall immediately report to EPA and the appropriate 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.

61. Motiva shall certify to the United States and the appropriate Plaintiff-Interveners, that the audit and any related corrective action have been completed and that all Motiva refineries are in compliance. The United States will review Motiva's certification and will respond with written concurrence. Motiva'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 XVI (Effect of Settlement), and release for those violations which Motiva self-discloses as a result of its audits, will take effect upon the United States' concurrence with

Motiva's audit and compliance certification.

D. Waste Streams Audits

62. Motiva shall conduct an audit of each facility's waste stream inventory and Total Annual Benzene ("TAB") calculation. Sampling of the waste streams is not required for the first phase of the audit. Motiva 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.

63. Motiva shall conduct the audits required by Paragraph 62, above, in accordance with the following schedule:

- (a) By no later than January 31, 2002, Motiva 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 Motiva a list of up to twenty (20) waste streams per facility for sampling for benzene concentration.
- (c) Motiva 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) Motiva shall use the results of the sampling conducted pursuant to Paragraphs 63(b) and (c) to calculate the TAB or uncontrolled benzene quantities for the respective facilities. Motiva 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.

64. Motiva shall comply with the requirements of Paragraphs 65 through 72 at all locations where a carbon canister(s) is utilized as the control device under the Benzene Waste NESHAP.

65. 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 compound ("VOC"). For all canisters that are operated as part of a single canister system, "breakthrough" is defined as any VOC reading above background.

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

67. Primary and Secondary Carbon Canisters. By no later than January 31, 2002, Motiva 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.

68. Within 7-days of installation of each secondary carbon canister, Motiva 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).

69. Motiva shall replace the primary carbon canisters with fresh carbon canisters immediately when 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.

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

71. Utilizing single carbon canisters. Beginning no later than the date of lodging of this Consent Decree, Motiva 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).

72. 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.

73. Motiva 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.

74. Motiva 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.

75. No later than January 1, 2002, Motiva shall conduct the audit(s) of the laboratories used by 2 of its refineries. Motiva shall complete audits of the laboratories used by the remaining refineries by June 30, 2002.

76. During the life of this Consent Decree, Motiva 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.

77. Motiva shall account for all benzene wastes generated through spills in its TAB calculations. In addition, Motiva shall review all reportable spills within each facility to determine if benzene waste was generated. Motiva shall account for all benzene wastes generated through spills in its TAB calculation.

78. Motiva 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.

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

80. By no later than December 31, 2001, Motiva 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.

81. As part of Motiva's training program, Motiva 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.

82. By no later than January 1, 2002, Motiva shall maintain

records of waste/slop oil movements for waste streams (organic or aqueous) which are not controlled.

83. General Sampling. Motiva, in consultation with EPA, and the appropriate state personnel, will conduct a preliminary evaluation at one selected Alliance refinery (one operated by either Motiva, Equilon, or Deer Park Refinery Limited Partnership) to identify potential sample locations, determine "end of line benzene" sample locations, and review available oil movement transfer documentation to assist Motiva with preparation for its sampling plans for the remaining facilities.

L. Sampling (2 Mg/yr).

84. For refineries that are complying with the 2 Mg/yr compliance option (40 C.F.R. § 61.342(c)(3)(ii)), Motiva shall include in the annual benzene waste NESHAPs report, a list of all waste streams at the facility, the benzene content of each of these streams, and the annual flow and shall conduct a quarterly "end of the line" benzene determination.

85. Within two (2) months of Motiva's consultation with EPA as required by Paragraph 83, but no later than September 30, 2001, Motiva 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 Motiva receives written approval from EPA of its submitted

sampling plan.

86. Motiva shall sample quarterly all uncontrolled waste streams that count toward the 2 Mg/yr calculation and contain greater than 0.05 Mg/yr of benzene. This sampling shall begin during the first full calendar quarter after the date of lodging of this Consent Decree. After two years, EPA will evaluate the quarterly sampling results to determine the appropriateness of an alternative sampling frequency.

87. Motiva shall measure quarterly the concentration of all uncontrolled waste streams that qualify for the 10 ppmw exemption (see 40 C.F.R. § 61.342(c)(2)) and contain greater than 0.1 Mg/yr of benzene. This sampling shall begin during the first full calendar quarter after the date of lodging of this Consent Decree. After two years, EPA will evaluate the quarterly sampling results to determine the appropriateness of less frequent sampling.

M. Sampling (6 Mg/yr).

88. Motiva 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)).

89. Within two (2) months of Motiva's consultation with EPA as required by Paragraph 83, but no later than September 30, 2001, Motiva 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.

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

91. Beginning no later than the first full calendar quarter following EPA's approval under Paragraph 90, Motiva 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. This sampling shall begin during the first full calendar quarter after the date of lodging of this Consent Decree.

N. Miscellaneous Measures.

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

93. Motiva 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.

94. Motiva 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 Motiva 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. Projects/Investigations.

95. By no later than January 31, 2002, Motiva 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.

96. Motiva shall submit a report summarizing the results of the evaluations of the projects identified in Paragraph 95 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, Motiva'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.

97. Beginning the first full calendar quarter after the date of lodging of this Consent Decree, Motiva shall submit a report to EPA and the appropriate Plaintiff-Intervener that includes the information requested in Paragraphs 101 through 106, for each of its refineries, and the specific progress information requested in Paragraphs 98 through 100, as appropriate. The quarterly report shall be due no later than thirty days after the end of each calendar quarter.

98. Canisters and Water Scrubbers. Motiva 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.

99. Audits. Motiva shall submit a report to EPA summarizing the results of the initial lab audits upon their completion for each facility specified in Paragraphs 74 and 75. 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 the methods

used in the audit, and the results of the audit.

100. Training. As part of its quarterly reports, Motiva shall include a report to EPA and the appropriate Plaintiff-Intervener that details the training it will implement at each facility pursuant to Paragraphs 79 through 81 above.

101. Motiva shall include in its Quarterly report the results of the quarterly sampling conducted pursuant to Paragraphs 86 and 87 (2Mg sampling) and 88 through 91 (6BQ sampling) above. This shall include a list of all waste streams sampled and all results of benzene analysis for each waste stream.

102. For all refineries, Motiva shall include in its Quarterly Reports the results of the quarterly end of the line sampling conducted pursuant to Paragraphs 84 and 88 above.

103. Motiva shall use all sampling results and approved flow calculation methods pursuant to Paragraphs 84 and 88, above, to calculate and include in its Quarterly Report a quarterly and a projected calendar year value against the 2Mg or 6BQ compliance options.

104. Quarterly Calculations. If the quarterly calculation for any facility made pursuant to Paragraph 103 exceeds: (a) 0.5 Mg for refineries complying with the 2 Mg compliance option, or (b) 1.5 Mg for refineries complying with the 6BQ compliance option, Motiva 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.

105. Projected Annual Calculations. If any projected annual calculation for any facility made pursuant to Paragraph 103, above, exceeds (a) 2 Mg for refineries complying with the 2 Mg compliance option or (b) 6 Mg for refineries complying with the 6BQ compliance option, Motiva 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.

106. Motiva 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: Motiva 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, Motiva 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.

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

A. Written Refinery-Wide Program.

107(b). By no later than September 30, 2001, Motiva 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.

108. By no later than March 31, 2002, Motiva shall implement the following training programs at each covered facility:

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

require completion of annual LDAR training; and

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

C. LDAR Audits.

109. Beginning no later than June 30, 2001, Motiva 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 111. Within 30 days of completion of each audit, Motiva shall report to EPA and the appropriate 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.

110. Within 60 days of completion of the audits, Motiva shall certify to EPA that the audit and any related corrective action has been completed and that all Motiva refineries are in compliance or on a compliance schedule. The United States will review Motiva's certification and will respond with written concurrence. Motiva's release from liability as specified in Part XVII (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 Motiva self-discloses as a result of its audits, will take effect upon the United States'

concurrence with Motiva's audit and compliance certification.

111. Audit Program. Motiva'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 2 to this Consent Decree, Motiva shall use the leak rates calculated during the audit to determine if more frequent monitoring is required.

112. External Audits. Motiva 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.

113.(a). Internal Audits. Motiva shall conduct internal audits of each refineries' LDAR program according to the broad framework approved by EPA. These audits shall be conducted by sending the personnel familiar with the LDAR Program and its

requirements from one or more the nine (9) refineries operated by the Alliance (owned and/or operated by either Motiva, Equilon, or Deer Park Refinery Limited Partnership) to audit another of the Motiva, Equilon, or Shell Deer Park refineries. 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 112 above, and held every four years thereafter for the life of this Consent Decree.

113.(b). Alternative. As an alternative to the internal audits required by Paragraph 113(a), above, Motiva may elect to perform external audits instead, provided that an audit of each refinery occurs every two (2) years.

D. Pump Leak Definition.

114. By no later than March 31, 2003, Motiva shall utilize an internal leak definition of 2000 ppm for all pumps. Motiva 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.

115. By no later than March 31, 2003, Motiva shall utilize an internal leak definition of 500 ppm for all valves, excluding pressure relief devices. Motiva may continue to report leak rates against the applicable regulatory leak definition, or use the lower leak definition for regulatory reporting purposes.

F. Repairs.

116. Motiva shall track, repair, and re-monitor all leaks above the internal leak definitions of 2000 ppm for pumps and 500 ppm for valves, except that Motiva shall have thirty (30) days to make repairs and re-monitor leaks that are greater than these internal leak definitions and less than the appropriate regulatory leak definition.

117. Beginning no later than June 30, 2001, Motiva 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.

118. As part of the "first attempt at repair program," Motiva shall record, track and re-monitor leaks above the internal leak definitions as specified above in Paragraphs 114 and 115. However, Motiva shall immediately re-monitor all valves that LDAR personnel attempted to repair to ensure that the leaks have not been made worse. If Motiva can demonstrate with sufficient monitoring data that "first attempt" repair at 100 ppm worsen leaks, after 2 years Motiva may request that the United States reconsider or amend this requirement.

G. LDAR

Monitoring Frequency.

119. By no later than March 31, 2003, Motiva 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 2 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.

120. For process units complying with the Sustainable Skip Period Program set forth in Paragraph 119(b), above, EPA or the State or local agency may require Motiva 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.

121. Process units monitored in the Sustainable Skip Period Program 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.

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

123. Motiva 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 Paragraphs 124(a) and (b), within 7 days of monitoring.

124(a). By no later than March 31, 2001, the Convent, Norco, and Port Arthur Refineries shall create and maintain an electronic database for storage and reporting of data. The refineries shall ensure that the collected monitoring data includes a time/date stamp, operator identification, and instrument identification for all monitoring events.

124(b). By no later than September 30, 2001, the Delaware City Refinery shall create and maintain an electronic database for storage and reporting of data. The refinery 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.

125(a). Beginning no later than March 31, 2001, the

Convent, Norco, and Port Arthur Refineries 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.

125(b). Beginning no later than September 30, 2001, the Delaware City Refinery 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.

126. By no later than June 30, 2001, Motiva shall establish a program that will hold LDAR personnel accountable for LDAR performance. Motiva 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.

127. Motiva 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 Motiva monitor according to the following schedule:

- (a) For events involving 1000 or fewer valves and pumps, Motiva 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, Motiva 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, Motiva shall monitor within four (4) weeks of the documented maintenance, start-up, or shutdown activity.

L. Calibration

128. 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.

129. Beginning no later than the date of lodging of this Consent Decree, Motiva shall conduct calibration drift assessments of the LDAR monitoring equipment at a minimum, at the end of each monitoring shift.

130. 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.

131. If any calibration drift assessment after the initial calibration shows a negative drift of more than 10% from the

previous calibration, Motiva 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.

132. Beginning no later than June 30, 2001, for any valve Motiva is allowed under the applicable regulations to place on the "delay of repair" list for repair, Motiva 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 Motiva 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 Motiva 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

133. Quarterly Progress Reports. Motiva shall maintain and submit the following information as part of the quarterly progress report submitted pursuant to Section XI (General Recordkeeping, Report Retention, and Reporting) (or less often if

so indicated). Reports are to be submitted to EPA and to the appropriate Plaintiff-Intervener:

- (a) Motiva shall report on an annual basis the results of the audits conducted pursuant to Paragraphs 111-113(b). Motiva 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. Motiva shall maintain the audit results from Paragraphs 109-113(b) 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, Motiva shall submit a certification that it has implemented the calibration drift assessments described in Paragraphs 129-131;
- (c) As part of its first progress report required by this Consent Decree, Motiva shall include a certification that it has implemented the "delay of repair" requirements described in Paragraph 132;
- (d) In its first progress report due under this Consent Decree, Motiva shall submit a certification that the first attempt repair program as described in Paragraphs 117 and 118 has been implemented;
- (e) As part of the first progress report submitted after June 30, 2001, Motiva shall include a description of the accountability programs that are developed pursuant to Paragraph 126;
- (f) As part of the first progress report required to be submitted after June 30, 2001, Motiva shall submit a status report on the use of dataloggers and/or electronic data storage for data monitoring as required by Paragraph 122-124;
- (g) As part of the first progress report required to be submitted after September 30, 2001, Motiva shall include a copy of the written LDAR program for each refinery developed pursuant to Paragraph 107(b);
- (h) In the first progress report due after the training

program required by Paragraph 108 has been implemented at each refinery, Motiva shall submit a description of the various training programs and a certification that the training has been implemented; and

- (i) Quarterly Monitoring Reports. Motiva 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, Motiva agrees to take the following measures at all of its SRPs and certain flaring devices at the refineries identified in Paragraph 5. Motiva shall eliminate all reasonably preventable SO2 emissions from flaring. Motiva will implement procedures for root cause analysis of acid gas flaring incidents at all refineries. Motiva shall strive to extend the duration between SRP maintenance shutdowns (unscheduled or scheduled) to three years or greater.

A. DEFINITIONS.

134. 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 that receives and combusts 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:

Delaware City Refinery (DE): North and South

Convent Refinery (LA): Flares 1, 2 and 3

Norco Refinery (LA): West Operations Ground, Coker, and Hydrocracker. Norco also has AG Flaring Devices located off-site from the Norco Refinery, not owned and/or operated by Motiva. These flares are West Operations Elevated, GO-1, and OL-5.

Port Arthur Refinery (TX): Amine Units 1 & 2
Emergency Flare, and DCU.

- (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" or "HC Flaring" shall mean, for purposes of this Consent Decree, the combustion of refinery process gases, except for AG and/or Sour Water Stripper Gas and/or Tail Gas, in a HC 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 Consent 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 and/or Sour Water Stripper Gas and/or Tail Gas, as follows:

Delaware City Refinery (DE): subject to audit in Paragraph 135(a).

Convent Refinery (LA): Flares 2, 3, and 4.

Norco Refinery (LA): West OPS Ground, RCCU, MVR.

Port Arthur Refinery (TX): Alky, Hydrotreater #4, CRU #4, and DCU.

Additional flaring devices subject to this definition may be identified pursuant to the audits required by Paragraph 135(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 that are either (1) equal to or greater than 500 pounds in a twenty four (24) hour period in excess of the flare's existing federally enforceable permit level or (2) equal to or greater than 500 pounds in a 24 hour period where no federally enforceable 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 Motiva 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 Motiva's Refineries identified as:

Delaware City Refinery SRP (SRU I and II);
Convent Refinery SRP (SRUs 1,2,3,4,5);
Norco Refinery SRP (SRU-2 and SRU-3);
Port Arthur Refinery SRP (SRU 2,3,4).

- (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" (or "TG 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.

135(a). By no later than June 30, 2001, Motiva shall develop and submit for EPA approval a protocol for audits of pre-1973 refinery flares, including the following:

Delaware City Refinery (DE): North, South, and Frozen Earth Propane.

Convent Refinery (LA): Flare 1.

Norco Refinery (LA): Coker and Hydrocracker.

Port Arthur Refinery (TX): VPS #4 and Hydrocracker.

Motiva shall begin the audits by September 30, 2001. Within 30 days of completing each audit, Motiva 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. Motiva shall submit notifications 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 Motiva's next quarterly report following compliance, as required under Part XI. Release for liability for each particular flare for violations of NSPS Subpart J under Part XIV (Effect of Settlement) shall be contingent upon Motiva's certification of compliance.

C. SRP NSPS SUBPARTS A and J APPLICABILITY.

135(b). Immediately upon lodging of this Consent Decree, Motiva's Claus Sulfur Recovery Plants ("SRP") identified at Paragraph 134(o) shall be subject to and will continue to comply with the applicable provisions of NSPS Subpart A and J.

136. Immediately upon lodging of this Consent Decree, Motiva 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 134(c).

137. Motiva 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 that meet 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). Motiva 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.

138. During the life of this Consent Decree, Motiva 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.

139. During the life of this Consent Decree, for the purpose of determining compliance with the SRP emission limits, Motiva 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.

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

- (a) A 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

141. Motiva 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. Motiva has implemented (or is in the process of identifying and implementing) corrective actions

to minimize the number and duration of AG Flaring events. The Norco Refinery shall comply with the Acid Gas Flaring requirements of this Part to the extent that the Acid Gas is generated by the Norco Refinery.

142. By no later than September 30, 2001, Motiva shall submit to the EPA regional office in which the Motiva facility is located, and the appropriate State office, a report which contains an examination of all past acid gas and sour water stripper gas 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 an 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 an 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 Motiva 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 Motiva 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 Motiva 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 159(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.

143. Upon the completion of the corrective actions identified in the Past Flaring Incident Analysis Report, Motiva shall certify to the EPA regional office in which the Motiva 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. FUTURE FLARING.

144. By no later than June 1, 2001, Motiva shall implement procedures at the refineries identified in Paragraph 5, 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. Motiva shall comply with the Acid Gas Flaring requirements of this Part to the extent that the Acid Gas is generated by Motiva's refineries.

G. HYDROCARBON FLARING.

145. Motiva agrees for purposes of this Consent Decree that hydrocarbon flares identified at Paragraph 134(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.

146. Motiva 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.

147. Motiva's hydrocarbon flares that 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.

148(a). By no later than December 31, 2001, Motiva shall

submit a plan for addressing Hydrocarbon Flaring at all of its refineries. The plan shall identify waste streams and flaring devices and shall select one of the options set forth below for each hydrocarbon flare. Motiva 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 Motiva chooses to continue to route hydrocarbon streams to any hydrocarbon flaring device. This is the only option allowed for the Norco West Operations Ground flare.

148(b). For HC Flaring Incidents, Motiva shall follow the Investigation and Reporting, and Correction Action procedures in Paragraphs 150-155.

H. TAIL GAS INCIDENTS.

149. For Tail Gas Incidents, Motiva shall follow the same investigative, reporting, corrective action and assessment of stipulated penalty procedures as outlined in Paragraph 150 for 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 165 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 128.

I. REQUIREMENTS RELATED TO ALL FLARING.

150. 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"), Motiva 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 or an event identified in Paragraph 149 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, Motiva 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 Motiva 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 Motiva concludes that corrective action(s) is (are) required under Paragraph 151(a), 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 Motiva concludes that corrective action is not required under Paragraph 151(a), 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 156 and 157 of this Decree and describes whether or not the Flaring Incident falls under any of those grounds;
- (2) Describes which Paragraph 159(a) or (b) applies, and why, if a Flaring Incident falls under Paragraph 159 of this Decree;
- (3) States whether or not Motiva asserts a defense to the Flaring Incident, and if so, a description of the defense if an AG Flaring Incident falls under either Paragraph 157 or Paragraph 159(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 Paragraph 150 will be submitted; provided, however, that if Motiva 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 165 shall apply, but Motiva shall retain the right to dispute, under Part XVI (Dispute Resolution) of this Consent Decree, any demand for

stipulated penalties that was issued as a result of Motiva'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 Motiva from its investigation, reporting, and corrective action obligations under this Part for any Flaring Incident, which occurs after a subject Flaring Incident for which Motiva 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), Motiva shall submit a report identifying the corrective action(s) taken and the dates of commencement and completion of implementation.

J. CORRECTIVE ACTION.

151(a). In response to any Flaring Incident, Motiva, 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 Motiva shall perform, as an aspect of its corrective action, an Optimization Study of the affected SRP pursuant to Paragraph 140 of this Consent Decree and implement the results of that Optimization Study.

151(b). Norco shall comply with the AG Flaring requirements of this Part to the extent that the Acid Gas is generated by

Norco.

152. If EPA does not notify Motiva in writing within sixty (60) days of receipt of the report(s) required by Paragraph 150 that it objects to one or more aspects of Motiva'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 Motiva's compliance with Paragraphs 151(a) and (b) of this Consent Decree.

153. 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 Motiva may take in the future, warrant or aver in any manner that any of Motiva'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, Motiva shall remain solely responsible for compliance with the Clean Air Act and its implementing regulations.

154. If EPA does object, in whole or in part, to Motiva'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 Motiva of that fact within sixty (60) days following receipt of the report(s) required by Paragraph 150 above. If Motiva and EPA cannot agree

within thirty (30) days on the appropriate corrective action(s), if any, to be taken in response to a particular Flaring Incident, either Party may invoke the Dispute Resolution provisions of Part XVI of this Decree.

155. 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 Motiva's right to take such corrective actions as it deems necessary and appropriate immediately following a 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.

156. Stipulated Penalties. The stipulated penalty provisions of Paragraph 165(a) shall apply to any AG Flaring or Tail Gas Incident for which the Root Cause was one or more of the following acts, omissions, or events. Except for a Force Majeure event, Motiva 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 Motiva to operate and maintain that equipment in a manner consistent with good engineering practice.

157. The stipulated penalty provisions of Paragraph 165 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).

158. Defenses. In response to a demand by EPA for stipulated penalties, Motiva shall be entitled to assert a Malfunction defense with respect to any AG Flaring or Tail Gas Incident falling under Paragraph 157. In the event that a dispute arising under Paragraph 157 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 Motiva of its view that Startup, Shutdown, and upset defenses are available for AG Flaring or Tail Gas 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 falls under both Paragraph 156 and 157, then Paragraph 156 shall apply.

159. With respect to any AG Flaring or Tail Gas Incident other than those identified in Paragraphs 156 and 157, 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 or Tail Gas Incident that occurred since the effective date of this Decree for the refineries identified in Paragraph 5;

- (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 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 Motiva shall implement corrective action(s) pursuant to Paragraph 151 (a);
- (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 Motiva shall be liable for stipulated penalties under Paragraph 165 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 159(a)(1), or
 - (3) the AG Flaring or Tail Gas Incident was a recurrence of an event that Motiva 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 159(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 Motiva of its view that Startup, Shutdown, and Malfunction upset defenses are available for AG Flaring or 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 or 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 165 no longer apply at that refinery. EPA may elect to reinstate the stipulated penalty provision if Motiva has an AG Flaring or Tail Gas Incident 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.

160. 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 Hydrocarbon Flaring shall be calculated by the following formula:

$$\text{Tons of SO}_2 = [\text{FR}][\text{TD}][\text{ConcH}_2\text{S}][8.44 \times 10^{-5}].$$

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.

161. Calculation of the Rate of SO₂ Emissions during AG or Hydrocarbon 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.)

162. Meaning of Variables and Derivation of Multipliers used in the Equations in Paragraphs 160 and 161:

ER =	Emission Rate in pounds of SO ₂ 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
ConcH ₂ S =	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 H ₂ S/scf gas)
8.44×10^{-5} =	$[\text{lb mole H}_2\text{S}/379 \text{ scf H}_2\text{S}][64 \text{ lbs SO}_2/\text{lb mole H}_2\text{S}][\text{Ton}/2000 \text{ lbs}]$
0.169 =	$[\text{lb mole H}_2\text{S}/379 \text{ scf H}_2\text{S}][1.0 \text{ lb mole SO}_2/1 \text{ lb mole H}_2\text{S}][64 \text{ lb SO}_2/1.0 \text{ lb mole SO}_2]$

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 150 shall include the data used in the calculation and an explanation of the basis for any estimates of missing data points.

163. 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 160, or
- (b) If the Tail Gas Incident is a event exceeding the 250 ppmvd (NSPS J limit), from a monitored SRP incinerator, then the following formula applies:

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

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.

$$0.169 \times 10^{-6} = [\text{lb mole of SO}_2 / 379 \text{ SO}_2] [64$$

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.

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

M. STIPULATED PENALTIES UNDER THIS PART.

165. Motiva 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, are calculated for each incremental period of violation (or portion thereof):

- (a) AG Flaring or Tail Gas Incidents for which Motiva is liable under this Part. Nothing in this Part shall be understood to subject Motiva to stipulated penalties for HC Flaring Incidents:

Tons Emitted in AG Flaring or Tail Gas Incident	Length of Time from Commencement of Flaring within the AG Flaring or Tail Gas Incident to Termination of Flaring within the AG Flaring or Tail Gas Incident is 3 hours or less	Length of Time from Commencement of Flaring within the AG Flaring or Tail Gas Incident to Termination of Flaring within the AG Flaring or Tail Gas Incident 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 Incident is greater than 24 hours
5 Tons or less	\$500 per Ton	\$750 per Ton	\$1,000 per Ton
Greater than 5 Tons, but less than or equal to 15 Tons	\$1,200 per Ton	\$1,800 per Ton	\$2,300 per Ton, up to, but not exceeding, \$27,500 in any one calendar day
Greater than 15 Tons	\$1,800 per Ton, up to, but not exceeding, \$27,500 in any one calendar day.	\$2,300 per Ton, up to, but not exceeding, \$27,500 in any one calendar day	\$27,500 per calendar day for each calendar day over which the AG Flaring or Tail Gas 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 flaring occurs intermittently during an AG Flaring or Tail Gas Incident, the flaring shall be deemed to commence at the time that the 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 flaring within the AG Flaring or Tail Gas Incident. Thus, for example, for flaring within a 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 flaring of "greater than 3 hours but less than or equal to 24 hours" shall apply.

- (b) Failure to timely submit any report required by this Part, or for submitting any report that does not conform to the requirements of this Part:

\$5,000 per week, per report.

- (c) For those corrective action(s) which Motiva is required to undertake following Dispute Resolution, then, from the 91st day after EPA's receipt of Motiva's report under Paragraphs 142 and 150 of this Decree until the date that either (i) a final agreement is reached between EPA and Motiva regarding the corrective action or (ii) a court order regarding the corrective action is entered:

\$5,000 per month

- (d) Failure to complete any corrective action under Paragraphs 142(e) and 151 of this Decree in accordance with the schedule for such corrective action agreed to by Motiva or imposed on Motiva pursuant to the Dispute Resolution provisions of this Decree (with any such extensions thereto as to which EPA and Motiva may agree

in writing):

\$5,000 per week

N. Certification.

166. All notices, reports or any other submissions required of Motiva 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."

167. The reporting requirements set forth in this Part do not relieve Motiva 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

168. Construction. Motiva 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.

169. Operation. As soon as practicable, but in no event later than 60 days following a final determination of

concentration limits, Motiva 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.

170. NSPS Applicability. Motiva shall apply to incorporate NSPS applicability into the relevant permits.

X. (Reserved)

XI. GENERAL RECORDKEEPING, RECORD RETENTION AND REPORTING

171. For the purposes of this Consent Decree, any requirement for Motiva to consult, obtain approval of or submit any type of information to EPA or the United States, including reports, analyses, or data, shall be construed as imposing identical requirements from the Company to each appropriate Plaintiff-Intervener. Motiva 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.

172. 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 the appropriate 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 Sections of this Consent Decree, this report shall contain the following:

- (a) progress report on the implementation of the requirements of Parts IV-IX, and XII (Compliance Programs);
- (b) a summary of all Hydrocarbon Flaring Incidents;
- (c) a summary of the emissions data as required by Parts IV-VIII, 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-IX, and XII of this Consent Decree.

173. 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."

XII. STIPULATED PENALTIES

174. Motiva shall pay stipulated penalties to the United States and the appropriate Plaintiff-Intervener (split 50% to each), for each failure by the Company to comply with the terms of this Consent Decree; provided, however, that the United States

or the appropriate Plaintiff-Intervener may elect to bring an action for contempt in lieu of seeking stipulated penalties for violations of this Consent Decree.

175. 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 (g), (h), and (i). In the alternative, at the option of the United States or the Appropriate Plaintiff-Intervener, stipulated penalties shall equal 1.2 times the economic benefit of Motiva'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 Section IV.C, IV.G, IV.I, V.E, or V.G, 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 and an FCU (Part IV):
 - (i) Failure to install SNCR, as required by Section A: \$100,000 per quarter per refinery
 - (ii) Failure to conduct SNCR Optimization Study, if applicable, as required by Section B:

- \$30,000 per month per refinery
- (iii) Failure to conduct NOx additive demonstrations, if applicable, as required by Section E: \$30,000 per month per refinery
 - (iv) Failure to conduct Optimization Study, as required by Section I: \$30,000 per month per refinery
 - (v) Failure to install, calibrate, maintain and operate properly CEMS, as required by Section D, H or I: \$2,500 per month per CEMS;
 - (vi) Failure to comply with emission limits, as required by Section C, E, G or I: \$1,500 per day per emission limit per emission point
 - (vii) Failure to submit timely reports, as required by Section B, F or I: \$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 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 D: \$5000 per month per unit
 - (iv) Failure to install, calibrate, maintain and operate properly CEMS, as required by Section A 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 VI):
- (i) Failure to timely conduct initial audits, 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 quarter)
- (iii) Failure to timely install secondary carbon canisters or water scrubbers, as required by Section F: \$5,000 per week per canister or water scrubber
- (iv) Failure to timely replace carbon canisters, as required by 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 H: \$1,000 per week per drain
- (ix) Failure to complete timely reviews, analyses or evaluations, as required by Section I, N or O: \$500 per week per review, analysis or evaluation
- (x) Failure to timely submit complete reports under Section O or P: \$1,000 per week per report
- (xi) Following the audit and development of the Compliance Plan, if it is discovered by an EPA or state investigator or inspector, or their agent, that Motiva 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: \$,3000 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 D and F: \$10,000 per month per process unit
- (v) Failure to timely implement internal leak definition, as required by Section E and F: \$10,000 per month per process unit
- (vi) Failure to develop and timely implement first attempt at repair program, as required by Section F: \$10,000 per month
- (vii) Failure to implement and begin more frequent monitoring program, as required by Section G: \$10,000 per month per process unit
- (viii) Failure to timely monitor, as required by Section G: \$5,000 per week per process unit
- (ix) Failure to have dataloggers and electronic storage, as required by Section H: \$5,000 per month per refinery
- (x) Failure to implement subcontractor requirements (if required) under this Part: \$5,000 per month per refinery

- (xi) Failure to timely establish LDAR accountability, as required by Section J: \$5,000 per month per refinery
- (xii) Failure to conduct calibration drift assessment or to remonitor components (if and as required), as required by Section M: \$100 per day per refinery
- (xiii) Failure to attempt to minimize a component being placed or continuing to be on the "delay of repair" list, as required by Section N: \$5,000 per component
- (xiv) Failure to timely submit reports required under this Part: \$1,000 per week per report
- (xv) Following the audit and development of the Compliance Plan, if it is discovered by an EPA or state investigator or inspector, or their agent, that Motiva 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 XI):
- Failure to timely submit a report required under Part XI: \$1,000 per week per report
- (h) Failure to escrow stipulated penalties, as required by this Part: \$10,000 per week per penalty
- (i) Failure to meet the milestones for RCRA compliance and/or to comply with any RCRA requirement (Part XIII): \$2,500 per week

176. Motiva shall pay such stipulated penalties only upon written demand by the United States or the appropriate Plaintiff-Intervener no later than thirty (30) days after the Company

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 the appropriate Plaintiff-Intervener, 50% to each. Such payment shall be made to the United States and to the appropriate Plaintiff-Intervener in the following manner:

(a) Stipulated Penalties owed the United States.

Motiva 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 Company's responsibility. Payment shall be made in accordance with instructions provided to the Company 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. Motiva 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 224 (Notice).

(b) Stipulated Penalties Owed Plaintiff-Intervener the State of Louisiana.

Payment to Plaintiff-Intervener the State of Louisiana shall be

made in the form of a certified check payable to the "Louisiana Department of Environmental Quality," and delivered to Darryl Serio, Office of the Secretary, P.O. Box 82263, Baton Rouge, Louisiana, 70884.

(c) Stipulated Penalties Owed Plaintiff-Intervener the State of Delaware.

Payment to Plaintiff-Intervener the State of Delaware shall be made by submitting a certified check, payable to the "State of Delaware," to Kevin Maloney, Deputy Attorney General, Delaware Department of Natural Resources & Environmental Control, Legal Office, 89 Kings Highway, Dover, Delaware 19901.

177. Should Motiva 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 the appropriate Plaintiff-Intervener, by placing the disputed amount demanded by the United States or the appropriate 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 the Company's favor, the escrowed amount plus accrued interest shall be returned to the Company, otherwise the United States or the appropriate

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.

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

179. Election of Remedy. The United States and the appropriate 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.

XIII. CONVENT, LOUISIANA AND PORT ARTHUR, TEXAS
RCRA INJUNCTIVE RELIEF

Program Summary: Motiva shall implement the following requirements to address RCRA non-compliance at its Convent, Louisiana, and Port Arthur, Texas, refineries. These requirements are to correct violations identified by EPA or self-reported by Motiva, as more specifically described in Part XVII (Effect of Settlement), Paragraph 208 (Other Issues).

180. Upon completion of the work described in Paragraphs 181 and 182, Motiva shall cease discharging hazardous waste into the surface impoundments (aeration basins).

181. By no later than June 30, 2001, Motiva shall submit a plan to the LDEQ, the TNRCC and EPA which includes the following:

- (a) A description of the proposed Staged Biotreater project intended to treat the hazardous waste (benzene - D018) in the surface impoundments to below hazardous levels and prevent future discharges of hazardous waste into the impoundments;
- (b) A schedule(s) for implementing the projects;
- (c) A description of proposed actions to be taken should the Staged Biotreater project(s) prove ineffective (meaning that hazardous waste is not treated to below hazardous levels or future discharges of hazardous waste into the impoundment(s) are not prevented).

182. Upon approval by the regulatory agencies, implement the projects in accordance with the approved schedule(s).

183. Submit semi-annual progress reports for six calendar months, January through July through December, with the first report due within 30-days or on July 30, 2001 and January 20, 2002 for each 6-month period thereafter, describing work completed to date, costs, delays and other pertinent information.

184. Submit a closure plan in compliance with LAC 33:V Chapter 35 or 30 TAC Subchapter E (40 C.F.R. Subpart G), including proposed schedules for closure, to the LDEQ, TNRCC as appropriate, and EPA for modification and/or approval.

185. Upon approval, implement the closure plans according to the approved schedule(s). Motiva's release from liability for the Other Issues set forth in Part XVIII (Effect of Settlement) is conditioned upon Motiva's certification to EPA that all work required to be performed under this Part has been completed and EPA's written concurrence with Motiva's certification.

XIV. RIGHT OF ENTRY

186. 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 Motiva 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 Motiva required by this Consent Decree. Nothing in this Consent Decree shall limit the authority of EPA and the appropriate 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.

XV. FORCE MAJEURE

187. If any event occurs which causes or may cause a delay or impediment to performance in complying with any provision of this Consent Decree, Motiva shall notify the United States and the appropriate Plaintiff-Intervener in writing as soon as

practicable, but in any event within twenty (20) business days of when Motiva first knew of the event or should have known of the event by the exercise of due diligence. In this notice Motiva 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 Motiva to prevent or minimize the delay and the schedule by which those measures will be implemented. Motiva shall adopt all reasonable measures to avoid or minimize such delays.

188. Failure by Motiva to comply with the notice requirements of Paragraph 187 as specified above shall render this Part XII voidable by the United States and Plaintiff-Interveners as to the specific event for which Motiva has failed to comply with such notice requirement, and, if voided, it shall be of no effect as to the particular event involved.

189. The United States and the appropriate Plaintiff-Intervener shall notify Motiva 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 187.

190. If the United States and the appropriate Plaintiff-Intervener agree that the delay or impediment to performance has been or will be caused by circumstances beyond the control of

Motiva, including any entity controlled by them, 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. Motiva shall not be liable for stipulated penalties for the period of any such delay.

191. If the United States and the appropriate Plaintiff-Intervener do not accept Motiva' claim of a delay or impediment to performance, they 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 the appropriate Plaintiff-Intervener do not agree, the position of the United States on the Force Majeure claim shall become the final Plaintiffs' position. Once Motiva has submitted this matter to this Court, the United States and the appropriate Plaintiff-Intervener shall have twenty (20) business days to file its response to said petition. If Motiva 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 Motiva, including any entity controlled by them, and that they could not have prevented the delay by the exercise of due diligence, Motiva 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.

192. Motiva 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 their control, including any entity controlled by them, and that they could not have prevented the delay by the exercise of due diligence. Motiva 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.

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

194. 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 Motiva delivering a notice of Force Majeure or the parties' inability to reach agreement.

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

XVI. DISPUTE RESOLUTION

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

197. 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.

198. 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 the appropriate Plaintiff-Intervener and the Company, unless the parties' representatives agree to shorten or extend this period.

199. In the event that the parties are unable to reach agreement during such informal negotiation period, the United States and the appropriate Plaintiff-Intervener shall provide the Company with a written summary of its position regarding the dispute. The position advanced by the United States and the appropriate 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 the appropriate Plaintiff-Intervener' position, Motiva files with this Court a petition which describes the nature of the dispute. In the event

that the United States and the appropriate Plaintiff-Intervener are unable to reach agreement with regard to the Company's claim, the position of the United States shall be the Plaintiffs' final position.

200. 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.

201. Notwithstanding any other provision of this Consent Decree, in dispute resolution, this Court shall not draw any inferences nor establish any presumptions adverse to either party as a result of invocation of this Part XIII or the parties' inability to reach agreement.

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

203. 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. Motiva shall be liable for stipulated penalties for their failure thereafter to complete the work in

accordance with the extended or modified schedule.

XVII. EFFECT OF SETTLEMENT

204. 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 identified in Paragraph 5 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 located at the facilities and as per the schedule set out in Paragraph 57(a), SRPs, and flares listed in Paragraph 134(g), and the relevant state and local regulations which incorporate and/or implement the above-listed federal regulations. 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.

205(a). NSPS Subpart A and J Audits. Motiva's complete performance of the pre-1973 flare audits pursuant to Paragraph 135(a), and/or submission of notifications of compliance with respect to pre-1973 flares, constitutes full settlement of and

shall resolve all past civil liability of Motiva to the United States and the Plaintiff-Intervener for those flares for which Motiva accepts applicability under NSPS Subpart J, through the date of the demonstrated or certified compliance.

205(b). Benzene Waste and LDAR Audits. Motiva's complete performance of the audits and submission of its certification of compliance pursuant to Parts VI and VII, constitutes full settlement of and shall resolve all civil liability of Motiva to the United States and the Plaintiff-Intervener for any violations at the refineries identified in Paragraph 5 based on events that occurred during the relevant time period under the following statutory and regulatory provisions, and those violations which Motiva 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.

206. 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 Delaware and Louisiana regulations which incorporate and/or implement those rules, for any increase in SO₂ and NO_x emissions resulting from Motiva's construction, modification, or operation of the FCCUs and FCU at the refineries identified in Paragraph 5, occurring prior to lodging of this Consent Decree, and increases in PM and PM₁₀ at all FCCUs which have installed Electrostatic Precipitator ("ESP") or have or will install a WGS for control of particulate emissions.

207. During the life of this Consent Decree, the units described in Paragraph 206 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.

208. Other Issues. Motiva's certification of completion of the injunctive requirements set forth in Part XIII of this Consent Decree and EPA's concurrence shall constitute full settlement of and shall resolve all civil liability of Motiva to the United States and the Plaintiff-Intervenors for the following specific violations at the Convent, Louisiana, refinery as

disclosed by Motiva on August 11, 1999, and identified during LDEQ's October 20, 2000, inspection, and the Port Arthur, Texas, refinery, as identified during EPA's June 7-11, 1999 inspection, and disclosed by Motiva on May 3, 2000:

(a) Port Arthur, Texas:

(i) RCRA § 3005(a) and 40 C.F.R. § 270.1 and 270.10, operating a hazardous waste storage unit without permit coverage or interim status as follows:

- (1) failure to properly label two 30-cubic yards roll-off boxes holding waste contaminated with TCLP-benzene at the Alky unit open area with the words "Hazardous Waste" as required by 30 TAC § 335.69 and 40 C.F.R. § 262.34;
- (2) failure to conduct weekly inspections of the two 30-cubic yards roll-off boxes at the Alky unit open area as required by 30 TAC § 335.69 and 40 C.F.R. §§ 262.34(a)(1)(i) and 265.174;
- (3) failure to meet the less than 90-day exemption by failing to keep records of the required daily inspections for the hazardous waste tank T-1825 when the tank was being operated as the RCRA unit as required by 30 TAC § 335.69 and 40 C.F.R. §§ 262.34(a)(1)(ii) and 265.195(c); and
- (4) failure to meet the less than 90-day storage exemption by failing to inspect and keep records of the required weekly inspection for the paint waste less than 90-day Container Storage Area ("CSA") during the year 1998 as required by 30 TAC 335.69 and 40 C.F.R. §§ 262.34(a)(1)(i) and 265.174.
- (5) Discharge of hazardous waste into a surface impoundment (aeration basin) in violation of 30 TAC § 335.2 and 40 C.F.R. §§ 270.1 and 270.10.

(ii) Port Arthur RCRA Permit Violations:

- (1) failure to maintain training records in violation of Permit No. HW-50188, Sections VII.A.3 and B.1; and
 - (2) failure to conduct daily inspection at the permitted CSAs during the weekends and holidays in violation of Permit No. HW-50188, Section VIII.C. (Vol I, Section II.B. incorporated by reference).
- (iii) TSCA § 8(a), Part 710 - Inventory Reporting Regulations: failure to timely submit a 1998 inventory update report for two reportable chemical substances, with CASRNs #'s 68527-16-2 and 64741-66-8 in violation of 40 C.F.R. §710.33(b).
- (b) Convent, Louisiana:
- (i) RCRA § 3005(a) and 40 C.F.R. § 270.1 and 270.10, operating a hazardous waste storage unit without permit coverage or interim status as follows:
 - (1) failure to obtain a standard treatment, storage or disposal (TSD) permit prior to storing and treating hazardous wastewater that contained greater than 0.5 ppm benzene in a surface impoundment (aeration basin) in violation of LAC 33:V.303.B and 40 C.F.R. §§ 262.34(a)(1)(i) and 265.174; and
 - (2) failure to meet the hazardous waste surface impoundment design and operation standards for two (2) aeration basins prior to receiving the hazardous wastewater that contained greater than 0.5 ppm of benzene, in violation of LAC 33:V.2903 and 40 C.F.R. §§ 262.34(a)(1)(i) and 265.
 - (ii) Convent RCRA Permit Violation: Motiva received and processed hazardous waste in the two (2) non-hazardous aeration basins, in violation of the standard permit P-0126, LAC 33:VII.315.N and LAC 33:VII.713D.1.a.

209. 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.

XVIII. GENERAL PROVISIONS

210. Other Laws. Except as specifically provided by this Consent Decree, nothing in this Consent Decree shall relieve Motiva of their obligation to comply with all applicable federal, state and local laws and regulations. Subject to Paragraph 179 (Election of Remedy), nothing contained in this Consent Decree shall be construed to prevent, alter or limit the ability of the United States' and the appropriate Plaintiff-Interveners' rights to seek or obtain other remedies or sanctions available under other federal, state or local statutes or regulations, by virtue of Motiva'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 the appropriate Plaintiff-Interveners' right to invoke the authority of the Court to order Motiva's compliance with this Consent Decree in a subsequent contempt action.

211. 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.

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

213. Public Documents. All information and documents submitted by Motiva to the United States and the appropriate 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 Motiva in accordance with 40 C.F.R. Part 2, or any equivalent state statutes and regulations.

214. 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. The parties acknowledge and agree that final approval by the State of Louisiana, Department of Environmental Quality, and entry of this Consent Decree is subject to the requirements of La. R.S.

30:2050.7, which provides for public notice of this Consent Decree in newspapers of general circulation and the official journals of parishes in which Motiva facilities are located, and opportunity for public comment, consideration of any comments, and concurrence by the State Attorney General.

215. Notice. Unless otherwise provided herein, notifications to or communications with the United States and the appropriate Plaintiff-Intervener or Motiva 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 Motiva 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, Motiva shall also submit a copy of that notice or other writing to the Plaintiff-Interveners, 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 the EPA Regional office where the refinery is located:

EPA Region 3:

Director
Air Protection Division (3AP00)
U.S. Environmental Protection Agency, Region 3
1650 Arch Street
Philadelphia, PA 19103

EPA Region 6:

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

As to Motiva:

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 State of Delaware:

Robert J. Taggart
Program Manager
Air Quality Management Section
715 Grantham Lane
New Castle, DE 19720

As to Plaintiff-Intervener the State of Louisiana, through the
Department of Environmental Quality:

R. BRUCE HAMMATT, Administrator
Enforcement Division
Office of Environmental Compliance
P.O. Box 82215
Baton Rouge, Louisiana 70884-2215

As to the State of Texas:

Regional Manager
TNRCC - Region 10
3870 Eastex Fwy
Beaumont, TX 7703-1892

216. All EPA approvals or comments required under this Decree shall come from EPA, AED at the address listed in Paragraph 215 (Notice). All Plaintiff-Intervener approvals shall be sent from the offices identified in Paragraph 215.

217. 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.

218. 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.

219. 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.

220. Modification. This Consent Decree may be modified only by the written approval of the United States and the appropriate Plaintiff-Intervener and Motiva or by Order of the Court.

221. 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.

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

XIX. TERMINATION

223. This Consent Decree shall be subject to termination

upon motion by the United States, the Plaintiff-Interveners, or Motiva 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-Interveners 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, EPA's receipt of the first calendar quarterly progress report following the conclusion of Motiva' operation for at least one year of all units in compliance with the emission limits established herein. At such time, if Motiva 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-Interveners, 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 Motiva's motion. If any Plaintiff objects to Motiva's certification, then the matter shall be submitted to the Court for resolution under Part XVI (Dispute Resolution) of this Consent Decree. In such case, Motiva 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 Mosbacher
United States Attorney

By: _____

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
Acting 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 PLAINTIFF-INTERVENER the STATE OF DELAWARE:

_____ Date _____

Nicholas A. DiPasquale,
Secretary,
Department of Natural Resources and
Environmental Control
715 Grantham Lane
New Castle, Delaware 19720

_____ Date _____

Kevin Maloney,
Deputy Attorney General
Delaware Department of Natural Resources and
Environmental Control
89 Kings Highway
Dover, Delaware 19901

PRELIMINARY APPROVAL OF PLAINTIFF-INTERVENER, THE STATE OF
LOUISIANA, THROUGH THE DEPARTMENT OF ENVIRONMENTAL QUALITY:

_____ Date _____

LINDA KORN LEVY
Assistant Secretary
Office of Environmental Compliance
Louisiana Department of Environmental Quality

_____ Date _____

JOHN B. KING
Chief Attorney
Legal Division
Louisiana Department of Environmental Quality
P.O. Box 82282
Baton Rouge, Louisiana 70884-2282

ATTACHMENT 1
SNCR and WGS DESIGN AND OPERATING CRITERIA
for MOTIVA

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. Design Considerations (required for consideration by Paragraph 10)

1. Reductant Addition

- a. Type (Anhydrous Ammonia, Aqueous Ammonia, or Urea)
- b. Primary and Enhanced Reductant Addition Rates
- c. Diluent Type and Rate
- d. CO Boiler Flow Distribution Manifold
- e. Injection Grid / Nozzles
 - i. Number
 - ii. Size
 - iii. Location
 - iv. Controls
- f. Ammonia Slip

2. Flue Gas Characteristics

- a. Outlet NO_x Concentration
- b. Flue Gas Volumetric Flow
- c. Inlet/Outlet Temperature Range
- d. Outlet SO₂ Concentrations
- e. Inlet/Outlet CO/H₂O/O₂ Concentrations
- f. Outlet Particulate Loading and Characteristics

3. Efficiency

- a. Designed to Outlet NO_x Concentration
- b. Designed to Removal Efficiency

4. Safety Considerations

B. Operating Considerations (required to be considered by Paragraph 12)

1. Reductant Addition

- a. Reductant Addition Rates
- b. Ammonia Slip

2. Flue Gas Characteristics

- a. Outlet NO_x Concentration
- b. Flue Gas Volumetric Flow
- c. Inlet/Outlet Temperature Range
- d. Outlet SO₂ Concentration
- e. Outlet CO/H₂O/O₂ Concentrations
- f. Outlet Particulate Loading and Characteristics

3. Efficiency

- a. Outlet NO_x Concentration
- b. Removal Efficiency

II. Wet Gas Scrubber

A. Design Considerations (required to be considered by Paragraph 41)

1. Absorber Vessel

- a. Volume
- b. Dimensions
- c. Pressure Drop
- d. Internal Configuration
- e. Location in Process Train

2. Scrubbing Liquor

- a. Type (Caustic, Lime, Sodium Sulfite or other)
- b. Scrubbing Liquor Blowdown/Makeup
- c. Scrubbing Liquor Circulation Rate
- d. Scrubbing Liquor pH

3. Flue Gas Characteristics

- a. Inlet/Outlet SO₂/SO₃ Concentrations
- b. Flue Gas Volumetric Flow
- c. Inlet/Outlet Temperature Range
- d. Inlet/Outlet Particulate Loading and Characteristics

4. Efficiency

- a. Designed to Outlet SO₂/SO₃ Concentration
- b. Designed to Removal Efficiency

5. Safety Considerations

B. Operating Considerations (required to be considered by Paragraph 45)

1. Scrubbing Liquor

- a. Type (Caustic, Lime, Sodium Sulfite or other)
- b. Scrubbing Liquor/Caustic Blowdown/Makeup
- c. Scrubbing Liquor Circulation Rate
- d. Scrubbing Liquor pH

2. Flue Gas Characteristics

- a. Outlet SO₂
- b. Flue Gas Volumetric Flow
- c. Inlet/Outlet Temperature Range
- d. Inlet/Outlet Particulate Loading and Characteristics

3. Efficiency

- a. Outlet SO₂ Concentration
- b. Actual Removal Efficiency

ATTACHMENT 2
DETERMINING CATALYST ADDITIVE ADDITION RATES
for MOTIVA

**I. Establishing Optimized NOx Adsorbing Catalyst
Additive Addition Rates**

At least 60 days prior to beginning the program to establish the optimized catalyst addition rate Motiva 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 Motiva 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 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, Motiva may apply for EPA approval to use a lower catalyst additive addition rate or to forego further catalyst usage and the requirements of paragraphs 21-27.