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

UNITED STATES of AMERICA,	)
	)
Plaintiff, and the	)
	)
State of Colorado,	)
Plaintiff-Intervener, and the	)
State of Louisiana,	)
Plaintiff-Intervener, and the	)
State of Oklahoma,	)
Plaintiff-Intervener, and the	)
State of Montana,	)
Plaintiff-Intervener,	)
v.	) Civil Action
	) No.
Conoco Inc.	)
	)
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 Conoco Inc., (hereinafter "Conoco" or "Company"), for alleged environmental violations at four petroleum refineries owned and operated by Conoco;

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

WHEREAS, the parties agree that the installation of equipment and implementation of controls pursuant to this Consent Decree will achieve major improvements in air quality control;

WHEREAS, in light of the settlement memorialized in this Consent Decree, Conoco has not answered or otherwise responded to the Complaint;

WHEREAS, the United States' Complaint alleges that Conoco has been and is in violation of the following statutory and regulatory provisions:

1) Prevention of Significant Deterioration ("PSD") requirements at Part C of Subchapter I of the Clean Air Act (the "Act"), 42 U.S.C. §§ 7475, and the regulations promulgated thereunder at 40 CFR § 52.21 (the "PSD Rules"), and "Plan Requirements for Non-Attainment Areas" at Part D of Subchapter I of the Act, 42 U.S.C. §§ 7502-7503, and the regulations promulgated thereunder at 40 CFR § 51.165(a) and (b), Part 51, Appendix S, and § 52.24 ("PSD/NSR Regulations") and the State Implementation Plans and rules adopted thereafter;

2) New Source Performance Standards (NSPS) for sulfur recovery plants, fuel gas combustion devices, and fluid catalytic cracking unit catalyst regenerators found at 40 CFR Part 60, Subparts A and J and wastewater units under Subpart QQQ, under Section 111 of the Act, 42 U.S.C. § 7411 ("Refinery NSPS Regulations");

3) Leak Detection and Repair ("LDAR") regulations found at 40 CFR Part 60 Subparts VV and GGG, under Section 111 of the Act, 40 CFR Part 61, Subparts F and V, and 40 CFR Part 63, Subparts F, H, and CC, under Section 112(d) of the Act ("LDAR Regulations");

4) National Emission Standards for Hazardous Air Pollutants ("NESHAP") for Benzene Waste, 40 CFR Part 61, Subpart FF, and Section 112(e) of the Act, 42 U.S.C. § 7412(e) ("Benzene Waste Operations NESHAP Regulations"); and

5) New Source Performance Standards (NSPS) for sulfuric acid plants at 40 CFR Part 60, Subpart H.

WHEREAS, the States of Colorado, Louisiana, Montana and Oklahoma will file a Complaint in Intervention ("Plaintiff-Intervener"), alleging that Conoco was and is in violation of the

applicable Clean Air Act State Implementation Plan (SIP), and other state environmental statutory and regulatory requirements;

WHEREAS, the United States and Conoco agree that the environmental projects (or measures) identified in the Consent Decree will reduce annual emissions from Conoco's refineries: 1) nitrogen oxide by approximately 3,210 tons; 2) sulfur dioxide by approximately 4,000 tons; 3) volatile organic compounds by approximately 100 tons; and 4) particulate matter ("PM") by approximately 400 tons;

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

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

WHEREAS, projects undertaken pursuant to this Consent Decree are for the purposes of abating or controlling atmospheric pollution or contamination by removing, reducing, or preventing the creation of emission of pollutants ("pollution control facilities") and as such, may be considered for certification as pollution control facilities by federal, state or local authorities;

WHEREAS, EPA agrees that for New Source Review purposes the following emissions control projects when required by this Consent Decree are "environmentally beneficial projects" that could be considered to be pollution control projects: wet gas scrubbers, ultra low-NOx burners, selective non-catalytic reduction for NOx, pollutant-reducing catalyst additives, third-stage separators, add-on controls for benzene waste and controls to reduce flaring;

WHEREAS, EPA expects that Conoco will design, operate and maintain the controls identified in the preceding Paragraph in a manner consistent with standard and reasonable air pollution control practices, and that collateral emissions increases will be adequately addressed by Conoco;

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

WHEREAS, Conoco 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 Conoco have agreed that settlement of this action is in the best interest of the parties and in the public interest, and that entry of this Consent

Decree without further litigation is the most appropriate means of resolving this matter; and

WHEREAS, the United States, Plaintiff-Intervener, and Conoco 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:

PART I.

JURISDICTION AND VENUE

1. The Complaints state a claim upon which relief can be granted against Conoco under Sections 113 and 167 of the Act, 42 U.S.C. §§ 7413 and 7477, and 28 U.S.C. § 1355. This Court has jurisdiction of the subject matter herein and over the parties consenting hereto pursuant to 28 U.S.C. § 1345 and pursuant to Sections 113 and 167 of the CAA, 42 U.S.C. §§ 7413 and 7477.

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

PART II.

APPLICABILITY

3. The provisions of this Consent Decree shall apply to and be binding upon the United States, the State of Colorado, the State of Louisiana, the State of Montana and the State of Oklahoma, and upon Conoco as well as Conoco's officers, employees, agents, successors and assigns, and shall apply to Conoco's refineries for the life of the Consent Decree. In the event Conoco proposes to sell or transfer all or part of 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 Conoco from having to comply with any applicable state or local regulatory requirement regarding notice and transfer of facility permits.

PART III.

FACTUAL BACKGROUND

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

Commerce City, Colorado (hereinafter Denver Refinery)

Westlake, Louisiana (hereinafter Lake Charles Refinery, including the Excel Paralubes facility operated and partly owned by Conoco)

Billings, Montana (hereinafter Billings Refinery)

Ponca City, Oklahoma (hereinafter Ponca City Refinery)

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

7. The petroleum refining process at Conoco'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 ("SO_2"), as well as volatile organic compounds ("VOCs") and hazardous air pollutants ("HAPs"), including benzene. Sources of these emissions include the fluid catalytic cracking units ("FCCUs"), process heaters and boilers, the sulfur recovery plants, flares, the wastewater treatment system, and fugitive emissions from leaking components.

PART IV.

REDUCTIONS OF NOx EMISSIONS FROM

FLUIDIZED CATALYTIC CRACKING UNITS (FCCUs)

Program Summary: Conoco shall implement a program to reduce NOx emissions from refinery FCCUs by the use of NOx reducing catalyst additives at each of its five (5) FCCUs. Conoco shall incorporate new NOx emission limits as established by this Consent Decree into operating permits and will demonstrate future compliance with the lower emission limits through the use of Continuous

Emission Monitoring Systems (CEMS).

A. <u>Low NOx CO Promoter and NOx Reducing Catalyst Additives, Optimizations and Demonstrations at the Denver, Lake Charles, Billings, Ponca City No. 4 and Ponca City No. 5 FCCUs</u>

8. By no later than March 1, 2004, where CEMS have yet to be installed, or September 1, 2003, where CEMs are already installed, Conoco shall begin the determination of the optimized addition rates of low NOx CO promoter and NOx reducing catalyst additive (Optimization Study) at each of the five (5) FCCUs in accordance with Attachment 2 to this Consent Decree, which is incorporated herein by reference, to establish the optimized catalyst additive addition rate.

9.(a) By no later than September 1, 2004, where CEMS are yet to be installed, or March 1, 2004, where CEMS are in place, Conoco will begin the performance demonstration of the catalyst additives at the optimized addition rates (NOx Additive Demonstration) over a twelve (12) month period to yield the lowest NOx concentration feasible from the FCCU at that optimized rate.

9.(b) <u>Identification of Commercially Available Products</u>: At least one month prior to beginning the short term trials in Paragraph 9c below, Conoco shall notify EPA in writing of all NOx reducing catalyst additives that are commercially available and shall identify each NOx reducing catalyst additive, up to the maximum of four, that Conoco proposes to use for the short term trials required below. Unless EPA objects prior to the beginning the trials, to one or more of the products identified, Conoco shall commence the short term trials.

9.(c) <u>Short Term Trials of NOx Reducing Catalyst Additives</u>: By no later than eight (8) months before beginning the optimization period, Conoco shall commence trials of the commercially available NOx reducing catalyst additives for the purpose of identifying the comparative NOx reduction effectiveness of each product. After completion of the trials and at least one month prior to beginning the optimization period, Conoco shall submit a report that sets forth the comparative NOx reduction effectiveness of each commercially available NOx reducing catalyst additive. Conoco shall propose for EPA's approval the particular NOx reducing catalyst additive that Conoco proposes to use in the optimization and demonstration periods for each FCCU. If Conoco intends to use a NOx reducing catalyst additive that is not the best performing NOx reducing catalyst additive (as required by Attachment 2), Conoco shall also propose for EPA's approval adjustments to: 1) the incremental pick-up factor, and 2) total catalyst additive addition rate. Subject to EPA's approval, a NOx reducing catalyst additive shall not be deemed the best performing additive if it impairs the performance of the FCCU.

10. By no later than thirty (30) days prior to beginning the determination of the optimized addition

rates of low-NOx CO promoter and NOx reducing catalyst additive at each FCCU, Conoco shall notify EPA in writing of which low-NOx CO promoter and NOx reducing catalyst additive that it intends to use in the optimization and demonstration periods, and shall submit a protocol for the optimization which describes, at a minimum, the methods that will be used to calculate control effectiveness (pounds NOx reduced per pound of additive), cost effectiveness (dollars per ton of NOx reduced), and percent additive added.

11. By no later than eighteen (18) months from the Date of Lodging, Conoco shall submit six (6) to twelve (12) months of baseline data, depending upon CEMS certification, to EPA for each FCCU that shall include at a minimum the following data on a daily average basis:

(1) Regenerator flue gas temperature;

(2) Coke burn rate;

(3) FCCU feed rate;

(4) FCCU feed API gravity;

(5) FCCU feed nitrogen content;

(6) Estimated percentage of each type of FCCU feed component (i.e. atmospheric gas oil, vacuum gas oil, atmospheric tower bottoms, vacuum tower bottoms, etc.) by volume;

(7) Estimated percentage by volume of the FCCU feed that is hydrotreated;

(8) CO boiler firing rate and fuel type for Ponca City No. 5 FCCU;

(9) CO boiler combustion temperature for Ponca City No. 5 FCCU;

(10) Total catalyst addition rate;

(11) NOx reducing catalyst additive and NOx reducing catalyst additive addition rates and

(12) Hourly and daily SO_2, NOx, CO and O_2 concentrations.

12. By no later than thirty (30) days prior to beginning the twelve (12) month demonstration at each FCCU, Conoco shall notify EPA in writing of the proposed optimized additive addition rate for each FCCU with an explanation and the supporting data that demonstrates that the requirements of Attachment 2 have been met in establishing the optimized rates. During the demonstration, Conoco shall add catalyst additive at the optimized rate and in a consistent manner (evenly over time) that

minimizes NOx emissions.

13. No later than sixty (60) days after the completion of the twelve (12) month demonstration, Conoco shall report to EPA the results of the demonstration for each FCCU. The report shall include, at a minimum, each of the parameters reported in the baseline data set required in Paragraph 11. Conoco shall report the data or measurements to EPA in electronic format. Conoco also shall submit the information to the appropriate state agency.

14. Conoco shall determine the NOx and O_2 concentrations at the point of emission to the atmosphere by CEMS.

B. Establishing FCCU NOx Emission Limits at the Denver, Lake Charles, Billings, Ponca City No. 4 and Ponca City No. 5 FCCUs

15. As part of its demonstration report required in Paragraph 13, Conoco shall propose to the EPA 3-hour rolling average and 365-day rolling average concentration based limits (ppmvd), each at 0% oxygen, for NOx emissions from each of its FCCUs. Conoco shall comply with the limits it proposes for each FCCU beginning immediately upon submission of its report to EPA, until such time as Conoco is required to comply with the emissions limits set by EPA, as specified below.

16. EPA will use the data collected from each FCCU during the baseline, optimization, and demonstration periods and all other available pertinent information to establish limits for NOx emissions from the FCCUs. EPA may establish 3-hour rolling average and 365-day rolling average concentration based limits (ppmvd), each at 0% oxygen, for NOx emissions from each of Conoco's FCCUs based on the level of performance during the baseline, optimization, and demonstration periods, a reasonable certainty of compliance, and any other available pertinent information.

17. EPA will notify Conoco of its determination of NOx concentration limits for the units, and Conoco shall immediately comply if the EPA limit is equal to or less stringent than the limit proposed by Conoco. If the limit established by EPA is more stringent than the limit proposed by Conoco, Conoco will comply with the EPA established emission limit within 30 days.

C. Installation of SNCR System and Continued Addition/Optimization/Demonstration of Low-NOx CO Promoter and NOx Reducing Catalyst Additives at Ponca City No. 5 FCCU

18. By no later than December 31, 2006, Conoco shall install and operate a selective non-catalytic

reduction system (SNCR) on the CO Boiler at the Ponca City No. 5 FCCU.

19. After the installation of the SNCR and by no later than March 31, 2007, Conoco shall begin the determination of the optimized addition rates of low-NOx CO promoter and NOx reducing catalyst additive at Ponca City No. 5 FCCU (SNCR Optimization Study) in accordance with Attachment 2 to this Consent Decree, which is incorporated herein by reference, to establish the optimized catalyst additive addition rate.

20. By no later than September 30, 2007, Conoco will begin the performance demonstration of the catalyst additive at the optimized addition rate over a twelve (12) month period to yield the lowest NOx concentration feasible from the FCCU at that optimized rate.

21. After installation of the SNCR and by no later than sixty (60) days prior to beginning the additive optimization at Ponca City No. 5 FCCU, Conoco shall notify EPA in writing of which low-NOx CO promoter and NOx reducing catalyst additive that it intends to use in the optimization and demonstration periods, and shall submit a protocol for the optimization which describes, at a minimum, the methods that will be used to calculate control effectiveness (pounds NOx reduced per pound of additive), cost effectiveness (dollars per ton of NOx reduced), and percent additive added.

22. After the installation of the SNCR and by no later than thirty (30) days prior to beginning the twelve (12) month demonstration at Ponca City No. 5 FCCU, Conoco shall notify EPA in writing of the optimized additive addition rate for Ponca City No. 5 FCCU with an explanation and the supporting data that demonstrates that the requirements of Attachment 2 have been met in establishing the optimized rates. During the demonstration, Conoco shall add catalyst additive at the optimized rate and in a consistent manner (evenly over time) that minimizes NOx emissions.

23. No later than sixty (60) days after the completion of the twelve (12) month demonstration, Conoco shall report to EPA the results of the demonstration for Ponca City No. 5 FCCU. The report shall include, at a minimum, each of the parameters reported in the baseline data set required in Paragraph 11. Conoco shall report the data or measurements to EPA in electronic format.

D. Establishing FCCU NOx Emission Limits for SNCR System, Low-NOx CO Promoter and NOx Reducing Catalyst Additive at Ponca City No. 5 FCCU

24. As part of its demonstration report required in Paragraph 23 above, Conoco shall propose to the EPA 3-hour rolling average and 365-day rolling average concentration based limits (ppmvd), each at 0% oxygen, for NOx emissions for Ponca City No. 5 FCCU. Conoco shall comply with the limits it

proposes for Ponca City No. 5 FCCU beginning immediately upon submission of its report to EPA, until such time as Conoco is required to comply with the emissions limits set by EPA, as specified in Paragraph 26.

25. EPA will use the data collected from Ponca City No. 5 FCCU during the baseline, optimization, and demonstration periods and all other available pertinent information to establish limits for NOx emissions from the Ponca City No. 5 FCCU. EPA may establish 3-hour rolling average and 365-day rolling average concentration based limits (ppmvd), each at 0% oxygen, for NOx emissions from the Ponca City No. 5 FCCU based on the level of performance during the baseline, optimization, and demonstration periods, a reasonable certainty of compliance, and any other available pertinent information.

26. EPA will notify Conoco of its determination of NOx concentration limits for the Ponca City No. 5 FCCU, and Conoco shall immediately comply if the EPA limit is equal to or less stringent than the limit proposed by Conoco. If the Ponca City No. 5 FCCU limit established by EPA is more stringent than the limit proposed by Conoco, Conoco will comply with the EPA established emission limit within thirty (30) days.

E. Hydrotreater Outages

27. No later than one hundred eighty (180) days from the Date of Lodging of the Consent Decree, Conoco shall submit to EPA for its approval a plan to minimize NOx emissions from its Billings, Denver, Lake Charles and Ponca City FCCUs (including associated air pollution control equipment) during hydrotreater outages. This plan will address how to calculate the impact of the period(s) of the hydrotreater outages on the annual average emission limits for the FCCUs and may allow for exclusion from the 365-day average those 3-hour average concentrations during periods of hydrotreater outages. Conoco shall comply with the plan at all times including periods of startup, shutdown, and malfunction of the hydrotreater. The 3-hour NOx emission limits established for the FCCUs as provided in this Order shall not apply during periods of hydrotreater outages at the Billings, Denver, Lake Charles, Ponca City No. 4 (if a gas oil hydrotreater is installed) and Ponca City No. 5 FCCUs, provided that Conoco is maintaining and operating its FCCUs (including associated air pollution control equipment) in a manner consistent with good air pollution control practices for minimizing emissions in accordance with the EPA-approved good air pollution control practices plan.

F. Demonstrating Compliance with FCCU NOx Emission Limits

28. Beginning no later than twelve (12) months from the Date of Lodging where CEMS are in place, and eighteen (18) months from the Date of Lodging where CEMS are yet to be installed, Conoco shall use a NOx and O_2 CEMS to monitor performance of each FCCU during the baseline, optimization, and demonstration periods, and to report compliance with the terms and conditions of this Consent Decree.

29. Conoco shall make CEMS and process data available to EPA upon demand as soon as practicable.

30. Conoco shall install, certify, calibrate, maintain, and operate all CEMS required by this Part in accordance with the requirements of Paragraphs 202 and 203.

PART V.

REDUCTIONS OF SO_2 EMISSIONS FROM FCCUs

Program Summary: Conoco shall implement a program to reduce SO_2 emissions from refinery FCCUs by the use of SO_2 adsorbing catalyst additives at each of its five (5) FCCUs. Conoco shall incorporate lower SO_2 emission limits into operating permits and will demonstrate future compliance with the lower emission limits through the use of CEMS.

A. Application of SO_2 Adsorbing Catalyst Additive at the Denver, Lake Charles, Billings, Ponca City No. 4 and Ponca City No. 5 FCCUs

31. By no later than eighteen (18) months from the Date of Lodging where CEMS are yet to be installed, and twelve (12) months from the Date of Lodging where CEMS are in place, Conoco shall begin to add SO_2 adsorbing catalyst additive (Optimization Study) to each of the five (5) FCCUs in accordance with Attachment 2 to this Consent Decree, which is incorporated herein by reference, to establish the optimized catalyst additive addition rate.

32. By no later than twenty-four (24) months from the Date of Lodging where CEMS are yet to be installed, or eighteen (18) months from the Date of Lodging where CEMS are in place, Conoco will begin the performance demonstration of the catalyst additive at the optimized addition rate over a twelve (12) month period to yield the lowest SO_2 concentration feasible from the FCCU at that optimized rate.

B. SO_2 Adsorbing Catalyst Additives Optimizations and Demonstrations

33. By no later than sixty (60) days prior to beginning the additive optimization at each FCCU,

Conoco shall notify EPA in writing of which SO_2 adsorbing catalyst additive that it intends to use in the optimization and demonstration periods, and shall submit a protocol for the optimization which describes, at a minimum, the methods that will be used to calculate control effectiveness (pounds SO_2 reduced per pound of additive), cost effectiveness (dollars per ton of SO_2 reduced), and percent additive added.

34. By no later than eighteen (18) months from the Date of Lodging, Conoco shall submit six (6) to twelve (12) months of baseline data, depending upon CEMS certification, to EPA for each FCCU that shall include at a minimum the following data on a daily average basis:

(1) Regenerator flue gas temperature;

(2) Coke burn rate;

(3) FCCU feed rate;

(4) FCCU feed API gravity;

(5) FCCU feed sulfur content;

(6) Estimated percentage by volume of each type of FCCU feed component (i.e. atmospheric gas oil, vacuum gas oil, atmospheric tower bottoms, vacuum tower bottoms, etc.);

(7) Estimated percentage by volume of the FCCU feed that is hydrotreated;

(8) CO boiler firing rate and fuel type for Ponca City No. 5 FCCU;

(9) CO boiler combustion temperature for Ponca City No. 5 FCCU;

(10) Total catalyst addition rate;

(11) SO_2 adsorbing catalyst additive type and additive addition rates and

(12) Hourly and daily SO_2, NOx, CO and O_2 concentrations.

35. By no later than thirty (30) days prior to beginning the twelve (12) month demonstration at each FCCU, Conoco shall notify EPA in writing of the optimized additive addition rate for each FCCU with an explanation and the supporting data that demonstrates that the requirements of Attachment 2 have been met in establishing the optimized rates. During the demonstration, Conoco shall add catalyst

additive at the optimized rate and in a consistent manner (evenly over time) that minimizes SO_2 emissions.

36. No later than sixty (60) days after the completion of the twelve (12) month demonstration, Conoco shall report to EPA the results of the demonstration for each FCCU. The report shall include, at a minimum, each of the parameters reported in the baseline data set required in Paragraph 34. Conoco shall report the data or measurements to EPA in electronic format. Conoco also shall submit the information to the appropriate state agency.

37. Conoco shall determine the SO_2 and O_2 concentrations at the point of emission to the atmosphere by CEMS.

C. Establishing FCCU SO_2 Emission Limits

38. As part of its demonstration report required in Paragraph 36, Conoco shall propose to the EPA 7-day rolling average and 365-day rolling average concentration based limits (ppmvd), each at 0% oxygen, for SO_2 emissions from each of its FCCUs. Conoco shall comply with the limits it proposes for each FCCU beginning immediately upon submission of its report to EPA, until such time as Conoco is required to comply with the emissions limits set by EPA, as specified in Paragraph 40.

39. EPA will use the data collected from each FCCU during the baseline, optimization, and demonstration periods and all other available pertinent information to establish limits for SO_2 emissions from the FCCUs. EPA may establish 7-day rolling average and 365-day rolling average concentration based limits (ppmvd), each at 0% oxygen, for SO_2 emissions from each of Conoco's FCCUs based on the level of performance during the baseline, optimization, and demonstration periods, a reasonable certainty of compliance, and any other available pertinent information.

40. EPA will notify Conoco of its determination of SO_2 concentration limits for the units, and Conoco shall immediately comply if the EPA limit is equal to or less stringent than the limit proposed by Conoco. If the SO_2 limit established by EPA is more stringent than the limit proposed by Conoco, Conoco will comply with the EPA established emission limit within thirty (30) days.

D. Hydrotreater Outages

41. No later than one hundred-eighty (180) days from the Date of Lodging of the Consent Decree, Conoco shall submit to EPA for its approval a plan to minimize SO_2 emissions from its Billings, Denver, Lake Charles and Ponca City FCCUs (including associated air pollution control equipment) during hydrotreater outages. This plan will address how to calculate the impact of the period(s) of the

hydrotreater outages on the annual average emission limits for the FCCUs and may allow for exclusion from the 365-day average those daily average concentrations during periods of hydrotreater outages. Conoco shall comply with the plan at all times including periods of startup, shutdown, and malfunction of the hydrotreater. The seven (7) day SO_2 emission limits established for the FCCUs as provided in this Order shall not apply during periods of hydrotreater outages at the Billings, Denver, Lake Charles, Ponca City No. 4 (if a gas oil hydrotreater is installed) and Ponca City No. 5 FCCU's, provided that Conoco is maintaining and operating its FCCU's (including associated air pollution control equipment) in a manner consistent with good air pollution control practices for minimizing emissions in accordance with the EPA-approved good air pollution control practices plan. Following the installation of a wet gas scrubber at an FCCU, this Paragraph shall no longer apply to that FCCU.

E. Final FCCU SO_2 Emission Limits for the Billings, Ponca City No. 4 and Ponca City No. 5 FCCUs

42. If the 365-day rolling average limit or the 7-day rolling average limit established pursuant to Paragraph 38 is greater than 25 ppmvd at 0% O_2 or 50 ppmvd at 0% O_2, respectively, for the Billings, Ponca City No. 4, or Ponca City No. 5 FCCU, Conoco shall, by the dates specified below, install additional SO_2 control technology and meet SO_2 emission limits of 25 ppmvd at 0% O_2 on a 365-day rolling average limit and 50 ppmvd at 0% O_2 on a 7-day rolling average:

(1) Billings FCCU June 30, 2007;

(2) Ponca City No. 4 December 31, 2008; and

(3) Ponca City No. 5 December 31, 2006.

F. Demonstrating Compliance with FCCU SO_2 Emission Limits

43. Beginning no later than twelve (12) months from the Date of Lodging Conoco shall use a SO_2 and O_2 CEMS to monitor performance of each FCCU during the baseline, optimization, and demonstration periods, and to report compliance with the terms and conditions of this Consent Decree.

44. Conoco shall make CEMS and process data available to EPA upon demand as soon as practicable.

45. Conoco shall install, certify, calibrate, maintain, and operate all CEMS required by this Part in accordance with the requirements of Paragraph 202 and 203.

PART VI.

REDUCTIONS OF OTHER EMISSIONS FROM FCCUs

A. REDUCTIONS OF PM EMISSIONS FROM FCCUs

Program Summary: Conoco shall implement a program to reduce PM emissions from refinery FCCUs by the use of either third stage separators (TSS), electrostatic precipitators (ESP), or wet gas scrubbers (WGS) at each of its 5 FCCUs as follows:

46. Conoco shall install and operate PM controls as follows:

Lake Charles: On the Date of Lodging of the Consent Decree, Conoco shall continue to comply with a PM emissions limit of 1 pound per 1000 pounds of coke burned as demonstrated by a stack test as described in Paragraph 47.

Denver: By no later than June 30, 2006, Conoco shall comply with a PM emissions limit of 1 pound per 1000 pounds of coke burned as demonstrated by a stack test as described in Paragraph 47.

Billings : By no later than June 30, 2007, Conoco shall comply with a PM emissions limit of 1 pound per 1000 pounds of coke burned as demonstrated by a stack test as described in Paragraph 47.

Ponca City No. 4 : By no later than December 31, 2008, Conoco shall comply with a PM emissions limit of 1 pound per 1000 pounds of coke burned as demonstrated by a stack test as described in Paragraph 47.

Ponca City No. 5: By no later than December 31, 2006, Conoco shall comply with a PM emissions limit of 1 pound per 1000 pounds of coke burned as demonstrated by a stack test as described in Paragraph 47.

47. (a) **PM Monitoring – FCCU**. Conoco shall follow an EPA-approved stack test protocol to

monitor PM emissions on each FCCU at each refinery. Conoco shall propose and submit the stack test protocol for approval to EPA and the Plaintiff-Interveners no later than two hundred forty (240) days following Date of Lodging of this Consent Decree. During the first two (2) years of operations following installation of the control device selected for that particular facility, the facilities shall conduct annual stack tests at each FCCU. Tests may be conducted less frequently than annually upon a showing of at least three (3) annual tests that limits are not being exceeded**.**

47. (b) **Opacity Monitoring – FCCU**. Conoco shall install Continuous Opacity Monitoring System (COMS) on each FCCU at each refinery by no later than twelve (12) months after the Date of Lodging. Conoco shall install, certify, calibrate, maintain, and operate all COMS required by this Part in accordance with the requirements of Paragraph 202 and 203.

PM Controls Associated with the Adoption of a Plantwide Applicability Limit (PAL)

48. For each refinery which implements a PAL for PM pursuant to Part XV, Conoco agrees to limit PM emissions from that refinery's FCCU(s) to 0.5 pounds per 1000 pound of coke burned on a 365-day rolling average basis and 1 pound per 1000 pounds of coke burned on a 3-hour rolling average. Conoco shall comply with this limit beginning upon the date on which it applies for the PAL.

B. REDUCTIONS OF CO EMISSIONS FROM FCCUs

Program Summary: Conoco shall implement a program to reduce CO emissions from refinery FCCUs by the use of either full combustion or a CO boiler.

49. By no later than the Date of Lodging, Conoco shall meet an emission limit of 500 ppmvd CO at 0% O_2 on a 1-hour average basis. Compliance will not have to be demonstrated until certification of CO CEMS, and future compliance will be demonstrated with the CEM..

50. By no later than June 30, 2003, Conoco shall meet an emission limit of 150 ppmvd CO at 0% O_2 on a 365-day rolling average basis.

51. Beginning no later than twelve (12) months from the Date of Lodging, Conoco shall use a CO CEMS to monitor performance of each FCCU and to report compliance with the terms and conditions of this Consent Decree.

52. Conoco shall make CEMS and process data available to EPA upon demand as soon as practicable.

53. Conoco shall install, certify, calibrate, maintain, and operate all CEMS required by this Part in

accordance with the requirements of Paragraph 202 and 203.

C. FCCU REGENERATOR NSPS SUBPARTS A and J APPLICABILITY

54. Conoco's FCCU Regenerators shall be affected facilities subject to the requirements of NSPS Subpart A and J for each relevant pollutant by the dates specified below:

Denver:

SO2	- 24 months from the Date of Lodging
PM	- June 30, 2006
CO	- June 30, 2003
Opacity	- June 30, 2006

Lake Charles:

SO2	- Date of Lodging
PM	- Date of Lodging
CO	- Date of Lodging
Opacity	- Date of Lodging

Billings:

SO2	- 24 months from the Date of Lodging
PM	- June 30, 2007
CO	- June 30, 2003
Opacity	- June 30, 2007

Ponca City No. 4:

SO2	- 24 months from the Date of Lodging
PM	- December 31, 2008
CO	- June 30, 2003
Opacity	- December 31, 2008

Ponca City No. 5:

SO2	- 24 months from the Date of Lodging
PM	- December 31, 2006
CO	- June 30, 2003
Opacity	- December 31, 2006

PART VII.

EMISSION REDUCTIONS FROM HEATERS AND BOILERS

A. NOx Reductions

55. (a) On or before July 31, 2009, Conoco shall complete a program to reduce the overall NOx emissions from the Controlled Heaters and Boilers at their refineries in an amount greater than or equal to 1,526 tons per year as demonstrated by the inequality in Paragraph 56. For purposes of this Part, Controlled Heaters and Boilers shall mean heaters and boilers which have been either shut down, or for which the refinery has installed one of the following NOx control technologies: SCR, SNCR, current or next generation ultra-low NOx burners, or technologies that Conoco demonstrates to EPA's satisfaction will reduce NOx emissions to 0.040 lbs per mmBTU or lower.

55. (b) A "Current Generation Ultra Low-NOx Burner" is one that is defined as a burner currently

on the market that is designed to achieve a NOx emission rate of 0.03 to 0.04 lb/mmBTU with consideration given for variations in specific heater operating conditions such as air preheat, fuel composition and bridgewall temperature. A "Next Generation Ultra-Low NOx Burner" is defined as a burner new to the market that is designed to an emission rate of 0.012 to 0.015 lb/mmBTU (HHV), when firing natural gas at typical industry firing conditions at full design load. Upon EPA approval, Conoco may also include technology designed and installed to meet less than 0.040 lbs per mmBTU.

56. Conoco's selection of control technology must at a minimum reduce overall NOx emissions from the Controlled Heaters and Boilers by at least 1,526 tons per year from a prior actual to future allowable basis (equivalent to at least a 50% reduction) so as to satisfy the following inequality:

$$\sum_{i=1}^{n} [(E_{Actual})_i - (E_{Allowable})_i] \geq 1526 \text{ tons of NOx per year}$$

Where:

$(E_{Allowable})_i$ = The requested portion of the permitted allowable pounds of NOx per million BTU for heater or boiler i)/(2000 pounds per ton)] x [(the lower of permitted or maximum heat input rate capacity in million BTU per hour for heater or boiler i) x (the lower of 8760 or permitted hours per year)] ;

$(E_{Actual})_i$ = The tons of NOx per year prior actual emissions (unless prior actuals exceed allowable emissions, then use allowable) as shown in Attachment 1 for controlled heater or boiler i; and

n = The number of heaters and boilers at all refineries that are controlled.

57. Attachment 1 to this Consent Decree provides the following information for each of the heaters and boilers greater than 40 mmBTU per hour at each refinery identified in Paragraph 5:

(1) the maximum heat input capacities in mmBTU/hr;

(2) the baseline emission rate for both calendar years 1999 and 2000 in lbs/mmBTU and tons per year; and

(3) the type of data used to derive the emission estimate (i.e. emission factor, stack test, or CEMS data) and the averaging period for the emissions data**.**

58. Conoco shall achieve two-thirds of the combined NOx emissions reductions from the Controlled Heaters and Boilers as set forth in Paragraph 56, by December 31, 2005. Conoco shall demonstrate compliance with this requirement by demonstrating in their March 31, 2006, annual report that they have installed NOx controls and applied for enforceable limits that will achieve the required reductions, pursuant to Part XIII (Permitting). For purposes of this Consent Decree, "applied for" shall mean that Conoco have submitted a complete and timely application for the appropriate permit, permit modification, and/or permit waiver. For purposes of this Paragraph only, Controlled Heaters and Boilers may include the following units that accept the annual average heat input rate (mmBTU/hr) as listed below:

	mmBTU/hr
Billings: B-1 & B-2:	5.5 & 5.5
Denver: B-4 & B-6:	9.3 & 10.0
Lake Charles: B-3 & B-4:	8.0 & 9.0
Ponca City: B-6 & B-7:	26.1 & 31.5

59. On or before July 31, 2009, Conoco shall have installed NOx controls on at least 30% of the heater and boiler capacity greater than 40 mmBTU per hour located at each refinery. The heater and boiler capacity at each refinery shall be based on the maximum Heat Input Capacity during the 1999/2000 baseline period.

60. Conoco may include in the 30% capacity demonstration those heaters and boilers which have been either shut down, or for which the refinery has installed one of the following NOx control

technologies: SCR, SNCR, current or next generation ultra-low NOx burners, or technologies that Conoco demonstrates to EPA's satisfaction will reduce NOx emissions to 0.040 lbs per mmBTU or lower.

61. Conoco shall submit a detailed NOx Control Plan ("Control Plan") to EPA for approval by no later than four (4) months after the Date of Lodging of the Consent Decree, with annual updates ("Updates") no later than March 31 of each year for the life of the Consent Decree. EPA shall approve the Control Plan provided that it meets the requirements of the Consent Decree. Upon receipt of EPA's approval of the initial Control Plan, Conoco shall implement the Control Plan. The Control Plan and its updates shall describe the progress of the NOx emissions reductions program for heaters and boilers greater than or equal to 40 mmBTU per hour towards meeting the requirements of Paragraph 56 and shall contain the following for each such heater and boiler at each refinery:

(a) All of the information required as identified in Attachment 1;

(b) The baseline utilization rate in average mmBTU/hr for calendar years 1999 and 2000;

(c) Reserved.

(d) Identification of all heaters and boilers that Conoco has controlled to reduce NOx emissions and plans to control in accordance with Paragraph 56;

(e) Identification of the type of controls installed or planned with date installed or planned;

(f) The allowable NOx emissions (in lbs/mmBTU) and allowable heat input rate (in mmBTU/hr) obtained or planned, dates obtained or planned, and identification of the permits in which the limits were obtained;

(g) The results of emissions tests and annual average CEMS data (in ppmvd at 3% O_2, lb/mmBTU, and tons per year) conducted pursuant to Paragraph 56;

(h) The amount in tons per year applied or to be applied toward satisfying Paragraph 56; and

(i) A description of the achieved and anticipated annual progress toward satisfying Paragraph 56 described on a refinery-by-refinery basis.

62. The Control Plan and Updates required under Paragraph 61 shall be certified as provided in Paragraph 212.

63. For heaters and boilers with a capacity of less than 100 mmBTU/hr Higher Heating Value (HHV), but greater than or equal to 40 mmBTU/hr (HHV) for which NOx Controls are installed pursuant to Paragraph 56 of this Consent Decree, Conoco shall conduct an initial performance test for NOx and CO within one hundred eighty (180) days of each heater and boiler start-up following installation of NOx Controls.

64. For heaters and boilers with a capacity of less than 150 mmBTU/hr (HHV), but greater than or equal to 100 mmBTU/hr (HHV) for which NOx Controls are installed pursuant to Paragraph 56 of this Consent Decree, Conoco shall conduct an initial performance test or CEMS certification for NOx and CO within one hundred eighty (180) days of each heater and boiler start-up following installation of NOx Controls, and either:

(a) Install, or continue to operate, a NOx and CO CEMS at the time of the installation of the NOx Control. Conoco shall install, calibrate, maintain and operate the CEMS pursuant to Paragraph 202 and 203. These CEMS will be used to demonstrate compliance with emission limits established under this Part; or

(b) Use or develop an approved Parametric Emissions Monitoring System (PEMS) for NOx and CO within one hundred eighty (180) days of each unit's start-up following installation of NOx Control, considering the full range of operating conditions.

65. For heaters and boilers with a capacity of 150 mmBTU/hr (HHV) or greater, for which NOx Controls are installed pursuant to Paragraph 56 of this Consent Decree, Conoco shall install, or continue to operate, a NOx and CO CEMS at the time the NOx Control(s) is (are) installed under this Consent Decree. In the event two (2) or more heaters or boilers vent to a common stack, and one (1) heater or boiler has not had NOx Controls installed, the CEMS sampling point must be set such that the unit(s) with the installed NOx Control is monitored directly.

66. For heaters and boilers which require CEMS, by no later than one hundred eighty (180) days after commencement of operation of the NOx controls, Conoco shall install, certify, calibrate, maintain and operate CEMS pursuant to Paragraph 202 and 203.

67. The requirements of this Part do not exempt Conoco from complying with any and all Federal, state or local requirements that may require technology upgrades based on actions or activities

occurring after the Date of Entry of this Consent Decree.

68. Conoco shall retain all records required to support their reporting requirements under this Part, for the life of this Consent Decree, unless other regulations require the records to be maintained longer.

B. SO_2, CO, PM and NSPS REQUIREMENTS FOR HEATERS AND BOILERS

69. By no later than the Date of Lodging, all heaters and boilers at each of Conoco's refineries shall be affected facilities subject to the requirements of NSPS Subpart J for fuel gas combustion devices, except where an alternate schedule for NSPS Subpart J compliance is set forth in Attachment 3.

70. Conoco does not currently burn any liquid fuel in its heaters and boilers at the Denver, Lake Charles, and Ponca City refineries. For the life of this Consent Decree, Conoco shall not commence burning of any liquid fuel in its heaters and boilers.

71. No later than the Date of Lodging, except in instances of natural gas curtailment where Conoco can demonstrate that fuel oil is required, Conoco agrees to limit SO_2 emissions from fuel oil burning in all heaters and boilers at the Billings refinery to 300 tons per year of SO_2 on a 365-day rolling average as determined by SO_2 CEMS. During documented periods of natural gas curtailment, SO_2 emissions from the burning of any liquid fuel in heaters and boiler at the Billings refinery shall not be included in the 365-day average. Conoco shall install an SO_2 CEMS on each heater and boiler that burns fuel oil during periods other than natural gas curtailment.

72. PM Controls Associated with the Adoption of a Plantwide Applicability Limit

For each refinery which implements a PAL for PM pursuant to Part XV, Conoco agrees to limit PM emissions from each heater or boiler included in the PAL to 0.005 lb/mmBTU (HHV) on a 365-day rolling average and 0.010 lb/mmBTU (HHV) on a 24-hour rolling average. Conoco shall comply with this limit upon the date of its application for such PAL.

73. (a) CO Controls for Heaters and Boilers

Upon installation of NOx controls at a specific heater or boiler, Conoco shall limit the CO emissions from that Controlled Heater and Boiler to 0.060 lb/mmBTU on a 24-hour rolling average basis and 0.040 lb/mmBTU on a 365-day rolling average basis.

73. (b) CO Controls Associated with the Adoption of a Plantwide Applicability Limit

For each refinery which implements a PAL for CO pursuant to Part XV, Conoco agrees to limit CO emissions from each heater or boiler to 0.060 lb/mmBTU on a 24-hour rolling average basis and 0.040 lb/mmBTU on a 365-day rolling average basis. For each refinery that implements a PAL for CO pursuant to Part XV of this Consent Decree, Conoco shall monitor CO emissions to demonstrate compliance with this requirement as follows:

(a) For heaters and boilers with a capacity greater than 150 mmBTU/hr (HHV), install or continue to operate CO CEMS;

(b) For heaters and boilers with a capacity of less than or equal to 150 mmBTU/hr (HHV) but greater than 100 mmBTU/hr (HHV), install or continue to operate a CO CEMS, or install a parametric emission monitoring system ("PEMS"); and

(c) For heaters and boilers with a capacity of less than or equal to 100 mmBTU/hr (HHV) conduct an initial performance test and/or utilize a portable continuous analyzer. The results of this testing shall be reported based upon the average of three (3) one hour testing periods.

74. SO_2 Controls Associated with the Adoption of a Plantwide Applicability Limit: For each refinery which implements a PAL for SO_2 pursuant to Part XV, Conoco agrees to limit SO_2 emissions from all heaters and boilers that burn fuel gas included in the PAL to 0.040 lb SO_2/mmBTU (HHV) or 125 ppmvd H_2S in fuel gas each on a 365-day rolling average basis. For purposes of determining an equivalent lbSO_2/mmBTU if the125 ppmvd H_2S option is selected for a heater or boiler, for use as the permitted concentration in Section II.B. and daily concentration in Section III.A.3. of Attachment 7, the following equation shall be used:

SO_2 emission rate in lb/mmBTU = [H_2S concentration ppmvd/1,000,000] x [1/(379 dscf/lb-mole)] x 34 lb/lb-mole x (64 lb/lb-mole/34 lb/lb-mole) / [fuel gas higher heating value (mmBTU/dscf)]

75. For each refinery that implements a PAL for SO_2 pursuant to Part XV of this Consent Decree, Conoco shall monitor SO_2 emissions and calculate a daily SO_2 emission rate by measuring the H_2S

content of the fuel gas to demonstrate compliance with the 0.040 lb SO_2/mmBTU requirement as follows:

(a) Calendar daily average SO_2 emission rate in lb/mmBTU = [calendar daily average H2S concentration ppmvd/1,000,000] x [1/(379 dscf/lb-mole)] x 34 lb/lb-mole x (64 lb/lb-mole/34 lb/lb-mole) / [calendar daily average fuel gas higher heating value (mmBTU/dscf)]

(b) The 365-day rolling average shall be calculated on a daily basis for each heater and boiler by summing the calendar daily average SO_2 emission rate in pounds per mmBTU for the prior 365 days and then dividing by 365.

Standard conditions: 60 deg. F., 14.7 lb. force/sq. in. absolute

PART VIII.
PROGRAM ENHANCEMENTS RE: BENZENE WASTE OPERATIONS NESHAP (BWON)

Program Summary: Conoco shall undertake the following enhancement to its existing programs to minimize or eliminate fugitive benzene waste emissions at each of the refineries listed in Paragraph 5.

A. Current Compliance Status

76. Conoco shall comply with the compliance options specified below:

(a) On the Date of Entry of the Consent Decree, Conoco's Ponca City and Lake Charles Refineries shall comply with the compliance option set forth at 40 CFR § 61.342(c), utilizing the exemptions set forth in 40 CFR § 61.342(c)(2) and (c)(3)(ii) (hereinafter referred to as the "2 Mg compliance option");

(b) On the Date of Entry of the Consent Decree, Conoco's Billings Refinery shall comply with the compliance option set forth at 40 CFR § 61.342(e) (herein referred to as the "6 BQ compliance option");

(c) On or before April 5, 2001, Conoco reported that it had a Total Annual Benzene (TAB) of less than 10 Mg/yr at its Denver Refinery, in accordance with Subpart FF.

B. Refinery Compliance Option Changes

77. Commencing on the Date of Entry of the Consent Decree and continuing through termination, Conoco shall not change the compliance option of any Refinery from the 6 BQ compliance option to the 2 Mg compliance option. If at any time from the Date of Entry of the Consent Decree through its termination, the Denver Refinery is determined to have a TAB equal to or greater than 10 Mg/yr, Conoco shall not utilize the 2 Mg compliance option. Conoco shall consult with EPA and the appropriate state agency before making any change in compliance strategy not expressly prohibited by this Paragraph. All changes must be undertaken in accordance with the regulatory provisions of the Benzene Waste Operations NESHAP.

C. Review and Verification of Each Refinery's TAB and, as applicable, Each Refinery's Compliance with the 2 Mg or 6 BQ Compliance Options

78. All Refineries: Phase One of the Review and Verification Process. Conoco shall complete a review and verification of each Refinery's TAB, and each Refinery's compliance with the <10 Mg, 2 Mg or 6 BQ compliance option, as applicable. For each Refinery, Conoco's Phase One review and verification process shall include, but not be limited to:

(a) an identification of each waste stream that is required to be included in the Refinery's TAB (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, if these streams meet the definition of a waste under Subpart FF);

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

(c) an identification of the benzene concentration in each waste stream, provided, however, that previous analytical data or documented knowledge of waste streams may be used, 40 CFR § 61.355(c)(2), for streams not sampled; and

(d) an identification of whether or not the stream is controlled consistent with the requirements of Subpart FF.

79. By no later than September 30, 2002, following the completion of Phase One of the review and verification process, Conoco shall submit a Benzene Waste Operations NESHAP Compliance Review and Verification report ("BWON Compliance Review and Verification Report") that sets forth the results of Phase One, including but not limited to the items identified in (a) through (d) of Paragraph 78. At its option, Conoco may submit one BWON Compliance Review and Verification Report that includes the results of all Refineries or may submit four separate BWON Compliance Review and Verification Reports.

80. All Refineries: Phase Two of the Review and Verification Process. Based on EPA's review of the Phase One BWON Compliance Review and Verification Report(s), no later than thirty (30) days from Conoco's submittal of the BWON Compliance Review and Verification Report, EPA may select up to twenty (20) additional waste streams at each Refinery for sampling for benzene concentration. Conoco will conduct the required sampling and submit the results to EPA within sixty (60) days of receipt of EPA's request. To the extent that EPA requires Conoco to sample a waste stream as part of the Phase Two review that Conoco chose to sample as part of the Phase One review, Conoco may average the results of the two sampling events. Conoco will use the results of this additional sampling to recalculate the TAB and the uncontrolled benzene quantity. If Phase Two sampling is required by EPA, Conoco shall submit an amended BWON Compliance Review and Verification Report no later than one hundred-fifty (150) days after receipt of EPA's request for sampling.

D. Waste/Slop Oil Management

81. No later than March 31, 2002, Conoco, in consultation with EPA and the appropriate state personnel, will conduct a review of its waste/slop oil management activities at its Denver Refinery. This review is to identify potential sample locations, determine "end of line" benzene sample locations and review available oil movement transfer documentation to assist Conoco with preparation for their sampling as required under Paragraphs 106 – 114. No later than August 31, 2002, Conoco will conduct similar reviews at the remaining three (3) refineries subject to this Decree.

E. Implementation of Actions to Correct Non-Compliance

82. Amended TAB Reports. If the results of the BWON Compliance Review and Verification Report(s) indicate(s) that a Refinery's most recently-filed TAB report does not satisfy the requirements of Subpart FF, Conoco shall submit, by no later than sixty (60) days after completion of the BWON Compliance Review and Verification Report(s), an amended TAB report to the appropriate state agency. Conoco's BWON Compliance Review and Verification Report(s) shall be deemed an amended TAB report for purposes of Subpart FF reporting to EPA.

83. Denver Refinery. If the results of the BWON Compliance Review and Verification Report(s) indicate that the Denver Refinery has a TAB of over 10 Mg/yr, Conoco shall submit to EPA, to Region 8 of EPA, and to the Colorado DPHE, by no later than one hundred eighty (180) days after completion of the BWON Compliance Review and Verification Report(s), a plan that identifies with specificity the compliance strategy and schedule that Conoco will implement to ensure that the Denver Refinery complies with the 6 BQ compliance option as soon as practicable.

84. Billings, Ponca City and Lake Charles Refineries. If the results of the BWON Compliance

Review and Verification Report(s) indicate that Conoco is not in compliance with the 6 BQ compliance option at the Billings Refinery, or the 2 Mg compliance option at the Ponca City and Lake Charles Refineries, then, for each such Refinery not in compliance, Conoco shall submit to EPA, to the appropriate EPA Region, and to the appropriate state agency, by no later than one hundred twenty (120) days after completion of the BWON Compliance Review and Verification Report(s), a plan that identifies with specificity the compliance strategy and schedule that Conoco will implement to ensure that the subject Refinery complies with its applicable compliance option as soon as practicable.

85. Review and Approval of Plans Submitted Pursuant to Paragraphs 83 and 84. Any plans submitted pursuant to Paragraphs 83 and 84 shall be subject to the approval of, disapproval of, or modification by EPA, which shall act in consultation with the appropriate state agency. Within sixty (60) days after receiving any notification of disapproval or request for modification from EPA, Conoco shall submit to EPA and the appropriate state agency a revised plan that responds to all identified deficiencies. Upon receipt of approval or approval with conditions, Conoco shall implement the plan.

86. Certification of Compliance with the 2 Mg or 6 BQ Compliance Option, as Applicable. By no later than thirty (30) days after completion of the implementation of all actions, if any, required pursuant to Paragraphs 83 and 84 to come into compliance with the applicable compliance option, Conoco shall submit a report to EPA that, as to each Refinery, the Refinery complies with the Benzene Waste Operations NESHAP.

F. Carbon Canisters

87. Except as noted for Conoco's Lake Charles Refinery, Conoco's Refineries requiring control devices shall comply with the requirements of Paragraphs 88 - 96 (either primary and secondary canisters in series or single carbon canisters) at all locations at Conoco's Refineries where a carbon canister(s) is utilized as a control device under the Benzene Waste Operations NESHAP. Lake Charles Refinery may continue to use its primary control system (flare) as the primary control system with single carbon canister system as backup. Lake Charles may change to dual canisters in series if needed.

88. Primary and Secondary Carbon Canisters. By no later than two hundred seventy (270) days after the Date of Entry of the Consent Decree, Conoco shall replace all dual canister systems in parallel with primary and secondary carbon canisters and operate them in series.

89. By no later than thirty (30) days following completion of the installation of the dual canisters in series as provided in Paragraph 88, Conoco shall submit a report certifying the completion of the installation. The report shall include a list of all locations within each Refinery where secondary carbon canisters were installed and the date that each secondary canister was put into operation.

90. For dual carbon canister systems in series, "breakthrough" between the primary and secondary canister is defined as any reading equal to or greater than 50 ppm volatile organic compounds ("VOC"). At any time during the life of this Consent Decree, Conoco may propose to EPA to conduct a study of the effectiveness of the benzene and VOC limits proposed under this paragraph for dual carbon canisters. The study shall be designed to determine the concentration of VOCs or benzene that may be emitted from the primary (lead) carbon canister in a dual series before VOCs above background or benzene above 1 ppm is emitted from the secondary (tail) carbon canister. If Conoco elects to conduct the study, it must submit written notice to EPA and submit a proposed statement of work and schedule for the study for EPA-approval.

91. By no later than seven (7) days after start of operation of each secondary carbon canister, Conoco shall start to 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 CFR § 61.354(d).

92. Conoco shall replace the original primary carbon canisters with either a fresh carbon canister or the secondary canister immediately when breakthrough is detected. If the original secondary carbon canister is used as the new primary carbon canister, a fresh carbon canister will become the secondary canister. For this Paragraph, "immediately" shall mean within twenty-four (24) hours.

93. Utilizing single carbon canisters. Conoco shall continue to operate its existing single canisters for short-term operations such as with temporary storage tanks. For all canisters operated as part of a single canister system, "breakthrough" is defined for the purposes of this Decree as any reading of VOC above background. Beginning no later than the Date of Entry of this Consent Decree, Conoco 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 CFR § 61.354(d).

94. 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. Single carbon canisters can be replaced with a dual system (in series) at any time, provided that Conoco provides notice to EPA and single canister monitoring is continued until the second canister is installed.

95. Conoco shall maintain a supply of fresh carbon canisters used as single canisters at each Refinery at all times. Conoco shall either maintain the supply or assure a replacement is available within the replacement interval for all canisters used in dual systems.

96. Records for the requirements of Paragraphs 88 - 95 shall be maintained in accordance with 40 CFR § 61.356(j)(10).

G. Annual Review

97. Conoco shall establish a process to annually review process and project information for each Refinery, including but not limited to construction projects, to ensure that all new benzene waste streams are included in each Refinery's waste stream inventory during the life of the Consent Decree. Conoco shall have one hundred eighty (180) days from Date of Entry of the Consent Decree to modify existing management of change procedures for this annual review or to develop a new program.

H. Laboratory Audits

98. Conoco shall conduct audits of all laboratories that perform analyses of Conoco's benzene waste operations NESHAP samples to ensure that proper analytical and quality assurance/quality control procedures are followed. These audits may be conducted either by Conoco personnel or third parties.

99. Beginning within six (6) months after the Date of Entry of the Consent Decree, Conoco shall conduct initial audits of the laboratories used by two (2) of its Refineries. Conoco shall complete initial audits of the laboratories used by the remaining Conoco Refineries within twelve (12) months of the Date of Entry of the Consent Decree. In addition, Conoco shall audit any new laboratory used for analyses of benzene samples prior to use of the new laboratory.

100. During the life of this Consent Decree, Conoco shall conduct subsequent laboratory audits, such that each laboratory is audited every two (2) years.

I. Spills

101. Upon entry of the Consent Decree, Conoco shall review reportable spills within the Refineries identified in Paragraph 5 to determine if benzene waste, as defined under Subpart FF, was generated. For the purposes of this review, 'reportable' will be the smaller of the benzene quantity defined as reportable by either CERCLA or the State in which the particular refinery operates. Conoco shall account for such benzene waste in the respective TABs as required by 40 CFR § 61.342. For the Refineries with a TAB greater than or equal to 10 Mg/year, Conoco will account for such benzene wastes in accordance with the applicable compliance option calculations, as appropriate under Subpart FF, unless the benzene waste is promptly managed in controlled waste management units.

J. Training

102. By no later than one hundred twenty (120) days from the Date of Entry of the Consent Decree, Conoco shall develop and begin implementation of annual (i.e., once each calendar year) training for all employees asked to draw benzene waste samples.

103. Billings, Lake Charles and Ponca City Refineries: For the Billings, Lake Charles and Ponca City Refineries, by no later than one hundred eighty (180) days from the Date of Entry of the Consent Decree, Conoco shall complete the development of standard operating procedures for all control equipment used to comply with the Benzene Waste Operations NESHAP. By no later than two hundred seventy (270) days thereafter, Conoco shall complete an initial training program regarding these procedures for all operators assigned to this equipment. Comparable training shall also be provided to any persons who subsequently become operators, prior to their assumption of this duty. Until termination of this Decree, "refresher" training in these procedures shall be performed at a minimum on a three (3) year cycle.

104. The Denver Refinery shall comply with the procedure and training provisions of Paragraph 103 if and when that Refinery's TAB exceeds 10 Mg/yr. Conoco shall propose the schedule for these procedures and training at the same time that Conoco proposes a plan, pursuant to Paragraph 83 that identifies the compliance strategy and schedule that Conoco will implement to come into compliance with the 6 BQ compliance option.

105. If personnel are employees of contractors, the contractor will provide their employees' training information to Conoco.

K. Sampling Plans

106. Conoco shall submit a sampling plan for each Refinery to EPA for approval. The plan will include the information required by Sections L, M and N of this Part. If no Phase Two samples are requested by EPA, the plans shall be submitted no later than December 31, 2002. If EPA requests Phase Two samples, the plan shall be submitted no later than two hundred ten (210) days after EPA's request. The sampling plan shall be implemented during the first full calendar quarter after Conoco receives written approval from EPA of the sampling plans required by this Paragraph. After two (2) years, Conoco may request an alternative sampling plan for any of its Refineries, including sampling frequency, and EPA should not unreasonably withhold its consent.

L. Sampling (Less than 10 Mg/yr)

107. For the Denver Refinery, which has a TAB of less than 10 Mg/yr, Conoco shall submit a sampling plan pursuant to Paragraph 106 to EPA which will:

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

(b) Identify sampling to conduct quarterly "end of the line" benzene determination. This will include proposed sampling locations and methods for flow calculations to be used in the quarterly benzene determination.

M. End of Line Sampling (6 BQ Compliance Option)

108. Conoco shall submit a sampling plan pursuant to Paragraph 106 to EPA to conduct quarterly "end of the line" benzene determination for the Billings Refinery which is complying with the 6 Mg/yr compliance option (40 CFR § 61.342(e)).

109. Conoco's plan for the Billings Refinery will contain proposed sampling locations and methods for flow calculations to be used in the quarterly benzene determination.

110. Conoco's plan for the Billings Refinery shall also provide for quarterly sampling of all uncontrolled waste streams that count toward the 6 Mg/yr calculation and contain greater than 0.05 Mg/yr of benzene.

N. End of Line Sampling (2 Mg Compliance Option)

111. Conoco shall submit sampling plans pursuant to Paragraph 106 to EPA to conduct quarterly "end of the line" benzene determinations for the Lake Charles and Ponca City Refineries which are complying with the 2 Mg/yr compliance option (40 CFR 61.342(c)).

112. Conoco's plans for the Lake Charles and Ponca City Refineries will contain proposed sampling locations and methods for flow calculations to be used in the quarterly benzene determination.

113. Conoco's plans for the Lake Charles and Ponca City Refineries shall also provide for quarterly sampling of all uncontrolled waste streams that count toward the 2 Mg/yr calculation and contain greater than 0.05 Mg/yr of benzene.

114. Conoco's plans for the Lake Charles and Ponca City Refineries shall also provide for quarterly sampling of all uncontrolled waste streams that qualify for the ten (10) ppmw exemption (see 40 CFR 61.342(c)(2)) and contain greater than 0.1 Mg/yr of benzene.

O. Quarterly Estimation of Annual TAB

115. Conoco shall use all sampling results and approved flow calculation methods under the approved sampling plans (Paragraph 106) to calculate a quarterly and estimate a calendar year value for each refinery. If the quarterly calculation for a refinery made pursuant to this Paragraph exceeds: a) 2.5 Mg for the refinery with TAB historically less than 10 Mg/yr, b) 0.5 Mg for refineries complying with the 2 Mg compliance option, or c) 1.5 Mg for refineries complying with the 6 BQ compliance option, then Conoco shall prepare for that refinery a written summary and schedule of the activities planned to minimize benzene wastes at such facility for the rest of the calendar year to ensure that the calendar year calculation complies with the 10 Mg TAB calculation, or the 2 Mg or 6 BQ compliance options. The summary and schedule are due no later than sixty (60) days after the close of the quarter in which the quarterly calculation exceeded the applicable quantity.

116. If any estimated calendar year calculation for any facility made pursuant to the preceding Paragraph exceeds: (a) 10 Mg for refineries with TABs historically less than 10 Mg/yr, (b) 2 Mg for refineries complying with the 2 Mg compliance option, or (c) 6 Mg for refineries complying with the 6 BQ compliance option, then Conoco shall prepare for each such refinery a written summary and schedule of the activities planned to minimize benzene wastes at such facility to ensure that the calendar year calculation complies with the Benzene Waste Operations NESHAP compliance option. (The projected annual estimates themselves are not the basis for penalties and are not deemed to be instances of non-compliance for purpose of this Consent Decree.) The summary and schedule are due no later than sixty (60) days after the close of the quarter in which the estimated annual amount exceeded the applicable quantity.

P. Miscellaneous Measures

117. The provisions of this Paragraph shall apply to: (a) the Billings, Ponca City and Lake Charles Refineries from the Date of Entry of the Consent Decree through termination of the Consent Decree and (b) to the Denver Refinery, if its TAB exceeds 10 Mg/yr, from such time as a compliance strategy is completed, through termination of the Consent Decree. Conoco shall:

(a) Conduct monthly visual inspections of all water traps used for BWON control within the Refineries' individual drain systems;

(b) By no later than June 30, 2002, identify and mark all area drains that are segregated stormwater drains;

(c) Where installed, visually inspect all conservation vents or indicators on process sewers for detectable leaks on a weekly basis; reset any vents where leaks are detected; and record the results of the inspections. After two (2) years of weekly inspections, and based upon an evaluation of the recorded results, Conoco may submit a request to the appropriate EPA Region to modify the frequency of the inspections. Nothing in this Paragraph 117(c) shall require Conoco to monitor conservation vents on fixed roof tanks.

(d) On a quarterly basis, conduct monitoring of the controlled oil-water separators in benzene service in accordance with the "no detectable emissions" provision in 40 CFR § 61.347.

118. Conoco shall manage all groundwater remediation conveyance systems at its Billings, Lake Charles and Ponca City Refineries in accordance with the Benzene Waste Operations NESHAP.

119. The provisions of Paragraph 118 do not currently apply to Conoco's Denver Refinery. The groundwater treatment system at Conoco's Denver Refinery receives groundwater from both Conoco's Denver Refinery and another non-Conoco refinery, both of which are subject to groundwater remediation orders under RCRA. If the Denver Refinery TAB exceeds 10 Mg during the term of this Consent Decree and before the resolution of the three existing RCRA Orders and before the non-Conoco refinery has stopped its contaminated groundwater from migrating to Conoco's property, Conoco's Denver Refinery will be required to submit a plan to the EPA to address only the Conoco contribution to the benzene contamination in the groundwater system.

Q. Closed Loop Sampling

120. Within one (1) year after the Date of Entry of this Consent Decree, each refinery will review the closed purge sampling devices on sampling points on waste and process streams consistent with safety, feasibility, and cost, and with the requirements of 40 CFR, Part 63, Subpart CC and report such findings to the EPA. Conoco believes that a project or investigation involving these closed loop systems will have little effect on benzene emissions. The systems will be compared to the Refinery MACT standard. Any applicable regulatory deficiencies will be corrected within two (2) years of the Date of Entry of the Decree, unless a refinery process unit shutdown is required, in which case the deficiency shall be corrected during the next scheduled process unit shutdown.

R. Recordkeeping and Reporting Requirements for this Part

121. In addition to the reports required under 40 CFR § 61.357 and the Quarterly Progress Report Procedures of Part XIV (Recordkeeping and Reporting), at the times specified in the applicable provisions and Paragraphs of this Part VIII, Conoco shall make available, as and to the extent required, the following reports to EPA:

(a) BWON Compliance Review and Verification Report(s) (Paragraph 79), as amended, if necessary (Paragraph 80);

(b) Amended TAB Report(s), if necessary (Paragraph 82);

(c) Plan for Denver to come into compliance with the 6 BQ compliance option upon discovering that its TAB exceeds 10 Mg/yr through the BWON Compliance Review and Verification Report(s) (Paragraph 83);

(d) Plan for the Billings, Lake Charles and Ponca City Refineries to come into compliance with the applicable compliance option, if the BWON Compliance Review and Verification Report(s) indicate non-compliance (Paragraph 84);

(e) Compliance certification, if necessary (Paragraph 86);

(f) Report certifying the completion of the installation of dual carbon canisters in series (Paragraph 89);

(g) Sampling Plans (Paragraphs 106 – 114);

(h) Report on installation of closed purge sampling devices (Paragraph 120); and

(i) Written summary and schedule to ensure that uncontrolled benzene does not equal or exceed, as applicable, 2, 6, or 10 Mg/yr – or is minimized – based on quarterly or projected calendar year uncontrolled benzene quantities as determined through EOL sampling (Paragraphs 115 and 116).

122. Quarterly Reports: Conoco shall submit the following information quarterly as part of the information submitted in either the quarterly reports required pursuant to 40 CFR § 61.357(d)(6) and (7) ("Section 61.357 Reports"), (Billings, Lake Charles, and Ponca City) or in the quarterly reports due pursuant to Part XIV of this Decree (Denver and/or the other three (3) Refineries). This provision is applicable through the Life of the Consent Decree, unless the reporting for (a), (b) or (c) below is modified as provided in Paragraph 123:

(a) Sampling results and approved flow calculations generated pursuant to Sections L, M and N.

(b) Estimated quarterly and annual TABs calculated and reported pursuant to Section O.

(c) Initial and/or subsequent training conducted in accordance with Paragraphs 102-105 through the end of calendar quarter for which the quarterly report is due.

(d) Initial and subsequent laboratory audits conducted pursuant to Paragraphs 98-100 through the end of calendar quarter for which the quarterly report is due. Conoco shall include, at a minimum, the identification of each laboratory audited, a description of the methods used in the audit, and the results of the audit.

123. Any time after two (2) years of quarterly reporting pursuant to Paragraph 122(a), (b), or (c) of sampling results and estimated calendar calculations, Conoco may submit a request to EPA on any or all of these items to modify the frequency of reporting. This request would include the provision to report for the previous calendar year in the quarterly report due for the last calendar quarter of each year submitted pursuant to the provisions of Part XIV of the Consent Decree. This request for Paragraphs 122(a) and (b) would include a provision to recommence quarterly reporting for any calendar year in which the estimated calendar calculation for any facility indicates it may exceed the annual compliance option.

124. Reserved

125. Conoco shall submit all reports, plans and certifications required to be submitted under this Part to EPA Headquarters. Where indicated, Conoco also shall submit the information to the appropriate state agency. Conoco may submit the materials electronically. Certifications shall be made in accordance with the provisions in Part XIV.

PART IX.
PROGRAM ENHANCEMENTS RE:
LEAK DETECTION AND REPAIR

Program Summary: In order to minimize or eliminate fugitive emissions of volatile organic compounds (VOCs), volatile hazardous air pollutants (VHAPs), and organic hazardous air pollutants (HAPs) from equipment in light liquid and/or in gas/vapor service, Conoco shall undertake at each of its Refineries the enhancements at Paragraph 126 through Paragraph 153 to each Refinery's LDAR program as may be required under Title 40 of the Code of Federal Regulations, Part 60, Subparts GGG and VV; Part 61, Subparts J and V; Part 63, Subparts F, H, and CC; and applicable state LDAR requirements. The terms "equipment," "in light liquid service" and "in gas/vapor service" shall have the definitions set forth

in the applicable provisions of Title 40 of the Code of Federal Regulations, Part 60, Subparts GGG and VV; Part 61, Subparts J and V; Part 63, Subparts F, H and CC; and applicable state LDAR regulations.

A. Written Refinery-Wide LDAR Program

126. By no later than one hundred eighty (180) days after the Date of Entry of the Consent Decree, Conoco shall develop and maintain, for each of its Refineries, a written program for compliance with all applicable federal and state LDAR regulations. This written program may be specific to each Refinery and will include all process units subject to federal and/or state LDAR regulations ("Refinery-wide program"). Until termination of this Decree, Conoco shall implement this program on a Refinery-wide basis, and Conoco shall update each Refinery's program as necessary to ensure continuing compliance. Each Refinery-wide program shall include:

(a) An overall, Refinery-wide leak rate goal that will be a target for achievement on a process-unit-by-process-unit basis;

(b) An identification of all equipment in light liquid and/or in gas/vapor service that has the potential to leak VOCs, HAPs, and VHAPs, within process units that are owned and maintained by each Refinery;

(c) Procedures for identifying leaking equipment within process units that are owned and maintained by each Refinery;

(d) Procedures for repairing and keeping track of leaking equipment;

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

(f) A definition of "LDAR Personnel" and process for accountability, and identify for each refinery the person or position that will be the "LDAR coordinator." This person shall have the authority and responsibility to implement improvements to the LDAR program; and

(g) Procedures (e.g., a Management of Change program) to ensure that components subject to LDAR requirements added to each Refinery during maintenance and construction are integrated into the LDAR program.

B. Training

127. By no later than one (1) year from the Date of Entry of the Consent Decree, Conoco shall implement the following training programs at each of its Refineries:

(a) For Conoco employees newly-assigned to LDAR responsibilities, Conoco shall require LDAR training prior to each employee beginning such work;

(b) For all Conoco employees assigned LDAR responsibilities, such as monitoring technicians, database users, QA/QC personnel and the LDAR Coordinator, Conoco shall provide and require completion of annual LDAR refresher training;

(c) For all other Conoco employee operations and maintenance personnel, such as operators and mechanics performing valve packing and designated unit supervisor reviewing for delay of repair work, Conoco shall provide and require completion of an initial training program that includes instruction on aspects of LDAR that are relevant to the person's duties. Until termination of this Decree, "refresher" training in LDAR for these personnel shall be performed at a minimum on a three- (3) year cycle; and

(d) If contract employees are performing LDAR work, Conoco's contractor will provide its training information and records to Conoco.

C. LDAR Audits

128. Conoco shall implement at each of its Refineries, Refinery-wide audits performed as set forth in Paragraphs 129 and 130, to ensure each Refinery's compliance with all applicable LDAR requirements. Conoco's LDAR audits shall include but not be limited to, comparative monitoring, records review, tagging, data management, and observation of the LDAR technicians' calibration and monitoring techniques. An audit of each Refinery shall occur every two (2) years and, if Conoco-led audits are done, third-party and Conoco-led audits shall be separated by two (2) years.

129. Third-Party Audits. Conoco shall retain a contractor(s) to perform a third-party audit of each Refinery's LDAR program at least once every four (4) years. The first third-party audit for two (2) of Conoco's four (4) Refineries shall be completed no later than one (1) year from the Date of Entry of the Consent Decree. The first third-party audits of Conoco's remaining two Refineries shall be completed within two (2) years from the Date of Entry of the Consent Decree.

130. Conoco-Led Audits. Unless the alternative in Paragraph 131 is chosen, Conoco shall conduct audits of each Refinery's LDAR program by sending personnel familiar with the LDAR program and its requirements from one or more of Conoco's other Refineries or locations to audit another Conoco Refinery. Conoco shall complete the first round of these LDAR audits by no later than two (2) years from the date of the completion of the third-party audits required in Paragraph 129. Conoco audits of each Refinery shall be held every four (4) years thereafter for the life of this Consent Decree.

131. Alternative. As an alternative to the Conoco-led audits required by Paragraph 130, Conoco

may elect to retain third parties to undertake these audits.

D. Actions Necessary to Correct Non-Compliance

132. If the results of any of the audits conducted pursuant to Paragraphs 128-131 at any of Conoco's Refineries identify any areas of non-compliance, Conoco shall implement, as soon as practicable, all steps necessary to correct the area(s) of non-compliance, and to prevent, to the extent practicable, a recurrence of the cause of the non-compliance. Until two (2) years after termination of the Consent Decree, Conoco shall retain the audit reports generated pursuant to Paragraphs 129-130 and shall maintain a written record of the corrective actions that Conoco takes at each of its Refineries in response to any deficiencies identified in any audits.

133. In the quarterly report submitted pursuant to the provisions of Part XIV of this Consent Decree (Recordkeeping and Reporting) for the first calendar quarter of each year, Conoco shall report on the audits and corrective actions for audits performed during the previous year as provided in Paragraph 151(b).

E. Internal Leak Definition for Valves and Pumps

134. Conoco shall utilize the internal leak definitions listed in Paragraphs 135 and 136 for valves and pumps in light liquid and/or gas/vapor service, unless other permit(s), regulations, or laws require the use of lower leak definitions.

135. Leak Definition for Valves. By no later than two (2) years after the Date of Entry, Conoco shall utilize an internal leak definition of 500 ppm VOCs for all of its Refineries' valves in light liquid and/or gas vapor service, excluding pressure relief devices.

136. Leak Definition for Pumps. By no later than two (2) years from the Date of Entry of this Consent Decree, Conoco shall utilize an internal leak definition of 2,000 ppm for its Refineries' pumps in light liquid and/or gas/vapor service.

F. Reporting, Recording, Tracking, Repairing and Remonitoring Leaks of Valves and Pumps Based on the Internal Leak Definitions

137. Reporting. For regulatory reporting purposes, Conoco may continue to report leak rates in valves and pumps against the applicable regulatory leak definition, or may use the lower, internal leak definitions specified in Paragraphs 135 and 136. Conoco will identify in the report which definition is being used.

138. Recording, Tracking, Repairing and Re-monitoring Leaks. Conoco shall record, track, repair and re-monitor applicable leaks in excess of the internal leak definitions of Paragraphs 135 and 136 (at

such time as those definitions become applicable), except that Conoco shall have thirty (30) days to make repairs and re-monitor leaks that are greater than the internal leak definitions but less than the applicable regulatory leak definitions.

G. "First Attempt at Repairs" on Valves

139. Conoco shall implement "first attempt at repair" beginning no later than ninety (90) days after the Date of Entry of the Consent Decree. Conoco shall promptly make a "first attempt at repair" on any valve that has a reading greater than 200 ppm of VOCs excluding control valves, pumps, and components that LDAR personnel are not authorized to repair. The timing for the "first attempt at repair" of those components which the monitoring personnel are not authorized to repair will be consistent with the existing regulatory requirements. "First attempt at repair" will be made promptly (no later than the next business day) for the valves over 200 ppm that the LDAR monitoring personnel are authorized to attempt repair. The "first attempt at repair" will be re-monitored no later than the next regular business day at that refinery to assure the leak is not worse. No other action will be required unless the leak exceeds the then-applicable leak definition for the refinery. If, after two (2) years, Conoco can demonstrate with sufficient monitoring data that the "first attempt at repair" at 200 ppm will worsen or not improve the Refinery's leak rates, Conoco may request that EPA reconsider or amend this requirement.

H. LDAR Monitoring Frequency

140. Pumps. When the lower leak definition for pumps becomes applicable pursuant to Paragraph 136, Conoco shall monitor pumps in light liquid and/or gas vapor service at the lower leak definition on a monthly basis.

141. Valves. Unless more frequent monitoring is required by a State regulation, when the lower internal leak definition for valves becomes applicable pursuant to Paragraph 135, Conoco shall implement a program to monitor valves in light liquid and/or gas vapor service – other than difficult to monitor or unsafe to monitor valves – on a quarterly basis, with no ability to skip periods on a process-unit-by-process-unit basis.

I. Electronic Monitoring, Storing, and Reporting of LDAR Data

142. Electronic Storing and Reporting of LDAR Data. At each of its Refineries, Conoco has and will continue to maintain for the duration of this Consent Decree an electronic database for storing and reporting LDAR data.

143. Electronic Data Collection During LDAR Monitoring. For the duration of this Consent Decree, Conoco shall continue to use dataloggers and/or electronic data collection devices during all LDAR

monitoring. Conoco or its designated contractor shall use its/their best efforts to transfer, on a daily basis, electronic data from electronic datalogging devices to the electronic database of Paragraph 142. For all monitoring events in which an electronic data collection device is used, the collected monitoring data shall include a time and date stamp, an operator identification, and an instrument identification. Conoco may use paper logs where necessary or more feasible (e.g., small rounds, re-monitoring, or when dataloggers are not available or broken), and shall record, at a minimum, the identification of the technician undertaking the monitoring, the date, and the identification of the monitoring equipment. Conoco shall transfer any manually recorded monitoring data to the electronic database of Paragraph 142 within seven (7) days of monitoring.

J. QA/QC of LDAR Data

144. By no later than one hundred twenty (120) days after the Date of Entry of the Consent Decree, Conoco or a third party contractor retained by Conoco shall develop and implement a procedure to ensure a quality assurance/quality control ("QA/QC") review of all data generated by LDAR monitoring technicians. This QA/QC procedure shall include procedures for:

(a) contractor(s) reviewing the monitoring data provided to Conoco before submitting the data to Conoco;

(b) quarterly performing QA/QC of Conoco's and any contractor's monitoring data which shall include, but not be limited to: number of components monitored per technician, time between monitoring events, and abnormal data patterns; and

(c) periodically reviewing the daily monitoring reports.

K. Calibration/Calibration Drift Assessment

145. Calibration. Conoco shall conduct all calibrations of LDAR monitoring equipment using methane as the calibration gas, in accordance with 40 CFR Part 60, EPA Reference Test Method 21.

146. Calibration Drift Assessment. Beginning no later than the Date of Entry of the Consent Decree, Conoco shall conduct calibration drift assessments of LDAR monitoring equipment at the end of each monitoring shift, at a minimum. Conoco shall conduct the calibration drift assessment using, at a minimum, an approximately 500 ppm calibration gas. If any calibration drift assessment after the initial calibration shows a negative drift of more than 10% from the previous calibration, Conoco shall re-monitor all valves that were monitored since the last calibration that had a reading greater than 100 ppm

and shall re-monitor all pumps that were monitored since the last calibration that had a reading greater than 500 ppm.

L. Delay of Repair

147. Within thirty (30) days of the completion of the written program described in Paragraph 126, for any equipment for which Conoco is allowed, under 40 CFR § 60.482-9(a) or equivalent state regulations, to place on the "delay of repair" list for repair, Conoco shall:

(a) Require sign-off by the unit supervisor, which position shall be identified in the written program, that the piece of equipment is technically infeasible to repair without a process unit shutdown, before the component is eligible for inclusion on the "delay of repair" list; and

(b) Include equipment that is placed on the "delay of repair" list in Conoco's regular LDAR monitoring. For leaks above the internal leak definition rate and below the regulatory rate, Conoco shall have thirty (30) days to put the equipment on the delay of repair list.

148. For valves: For valves, other than control valves or pressure relief valves, that qualify to be on the "delay of repair" list and are leaking at a rate of 50,000 ppm or greater, Conoco will undertake "extraordinary efforts" to fix the leaking valve rather than keeping the valve on the "delay of repair" list, unless Conoco can demonstrate that there is a safety, mechanical, or major environmental concern posed by repairing the leak in this manner. For valves, extraordinary efforts for repairs shall be defined as non-routine repair methods. The extraordinary effort will be undertaken within one hundred twenty (120) days of the valve being placed on the "delay of repair" list. After two (2) unsuccessful attempts to repair a leaking valve through extraordinary efforts, Conoco may keep the leaking valve on its "delay of repair" list. Conoco will implement these extraordinary repair procedures within thirty (30) days of completion of the written program.

149. Within one hundred twenty (120) days of implementation of the written program, Conoco shall also make extraordinary efforts to repair those valves which have been placed on the delay of repair list which leak at 10,000 ppm for more than three (3) years. Conoco may delay these repairs further if it can demonstrate that there is a safety, mechanical, or major environmental concern posed by repairing the leak in this manner.

M. Recordkeeping and Reporting Requirements for this Paragraph

In Addition to the Reports Required under 40 CFR § 63.654 and the Quarterly Progress Report Procedures of Part XIV (Recordkeeping and Reporting).

150. Written Refinery-Wide LDAR Program. No later than thirty (30) days after completion of the

development of the written refinery-wide LDAR programs that Conoco develops pursuant to Paragraph 126, Conoco shall submit a copy of each Refinery's Program to EPA and to the appropriate state agency.

As Part of Either the Reports Required under 40 CFR § 63.654 or the Quarterly Progress Report Procedures of Part XIV (Recordkeeping and Reporting).

151. Consistent with the requirements of Part XIV (Recordkeeping and Reporting), Conoco shall include the following information, at the following times, in its quarterly progress reports:

a. First Quarterly Progress Report Due under the Consent Decree. At the later of: (i) the first quarterly progress report due under the Consent Decree; or (ii) the first quarterly progress report after the requirement becomes due, Conoco shall include the following:

(1) A certification of the implementation of the "first attempt at repair" program of Paragraph 139;

(2) A certification of the implementation of QA/QC procedures for review of data generated by LDAR technicians as required by Paragraph 144;

(3) An identification of the position at each Refinery responsible for LDAR performance as defined in the written program required in Paragraph 126;

(4) A certification of the development of a tracking program for new valves and pumps added during maintenance and construction defined in the written program required in Paragraph 126;

(5) A certification of the implementation of the calibration drift assessment procedures of Paragraph 146; and

(6) A certification of the implementation of the "delay of repair" procedures of Paragraphs 147 - 149.

(b) Quarterly Progress Report for the First Calendar Quarter of Each Year - Reporting on Audits. Conoco will report on the audits and corrective actions (Paragraphs 128 - 133) in the quarterly progress report that Conoco submits for the first calendar quarter of each year pursuant to Part XIV. For the first third-party audit at each Refinery, Conoco shall include a copy of each audit report from audits conducted in the previous calendar year and a summary of the actions taken or planned to correct all deficiencies identified in the audits. For the remainder of the audits required pursuant to this Order, in the quarterly progress report that Conoco submits for the first calendar quarter of each year, Conoco shall identify

which refineries were audited in the previous year, identify the auditors, and identify that a written plan exists identifying corrective action for any deficiencies identified in the audits and that this plan is being implemented. The certification for that quarterly report as provided in Paragraph 214 will serve as the certification for the audit information.

(c) In Each Report due under 40 CFR § 63.654. In each report due under 40 CFR § 63.654, Conoco shall include:

(1) Training. Information identifying the measures that Conoco took to comply with the provisions of Paragraph 127; and

(2) Monitoring. The following information on LDAR monitoring: (a) a list of the process units monitored during the quarter; (b) the number of valves and pumps monitored in each process unit; (c) the number of valves and pumps found leaking; (d) the number of "difficult to monitor" pieces of equipment monitored; (e) the projected month of the next monitoring event for that unit; and (f) a list of all equipment currently on the "delay of repair" list and the date each component was placed on the list.

152. Reserved

153. Agencies to Receive Reports, Plans and Certifications Required in this Part; Number of Copies. Conoco shall submit all reports, plans and certifications required to be submitted under Paragraphs 150 - 151 to EPA. Where indicated, Conoco also shall submit the information to the appropriate state agency. Upon written agreement of the parties, Conoco may submit the materials electronically. Certifications shall be made in accordance with the provisions in Part XIV.

PART X.
PROGRAM ENHANCEMENTS RE:
SUBPART J AND FLARING

Program Summary: Pursuant to the schedule included in this Consent Decree, Conoco agrees to take the following measures at all of its Claus Sulfur Recovery Plants (SRPs) and certain flaring devices at the refineries identified in Paragraph 5. Conoco shall eliminate all reasonably preventable SO_2 emissions from flaring. Conoco will implement procedures for root cause analysis of acid gas flaring incidents at all refineries identified in Paragraph 5.

A. Definitions

154. 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 X 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) "Acid Gas 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) "Acid Gas 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, sulfuric acid, ammonium thiosulfate, ammonium bisulfite or sodium bisulfite.

(d) "Acid Gas Flaring Incident" (or "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 (SO_2) 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 Acid Gas Flaring Incident shall have occurred. Subsequent, contiguous, non-overlapping periods are measured from the initial commencement of Flaring within the Acid Gas Flaring Incident.

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

(f) "Denver No. 1 Incinerator Incident" shall mean, for the purpose of this Consent Decree, combustion of Tail Gas in the Denver No. 1 SRU incinerator such that the amount of sulfur dioxide emissions in excess of the permitted interim emission limits (as established for Denver No. 1 SRP operating scenarios pursuant to Paragraph 172) exceeds five hundred (500) pounds on a twenty-four (24) hour average basis. This definition shall apply only

until the Denver Refinery No. 1 SRU is retrofitted to meet NSPS standards.

(g) "First Time Occurrence of a Root Cause" shall mean that the root cause of the Flaring Incident as identified pursuant to the procedures outlined in Paragraph 183(d) is one for which the root cause is not a recurrence of the same root cause of a previous Flaring Incident that has occurred since Date of Entry of this Decree for the Conoco refineries identified in Paragraph 5.

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

(i) "Hydrocarbon Flaring Device" (or a "flare") shall mean a combustion device used to safely control any excess volume of a refinery process gas as follows:

Billings Refinery: Main Plant Flare and its Spare, SRU/Ammonium Sulfide Unit Flare,

Denver Refinery: Main Plant Flare, Asphalt Unit (AU or Sour Crude Unit) Flare, Slop Oil Flare, Rail Rack Flare,

Lake Charles Refinery: North Flare, South Flare, West (Excel) Flare, T-38 Flare, API/CPI Flare, and

Ponca City Refinery: East Plant Flare, West Plant Flare, South Plant Flare, Coker Combo Flare, Mobile Temporary Spare Flare and Rail Rack Flare

(j) "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 (SO_2) that are equal to or greater than five hundred (500) pounds in a twenty-four (24) hour period. The SO_2 trigger value in this definition may be revised upward pursuant to the procedure in Paragraph 180 for Conoco's coker flares after Conoco has conducted a coker flare study and installed flare gas recovery systems on its coker flares.

(k) "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.

(l) "Root Cause" shall mean the primary cause of an Acid Gas Incident, Tail Gas Incident, Denver No. 1 Incinerator Incident or Hydrocarbon Flaring Incident as determined through a process of investigation; provided, however, that if the subject incident encompasses multiple releases of sulfur dioxide, the "Root Cause" may encompass multiple primary causes.

(m) "Scheduled Maintenance" shall mean any maintenance performed during a shutdown of a unit that Conoco schedules at least ten (10) days in advance of the shutdown.

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

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

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

(q) "Sulfur Recovery Plant" shall mean the devices operated or permitted by Conoco at Conoco's Refineries identified as:

Billings Refinery SRP (No. 1 SRU);
Denver Refinery SRPs (No. 1 SRU and No. 2 SRU);
Lake Charles SRPs (Nos. 1/2 SRUs and Nos. 4/5 SRUs); and
Ponca City Refinery SRP (No. 1 SRU).

(r) "Tail Gas" (TG) shall mean exhaust gas from the Claus trains and the tail gas unit ("TGU") section of the SRP.

(s) "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 twenty-four (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 (as defined by 40 CFR 60.104 (2)(i)) on a twenty-four (24) hour average exceeds 500 pounds. This definition shall not apply to the Denver No. 1 SRU until such time as that unit is retrofitted to meet NSPS Subpart J standards.

(t) "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. <u>Flare NSPS Subparts A and J Applicability – Non-Coker Flares</u>

155. By no later than March 31, 2003, Conoco will review the Subparts A and J compliance status of the flares that do not service delayed coker unit blowdown systems:

Billings Refinery: SRU/Ammonium Sulfide Unit Flare;

Denver Refinery: Main Plant Flare, AU Flare, Slop Oil Flare, Rail Rack Flare;

Lake Charles Refinery: North Flare, West Flare, T-38 Flare, API/CPI Flare; and

Ponca City Refinery: East Plant Flare, West Plant Flare, South Plant Flare, Rail Rack Flare, Mobile Temporary Spare Flare.

156. Conoco shall meet the NSPS Subpart A and J requirements for the flares listed in Paragraph 155 using one of the following methods:

(a) Implementing good air pollution control practices as required by 40 CFR § 60.11(d) and following the procedures set forth in Paragraphs 183 through 188.

(b) Operating the flare as a fuel gas combustion device and monitoring H_2S in accordance with 40 CFR § 60.104(a)(1); or

(c) Operating the flare such that it only receives process upset gas, fuel gas that is released to the flare as a result of relief valve leakage or other emergency malfunctions (as defined by NSPS Subpart J.)

157. Conoco shall implement the compliance option chosen for each flare listed in Paragraph 155 the earlier of: (a) the first turnaround for each flare that occurs at least six (6) months after completion the flare's evaluation; or (b) the end of 2006.

158. Conoco shall submit notifications to EPA when it has achieved compliance with Subpart A and J for each particular flare. Such notifications will be submitted within thirty (30) days of completion of the compliance option. Conoco shall include a certification of compliance for the release for liability for each particular flare for NSPS Subpart A and J under Part XXI (Effect of Settlement).

159. Upon bringing a flare into compliance per Paragraph 156, Conoco shall conduct a flare performance test pursuant to 40 CFR § 60.8 and §60.18. In lieu of conducting the velocity test required in 40 CFR § 60.18, Conoco may submit velocity calculations which demonstrate that the flare meets the performance specification required by 40 CFR § 60.18.

160. To the extent that Conoco chooses to use an alternative monitoring method at a particular flare to demonstrate compliance with the emissions limits under 40 CFR § 60.104, Conoco may begin using

the method immediately upon submitting the application for approval to use the method provided that the alternative method for which approval is being sought is the same or is substantially similar to the method identified as the "Alternative Monitoring Plan for NSPS Subpart J Refinery Fuel Gas" attached to EPA's December 2, 1999, letter to Koch Refining Company LP.

C. Flare NSPS Subparts A and J Applicability – Coker Flares

161. Conoco shall comply with the Subpart A and J requirements at the following flares that service delayed coker blowdown systems:

Billings Refinery: Main Plant Flare and its Spare;

Lake Charles Refinery: South Flare; and

Ponca City Refinery: Coker Combo Flare.

162. Conoco shall meet the Subpart A and J requirements for the flares servicing delayed cokers as listed in Paragraph 161 by installing and operating flare gas recovery systems as a means of implementing good air pollution control practices as required by 40 CFR § 60.11(d) to minimize flaring activity in lieu of meeting the emissions limits and monitoring and recordkeeping requirements under 40 CFR § 60.104, 105 and 107. Where Conoco has previously agreed to install or installs flare gas recovery systems as Supplemental Environmental Projects as part of prior State Orders, Conoco shall ensure good air pollution control practices by following the procedures for conducting Root Cause Failure Analysis and Corrective Action for flaring incidents as specified in this Consent Decree.

163. Conoco has previously agreed to install flare gas recovery systems as Supplemental Environmental Projects in State Orders in Oklahoma and Montana as indicated below. As such, the installation of these systems is not considered to be required by this Consent Decree:

Billings Refinery: Main Plant Flare and its Spare by the end of 2003 as specified to in a letter to the State of Montana dated June 25, 2001, and to be incorporated in a compliance order.

Ponca City Refinery: Coker Combo Flare by July 2002 as specified to in Consent Order 00-196 dated July 11, 2000, with the State of Oklahoma.

164. Conoco shall install a new or upgrade the existing flare gas recovery system at the Lake Charles Refinery South Flare by the end of 2005.

165. Conoco shall have a six (6) month period following the installation or upgrade of any flare gas recovery system installed on a flare listed in Paragraph 161 to optimize the operation of the flare gas

recovery system. Root Cause Failure Analyses will not be required during this optimization period unless the flare gas recovery system is shutdown or bypassed.

166. Within two (2) years of the Date of Entry of the Consent Decree, Conoco, as a licensor of delayed coking technology, shall perform and provide to EPA and the appropriate Plaintiff-Interveners (subject to each party's obligation to protect confidential business information in accordance with Federal and State regulations) a coker flare gas minimization study that will evaluate NSPS Subpart A and J compliance methodologies for flares servicing delayed cokers. This study will look at methods to minimize pass through of gases from a flare gas recovery system to flare, optimal flare gas recovery operations, and coker design and operation.

167. Upon bringing a flare into compliance per Paragraph 162, Conoco shall conduct a flare performance test pursuant to 40 CFR § 60.8 and § 60.18. In lieu of conducting the velocity test required in 40 CFR § 60.18, Conoco may submit velocity calculations which demonstrate that the flare meets the performance specification required by 40 CFR § 60.18.

168. Conoco shall submit notification to EPA when it has achieved compliance with Subpart A and J for each particular flare listed in Paragraph 161 through the use of good engineering control practices. Such notifications will be submitted within thirty (30) days of completion of the flare gas recovery system installation and the six month shakedown period. Conoco shall include a certification of compliance for the release for liability for each particular flare for NSPS Subparts A and J under Part XXI (Effect of Settlement).

D. SRP NSPS Subparts A and J Applicability

169. Immediately upon the Date of Lodging of this Consent Decree, the Conoco operated and permitted SRPs, other than the Denver No. 1 SRU, shall be subject to and will continue to comply with the applicable provisions of NSPS Subparts A and J.

170. Immediately upon Date of Lodging of this Consent Decree, Conoco agrees that all emission points (stacks) to the atmosphere for tail gas emissions from each of Conoco's operated and permitted SRPs other than the Denver No. 1 SRU will continue to be monitored and reported upon as required by 40 CFR §§ 60.7(c), 60.13, and 60.105. This requirement is not applicable to Acid Gas Flaring Devices.

171. The Denver No. 1 SRU shall comply with the NSPS Subparts A and J requirements for Claus units the earlier of the last Tier 1 and 2 Diesel or Low Sulfur Gasoline compliance date as applicable to the Denver Refinery or the end of 2008.

172. Conoco shall implement the following interim measures at the Denver No. 1 SRU until it

complies with the NSPS Subparts A and J requirements for Claus units.

(a) By no later than September 30, 2002, Conoco shall install a CEM on the Denver No. 1 Tail Gas Incinerator stack to measure flow and SO_2 emissions.

(b) By no later than March 31, 2003, Conoco shall perform an optimization study to determine the maximum turndown ratio at which the unit continues to operate reliably and the maximum operating rate of the unit when the Denver No. 2 SRU is shut down. This may include considerations for oxygen enrichment as discussed in the Colorado Supplemental Environment Project (Colorado SEP) descriptions noted in the Consent Agreement between Conoco and the U.S. EPA Docket No. RCRA (3008) VIII-97-03, effective August 7, 1998, and Colorado Compliance Order on Consent Number 98-08-07-02, also effective August 7, 1998. Results of this study shall be reported to EPA Region 8 and the State of Colorado within thirty (30) days of completing the study.

(c) By no later than May 31, 2003, Conoco shall apply for a modification to Colorado Permit C-10,998 to adopt specific emission limits associated with the optimal maximum turndown and maximum capacity rates including considerations for oxygen enrichment as noted in Colorado SEP descriptions referenced above.

(d) Conoco shall comply with limits established pursuant to sub-paragraph (c), above, immediately upon Conoco's submission of an application for modification of the existing permit.

(e) Upon submission of an application for modification of the existing permit, Conoco shall implement procedures for evaluating whether Denver No. 1 Incinerator Incidents are due to Malfunctions as required by Paragraph 182. The procedure requires Root Cause Failure Analysis and Corrective Action for incidents as specified in Paragraph 183, and stipulated penalties for Denver No. 1 Incinerator Incidents if the Root Causes were not due to Malfunctions as outlined in Paragraph 189 of this Consent Decree.

173. All sulfur pit emissions to the atmosphere shall be either eliminated or included and monitored as part of the SRP's emissions by no later than the first turnaround of the applicable Claus train occurring six (6) months after the Date of Lodging of this Consent Decree.

174. Reserved

175. During the life of this Consent Decree, for the purpose of determining compliance with the SRP emission limits, Conoco 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. TGU). 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., TGU).

E. Sulfur Recovery Plant Optimization

176. During the life of the Consent Decree, Conoco shall continue to maintain its Conoco Sulfur Processing Best Practices Network as a means to optimize sulfur plant operations. This network charter is included in Attachment 6. The network, at a minimum, will review:

(a) operator and engineer training for SRP and amine treating operations;

(b) operating parameters, material balances and efficiencies;

(c) acid gas and SWS gas composition;

(d) operating problems and corrective actions;

(e) incremental improvements achieved;

(f) new or modified operating procedures; and

(g) root cause and corrective action performed as a result of any incident investigation performed as a result of an Acid Gas Flaring Incident or Tail Gas Flaring Incident.

F. Past Flaring Analysis

177. Conoco supplied EPA with a list of the Acid Gas Flaring Incidents at all of its refineries that occurred since 1996. Conoco has implemented (or is in the process of identifying and implementing) corrective actions to minimize the number and duration of Acid Gas Flaring events. The corrective actions include an electrical reliability project currently being implemented at Ponca City and the upgrade of the Denver No. 1 SRU pursuant to the descriptions noted in the Consent Agreement between Conoco and the U.S. EPA Docket No. RCRA (3008) VIII-97-03, effective August 7, 1998, and Colorado Compliance Order on Consent Number 98-08-07-02, also effective August 7, 1998, allowing it to process sour water stripper off-gas.

G. Future Flaring

178. By no later than the Date of Entry of this Decree, Conoco shall implement procedures at the refineries identified in Paragraph 5, for evaluating whether future Acid Gas Flaring Incidents and Tail Gas Incidents are due to Malfunctions. The procedures require Root Cause Failure Analysis and Corrective Action for flaring incidents as specified in this Consent Decree, and stipulated penalties for Acid Gas Flaring Incidents or Tail Gas Incidents if the Root Causes were not due to Malfunctions.

179. By no later than the Date of Entry of this Decree, Conoco shall implement procedures at the refineries identified in Paragraph 5, for evaluating whether future HC Flaring Incidents are due to Malfunctions. The procedures require Root Cause Failure Analysis (RCFA) and Corrective Action for HC Flaring Incidents as specified in this Consent Decree at Paragraphs 183 (a)-(e) and 184. For each of the flares identified in Paragraphs 155 and 161, during the period between the Date of Entry of this Decree and the date Conoco certifies the flare is compliant with NSPS Subparts A and J in accord with Paragraphs 158 and 168, Conoco may prepare and submit a single RCFA for one or more Root Causes found by that analysis to routinely reoccur. Conoco shall inform the EPA and the State in that RCFA that it is electing to report only once on that Root Cause(s) during the interim period. Unless EPA or the State object within thirty (30) days of receipt of the RCFA, such election shall be effective. During this interim period, additional RCFAs will be triggered whenever there is a release of 500 pounds of SO_2 in a 24-hour period as the result of identifiable, abnormal operating conditions.

180. If within six (6) months after installation of a flare gas recovery system at each of the flares identified in Paragraph 161 and adoption of reasonable measures identified in the study conducted pursuant to Paragraph 166, any or all of the flares identified in Paragraph 161 routinely have SO_2 emissions in excess of 500 pounds per 24-hour period, Conoco may propose for EPA and the appropriate State Agency concurrence an alternative unit specific value above which a flaring incident investigation would be required in lieu of the 500 pounds per 24-hour period. Conoco's written request would include the proposed value, a list of all measures taken or adopted up to the time of the submittal to try to reduce SO_2 emissions below 500 pounds per 24-hour period, and information required as part of the RCFA process. EPA and the State shall approve or disapprove the proposed value within sixty (60) days of receipt.

H. Tail Gas Incidents and Denver No. 1 Incinerator Incidents

181. For Tail Gas Incidents, Conoco shall follow the investigative, reporting, and corrective action as outlined in Paragraph 183 and the same assessment of stipulated penalty procedures for Acid Gas Flaring outlined in Paragraph 189. Such Tail Gas Incidents would not be counted in the tally of Acid Gas Flaring Incidents under Paragraph 190.

182. For a Denver No. 1 Incinerator Incident, Conoco shall follow the investigative, reporting, and corrective action as outlined in Paragraph 183 and the same assessment of stipulated penalty procedures for Acid Gas Flaring Incidents outlined in Paragraph 189. Denver No. 1 Incinerator Incidents shall not be counted in the tally of Acid Gas Flaring Incidents under Paragraph 190.

I. Requirements Related to All Flaring Incidents

183. Investigation and Reporting. No later than forty-five (45) days following the end of an Acid Gas Flaring Incident, Tail Gas Incident, HC Flaring Incident, or a Denver No. 1 Incinerator Incident (individually and collectively referred to as "Flaring Incident"), Conoco shall submit a report to the applicable EPA Regional Office and applicable State Agency that sets forth the following:

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

(b) An estimate of the quantity of SO_2 that was emitted and the calculations that were used to determine that quantity;

(c) The steps, if any, that Conoco took to limit the duration and/or quantity of SO_2 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, available to reduce the likelihood of a recurrence a Flaring Incident resulting from the same Root Cause or contributing causes in the future. If two or more reasonable alternatives exist to address the root cause, the analysis shall discuss the alternatives 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 Conoco concludes that corrective action(s) is (are) required under Paragraph 184, 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 Conoco concludes that corrective action is not required under Paragraph 184, the report shall explain the basis for that conclusion;

(f) For AG Flaring Incidents, Tail Gas Incidents and Denver No. 1 Incinerator Incidents, a statement that:

(1) Specifically identifies each of the grounds for stipulated penalties in Paragraphs 189 and 190 of this Decree and describes whether or not the Acid Gas Flaring Incident, Tail Gas Incident, or Denver No. 1 Incinerator Incident falls under any of those grounds;

provided, however, that Conoco may choose to submit with the Root Cause Failure Analysis a payment of stipulated penalties in the nature of settlement without the need to specifically identify the grounds for the penalty. Such payment of stipulated penalties shall not constitute an admission of liability, nor shall it raise any presumption whatsoever about the nature, existence or strength of Conoco's potential defenses. Further, if Conoco submits the Root Cause Failure Analysis with a payment of stipulated penalties in the nature of settlement, the incident for which the stipulated penalties are paid would be counted in the tally of flaring incidents under Paragraph 190 and Conoco could not later assert that it should not be.

(2) Describes which Paragraph 192(a) or (b) applies, and why, the Acid Gas Flaring Incident, Tail Gas Incident, or Denver No. 1 Incinerator Incident falls under Paragraph 192 of this Decree;

(3) States whether or not Conoco asserts a defense to the Acid Gas Flaring Incident, Tail Gas Incident, or Denver No. 1 Incinerator Incident, and if so, a description of the defense if the subject incident falls under either Paragraph 190 or Paragraph 192(b); provided, however, that if Conoco submits stipulated penalties in the nature of settlement as described in (f)(1) above, such defenses are moot and may be, but shall not be required to be, included in the incident investigation report.

(g) 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 183 will be submitted. However, if Conoco has not submitted a report or a series of reports containing the information required to be submitted under this Paragraph within forty-five (45) days (or such additional time as EPA may allow) after the due date for the initial report for the Acid Gas Flaring Incident, Tail Gas Incident, or Denver No. 1 Incinerator Incident, the stipulated penalty provisions of Paragraphs 189 and 190 shall apply. Nothing in this Paragraph shall be deemed to excuse Conoco from its investigation, reporting, and corrective action obligations under this Part that occurs after a subject Acid Gas Flaring Incident, Tail Gas Incident, or Denver No. 1 Incinerator Incident for which Conoco has requested an extension of time under this Paragraph; and

(h) 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 thirty (30) days after completion of the implementation of corrective action(s),

Conoco shall submit a report identifying the corrective action(s) taken and the dates of commencement and completion of implementation.

J. Corrective Action

184. In response to any Acid Gas Flaring Incident, Tail Gas Incident, HC Flaring Incident or Denver No. 1 Incinerator Incident, Conoco, 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 the subject incident.

185. If EPA does not notify Conoco in writing within thirty (30) days of receipt of the report(s) required by Paragraph 183 that it objects to one or more aspects of Conoco'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 Conoco's compliance with Paragraphs 184 of this Consent Decree.

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

187. If EPA does object, in whole or in part, to Conoco'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 Conoco of that fact within thirty (30) days following receipt of the report(s) required by Paragraph 183 above.

188. Nothing in this Part shall be construed as a waiver of EPA's rights under the Clean Air Act and its regulations for future violations of the Clean Air Act or its regulations nor to limit Conoco's right to take such corrective actions as it deems necessary and appropriate immediately following a Flaring or Denver No. 1 Incinerator Incident or in the period during preparation and review of any reports required under this Part.

K. Acid Gas Flaring and Stipulated Penalties

189. Stipulated Penalties. The stipulated penalty provisions of Paragraph 199(a) shall apply to any

Acid Gas Flaring Incident for which the Root Cause was one or more of the following acts, omissions, or events:

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

(b) A failure of equipment that is due to a failure by Conoco to operate and maintain that equipment in a manner consistent with good engineering practice; and/or

(c) failure to follow written procedures;

provided, however, that Conoco may elect to submit stipulated penalties in the nature of settlement with no admission of liability as described in Paragraph 183(f)(1) with the submittal of the RCFA. Should Conoco admit that the incident was the result of one of previously listed acts, omission, or events, and not elect to automatically submit stipulated penalties in the nature of settlement, then except for a Force Majeure event, Conoco shall have no defenses to a demand for stipulated penalties for an Acid Gas Flaring Incident that falls under this Paragraph.

190. The stipulated penalty provisions of Paragraph 199 shall apply to any Acid Gas Flaring 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 Acid Gas Flaring Incidents per refinery in a rolling twelve (12) month period to exceed five (5).

191. Defenses. In response to a demand by EPA for stipulated penalties, Conoco shall be entitled to assert a Malfunction defense with respect to any Acid Gas Flaring Incident falling under Paragraph 190. In the event that a dispute arising under Paragraph 190 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 Conoco of its view that Startup, Shutdown, and Malfunction defenses are available for Acid Gas Flaring Incidents, nor to deprive EPA of its view that such defenses are not available. In the event that an Acid Gas Flaring Incident falls under both Paragraphs 189 and 190, then Paragraph 189 shall apply.

192. The stipulated penalty provisions of Paragraph 199 shall apply to Acid Gas Flaring Incidents

other than those identified in Paragraphs 189 and 190 as follows:

(a) No stipulated penalties shall apply if the Root Cause is a First Time Occurrence of a Root Cause provided;

(1) If the Root Cause of the Acid Gas Flaring 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 Acid Gas Flaring Incident was not sudden and infrequent, and was reasonably preventable through the exercise of good engineering practice, then Conoco shall implement corrective action(s) pursuant to Paragraph 184;

(b) Stipulated penalties shall apply if the Root Cause is a recurrence of the same Root Cause of a previous Acid Gas Flaring Incident that has occurred since the Date of Entry of this Consent Decree, unless:

(1) the Acid Gas Flaring resulted from a Malfunction,

(2) the Root Cause previously was designated as an agreed-upon malfunction under Paragraph 192(a)(1), or

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

(c) In the event that a dispute arising under Paragraph 192(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 Conoco of its view that Startup, Shutdown, and Malfunction defenses are available for Acid Gas Flaring Incidents, nor to deprive the United States of its view that such defenses are not available.

(d) If no Acid Gas Flaring Incident occurs at a refinery for a rolling thirty-six (36) month period following entry of this Consent Decree (other than as a result of a Malfunction or Force Majeure event), then the stipulated penalty provisions of Paragraph 199 no longer apply at that refinery. EPA may elect to reinstate the stipulated penalty provision if Conoco 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 apply to future flaring incidents at that refinery and continue for the remaining life of this Consent Decree.

L. Miscellaneous

193. Calculation of the Quantity of Sulfur Dioxide Emissions resulting from Acid Gas or Hydrocarbon Flaring. The methodology outlined in this paragraph and paragraphs 194, 195, and 196 will be used for determining emissions of SO_2 resulting from Acid Gas Incidents, Tail Gas Incidents and Hydrocarbon Flaring Incidents. In the event Conoco determines that a more accurate methodology exists for such calculations, Conoco will notify EPA and the appropriate state agency prior to using the new methodology for purposes related to this consent decree.

For purposes of this Consent Decree, the quantity of SO_2 emissions resulting from Acid Gas or Hydrocarbon Flaring shall be calculated by the following formula:

Tons of SO_2 = [FR][TD][ConcH_2S][8.31 x 10-5].

The quantity of SO_2 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 SO_2 emitted shall be rounded to 10.1 tons and 10.049 would be 10.0 tons.) For purposes of determining the occurrence of, or the total quantity of SO_2 emissions resulting from, an Acid Gas Flaring Incident that is comprised of intermittent Acid Gas Flaring, the quantity of SO_2 emitted shall be equal to the sum of the quantities of SO_2 flared during each such period of intermittent Acid Gas Flaring.

194. Calculation of the Rate of SO_2 Emissions during Acid Gas or Hydrocarbon Flaring. For purposes of this Consent Decree, the rate of SO_2 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][ConcH_2S][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 SO_2 per hour, the emission rate shall be rounded to 20.0 pounds of SO_2 per hour; for a calculation that results in an emission rate of 20.05 pounds of SO_2 per hour, the emission rate shall be rounded to 20.1 and 20.049 becomes 20.0 pounds.)

195. Meaning of Variables and Derivation of Multipliers used in the Equations in Paragraphs 193 and 194:

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_2S = 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_2S/scf gas)

8.44 x 10-5 = [lb mole H_2S/379 scf H_2S][64 lbs SO_2/lb mole H_2S][Ton/2000 lbs]

0.169 = [lb mole H_2S /379 scf H_2S][1.0 lb mole SO_2/1 lb mole H_2S][64 lb SO_2/1.0 lb mole SO_2]

Standard conditions: 60 deg F, 14.7 lb-force/sq.in. absolute

The flow of gas to the Acid Gas or Hydrocarbon Flaring Device(s) ("FR") shall be as measured by the relevant flow meter. Hydrogen sulfide concentration ("ConcH_2S") 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 183 shall include the data used in the calculation and an explanation of the basis for any estimates of missing data points.

196. Calculation of the Quantity of SO_2 Emissions resulting from a Tail Gas Incident. For the purposes of this Consent Decree, the quantity of SO_2 emissions resulting from a Tail Gas Incident shall be calculated by one of the following methods or an equivalent method approved by EPA, based on the type of event:

(a) If the Tail Gas Incident is combusted in a flare, the SO_2 emissions are calculated using the methods outlined in Paragraph 193, or

(b) If the Tail Gas Incident is a event exceeding the 250 ppmvd adjusted to 0% O_2 (NSPS J limit), from a monitored SRP incinerator, then the following formula applies to each 24-hour period of an incident beginning with the first hour that the rolling 12 hour average SO_2 concentration exceeds the 250 ppmvd Subpart J limit and ending with the 24-hour period in which the 250 ppmcvd NSPS limit is last exceeded. Total SO_2 emissions during an incident are determined by summing the emissions during each 24-hour period of the incident:

$$ER_{TGI} = \sum_{i=1}^{H_{TGI}} [FR_{Inc.}]_i \, [\text{Conc. } SO_2 - 250]_i \, [(20.9-\%O2)/20.9]_i \, [0.169 \times 10^{-6}]$$

Where:

ER_{TGI} = Excess Emissions from Tail Gas at the SRP incinerator, in SO_2 lbs. over a 24 hour period

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

Conc. SO_2 = Actual SO_2 concentration (CEM data) in the incinerator exhaust gas, ppmvd adjusted to 0% O_2 for each hour of the incident

% O_2 = O_2 concentration (CEM data) in % in the incinerator exhaust gas in ppm on dry basis for each hour of the incident

0.169×10^{-6} = [lb mole of SO_2 / 379 SO_2] [64 lbs SO_2 / lb mole SO_2] [1×10^{-6}]

H_{TGI} = Hours when the incinerator CEM was exceeding 250 ppmvd adjusted to 0% O_2 in each 24 hour period of the incident (as described above).

Standard conditions: 60 deg F, 14.7 lb-force/sq.in. absolute

In the event the SO_2 and/or the O_2 CEM hourly concentration data are 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.

197. Effect of State Startup, Shutdown or Malfunction Provisions. Nothing in this Consent Decree shall prevent Conoco from asserting a startup, shutdown or malfunction defense where such a defense exists in State law for state law purposes.

198. Existing and new CEMS required by this Part shall comply with the certification, calibration, maintenance, and operation requirements for CEMS found in Part XI, Paragraphs 202 and 203.

M. Stipulated Penalties under this Part

199. Nothing in this Part shall be understood to subject Conoco to stipulated penalties for Hydrocarbon Flaring Incidents. Conoco 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 through the end of the incident as explained below:

(a) Acid Gas Flaring, Tail Gas Incidents or Denver No. 1 Incinerator Incidents for which Conoco is liable under this Part:

Tons Emitted in Acid Gas Flaring, Tail Gas Incident or Denver No. 1 Incinerator Incident	**Length of Time from Commencement of Flaring within the Acid Gas Flaring, Tail Gas or Denver No. 1 Incinerator Incident to Termination of Flaring within the Acid Gas Flaring or Tail Gas Incident is 3 hours or less**	**Length of Time from Commencement of Flaring within the Acid Gas Flaring, Tail Gas or Denver No. I Incinerator Incident to Termination of Flaring within the Incident is greater than 3 hours but less than or equal to 24 hours**	**Length of Time of Flaring within the Acid Gas Flaring, Tail Gas, or Denver No. 1 Incinerator 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 Acid Gas 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 Acid Gas Flaring Incident in which the Acid Gas 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 Acid Gas Flaring or Tail Gas or Denver No. 1 Incinerator Incident, the flaring shall be deemed to commence at the time that the flaring that triggers the initiation of an Acid Gas 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 Acid Gas 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 Acid Gas Flaring occurs within the Acid Gas Flaring Incident, the Acid Gas Flaring within the Acid Gas 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.

(3) For purposes of determining which column in the table set forth in this Paragraph applies under circumstances in which a Denver No. 1 Incinerator Incident occurs, the Incident shall be deemed to commence at the time when the emissions exceeded the applicable permitted limit, and shall be deemed to terminate at the time the emissions fell below the applicable permitted limit. The permitted limits for determining which column applies shall be those established in Paragraph 172 of this Consent Decree.

(b) For submitting any report that does not conform to the requirements of this Part after the deficiencies are pointed out and until corrected: $5,000 per week, per report.

(c) Failure to timely submit any report required by this Part beginning on the 7th day past the Report's due date: $5,000 per week, per report

(d) For those corrective action(s) which Conoco is required to undertake following Dispute Resolution, then, from the 91st day after EPA's receipt of Conoco's report under Paragraph 183 of this Decree until the date that either (i) a final agreement is reached between EPA and Conoco regarding the corrective action or (ii) a court order regarding the corrective action is entered: $5,000 per month

(e) Failure to complete any corrective action under Paragraph 184 of this Decree in accordance with the schedule for such corrective action agreed to by Conoco or imposed on Conoco pursuant to the Dispute Resolution provisions of this Decree (with any such extensions thereto as to which EPA and Conoco may agree in writing). If Conoco presents a reasonable basis for extension, EPA shall not unreasonably withhold its consent or fail to respond timely to Conoco's request: $5,000 per week

N. Certification

200. Agencies to Receive Reports, Plans and Certifications Required in this Part; Number of Copies. Conoco shall submit all reports, plans and certifications required to be submitted under this Part to EPA. Where indicated, Conoco also shall submit the information to the appropriate state agency. Conoco may submit the materials electronically. Certifications shall be made in accordance with the provisions in Part XIV.

201. The reporting requirements set forth in this Part do not relieve Conoco 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.

PART XI.
CONTINUOUS EMISSIONS MONITORS

202. Conoco shall install, certify, calibrate, maintain, and operate all COMS required by this Consent Decree in accordance with the requirements of 40 CFR §§ 60.11, 60.13 and Part 60 Appendices A and B. Conoco 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. With respect to 40 CFR Part 60, Appendix F, in lieu of the requirements of 40 CFR Part 60 Appendix F § 5.1.1, 5.1.3 and 5.1.4, Conoco shall conduct either a Relative Accuracy Audit ("RAA") or a Relative Accuracy Test Audit ("RATA") once every twelve (12) calendar quarters, provided that a Cylinder Gas Audit is conducted each calendar quarter. These COMS and CEMS will be used to demonstrate compliance with emission limits.

203. By no later than twelve (12) months from the Date of Lodging, all existing COMS on Conoco's FCCUs affected by this Consent Decree shall comply with the certification, calibration, maintenance, and operation requirements of 40 CFR § 60.11 and 60.13 and Part 60 Appendix A and B. By no later than twelve (12) months from the Date of Lodging, all existing CEMS on Conoco's FCCUs, heaters, boilers, tail gas treatment units or other units affected by this Consent Decree shall comply with the certification, calibration, maintenance, and operation requirements of 40 CFR § 60.11 and 60.13 and Part 60 Appendices A, B and F. With respect to 40 CFR Part 60, Appendix F, in lieu of the

requirements of 40 CFR Part 60 Appendix F § 5.1.1, 5.1.3 and 5.1.4, Conoco shall conduct either a Relative Accuracy Audit (RAA) or a Relative Accuracy Test Audit (RATA) once every twelve (12) calendar quarters, provided that a Cylinder Gas Audit is conducted each calendar quarter. These COMS and CEMS will be used to demonstrate compliance with emission limits.

PART XII.

SUBPART QQQ COMPLIANCE AT BILLINGS REFINERY

Program Summary: Conoco agrees to evaluate and, where necessary, correct deficiencies in its NSPS Part 60 (Subpart QQQ) compliance at the Billings Refinery and the Billings Jupiter Sulfur Plant.

204. Within six (6) months of entry of this Consent Decree, Conoco's Billings Refinery will determine which, if any, oily wastewater streams are entering the storm sewers or storm water diversion tanks. Conoco and the State of Montana have agreed that Conoco shall review the streams in the following areas:

Waste Staging Area

T-3901

SU-101 overflow

Cross Connection west of D-21

PB Merox

Drum D-59

#1 Amine north of D-14

D-80 & D-81 vicinity

D-276, D-172 & D-22 vicinity

KOH treater

GOHS unit

Propane caustic treater area

Amine Contactor area

Gasoline merox unit area

205. Within seven (7) months of entry of the decree, Conoco will report findings to State of Montana. The report will identify streams reviewed for Subpart QQQ applicability, the estimated amount of oil reaching the storm sewers, and whether this has any impact on BWON reporting or compliance.

206. On or before June 1, 2002, Conoco's Billings Refinery will report to the State of Montana whether specific streams identified as reaching the storm water system will be removed from the storm water system and/or whether the storm water diversion tanks and affected drains will be upgraded to Subpart QQQ status.

207. By end of 2003 (next turnaround date), Conoco's Billings Refinery will remove all oily wastewater streams from storm sewers and storm water diversion tanks or upgrade sewers and tanks to meet Subpart QQQ standards for drains, junction boxes, and oil water separators as appropriate.

208. By January 31, 2004, Conoco will submit a final report to the State of Montana indicating how Subpart QQQ compliance has been achieved at the Billings Refinery.

PART XIII.

PERMITTING

Program Summary: The purpose of this Part is to require the incorporation of emissions limits and other requirements of the Consent Decree into federally enforceable permits.

209. Incorporation of Consent Decree Requirements in Permits. By no later than one hundred-twenty (120) days following the Date of Lodging of the Consent Decree, Conoco shall submit applications to incorporate the emission limits and standards required by the Consent Decree that are effective as of the Date of Lodging of the Consent Decree into minor or major new source review permits or other permits (other than Title V permits), which are federally enforceable and, upon issuance of such permits shall file any applications necessary to incorporate the requirements of those permits into the refinery's Title V permit. In cases where activities required by this Consent Decree do not otherwise require state construction or operating permits, Conoco may propose and include such terms as a part of the refineries' Title V operating permit and they shall be considered federally

enforceable terms. The Parties agree that incorporation of the requirements of this Decree into Title V permits may be by "administrative amendment" under 40 CFR § 70.7(d) and analogous state Title V rules, where allowed by state law.

210. (a) By no later than ninety (90) days after the effective date or establishment of any emission limits, standards and schedules established pursuant to this Consent Decree, Conoco shall submit applications to incorporate those emission limitations into minor or major new source review permits or other permits, in addition to Title V permits, which are federally enforceable and, upon issuance of such permits shall file any applications necessary to incorporate the requirements of those permits into the refinery's Title V permit. The Parties agree that incorporation of the requirements of this Decree into Title V permits may be by "administrative amendment" under 40 CFR §70.7(d) and analogous state Title V rules where allowed by state law.

210. (b) By no later than ninety (90) days following Conoco's receipt of the initial third party-led audit of the LDAR program at each Refinery, Conoco shall submit a permit application to incorporate, where necessary, the increased VOC emissions associated with previously unmonitored or incorrectly monitored components.

PART XIV.

GENERAL RECORDKEEPING, RECORD RETENTION AND REPORTING

211. For the purposes of this Consent Decree, any requirement for Conoco 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 Conoco to each appropriate Plaintiff-Intervener. Conoco shall retain all records required to be maintained in accordance with this Consent Decree for a period of five (5) years after termination of the Consent Decree, unless other regulations require the records to be maintained longer.

212. All notices, reports or any other submissions required of Conoco to be certified, with the exception of the Quarterly Progress Reports, shall contain the following certification. They may be signed by the refinery manager or his/her designee, as provided in writing by the refinery manager, provided the designee is a company employee responsible for environmental management and compliance.

"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."

213. Beginning with the first full calendar quarter after entry of this Consent Decree, Conoco shall submit a calendar Quarterly Progress Report ("calendar quarterly report") to EPA and the appropriate Plaintiff-Intervener within thirty (30) days after the end of each calendar quarter during the life of this Consent Decree. In addition to any other information specifically required to be submitted per other Parts of this Consent Decree, this report shall contain the following:

(a) progress report on the implementation of the requirements of Parts IV-XII;

(b) a summary of all Hydrocarbon Flaring Incidents;

(c) a summary of the emissions data as required by Parts IV-XII, 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-XII of this Consent Decree.

214. The calendar Quarterly Progress Reports 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."

PART XV.
GENERATION OF EMISSION CREDITS
OR USE OF
PLANTWIDE APPLICABILITY LIMIT (PAL)

Program Summary: Conoco must decide whether it will generate specific limited emission reduction credits or opt to use plantwide applicability limits (PALs). Either program is subject to limits as described below.

A. Election of Emission Credit Reductions or Plantwide Applicability Limits

215. No later than twelve (12) months after the Date of Entry of the Consent Decree, Conoco shall notify EPA and the Plaintiff Interveners whether it shall elect to use emission credits generated and to be used pursuant to Paragraphs 218 through 224 or adopt one or more PALs in accordance with Paragraphs 226 through 242 at its four (4) refineries. Conoco must choose one of the two options.

216. Generation and use of the emission reduction credits will be restricted as indicated in Paragraphs 218 through 224. Generation and use of the emission reduction credits will not affect the releases of liability provided for in Paragraphs 271 through 277.

217. Establishment and use of the plantwide applicability provisions will be governed by Paragraphs 226 through 242. Releases of liability will be affected as indicated in Paragraph 278.

B. Restrictions on the use of Emission Reduction Credit Generation

Program Summary: The purpose of this subsection is to generally forbid the use of emissions reductions required by the Consent Decree in netting and as offsets while allowing for the limited use of a fraction of the emissions reductions required by the Consent Decree provided that the emissions units for which the reductions are used are being modified or constructed for Tier 2 Gasoline or Low Sulfur Diesel and that the emissions from those units are below certain levels. The provisions of this Subsection are for purposes of this Consent Decree only, and may not be used or relied upon by

Conoco or any other entity, including any party to this Consent Decree, for any other purpose, in any subsequent permitting or enforcement action, except as provided herein. These provisions are intended to limit the use of reductions made pursuant to this Consent Decree and are not intended to grant use of reductions as in netting and as offsets for reductions that have not been made.

218. Except as provided herein, Conoco shall not generate or use any NOx or SO_2 emissions reductions that result from any projects required by this Consent Decree as credits or offsets in any PSD, major non-attainment and/or minor New Source Review ("NSR") permit or permit proceeding. Notwithstanding the above, Conoco may conduct projects pursuant to this Consent Decree that create more emission reductions than are required by this Consent Decree. In such instances, Conoco, with the concurrence of the permitting authority, may retain a portion of the achieved emissions reductions for use as credits or offsets. All other emission sources of NOx and SO_2, and any netting associated with other pollutants, are outside the scope of these netting limitations and are subject to PSD/NSR applicability as implemented by the appropriate permitting authority or EPA. Use of reductions in netting and as offsets in any PSD, major non-attainment and/or minor NSR permit or permit proceeding pursuant to the limitations herein shall be further limited by the applicable regulations, and by the PSD, major non-attainment, and/or minor NSR permit.

219. Tier 2 Gasoline. From the reductions made pursuant to the Consent Decree, Conoco shall use only 100 total tons per year of NOx and 100 total tons per year of SO_2 from the refineries identified in Paragraph 5 necessary for use as credits or offsets in any PSD, major non-attainment and/or minor NSR permit or permit proceeding occurring after the Date of Lodging of this Consent Decree for Tier 2 Gasoline projects.

220. Conoco shall only use the credits for projects necessary to meet the requirements of Tier 2 Gasoline, provided that the new or modified emissions units being permitted have emission limits at the time of permitting as follows:

(a) For heaters and boilers, a limit of 0.040 lbs NOx per million BTU or less on a 3-hour rolling average basis;

(b) For heaters and boilers, a limit of 0.1 grains of hydrogen sulfide per dry standard cubic foot of fuel gas or 20 ppmvd SO_2 at 0% O_2 both on a 3-hour rolling average;

(c) For heaters and boilers, no liquid or solid fuel firing capabilities;

(d) For FCCUs, a limit of 20 ppmvd NOx at 0% O_2 or less on a 365-day rolling average basis;

(e) For FCCUs, a limit of 25 ppmvd SO_2 at 0% O_2 or less on a 365-day rolling average basis; and

(f) For SRPs, applicability of NSPS Subpart J emission limits.

221. Low Sulfur Diesel. From the reductions made pursuant to this Consent Decree, Conoco may use total 200 tons per year of NOx and 200 total tons per year of SO_2 from the refineries identified in Paragraph 5 as credits or offsets in any PSD, major non-attainment and/or minor NSR permit or permit proceeding occurring after the Date of Lodging of this Consent Decree necessary to permit the Low Sulfur Diesel projects at each refinery.

222. Conoco shall only use the credits for projects necessary to meet the requirements of the Low Sulfur Diesel rule provided that the new or modified emissions units being permitted have emission limits at the time of permitting as follows:

(a) For heaters and boilers, a limit of 0.02 pounds of NOx per million BTU or less on a 3-hour rolling average basis;

(b) For heaters and boilers, a limit of 0.1 grains of hydrogen sulfide per dry standard cubic foot of fuel gas or 20 ppmvd SO_2 at 0% O_2, both on a 3-hour rolling average;

(c) For heaters and boilers, no liquid or solid fuel firing capabilities;

(d) For FCCUs, a limit of 20 ppmvd NOx at 0% O_2 or less on a 365-day rolling average basis;

(e) For FCCUs, a limit of 25 ppmvd SO_2 at 0% O_2 or less on a 365-day rolling average basis; and

(f) For SRPs, applicability of NSPS Subpart J emission limits.

223. If Conoco can make a showing to EPA that additional credits are necessary for construction or modification of emission units required by the Tier 2 Gasoline or Low Sulfur Diesel regulations, Conoco may request that EPA allow use of additional credits for that purpose in accordance with this Part, not to exceed 5% each for NOx and SO_2 of any refinery's total reductions achieved by that date under this Consent Decree.

224. Conoco shall only use the credits under this Part if it can demonstrate to the United States that, at the time the credits are to be applied, it is otherwise in compliance with all other requirements of this Consent Decree at each of its refineries. If it is in violation of any Consent Decree requirement at any of its refineries, Conoco shall be prohibited from using any credits until the violation(s) is corrected and any stipulated penalties are paid in full.

225. Use of the emission reduction credits generated and used pursuant to this Consent Decree does not preclude Conoco from establishing plantwide applicability limits under any other existing or future state, local or federal program.

C. Restrictions Regarding the Plantwide Applicability Limits ("PALs")

Program Summary: This Subsection sets forth a process for the establishment of partial "plantwide applicability limits" ("PALs") for each of the Conoco petroleum refineries identified in Paragraph 5. If Conoco elects to use PALs in accordance with Paragraph 215, Conoco may not emit NOx, SO_2, PM or CO into the atmosphere from the emissions units included within a PAL in excess of the aggregate emissions limits ("Cap") established for the PAL pursuant to Paragraphs 226 through 242. The Cap(s) established under Paragraphs 226 through 242 for each refinery shall be considered the actual emissions for the emissions units under the PAL for the purpose of determining emissions increases associated with a physical change or change in method of operation for such emissions units for federal new source review for the life of the PAL.

D. Covered Emissions Units

226. The initial PALs established pursuant to this Subsection shall include only those emissions units identified in Attachment 7.

227. Conoco may expand, upon EPA approval, the universe of emissions units to be included within a particular PAL to include additional emissions units. Conoco shall identify all combustion units at each refinery and will endeavor to include in the PAL such units, where practicable.

228. For newly constructed units included within the PAL that receive major NSR permits and that reflect the application of BACT or LAER, the Cap shall be increased by an amount equal to the emissions units allowable emissions. For emissions units included within the PAL that are modified, that receive major NSR permits, and that reflect the application of BACT or LAER, the Cap shall be increased by an amount equal to the difference between the new allowable emissions rate and the emissions unit's previous contribution to the Cap as determined in reference to Attachment 7.

229. Establishing Baseline Emissions. Conoco shall establish baseline emissions for emissions units within any PAL based on emissions from the two (2) most recent consecutive calendar years, or other such representative two (2) calendar year periods as approved by EPA. Conoco shall calculate the baseline emissions covering the time period set forth in the preceding sentence and set forth in Attachment 7 ("Baseline Cap and Compliance Determination for the PAL(s)").

230. Initial Cap. On or before December 31, 2004, Conoco shall provide EPA with a report that identifies its proposed level for the Cap associated with each initial PAL in tons per year on a 365-day rolling average consistent with Attachment 7 ("Baseline, Cap, and Compliance Determination for the PAL(s)"). The effective date of the PALs at each of Conoco's petroleum refineries shall be the date EPA approves each such PAL.

231. Changes in Cap(s). On or before each February 15th after the PAL is approved, and each February 15th thereafter, Conoco shall submit to EPA for its approval, an application to revise the then-existing Cap. Conoco's proposal shall reflect the contribution to the Cap from each emissions unit covered by the PAL, including those emissions units that were controlled as required by the Consent Decree pursuant to Parts IV, V, VI and VII in the preceding calendar year. The recalculation of the

cap for emissions from units that were controlled as required by the Consent Decree in the preceding year, shall be determined by reference to Section II.B. of Attachment 7. In addition, Conoco's proposed revision to a Cap must be consistent with any regulatory requirements enacted by a State or local authority to meet attainment objectives, effective before December 31 of that preceding calendar year. Each Cap proposed by Conoco pursuant to this Subsection shall be expressed in tons per year on a 365-day rolling average consistent with Attachment 7.

232. Cap Approval and Compliance. EPA will notify Conoco of its determination of the Cap proposed by Conoco. Conoco will demonstrate compliance with each Cap on a 365-day rolling average beginning no later than January 1st of the calendar year following EPA's approval and on each day thereafter through December 31st of that calendar year.

233. During the life of a PAL, the following shall apply to determination of whether a major modification has occurred pursuant to PSD and major non-attainment NSR:

(a) For a modification to an emission unit under a PAL, for a particular pollutant, that affects only other emissions units within the PAL, the net emissions change for units under the PAL shall be zero.

(b) For modifications to an emissions unit within a PAL, for a particular pollutant, that affect an emissions unit outside of the PAL:

(1) the emissions change for the unit modified within the PAL shall be zero;

(2) the emissions change for emissions units under the PAL that are not modified but are affected shall be zero; and

(3) the emissions change for emissions units outside of the PAL that are affected shall be calculated as required by the applicable PSD and major non-attainment NSR regulations.

(c) For a modification to a unit outside of the PAL, for a particular pollutant, that affects an emissions unit within a PAL:

(1) the emissions change for the emissions unit within the PAL that is affected shall be zero; and

(2) the emissions change for the emissions unit outside the PAL that is affected shall be calculated as required by the applicable PSD and major non-attainment NSR

regulations.

(d) For the purposes of netting for changes to units outside of the PAL, no contemporaneous increases or decreases shall be allowed or considered for emissions units under the PAL.

(e) Net emissions change for emissions units not within the PAL shall always be less than the significance levels. Increased emissions allowed pursuant to issuance of a PSD or major non-attainment NSR permits shall not be considered an increase pursuant to 40 CFR § 52.21, and the SIP-approved PSD and major non-attainment NSR programs.

234. This Section does not in any way change, alter or modify any obligation of Conoco to comply with the concentration based limits ("ppmvd" or "lb/mmBTU") imposed by Paragraphs 15, 24, 38, 46, 49, 50 and 169.

235. This Section does not in any way change, alter or modify any obligation of Conoco, whether existing or imposed by virtue of this Consent Decree, to comply with the NSPS. If any physical or operational change results in an increase in the emission rate to the atmosphere of any pollutant from the affected facility to which a NSPS applies, Conoco must comply with all applicable parts of the NSPS and the General Provisions in 40 CFR Part 60, Subpart A. The determination of whether there has been an increase in emissions to the atmosphere shall be based on a comparison of the emission rate (in pounds per hour) at the maximum achievable capacity prior to and after the physical or operational change.

236. The establishment of a PAL under this Section does not in any way change, alter or modify any obligation of Conoco, to comply with any applicable minor NSR permitting requirements or obligations.

237. Notice of Changes to Emissions Unit. Together with its annual proposal for a Cap revision required by Paragraph 231, Conoco shall provide a written report to EPA and the Plaintiff-Interveners of actual construction of physical or operational changes made to emissions units included within any PAL. The report shall:

(a) Describe the physical or operational change;

(b) Identify the emissions unit that the physical or operational change has affected or will affect, whether or not such emissions unit is included within the Cap;

(c) Provide a statement of whether or not any New Source Performance Standard ("NSPS") is applicable to the physical or operational change and the reason why the NSPS does or does not apply; and

(d) A netting analysis (increases and decreases) for all emissions units not within the PAL that emit SO_2 or NOx, PM and CO for that prior calendar year.

238. PAL and Cap Life and Renewal. The life of any PAL established pursuant to this Section shall be no more than five (5) years from its effective date as determined under Paragraph 230. The provisions of Paragraph 233 of the Consent Decree shall apply only during those same five (5) years.

239. Cap Life. Expiration of the Cap without renewal shall result in an examination of PSD/NSR applicability for all emissions units included within the PAL in accordance with the then-effective PSD and major non-attainment NSR regulations.

240. Second PAL. At any time prior to three (3) months before termination of a PAL established pursuant to Paragraph 230, Conoco may apply to EPA and the appropriate Plaintiff Intervener to renew such PAL. The baseline for any second PAL shall be calculated pursuant to Attachment 7. Conoco shall determine baseline emissions for emissions unit to be included in any second PAL through monitoring conducted consistent with Attachment 7. Conoco shall comply with the terms and conditions of Paragraphs 234 with respect to any renewed PAL.

241. Cap Exceedance. If Conoco allows or causes an exceedance of the 365-day rolling average Cap for any pollutant, Conoco shall undertake an analysis to determine whether emission unit(s) at the source were modified for that pollutant during the life of the PAL. Conoco shall complete the analysis required by the foregoing sentence within ninety (90) days of the exceedance and report such analysis to EPA. No later than one hundred eighty (180) days from the date of the exceedance, Conoco shall submit to EPA for its review and approval a proposed BACT/LAER determination for each modified emissions unit(s) identified above and a schedule for installation of any BACT/LAER controls proposed. Conoco shall propose a schedule that will propose installation of controls as soon as practicable but not to exceed forty-two (42) months from the initial date of the exceedance. EPA shall review and, after consultation with the appropriate State or local permitting authority, notify Conoco of its approval or rejection of the proposal. Upon EPA approval, Conoco shall install BACT (or LAER as appropriate) on the emissions units modified. The modification analysis shall be conducted as though the Cap is a non-enforceable limit. Except as provided in this Subsection, nothing in this provision is intended to limit the applicability of 40 CFR § 52.21, the SIP-approved PSD and major non-attainment NSR programs.

242. CAP Exceedance Stipulated Penalties. For exceeding a Cap, Conoco shall pay the higher of $27,500 (as adjusted for inflation) per pollutant for each succeeding day that Conoco exceeds the 365-

day annual rolling average or $20,000 per ton (or fraction thereof) in excess of the Cap for each pollutant.

PART XVI.
SUPPLEMENTAL AND BENEFICIAL ENVIRONMENTAL PROJECTS

243. In accordance with the schedule set forth and the scope of work submitted pursuant to Attachment 8 to this Consent Decree, Conoco shall spend $5.1 million ($5,100,000) on Supplemental Environmental Projects ("SEPs") and Beneficial Environmental Projects ("BEPs") in the communities where their refineries are located in the amounts specified in Paragraphs 244, 245 and 246. Conoco agrees that in any public statements regarding the funding of the projects identified in this Consent Decree, Conoco must clearly indicate that these projects are being undertaken pursuant to this settlement. Except as otherwise provided in this Consent Decree, Conoco shall not use or rely on the emission reductions generated as a result of their performance of the SEPs required by this Part in any emissions credit, trading, or netting program. Refinery-site projects, including energy projects, may be considered for inclusion in either State- or Federally-determined projects.

244. Conoco shall spend $1.35 million ($1,350,000) as SEP(s) or BEP(s) in the Commerce City/northeast metropolitan Denver area. These projects are to be determined jointly between Conoco, the appropriate Plaintiff-Intervener, and EPA.

245. Conoco shall spend $500,000 in each community surrounding the Billings, Lake Charles and Ponca City refineries on joint Conoco and state-determined SEP(s) or BEP(s). These projects are to be determined jointly between Conoco, the appropriate Plaintiff-Intervener, and EPA.

246. Conoco shall spend $2,250,000 for Federal projects benefitting the communities in which the Conoco facilities are located. These projects are to be determined jointly between Conoco, the appropriate Plaintiff-Intervener, and EPA to fund projects as follows: $725,000 in Colorado; $725,000 in Montana; $400,000 in Louisiana; and $400,000 in Oklahoma.

247. Federal projects at one or more refineries may include the following projects or other projects proposed by Conoco in accordance with Attachment 8 which are community-based and/or facility-based SEPs, subject to approval by EPA and the appropriate Plaintiff-Intervener:

(a) Conducting a pilot test and evaluation of "Smart LDAR" technology, using lasers to detect

emission leaks, at one or more refineries. Such test and evaluation will be conducted in consultation and coordination with EPA;

(b) Purchasing mobile air quality analytical equipment for state or local air authorities that all the Parties can agree upon;

(c) Purchasing portable air quality analyzers for state or local air authorities;

(d) Improving ambient monitoring systems through projects such as increased portable SO_2 monitoring devices; improving information management, upgrading PM-10 or NOx monitors;

(e) Watershed improvement projects;

(f) Funding retrofits in truck or school bus fleets to reduce PM and NOx emissions;

(g) Implementing odor control projects;

(h) Funding equipment improvements for local air pollution authorities or local emergency response department;

(i) Providing grant money to state or local clean air or energy efficiency projects,

(j) Fund or implement hazardous waste collection programs or recycling programs, or

(k) Sustainability projects to minimize waste creation or enhance energy efficiency.

PART XVII.
CIVIL PENALTY

248. Within thirty (30) calendar days of Entry of this Consent Decree, Conoco shall pay a combined civil penalty in the amount of $1.5 million dollars ($1,500,000). Of the total, $1,050,000 shall be paid to the United States. Conoco 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 90-5-2-1-07295/1, and the civil action case name and case number of the Southern District of Texas. The costs of such EFT shall be Conoco's

responsibility. Payment shall be made in accordance with instructions provided to Conoco 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. Conoco shall provide notice of payment, referencing the USAO File Number and DOJ Case Number 90-5-2-1-07295/1, and the civil action case name and case number, to the Department of Justice and to EPA, as provided in Paragraph 296 (Notice).

249. Of the total civil penalty, Conoco shall pay $250,000 to Plaintiff-Intervener, the State of Louisiana. Payment shall be made in the form of a certified check payable to the Louisiana Department of Environmental Quality and delivered to Darryl Serio, Fiscal Officer, Office of Management and Finance, LDEQ, P.O. Box 82231, Baton Rouge, Louisiana, 70884.

250. Of the total civil penalty, Conoco shall pay $125,000 to Plaintiff-Intervener, the State of Oklahoma. Payment shall be by check or money order made payable to the Department of Environmental Quality Revolving Fund, and delivered to: Oklahoma Department of Environmental Quality Finance and Human Resources Management, P.O. Box 2036, Oklahoma City, OK 73101; attention: Janet Pennington.

251. In lieu of a civil penalty, Conoco shall expend certain sums for SEPs and BEPs in the State of Colorado as described in Part XVI.

252. Of the total civil penalty, Conoco shall pay $75,000 to Plaintiff-Intervener, the State of Montana. Payment shall be made payable to the State of Montana and delivered to: John L. Arrigo, Administrator, Enforcement Division, Montana Department of Environmental Quality, P.O. Box 200901, Helena, MT 59620-0901.

253. Upon entry of this Decree, this Decree shall constitute an enforceable judgment for purposes of post-judgment collection in accordance with Rule 69 of the Federal Rules of Civil Procedure, the Federal Debt Collection Procedure Act, 28 U.S.C. §§ 3001-3308, and other applicable federal authority. The United States and the Plaintiff-Interveners shall be deemed judgment creditors for purposes of collection of any unpaid amounts of the civil and stipulated penalties and interest.

254. No amount of the civil penalty to be paid by Conoco shall be used to reduce their federal or state tax obligations.

PART XVIII.
STIPULATED PENALTIES

255. Conoco shall pay stipulated penalties to the United States and the appropriate Plaintiff-Intervener (split 50% to each), for each failure by Conoco 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.

256. 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 (l) and (m). 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 Conoco'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.B, IV.D, V.C, V.E or VI.B, 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. Where a single event triggers more than one stipulated penalty provision in this Consent Decree, only the higher of the individual stipulated penalties shall apply.

(a) Requirements for NOx emission reductions from FCCUs (Part IV):

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

(2) Failure to conduct NOx additive demonstrations, if applicable, as required by Section A: $30,000 per month per refinery

(3) Failure to install SNCR, as required by Section C: $100,000 per quarter per refinery

(4) Failure to conduct SNCR Optimization Study, if applicable, as required by Section C: $30,000 per month per refinery

(5) Failure to comply with emission limits, as required by Section B and D: $1,500 per day per emission limit per emission point

(6) Failure to submit timely reports, as required by Sections A, C, and E: $1,000 per week per report

(7) Failure to install, calibrate, maintain and operate properly CEMS, as required by Section F and Part XI: $2,500 per month per CEMS

(b) Requirements for SO_2 emission reductions from FCCUs (Part V):

(1) Failure to timely conduct optimization studies, as required by Section A: $5,000 per month per unit

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

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

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

(c) Requirements for PM emission reductions from FCCUs (Part VI):

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

(2) Failure to conduct the stack tests as required by Paragraph 47: $2,500 per month per FCCU

(3) Failure to submit timely reports, as required by Paragraph 47: $1,000 per week per report beginning on the 7th day after which the report was due

(d) Requirements for CO emission reductions from FCCUs (Part VI):

(1) Failure to comply with emission limits, as required by Paragraphs 49 and 50: $1,500 per day per emission limit per emission point

(2) Failure to install, calibrate, maintain and operate properly CEMS, as required by Paragraph 53 and Part XI: $2,500 per month per CEMS

(e) Requirements for NSPS Regenerator Applicability (Part VI):

(1) Failure to comply with emission limits, as required by Paragraph 54: $1,500 per day per emission limit per emission point

(f) Requirements for Heaters/Boilers (Part VII):

(1) Failure to meet the emission limits and to demonstrate compliance with Paragraphs 55 and 56:

(i) $800 per day for each heater or boiler with capacity of 150 mmBTU/hr (HHV) or greater

(ii) $400 per day for each heater or boiler with capacity of less than 150 mmBTU/hr (HHV)

(2) Failure to achieve the total combined NOx reductions in accordance with Paragraph 56: $100,000 per quarter, per refinery

(3) Failure to achieve two-thirds (2/3) of the combined NOx reductions in accordance with Paragraph 58: $200,000 per quarter, per refinery

(4) Failure to install NOx controls on at least 30% of the heater and boiler capacity in accordance with Paragraphs 59 and 60: $100,000 per quarter, per refinery

(5) Failure to submit the Control Plan and Update Reports in accordance with Paragraph 61: $1,000 per report per month

(6) Failure to conduct a performance test, to install, calibrate and operate CEMS, or to establish operating parameters in accordance with Paragraph 66 and Part XI: $2,000 per month per unit

(7) Failure to make heater or boiler Subpart J compliance by Date in Paragraph 69 or Attachment 3: $2,500 per month per heater

(8) Failure to submit plan for Subpart J compliance per Attachment 3: $1,000 per report

per month

(9) Failure to limit SO_2 emissions from fuel oil burning at the Billings Refinery to 300 tons per year as required by Paragraph 71: $5,000 per ton over 300 tons

(10) Failure to meet CO controls on Controlled Heaters and Boilers required by Paragraph 73(a):

(i) $800 per day for each heater or boiler with capacity of 150 mmBTU/hr (HHV) or greater

(ii) $400 per day for each heater or boiler with capacity of less than 150 mmBTU/hr (HHV)

(g) Requirements for Benzene Waste Operations NESHAP program enhancements (Part VIII):

(1) Failure to timely complete compliance reviews and verification as required by Section C, audits as required by Section H, or waste/slop oil review as required by Section D: $5,000 per month per review/audit

(2) Failure to timely sample, as required by the plans under Sections K, L, M or N: $5,000 per week or $30,000 per quarter, per stream (whichever amount is greater, but not to exceed $150,000 per quarter)

(3) Failure to timely install secondary carbon canisters, as required by Section F: $5,000 per week per canister

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

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

(6) Failure to perform monitoring, as required by Paragraph 117(d): $500 per monitoring event

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

(8) If it is discovered by an EPA or state investigator, or their agent, that Conoco failed to mark segregated stormwater drains, as required by Section P: $1,000 per week per drain

(9) Failure to timely complete reviews, analyses or inspections, as required by Section G, O or Paragraph 117(c): $500 per week per review, analysis or inspection

(10) Failure to timely submit complete reports under Section Q: $1,000 per week per report

(11) Following the development of the final Compliance Review and Verification Plan, if it is discovered by an EPA or state investigator or inspector, or their agent, that Conoco 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

(h) Requirements for Leak Detection and Repair program enhancements (Part IX):

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

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

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

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

(5) Failure to develop and timely implement first attempt at repair, as required by Section

G: $10,000 per month

(6) Failure to implement monitoring program, as required by Section H: $10,000 per month per process unit

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

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

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

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

(11) Failure to attempt to minimize a component being placed or continuing to be on the "delay of repair" list, as required by Section L: $5,000 per component

(12) Failure to timely submit reports required under Section M: $1,000 per week per report

(13) Following the completion of the refinery-wide written program(s), if it is discovered by an EPA or state investigator or inspector, or their agent, that Conoco failed to include all required components in its LDAR program: $175 per component

(i) Requirements Applicable to SRPs and Flaring (Part X):

(1) Failure to comply with emission limits identified or referred to in Section D:

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

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

(3) Operation of the SRP during scheduled maintenance of its associated TGU: $25,000

per SRP per day per refinery

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

(5) Failure to conduct the Denver No. 1 SRP Optimization Study, as required by Section D, or to implement such Study's recommendations: $5,000 per month

(6) Failure to timely submit any plan or report required by Part X: $1,000 per week per plan or report, beginning on the 7th day after the report was due

(7) Submitting any plan or report that does not conform to the requirements of Part X: $1,000 per plan or report

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

(9) Failure to timely monitor emissions as required under Part X: $1,000 per day per refinery

(j) Requirements for Subpart QQQ Compliance at Billings Refinery (Part XII):

(1) Failure to evaluate process water streams for entry into storm water system per Part XII: $1,000 per stream

(2) Failure to submit report required under Part XII: $1,000 per day

(3) Failure to submit report identifying whether Conoco will be removing streams or retrofitting wastewater system per Paragraph 206: $1,000 per day

(4) Failure to meet compliance deadline of Part XII: $1,000 per day

(5) Failure to submit final report per Part XII: $1,000 per day

(k) Requirements for Permitting (Part XIII):

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

(l) Requirements for Reporting and Recordkeeping (Part XIV):

(1) Failure to timely submit any report required by this Part beginning on the 7th day past the report's due date: $5,000 per week, per report

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

257. Conoco 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 Conoco 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. Conoco shall pay the stipulated 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 90-5-2-1-07295/1, and the civil action case name and case number of the Southern District of Texas. The costs of such EFT shall be Conoco's responsibility. Payment shall be made in accordance with instructions provided to Conoco 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. Conoco shall provide notice of payment, referencing the USAO File Number and DOJ Case Number 90-5-2-1-07295/1, and the civil action case name and case number, to the Department of Justice and to EPA, as provided in Paragraph 296 (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, Fiscal Officer, Office of Management and Finance, LDEQ, P.O. Box 82231, Baton Rouge, Louisiana, 70884.

(c) Stipulated Penalties Owed Plaintiff-Intervener the State of Colorado. Payment to Plaintiff-Intervener the State of Colorado shall be made by submitting a check, payable to the Colorado Department of Public Health and Environment, 4300 Cherry Creek Drive South,

Denver, Colorado 80246-1530.

(d) Stipulated Penalties Owed Plaintiff-Intervener the State of Montana. Payment to Plaintiff-Intervener the State of Montana shall be made by submitting a certified check, payable to the State of Montana, and delivered to: John L. Arrigo, Administrator, Enforcement Division, Montana Department of Environmental Quality, P.O. Box 200901, Helena, MT 59620-0901.

(e) Stipulated Penalties Owed Plaintiff-Intervener the State of Oklahoma. Payment to Plaintiff-Intervener the State of Oklahoma shall be made by submitting a check or money order made payable to the Department of Environmental Quality Revolving Fund, and delivered to: Oklahoma Department of Environmental Quality Finance and Human Resources Management, P.O. Box 2036, Oklahoma City, OK 73101; attention: Janet Pennington

258. Should Conoco 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 XXII within the time provided in this Part for payment of stipulated penalties. If the dispute is thereafter resolved in Conoco's favor, the escrowed amount plus accrued interest shall be returned to Conoco, 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 Conoco.

259. 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 Conoco'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 Conoco 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 Conoco refineries outside their state.

260. 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.

PART XIX.
RIGHT OF ENTRY

261. Any authorized representative of the EPA or an appropriate state agency, upon presentation of credentials and compliance with the Refinery's safety requirements, shall have a right of entry upon the premises of the Conoco 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 Conoco 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.

PART XX.
FORCE MAJEURE

262. If any event including, but not limited to construction delays, one or more union strikes at Conoco facilities, preparation for union strikes, acts of terrorism and/or an act of declared or undeclared war, occurs which causes or may cause a delay or impediment to performance in complying with any provision of this Consent Decree, and which otherwise meets the requirements of this Part, Conoco 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 Conoco first knew of the event or should have known of the event by the exercise of due diligence. In this notice, Conoco 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 Conoco to prevent or minimize the delay and the schedule by which those measures will be implemented. Conoco shall adopt all reasonable measures to avoid or minimize such delays.

263. Failure by Conoco to substantially comply with the notice requirements of Paragraph 262 as specified above shall render this Part XX voidable by the United States and Plaintiff-Interveners as to the specific event for which Conoco has failed to comply with such notice requirement, and, if voided, it shall be of no effect as to the particular event involved.

264. The United States and the appropriate Plaintiff-Intervener shall notify Conoco in writing regarding their claim of a delay or impediment to performance within thirty (30) business days of receipt of the Force Majeure notice provided under Paragraph 262.

265. 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 Conoco, 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. Conoco shall not be liable for stipulated penalties for the period of any such delay.

266. If the United States and the appropriate Plaintiff-Intervener do not accept Conoco's claim of a delay or impediment to performance, Conoco 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 Conoco 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 Conoco 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 Conoco, including any entity controlled by them, and that they could not have prevented the delay by the exercise of due diligence, Conoco 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.

267. Conoco 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. Conoco 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.

268. Unanticipated or increased costs or expenses associated with the performance of Conoco'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.

269. 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 Conoco delivering a notice

of Force Majeure or the parties' inability to reach agreement.

270. As part of the resolution of any matter submitted to this Court under this Part XX, 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. Conoco shall be liable for stipulated penalties for its failure thereafter to complete the work in accordance with the extended or modified schedule.

PART XXI.
EFFECT OF SETTLEMENT

271. FCCUs. This Consent Decree constitutes full settlement of and 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 CFR § 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 CFR §51.165(a) and (b) and Part 51, Subpart S, and § 52.24, and the Colorado, Louisiana, Montana and Oklahoma regulations which incorporate and/or implement those rules, for any increase in SO_2, NOx and CO emissions resulting from Conoco's construction, modification, or operation of the FCCUs at the refineries identified in Paragraph 5, occurring prior to Lodging of this Consent Decree. During the life of this Consent Decree, the units described in this Paragraph shall be on a compliance schedule and any modification to these units, as defined in 40 CFR § 52.21, which is not required by this Consent Decree is beyond the scope of this release.

272. Heaters and Boilers. This Consent Decree constitutes full settlement of and shall resolve all civil liability of Conoco to the United States and the Plaintiff-Interveners for the violations alleged in the United States and the Plaintiff-Interveners' Complaints and all civil liability of Conoco occurring prior to entry of this Consent Decree under the Prevention of Significant Deterioration (PSD) and Non-Attainment New Source Review requirements at Parts C and D of the Act, and the regulations promulgated thereunder at 40 CFR § 52.21 (the "PSD" rules), and state and local regulations which incorporate and/or implement those rules, for any increase in SO_2, NOx, and CO emissions resulting from Conoco's construction, modification, or operation of the process heaters and boilers at the refineries identified in Paragraph 5. During the life of the Consent Decree, these units shall be on a compliance schedule and any modification to these units, as defined in 40 CFR § 52.21, which is not required by this Consent Decree is beyond the scope of this release.

273. VOCs. Upon Conoco's implementation of the enhanced LDAR program and submittal of the applications for revised permits pursuant to Paragraph 210 (b), the United States and Plaintiff-Interveners covenant not to sue Conoco for civil penalties for increases in VOC emissions resulting from identification of new components through the audits conducted pursuant to Paragraphs 128 through 130. The United States and Plaintiff-Interveners expressly reserve their right to bring PSD/NSR claims for any other VOC emissions units at the refinery and to consider the implications of the revised emission estimates on past PSD/NSR applicability determinations.

274. Subpart J. This Consent Decree constitutes full settlement of and shall resolve all civil liability of Conoco to the United States and the Plaintiff-Interveners for the violations alleged in the United States' and Plaintiff-Interveners' Complaints and all civil liability of Conoco 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: NSPS Subpart J for (1) FCCU regenerators located at the facilities and as per the schedule set out in Paragraph 54, (2) the fuel gas combustion devices including the flares listed in Paragraph 154(h) and all heaters and boilers, and (3) the SRPs 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-Interveners' claims under the statutes and regulations identified in this Paragraph accrued, through the Date of Entry of the Consent Decree.

275.(a) NSPS Subpart A and J Releases. Conoco's submission of notifications of compliance with respect to the flares listed in Paragraphs 155 and 161 constitutes full settlement of and shall resolve all past civil liability of Conoco to the United States and the Plaintiff-Interveners for NSPS Subpart A and J for those flares through the date of the demonstrated or certified compliance.

275.(b) NSPS Subpart H Release. Conoco shall continue to comply with the New Source Performance Standards (NSPS), 40 CFR Part 60, Subpart H for Sulfuric Acid Plants at the Lake Charles refinery. Conoco's application to modify existing permits to incorporate the Subpart H requirements, and receipt of the modified permits, shall resolve all civil liability of Conoco for any violations that occurred during the period beginning when the United States' claims and or Plantiff-Intervener's claims under Subpart H accrued, through the Date of Lodging of the Consent Decree.

276. Benzene Waste and LDAR Releases. Conoco's performance of the measures required pursuant to Parts VIII and IX, constitutes full settlement of and shall resolve all civil liability of Conoco 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: Leak Detection and Repair (LDAR), 40 CFR Part 60, Subparts VV and GGG,

and 40 CFR Part 63, Subparts F, H, and CC; and National Emission Standards for Hazardous Air Pollutants (NESHAP) for Benzene, 40 CFR Part 61, Subparts FF, J and V pursuant to Section 112(d) of the Act, and state and local regulations which incorporate or implement those rules. This release also includes those events that continued past the Date of Lodging, provided those events were identified in or prior to the submittal of each Refinery's initial Third Party LDAR audit conducted pursuant to Paragraph 129 or the BWON Compliance Verification Review conducted pursant to Paragraphs 78 and 80 and these events are addressed pursuant to Paragraphs 83, 84, 85, and 86 or 132 as appropriate. This release specifically includes, but is not limited to, those violations which Conoco has previously self-disclosed to Plaintiff-Interveners Colorado and Montana as a result of audits conducted in 2000 and/or 2001. For purposes of this Paragraph, the "relevant time period" shall mean the period beginning when the United States' claims and/or Plaintiff-Interveners' claims under the statutes and regulations identified in this Paragraph accrued through Date of Lodging.

277. Other Issues. Conoco's completion of the injunctive requirements set forth in Parts I-XI of this Consent Decree and EPA's concurrence shall also constitute full settlement of all civil liability of Conoco to the United States and Plaintiff-Interveners for previously identified state or federal PSD issues for SO_2, NOx, and CO, and BWON, LDAR and NSPS Subpart J matters, including the following specific alleged violations at the refineries identified in Paragraph 5:

(a) Billings Refinery:

This Consent Decree resolves Conoco's discharge of process oily wastewater into the segregated stormwater systems in violation of Subpart QQQ as alleged in the United States' Complaint.

(b) Ponca City, Oklahoma:

This Consent Decree resolves the BWON, LDAR, PSD, and NSPS Subpart J issues addressed in Oklahoma DEQ Consent Order No. 01-395 and all Clean Air Act issues identified in the Oklahoma DEQ Compliance Inspection conducted on May 22- 23, 2001.

(c) Lake Charles, Louisiana:

This Consent Decree resolves the violations outlined in the Louisiana Department of Environmental Quality Consolidated Compliance Order and Notice of Potential Penalty No. AE-CN-01-0008 dated January 26, 2001, and No. AE-CN-01-0192 dated November 13, 2001.

(d) Denver, Colorado:

This Consent Decree resolves the Clean Air Act violations noted as being referred to the

United States Environmental Protection Agency in the December, 2001 Compliance Order on Consent between Colorado and Conoco Inc.

278. If Conoco elects to implement one or more plantwide applicability limits for PM in accordance with the election in Paragraph 215, the NSR/PSD liability release provided for in Paragraphs 271 and 272 for FCCUs and process heaters and boilers shall be extended to PM, provided Conoco meets the additional limits in Paragraphs 48 and 72.

PART XXII.
DISPUTE RESOLUTION

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

280. 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.

281. 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 Conoco, unless the parties' representatives agree to shorten or extend this period.

282. If these dispute resolution procedures are invoked to resolve a dispute regarding particular work practice or the contents of a compliance plan, Conoco shall comply with the elements of the plan or emission limit it has proposed until such time as the dispute is completely resolved.

283. 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 Conoco 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 forty-five (45) calendar days of Conoco's receipt of the written summary of the United States and the appropriate Plaintiff-Intervener' position, Conoco 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 Conoco's claim, the position of the United States shall be the Plaintiffs' final position.

284. 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.

285. 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 XXII or the parties' inability to reach agreement.

286. 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 administrative record, as identified and agreed to by all parties.

287. 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. Conoco shall be liable for stipulated penalties for their failure thereafter to complete the work in accordance with the extended or modified schedule.

XXIII.
GENERAL PROVISIONS

288. Other Laws. Except as specifically provided by this Consent Decree, nothing in this Consent Decree shall relieve Conoco of its obligation to comply with all applicable federal, state and local laws and regulations. Subject to Paragraph 260 (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 Conoco'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

Conoco's compliance with this Consent Decree in a subsequent contempt action.

289. Use of Contractors to Meet Conoco's Obligations. Except where expressly prohibited, Conoco may use a contractor to fulfill its obligations under this Consent Decree. Where Conoco uses one or more contractors to comply with its obligations, Conoco shall ensure that the contractor is aware of and in compliance with the requirements of the Consent Decree.

290. Reserved.

291. Liability for stipulated penalties, if applicable, shall accrue for violation of such obligations and payment of such stipulated penalties may be demanded by the United States as provided in this Consent Decree, provided that stipulated penalties that may have accrued between the Date of Lodging of the Consent Decree and the Date of Entry of the Consent Decree may not be collected by the United States unless and until Consent Decree is entered by the Court.

292. 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.

293. Costs. The United States, the Plaintiff-Interveners, and Conoco shall each bear their own costs and attorneys' fees.

294. Public Documents. All information and documents submitted by Conoco 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 Conoco in accordance with 40 CFR Part 2, or any equivalent state statutes and regulations.

295. 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 CFR § 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 Conoco facilities are located, and opportunity for public comment, consideration of any comments, and concurrence by the State Attorney General.

296. Notice. Unless otherwise provided herein, notifications to or communications with the United States and the appropriate Plaintiff-Intervener or Conoco 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 Conoco 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, Conoco shall also submit a copy of that notice or other writing to the Plaintiff-Intervener for the state in which the refinery is located. 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
United States Department of Justice
P.O. Box 7611, Ben Franklin Station
Washington, DC 20044-7611

United States Attorney
Southern District of Texas
c/o United States Marshal Service
United States Courthouse
515 Rusk
Houston, Texas 77002

As to the United States Environmental Protection Agency:

Director
Air Enforcement Division "AED" (2242A)
Office of Enforcement and Compliance Assurance
United States 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 6:
Chief
Air, Toxics, and Inspection Coordination Branch (6EN-A)
Compliance Assurance and Enforcement Division
United States Environmental Protection Agency
Region 6
1445 Ross Avenue
Dallas, Texas 75202

EPA Region 8:

Technical Enforcement Program Air Director
Mail Code 8ENF-T
Office of Enforcement, Compliance and Environmental Justice
United States Environmental Protection Agency Region 8
999 18th Street, Suite 300
Denver, CO 80202-2466

As to Conoco:

Donald J. Pirolo, Project Manager
Implementation Lead
Conoco Inc.
600 North Dairy Ashford
Room PO2052
Houston, Texas 77079
Telephone: (281)293-1815

As to Plaintiff-Intervener the State of Colorado:

Robert Jorgenson
Supervisor, Field Services Unit
Stationary Sources Program
Air Pollution Control Division
Colorado Department of Public Health & Environment
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530

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 Plaintiff-Intervener the State of Oklahoma:

Eddie Terrill
Division Director
Air Quality Division, Department of Environmental Quality
P.O. Box 1677
Oklahoma City, OF 73101-1677

As to Plaintiff-Intervener the State of Montana:

Administrator
Enforcement Division
Montana Department of Environmental Quality
Metcalf Building
P.O. Box 200901
Helena, MT 59620-0901

Chief
Air & Waste Management Bureau
Montana Department of Environmental Quality
Metcalf Building
P.O. Box 200901
Helena, MT 59620-0901

297. Approvals. All EPA approvals or comments required under this Decree shall come from EPA, Air Enforcement Division (AED) at the address listed in Paragraph 296 (Notice). All Plaintiff-Intervener approvals shall be sent from the offices identified in Paragraph 296.

298. 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.

299. The information required to be maintained or submitted pursuant to this Consent Decree is not subject to the Paperwork Reduction Act of 1980, 44 United States Code. §§ 3501 et seq.

300. 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.

301. Modification. This Consent Decree may be modified by the written approval of the United States, the appropriate Plaintiff-Intervener and Conoco or by Order of the Court. Furthermore, EPA and the appropriate Plaintiff Intervener may allow extensions of compliance dates upon a written and substantiated showing by Conoco of good cause that such a delay is necessary. Additionally, it is anticipated that the Parties may reduce the frequency or nature of reporting over time.

302. 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.

303. This Consent Decree constitutes the entire agreement and settlement between the Parties. Prior drafts of the Consent Decree shall not be used in any action involving the interpretation or enforcement of the Consent Decree.

PART XXIV.
TERMINATION

304. This Consent Decree shall be subject to termination upon motion by the United States, the Plaintiff-Intervener, or Conoco after Conoco satisfies all requirements of this Consent Decree. The requirements for termination include payment of all stipulated penalties that may be due to the United States or the Plaintiff-Intervener under this Consent Decree, installation of control technology systems as specified herein and the performance of all other Consent Decree requirements, the receipt of all permits specified herein, and EPA's receipt of the first calendar quarterly progress report following the conclusion of Conoco's operation for at least one year of all units in compliance with the emission limits established herein. At such time, if Conoco believes that it is in compliance with the requirements of this

Consent Decree and the permits specified herein and has paid any stipulated penalties required by this Consent Decree, then it shall so certify to the United States and the Plaintiff-Intervener, and unless any of the Plaintiffs object in writing with specific reasons within one hundred twenty (120) days of receipt of the certification, the Court shall order that this Consent Decree be terminated on Conoco's motion.

So entered in accordance with the foregoing this_____day of _____, 2002.

_____

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
United States Department of Justice
10th & Pennsylvania Avenue, N.W.
Washington, DC 20530

_____ Date _____

Dianne M. Shawley
Senior Counsel
Environment and Natural Resources Division
United States Department of Justice
1425 New York Avenue, N.W.
Washington, DC 20005

_____ Date _____

Mervyn Mosbacker
United States Attorney

By:

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

FOR UNITED STATES ENVIRONMENTAL PROTECTION AGENCY:

_____ Date _____

Sylvia Lowrance
Acting Assistant Administrator
Office of Enforcement and Compliance Assurance
United States Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

FOR PLAINTIFF-INTERVENER THE STATE OF COLORADO:

_____ Date _____

Attorney General

PRELIMINARY APPROVAL BY 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 _____

Ted R. Broyles, II
Senior Attorney (LA Bar No: 20456)
Legal Division
Louisiana Department of Environmental Quality
(225) 765-0236

FOR PLAINTIFF-INTERVENER THE STATE OF OKLAHOMA:

_____ Date _____

Mark S. Coleman
Executive Director
Oklahoma Department of Environmental Quality
Oklahoma City, OK 73101-1677

FOR PLAINTIFF-INTERVENER THE STATE OF MONTANA:

_____ Date _____

Jan P. Sensibaugh, Director
Montana Department of Environmental Quality
Metcalf Building
P.O. Box 20091
Helena, MT 59620-0901

FOR DEFENDANT, CONOCO INC.:

_____ Date _____

A.W. Dunham
President and CEO

Attachment 1

Heater/Boiler

Data to be Included:

For each of the heaters and boilers at each refinery for which reporting is required:

(1) the maximum heat input capacities in mmBTU/hr;
(2) the baseline emission rate for both calendar years 1999 and 2000 in lbmBTU and tons per year; and
(3) the type of data used to derive the emission estimate (i.e. emission factor, stack test, or CEMS data)**.**

ATTACHMENT 2
DETERMINING THE OPTIMIZED ADDITION RATES OF LOW NOx COMBUSTION PROMOTERS AND NOx REDUCING CATALYST ADDITIVES AT THE FCCUs

I. PURPOSE

This Appendix defines a process by which Conoco shall determine the Optimized Addition Rates for Low NOx Combustion Promoters and NOx Reducing Catalyst Additives during the Optimization Period for each FCCU.

II. ESTABLISHING AN OPTIMIZED LOW NOx COMBUSTION PROMOTER ADDITION RATE

A. Overview. Establishing an Optimized Low NOx Combustion Promoter Addition Rate for each FCCU is a three-step process: (1) establishing a minimum addition rate for the conventional combustion promoter that Conoco currently uses such that the effectiveness of the conventional combustion promoter is maintained (the "Minimum Conventional Combustion Promoter Addition Rate"); (2) replacing the conventional combustion promoter with Low NOx Combustion Promoter at an addition rate that is the functional equivalent of the Minimum Conventional Combustion Promoter Addition Rate (the "Initial Low NOx Combustion Promoter Addition Rate"); and (3) increasing the addition rate up to two times the Initial Low NOx Combustion Promoter Addition Rate if the Initial Low NOx Combustion Addition Rate is not effective (the "Optimized Low NOx Combustion Promoter Addition Rate"). Conoco may elect to forego the establishment of an optimized Low NOx Combustion Promoter Addition Rate as required below in B through E for an FCCU if Conoco agrees to replace all Conventional Combustion Promoter with Low NOx Combustion Promoter in that FCCU.

B. "Effectiveness" Determinations. The effectiveness of conventional combustion promoter shall be determined by the following criteria: (1) afterburn is controlled and regenerator temperature and combustion levels are adequately maintained; and (2) temperature excursions are brought under control adequately. The effectiveness of Low NOx Combustion Promoter shall be determined by those two criteria and by whether a measurable reduction in NOx emissions occurs.

C. Establishing the Minimum Conventional Combustion Promoter Addition Rate. Conoco shall reduce its historical usage of conventional combustion promoters to the point that the addition rate is the minimum necessary to retain the effectiveness of the conventional combustion promoter that Conoco is using ("Minimum Conventional Combustion Promoter Addition Rate").

D. Establishing the Initial Low NOx Combustion Promoter Addition Rate. Based on information provided by the vendor, Conoco shall replace conventional combustion promoter with Low NOx Combustion Promoter at a rate that is the functional equivalent of the Minimum Conventional Combustion Promoter Addition Rate. This functionally equivalent rate shall be called the Initial Low NOx Combustion Promoter Addition Rate.

E. Establishing the Optimized Low NOx Combustion Promoter Addition Rate. If the Low NOx Combustion Promoter is not effective at the Initial Low NOx Combustion Promoter Addition Rate, Conoco shall increase, by up to two times, the Initial Low NOx Combustion Promoter Addition Rate. If, at two times the Initial Low NOx Combustion Promoter Addition Rate, the Low NOx Combustion Promoter is not effective, Conoco may discontinue the use of Low NOx Combustion Promoter.

III. ESTABLISHING AN OPTIMIZED NOx REDUCING CATALYST ADDITIVE ADDITION RATE

A. Overview. The Optimized NOx Reducing Catalyst Additive Addition Rate shall be determined by evaluating NOx emissions reductions and annualized costs at three different addition rates.

B. The Increments. The three addition rates or "increments" shall be based on total FCC catalyst addition rates and shall be:

1.0 Weight % NOx Reducing Catalyst Additive
1.5 Weight % NOx Reducing Catalyst Additive
2.0 Weight % NOx Reducing Catalyst Additive

C. The Procedure. Conoco shall successively add NOx Reducing Catalyst Additive at each increment set forth above. Once a steady-state has been achieved at each increment, Conoco shall evaluate the performance of the NOx Reducing Catalyst Additive in terms of NOx emissions reductions and projected annualized costs. The final Optimized NOx Reducing Catalyst Additive Addition Rate shall occur at the lowest addition rate where either:

(1) the FCCU meets 20 ppmvd NOx (at 0% O_2) on a 365-day rolling average, in which case Conoco shall agree to accept limits of 20 ppmvd NOx (at 0% O_2) on a 365-day rolling average basis at the conclusion of the Demonstration Period;

(2) the total annualized cost-effectiveness of the NOx Reducing Catalyst Additive used exceeds $10,000 per ton of NOx removed as measured from an uncontrolled baseline (as estimated based on current operating parameters as compared to operating parameters during the baseline period); or

(3) the Incremental NOx Reduction Factor is less than 1.8, where the Incremental NOx Reduction Factor is defined as:

$\frac{PR_i - PR_{i-1}}{CAR_i - CAR_{i-1}}$ where:

PR_i	=	Pollutant (NOx) reduction rate at increment i in pounds per day from the baseline
PR_{i-1}	=	Pollutant (NOx) reduction rate at the increment prior to increment i in pounds per day from the baseline
CAR_i	=	NOx Reducing Catalyst Additive Rate at increment i in pounds per day from the baseline
CAR_{i-1}	=	NOx Reducing Catalyst Additive Rate at the increment prior to increment i in pounds per day from the baseline

If the requirements of either (1), (2), or (3) above are not met at any addition rate less than 2.0 Weight % NOx Reducing Catalyst Additive, then the Optimized Addition Rate shall be 2.0 Weight % NOx Reducing Catalyst Additive.

IV. ESTABLISHING AN OPTIMIZED SO2 REDUCING CATALYST ADDITIVE ADDITION RATE

A. Overview. The Optimized SO_2 Reducing Catalyst Additive Addition Rate shall be determined by evaluating SO_2 emissions reductions and annualized costs at four different addition rates.

B. The Increments. The four addition rates or "increments" shall be based on total FCC catalyst addition rates and shall be:

5.0 Weight % SO_2 Reducing Catalyst Additive
6.7Weight % SO_2 Reducing Catalyst Additive
8.4Weight % SO_2 Reducing Catalyst Additive
10.0 Weight % SO_2 Reducing Catalyst Additive

C. <u>The Procedure</u>. Conoco shall successively add SO_2 Reducing Catalyst Additive at each increment set forth above. Once a steady-state has been achieved at each increment, Conoco shall evaluate the performance of the SO_2 Reducing Catalyst Additive in terms of SO_2 emissions reductions and projected annualized costs. The final Optimized SO_2 Reducing Catalyst Additive Addition Rate shall occur at the lowest addition rate where either:

(1) the FCCU meets 25 ppmvd SO_2 (at 0% O_2) on a 365-day rolling average and 50 ppmvd SO_2 (at 0% O_2) on a 7-day rolling average, in which case Conoco shall agree to accept limits of 25 ppmvd SO_2 (at 0% O_2) on a 365-day rolling average and 50 ppmvd SO_2 (at 0% O_2) on a 7-day rolling average at the conclusion of the Demonstration Period; and

(2) the Incremental SO_2 Pickup Factor is less than 2.0, where the Incremental SO_2 Reduction Factor is defined as:

$$\frac{PR_i - PR_{i-1}}{CAR_i - CAR_{i-1}}$$

where:

PR_i	=	Pollutant (SO_2) reduction rate at increment i in pounds per day from the baseline
PR_{i-1}	=	Pollutant (SO_2) reduction rate at the increment prior to increment i in pounds per day from the baseline
CAR_i	=	SO_2 Reducing Catalyst Additive Rate at increment i in pounds per day from the baseline
CAR_{i-1}	=	SO_2 Reducing Catalyst Additive Rate at the increment prior to increment i in pounds per day from the baseline

If the requirements of either (1), (2), or (3) above are not met at any addition rate less than 10.0 Weight % SO_2 Reducing Catalyst Additive, then the Optimized Addition Rate shall be 10.0 Weight % SO_2 Reducing Catalyst Additive. If the addition of SO_2 Reducing Catalyst Additive at any increment limits the FCCU feedstock processing rate or conversion capability in a manner that cannot be reasonably compensated for by the adjustment of other parameters, then Optimized SO_2 Reducing

Catalyst Additive Addition Rate shall be reduced to a level at which the additive no longer interferes with the FCCU processing or conversion rate. In no case, however, shall the Optimized SO_2 Reducing Catalyst Additive Addition Rate be less than 5.0 Weight %.

Attachment 3

NSPS Subpart J Compliance Schedule for Heaters and Boilers

Billings Refinery: H-16 - June 30, 2003

Denver Refinery : H-27 - December 31, 2006

Ponca Refinery: All heaters and boilers fed by refinery fuel gas system shall comply with NSPS Subpart J requirements by no later than December 31, 2006. Within six (6) months of Date of Lodging, Conoco shall submit a Compliance Plan identifying the heaters and boilers on refinery fuel gas and a tentative schedule for ensuring they are Subpart J complaint by December 31, 2006. Annual updates to the Compliance Plan shall be submitted to EPA no later than March 31st of each year beginning March 31, 2003. The Compliance Plan and updates shall contain a description of the progress made towards compliance for the previous calendar year and a description of the work planned for the current calendar year.

Attachment 4

RESERVED

Attachment 5

RESERVED

Attachment 6

Conoco, Inc.

Best Practice Network Charter

Name: Treating/Sulfur Processing Best Practices Network

Sponsor: Manufacturing Functional Excellence Team (MFET)

Purpose: Improve treating unit performance to attain specification products and to meet environmental permit requirements without negative impact on the performance of associated refinery processes. Improve sulfur recovery performance to provide reliable, safe operation, and to meet environmental permit requirements without negative impact on the performance of associated refinery processes.

Membership: Leader: Treating/Sulfur Processing Resource representative, Refinery area managers with treating, amine, sour water processing, and sulfur recovery units, refinery process engineers in these areas, MCAL laboratory technician, CAS chemists.

Key Interfaces: OTL's, Refining Technology management, Refinery Management, REO's, refinery operators, Jupiter Chemicals, M&S representative, Air Products (amine supplier), and chemical and catalyst supplier.

Goals: Attain the performance specified below:

Treating:

All treated product streams meet specifications consistently

Minimize consumption of treating chemicals and supplies (<505Mlb/yr MDEA, <$100M/yr filters, <$100M/yr carbon), stop single event related amine losses such as maintenance draining)

Minimize utility consumption

Minimize impact of treating units on refinery processes

Meet all environmental permit requirements without reportable incidents

Minimize wastes and emissions

Minimize maintenance costs by effective corrosion control

Develop or acquire, and implement advances in treating technology

Sulfur Processing:

Meet all environmental permit requirements without reportable incidents

Minimize utility consumption

Minimize impact of sulfur processing units on refinery processes

Minimize wastes and emissions

Minimize maintenance costs by effective corrosion control

Develop or acquire, and implement advances in sulfur processing technology

Key Activities:

Monthly e-mail update of network activities

Treating:

In-control room operator training

Development of training/monitoring tools

Development of amine treating software

Development and implementation and monitoring of amine heat stable control program

Development and implementation and monitoring of amine inventory conservation program

Complete implementation of Conoco improved particle filtration technology

Complete implementation of improved hydrocarbon contamination removal technology (1999)

Implementation of correct caustic/MEROX/Merichem operations procedures

On and off-site diagnosis and remedy of treating problems

Coordination of laboratory and technology expertise resources

Sulfur Processing

In-control room operator training
Development of training tools
On and off-site diagnosis and remedy of operations problems
Development and implementation of new sulfur recovery technology
Implementation of available sulfur recovery technologies
Sulfur Plant computer program operation
Coordination of laboratory and technology expertise resources

Metrics:

Monitoring of amine, caustic, filter, carbon, and other related treating system costs
Monitoring of compliance with product and environmental treating specifications
Monitoring of compliance with environmental emissions specifications
Monitoring on impact on related refinery processes

Attachment 7

BASELINE AND CAP DETERMINATION FOR THE PAL(S)

I. Determining the Baseline – Conoco shall establish baseline emissions for emission units within any PAL established pursuant to Part XV using this Attachment separately for each pollutant. Conoco shall include the following emissions units within each PAL: all FCCUs, all SRUs (excluding flares, thermal oxidizers), all heaters (>5 mmBTU/hr), and all boilers (>5 mmBTU/hr). The foregoing sentence shall not apply to incinerators except those associated with SRUs. Conoco may propose, for EPA approval, to include additional emissions units within a PAL. EPA will consider Conoco's proposal based on availability, accuracy and reliability of baseline data, adequacy of monitoring, relative contribution to the Cap, and any other relevant and available information. In addition, Conoco may propose for EPA approval alternate methods to calculate baseline emissions and emission rates used to determine compliance with the PAL.

A. Determining Baseline Concentrations for NOx, SO_2, CO and PM for Calendar years 2001-2003. The baseline concentration shall be in lb/mmBTU separately for each fuel fired for heaters and boilers for all pollutants, in ppmvd @ 0% O_2 for all other emissions units for NOx, SO_2, and CO, in lb/1000 lb coke for PM emissions from FCCUs, in lb/dscf for PM emissions from all other units, and shall be determined as follows:

1. For calendar years 2001-2003, for emissions units that have CEMS installed the baseline concentration shall be established using the average concentration in that time period, or if CEMS were not installed in that time period, at least three (3) months of CEMS data from another representative time period, with adjustment for variability of operating parameters during this period as compared to the operating parameters for calendars years 2001-2002, and excluding periods of operation that result in emissions above allowable levels.

2. For calendar year 2003, for emissions units that have CEMS installed by December 31, 2002, the baseline concentration shall be established using the average concentration from January 1, 2003, through December 31, 2003, and excluding periods of operation that result in emissions above allowable levels.

3. For emissions units that do not have CEMS installed the baseline concentration shall be established as follows:

   a. For heaters and boilers > 40 mmBTU/hr conduct a series of source tests and parametric analysis or provide 30 consecutive days of CEMS data (from temporary CEMS);

   b. For heaters and boilers < 40 mmBTU/hr either conduct a series of source tests and parametric analysis, or conduct tests measuring concentration using a portable analyzer; and

   c. For all other emissions units, submit a proposal for EPA approval for the concentration with supporting information as part of the PAL application required by Part XV.

B. Determining Baseline Utilization for Calendar Years 2001-2003. The baseline utilization for each calendar year for each emissions unit shall be the average utilization of that emissions unit as follows:

1. For FCCUs utilization shall be in terms of an annual average pounds of coke burn per hour with an annual average weight percent hydrogen on coke and annual average CO Boiler auxiliary fuel firing rate in mmBTU/hr for each fuel at annual average combustion O_2 by volume percent, combustion temperature in degrees Fahrenheit, and air pre-heat temperature in degrees Fahrenheit;

2. For sulfur recovery units shall be in terms of long tons of sulfur produced per day, at an annual average acid gas feed rate in scfd, NH3 gas feed rate in scfd, air feed rate to reactor furnace (RF) in scfd, annual average acid and NH3 gas concentration in percent by volume, and annual average natural gas feed rate in mol/hr;

3. For heaters and boilers utilization shall be in terms of annual average fuel firing rate for each fuel fired in mmBTU/hr for each fuel at annual average combustion O2 by volume percent, combustion temperature in degrees Fahrenheit, and air pre-heat temperature in degrees Fahrenheit.

C. Determining Baseline Emissions. Conoco shall determine baseline emissions for an emissions unit to be included in the PAL as follows:

1. For FCCUs, baseline emissions in tons per year for a particular calendar year shall be calculated as follows:

BE_{FCCU} = BC_{FCCU} x [BRF_{FCCU} + $BCOBF_{FCCU}$] x 379 x MW x [8760/2000]

BRF_{FCCU} = [(3.64 x wt % H_B) + (1.53 x {100-wt % H_B})] x [BCBR]

$BCOBF_{FCCU}$ = [(BUO_{COB}) x (9190) +($BUFG_{COB}$) x ($BF_{d\text{-}fg}$) + $BUNG_{COB}$) x (8710)]

where:

BE_{FCCU} = baseline emissions for the FCCU in tons per year

BRF_{FCCU} = baseline FCCU regenerator contribution from burning coke to stack gas flow in scfm at 0 % O2

$BCOBF_{FCCU}$ = baseline FCCU CO boiler contribution from fuel firing to stack gas flow in scfm at 0 % O2

BC_{FCCU} = baseline concentration in ppmvd @ 0 % O_2 for that calendar year

MW = molecular weight of the pollutant in pounds per pound-mole

wt % H_B = annual average weight percent hydrogen on coke for that calendar year as determined by either continuous

measurement or daily measurements of CO_2 and moisture in the FCCU flue gas.

BCBR = annual average FCCU regenerator coke burn rate in pounds of coke per hour for that calendar year as determined continuously or on a daily basis by heat balance and flue gas constituents.

BUO_{COB} = baseline utilization rate of CO boiler on oil in mmBTU/hr for that calendar year

$BUFG_{COB}$ = baseline utilization rate of CO boiler on fuel gas in mmBTU/hr for that calendar year

$BUNG_{COB}$ = baseline utilization rate of CO boiler on natural gas in mmBTU/hr for that calendar year

$BF_{d\text{-}fg}$ = the baseline flow factor on a dry basis for fuel gas and shall be calculated for that calendar year for each application using the equation in section 3.2. of Method 19 in 40 CFR Part 60 Appendix A.

2. For SRUs, baseline emissions in tons per year for a particular calendar year shall be calculated as follows:

BE_{SRU} = BC_{SRU} x [BFRI] x MW x [8760/2000]

BFRI = BWG + [(BNG + BTA)/1-B%EA] - BSP

Where:

BFRI = baseline incinerator flue gas flow rate in lb-moles per hour;

BC_{SRU} = baseline SRU flue gas baseline concentration in ppmvd at 0 % O_2;

BWG = baseline waste gas flow in lb-moles per hour;

BNG = baseline natural gas flow in lb-moles per hour;

BTA = baseline theoretical air in lb-moles per hour;

B%EA = baseline percent excess air; and

BSP = baseline sulfur product loss in lb-moles per hour calculated based on an annual average of sulfur recovered in long tons per day for that calendar year.

3. For heaters and boilers, baseline emissions in tons per year for a particular calendar year shall be calculated as follows:

$BE_{H\&B}$ (tpy) = $[(BCO_{H\&B} \times BUO_{H\&B}) + (BCFG_{H\&B} \times BUFG_{H\&B}) + (BCNG_{H\&B} \times BUNG_{H\&B})] \times [8760/2000]$

Where:

$BUO_{H\&B}$ = baseline utilization rate of the heater or boiler on oil in mmBTU/hr;

$BUFG_{H\&B}$ = baseline utilization rate of the heater or boiler on fuel gas in mmBTU/hr;

$BUNG_{H\&B}$ = baseline utilization rate of the heater or boiler on natural gas in mmBTU/hr;

$BCO_{H\&B}$ = baseline concentration for emissions of a pollutant from the heater or boiler firing oil in lb/mmBTU;

$BCFG_{H\&B}$ = baseline concentration for emissions of a pollutant from

the heater or boiler firing fuel gas in lb/mmBTU;

$BCNG_{H\&B}$ = baseline concentration for emissions of a pollutant from the heater or boiler firing natural gas in lb/mmBTU.

To determine the contribution of SO_2 emissions from oil firing, the baseline emissions for SO_2 only for all heaters and boilers collectively firing oil shall be calculated by the following alternative method in place of $BCO_{H\&B} \times BUO_{H\&B}$ in the equation above:

BROE = $BOFR_{H\&B} \times 42 \times DO \times wt\%S \times 64/32 \times (1/2000)$

Where:

BROE = Baseline refinery-wide SO_2 emissions from oil firing in tons per year;

$BOFR_{H\&B}$ = Baseline oil firing rate in barrels per year;

DO = Baseline density of oil in pounds per gallon; and

wt%S = Baseline sulfur content of oil in weight percent sulfur.

4. For other units included within a PAL, Conoco shall propose for EPA approval a calculation method consistent with the above methods in its application for the PAL.

II. Establishing the Cap. Conoco shall establish the Initial Cap and each annual revision to that Cap used in any PAL submitted for approval by EPA pursuant to this Consent Decree in accordance with procedures of this Attachment.

A. Each initial Cap shall be calculated in accordance with the following equation separately

for each pollutant:

$$\text{Initial Cap} = \sum_{a=1}^{o} (BE_{FCCU})_a + \sum_{b=1}^{p} (BE_{SRU})_b + \sum_{c=1}^{q} (BE_{H\&B})_c + X$$

X = for all other units Conoco shall propose for EPA approval a calculation method consistent with the above methods in its application for the PAL

Where:

$(BE_{FCCU})_a$ = baseline emissions in tons per year for FCCU a within the PAL

o = the number of FCCUs within the PAL;

$(BE_{SRU})_b$ = baseline emissions in tons per year for SRU b within the PAL

p = the number of SRUs within the PAL;

$(BE_{H\&B})_c$ = baseline emissions in tons per year for heater or boiler c within the PAL; and

q = the number of heaters and boilers within the PAL.

B. Except as provided below, each Cap shall be revised annually as required by Part XV. Each annual revision to the Cap shall be in tons per year and calculated in accordance with the equation below separately for SO_2, NOx, and PM. For CO, the Initial Cap shall remain in effect for the full duration of the PAL and shall not be revised to lower it as CO limits become effective.

$$\text{Revised Cap} \quad \text{Prior Cap} - \Big[\sum_{d=1}^{r} (BE_{FCCU} - PE_{FCCU})_d + \sum_{e=1}^{s} (BE_{SRU} - PE_{SRU})_e + \sum_{f=1}^{t} (BE_{H\&B} - PE_{H\&B})_f + (BROE - PROE) \Big] + Y;$$

$f = 1$

$(PE_{FCCU})_d$ = $[BE_{FCCU}]_d$ x $[PC_{FCCU}]_d$ / $[BC_{FCCU})]_d$;

$(PE_{SRU})_e$ = $[BE_{SRU}]_e$ x $[PC_{SRU}]_e$ / $[BC_{FSRU})]_e$;

$(PE_{H\&B})_f$ = $[PC_{H\&B}]_f$ x ($[BUO_{H\&B}]_f$ + $[BUFG_{H\&B}]_f$ + $[BUNG_{H\&B}]_f$) x [8760/2000];

PROE = $POFR_{H\&B}$ x 42 x DO x wt%S x 64/32 x (1/2000)

Y = for all other units Conoco shall propose for EPA approval a calculation method consistent with the above methods in its application for the PAL;

Where:

Prior Cap = the prior cap for the PAL for the preceding year in tons per year;

r = the number of FCCUs within the PAL for which 365-day rolling average emissions limits were established pursuant to the consent decree in the preceding calendar year;

$(PC_{FCCU})_d$ = the 365-day rolling average emission limit established pursuant to this consent decree in ppmvd at 0% O2 for FCCU d;

s = the number of SRUs within the PAL for which 365-day rolling average emissions limits were established pursuant to the consent decree in the preceding calendar year;

$(PC_{SRU})_e$ = the 365-day rolling average emission limit established pursuant to this consent decree in ppmvd at 0% O_2 for SRU e;

t = the number of heaters and boilers within the PAL for which 365-day rolling average emissions limits were established pursuant to the consent decree in the preceding calendar year;

$(PC_{H\&B})_f$ = the 365-day rolling average emission limit established pursuant to this consent decree in ppmvd at 0% O_2 for heater or boiler f;

$POFR_{H\&B}$ = Permitted oil firing rate established pursuant to this consent decree for all heaters and boilers at the refinery in barrels per year;

DO = Maximum or permitted density of oil in pounds per gallon; and

wt%S = Maximum or permitted sulfur content of oil in weight percent sulfur.

If the permitted emission rate (PE) is higher than the baseline emission (BE) rate for particular emission unit, the term BE-PE shall be considered zero for that emissions unit for the purposes of the above summation. For the Revised SO_2 Cap only, the value produced by the equation above shall be multiplied by 1.15 to arrive at the final value of the Revised Cap, provided, however, that the Revised Cap shall never be more than the Cap for the prior year.

III. Determining Compliance with the Cap.

A. Each day Conoco shall calculate the daily emission rate using the following equations for each emissions unit in a PAL:

1. For FCCUs, daily emissions in tons per day for a particular calendar day shall be calculated as follows:

$$DE_{FCCU} = DC_{FCCU} \times [DRF_{FCCU} + DCOBF_{FCCU}] \times 379 \times MW \times [24/2000]$$

$$DRF_{FCCU} = [(3.64 \times wt\ \%\ H_D) + (1.53 \times \{100\text{-}wt\ \%\ H_D\})] \times [DCBR]$$

$$DCOBF_{FCCU} = [(DUO_{COB}) \times (9190) + (DUFG_{COB}) \times (DF_{d\text{-}fg}) + DUNG_{COB}) \times (8710)]$$

where:

DE_{FCCU} = daily emissions for the FCCU in tons per year

DRF_{FCCU} = daily FCCU regenerator contribution from burning coke to stack gas flow in scfm at 0 % O2

$DCOBF_{FCCU}$ = daily FCCU CO boiler contribution from fuel firing to stack gas flow in scfm at 0 % O2

DC_{FCCU} = calendar daily average concentration in ppmvd at 0% O_2;

MW = molecular weight of the pollutant in pounds per pound-mole;

wt % H_D = calendar daily average weight percent hydrogen on coke as determined by either continuous measurement or daily measurements of CO_2 and moisture in the FCCU flue gas;

DCBR = calendar daily average FCCU regenerator coke burn rate in pounds of coke per hour as determined continuously or on a daily basis by heat balance and flue gas constituents;

DUO_{COB} = calendar daily average utilization rate of CO boiler on oil in mmBTU/hr;

$DUFG_{COB}$ = calendar daily average utilization rate of CO boiler on fuel gas in mmBTU/hr for that calendar day;

$DUNG_{COB}$ = calendar daily average utilization rate of CO boiler on natural gas in mmBTU/hr for that calendar day

$DF_{d\text{-}fg}$ = the calendar daily average flow factor on a dry basis for fuel gas and shall be calculated for that calendar day for each application using the equation in section 3.2. of Method 19 in 40 CFR Part 60 Appendix A.

2. For SRUs, calendar daily average emissions in tons per day for a particular calendar day shall be calculated as follows:

DE_{SRU} = DC_{SRU} x [DFRI] x MW x [24/2000]

DFRI = DWG + [(DNG + DTA)/1-D%EA] - DSP

where:

DFRI	=	calendar daily average incinerator flue gas flow rate in lb-moles per hour;
DC_{SRU}	=	calendar daily average SRU flue gas concentration in ppmvd at 0 % O_2;
DWG	=	calendar daily average waste gas flow in lb-moles per hour;
DNG	=	calendar daily average natural gas flow in lb-moles per hour;
DTA	=	calendar daily average theoretical air in lb-moles per hour;
D%EA	=	calendar daily average percent excess air; and
DSP	=	calendar daily average sulfur product loss in lb-moles per hour calculated based on an calendar daily average of sulfur recovered in long tons per day for that calendar day.

3. For heaters and boilers, calendar daily average emissions in tons per day for a particular calendar day shall be calculated as follows:

$$DE_{H\&B}\ (tpy) = [(DCO_{H\&B} \times DUO_{H\&B}) + (DCFG_{H\&B} \times DUFG_{H\&B}) + (DCNG_{H\&B} \times DUNG_{H\&B})] \times [24/2000]$$

Where:

$DUO_{H\&B}$	=	calendar daily average utilization rate of the heater or boiler on oil in mmBTU/hr;
$DUFG_{H\&B}$	=	calendar daily average utilization rate of the heater or

boiler on fuel gas in mmBTU/hr;

$DUNG_{H\&B}$ = calendar daily average utilization rate of the heater or boiler on natural gas in mmBTU/hr;

$DCO_{H\&B}$ = calendar daily average concentration for emissions of a pollutant from the heater or boiler firing oil in lb/mmBTU;

$DCFG_{H\&B}$ = calendar daily average concentration for emissions of a pollutant from the heater or boiler firing fuel gas in lb/mmBTU;

$DCNG_{H\&B}$ = calendar daily average concentration for emissions of a pollutant from the heater or boiler firing natural gas in lb/mmBTU.

To determine the contribution of SO_2 emissions from oil firing, the daily emissions for SO_2 only for all heaters and boilers collectively firing oil shall be calculated by the following alternative method in place of $DCO_{H\&B}$ x $DUO_{H\&B}$ in the equation above:

$DROE = DOFR_{H\&B} \times 42 \times DO \times wt\%S \times 64/32 \times (1/2000)$

Where:

DROE = Daily refinery-wide SO_2 emissions from oil firing in tons per day;

$DOFR_{H\&B}$ = Daily oil firing rate in barrels per day;

DO = Daily density of oil in pounds per gallon; and

wt%S = Daily sulfur content of oil in weight percent sulfur.

4. For other units included within a PAL, Conoco shall propose for EPA approval a calculation method consistent with the above methods in its application for the

PAL.

C. Calculating the total daily emissions for units within the PAL. Each day, Conoco shall calculate the total daily emission rate in tons per day as follows:

$$DE_{Cap} = \sum_{g=1}^{u}(DE_{FCCU})_g + \sum_{h=1}^{V}(DE_{SRU})_h + \sum_{j=1}^{w}(DE_{H\&B})_j + DROE + Z$$

Z = for all other units Conoco shall propose for EPA approval a calculation method consistent with the above methods in its application for the PAL

Where:

$(DE_{FCCU})_g$ = calendar daily emissions in tons per calendar day for FCCU g within the PAL

u = the number of FCCUs within the PAL;

$(DE_{SRU})_h$ = calendar daily emissions in tons per calendar day for SRU h within the PAL

v = the number of SRUs within the PAL;

$(DE_{H\&B})_j$ = calendar daily emissions in tons per calendar day for heater or boiler j within the PAL; and

w = the number of heaters and boilers within the PAL.

D. Calculating the 365-day rolling average emission rate. Each day, Conoco shall calculate the 365-day rolling average emission rate in tons per year as follows:

$$AE_{Cap} = \sum^{365}(DE_{Cap})_k$$

$$\sum_{k=1}$$

k	=	the preceding 365 calendar days; and
(DECap)k	=	the daily emission rate in tons per day for calendar day k.

Attachment 8

SUPPLEMENTAL AND BENEFICIAL ENVIRONMENTAL PROJECTS

PERFORMANCE OF FEDERAL AND STATE PROJECTS

A. Conoco agrees to undertake Supplemental Environmental Projects (SEPs) and Beneficial Environmental Projects (BEPs), with an estimated aggregate cost of at least $5.1 million, in accordance with Part XVI, Paragraphs 243 through 247 of this Consent Decree. These SEPs and BEPs will be selected from those identified in the Consent Decree, or those subsequently approved by EPA and the appropriate Plaintiff-Intervener, and will proceed independently, according to the approved schedule for each project. Conoco agrees to report to EPA on a quarterly basis on the progress of its implementation of these SEPs and BEPs in accordance with this Attachment. However, Conoco agrees to report as soon as practicable any information obtained during development or implementation of any of these SEPs or BEPs which would materially affect the success of each.

B. By no later than one hundred-twenty (120) days following Date of Entry of this Consent Decree, Conoco shall submit a Statement of Work (SOW) for the SEPs and BEPs that they elect to perform, a schedule for development and implementation, and an estimated cost. The SOW shall be approved by EPA and the appropriate state and local authority. Within 45 days of receipt of the approval, Conoco shall begin implementation of the SEPs and BEPs in accordance with the SOWs.

C. Conoco may submit a request to EPA or to the appropriate state or local authority for approval of any proposed changes to the SOWs for the SEPs and BEPs, and EPA or to the appropriate state or local authority shall have 20 business days to respond to the request. Resolution of any disputes arising in the context of the Companies' project implementation will be handled in accordance with Part XXII (Dispute Resolution) of this Consent Decree.

D. Beginning with the first quarter following entry of this Consent Decree, Conoco shall submit a status report for each of the SEPs and BEPs that indicates the progress to date and the anticipated date of completion. The report shall be submitted to EPA and the appropriate state and local authorities as provided in Paragraph 296 (Notice) of this Consent Decree.

E. In the first quarterly report following completion of each project, Conoco shall submit to EPA and the appropriate Plaintiff-Intervener a Final SEP or BEP Report containing the following information:

1. a narrative description of the development and implementation of the SEP and BEP;

2. a certification that the SEPs and BEPs were installed and operated in accordance the approved or modified SOW for each;

3. a certification that Conoco has spent the full amount allocated for each SEP or BEP.

F. Each SEP and BEP must be implemented in conformance with all federal, state and local laws.