

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF ARKANSAS**

UNITED STATES OF AMERICA,)
)
 Plaintiff,)
)
 and)
)
STATE OF ARKANSAS,)
)
 Plaintiff-Intervenor,)
)
 v.)
)
LION OIL COMPANY ,)
)
 Defendant.)
_____)

Civil No.

CONSENT DECREE

TABLE OF CONTENTS

I.	Jurisdiction and Venue (Paragraphs 1-3)	5
II.	Applicability and Binding Effect (Paragraphs 4-8)	5
III.	Objectives (Paragraph 9)	7
IV.	Definitions (Paragraph 10)	7
V.	Affirmative Relief/Environmental Projects	12
11.	NO _x Emissions Reductions from FCCU	12
12.	SO ₂ Emissions Reductions from FCCU	17
13.	PM Emissions Reductions from FCCU	18
14.	CO Emissions Reductions from FCCU	19
15.	NSPS Applicability of FCCU Regenerators	20
16.	NO _x Emissions Reductions from Heaters and Boilers, NO _x and/or CO Emission Reductions from Compressor	20
17.	SO ₂ Emissions Reductions from and NSPS Applicability of Heaters and Boilers	22
18.	NSPS Applicability of and Compliance for Sulfur Recovery Plant	24
19.	NSPS Applicability of and Compliance for Flaring Devices	27
20.	Control of Acid Gas Flaring Incidents and Tail Gas Incidents	28
21.	Control of Hydrocarbon Flaring Incidents	36
22.	Benzene Waste NESHAP Program Enhancements	37
23.	Leak Detection and Repair Program Enhancements	52
24.	Incorporation of Consent Decree Requirements into Federally- Enforceable Permits	62
25.	Obtaining Construction Permits	63
26.	Incorporation of State Compliance Plan and Schedule into Consent Decree ...	63

VI.	Emission Credit Generation (Paragraph 27)	64
VII.	Modifications to Implementation Schedules (Paragraphs 28-29)	66
VIII.	Environmentally Beneficial Projects	69
30.	Compliance with NSPS Subpart QQQ at the El Dorado Refinery	69
31.	Installation of BACT Controls - Vacuum Distillation Tower	69
32.	Federal Supplemental Environmental Projects for Lion Oil	70
33 - 35.	General Provisions	70
IX.	Reporting and Recordkeeping (Paragraph 36)	71
X.	Civil Penalty (Paragraph 37-39)	72
XI.	Stipulated Penalties (Paragraph 40)	73
41.	Paragraph 11 – Requirements for NO _x Emission Reductions from FCCU	74
42.	Paragraph 12 – Requirements for SO ₂ Emission Reductions from FCCU	75
43.	Paragraph 13 – Requirements for PM Emission Reductions from FCCU	76
44.	Paragraph 14 – Requirements for CO Emission Reductions from FCCU	76
45.	Paragraph 16 – Requirements for NO _x Emission Reductions from Heaters/Boilers and No _x and/or CO Emission Reductions from Compressor	77
46.	Paragraph 17 – Requirements for SO ₂ Emission Reductions from Heaters/Boilers	78
47.	Paragraph 18 – Requirements for NSPS Applicability of Sulfur Recovery Plant	78
48.	Paragraph 19 – Requirements for NSPS Applicability of Flaring Devices	79
49.	Paragraph 20 – Requirements for Control of AG Flaring and Tail Gas Incidents	80
50.	Paragraph 21 – Requirements for Control of HC Flaring Incidents	82
51.	Paragraph 22 – Requirements for Benzene Waste NESHAP Enhancements	83

52.	Paragraph 23 – Requirements for Leak Detection and Repair Enhancements . .	84
53.	Paragraph 24 – Requirements to Incorporate CD Requirements into Permits . .	86
54.	Paragraphs 30-32 – Requirements related to Environmentally Beneficial Projects	87
55.	Paragraph 36 – Requirements for Reporting and Recordkeeping	87
56.	Paragraph 37 - Requirements for Payment of Civil Penalties	87
57.	Paragraph 59 – Requirement to Escrow Stipulated Penalties	87
58.	Payment of Stipulated Penalties	88
59.	Stipulated Penalties Dispute	88
XII.	Interest (Paragraph 60)	88
XIII.	Right of Entry (Paragraph 61)	89
XIV.	Force Majeure (Paragraphs 62-70)	89
XV.	Retention of Jurisdiction/Dispute Resolution (Paragraphs 71-79)	92
XVI.	Effect of Settlement (Paragraph 80)	93
XVII.	General Provisions	101
81.	Other Laws	101
82.	Post-Permit Violations	102
83.	Failure of Compliance	102
84.	Service of Process	102
85.	Post-Lodging/Pre-Entry Obligations	103
86.	Costs	103
87.	Public Documents	103
88.	Public Notice and Comment	103
89.	Notice	104
90.	Approvals	106

91.	Paperwork Reduction Act	106
92.	Modification	106
XVIII.	Termination (Paragraph 93)	106
XIX.	Signatories (Paragraph 94)	109

TABLE OF APPENDICES

Appendix A –	ADEQ Air Permit #868-AR-7 issued June 3, 1998; ADEQ Draft Air Permit #868-AOP-RI; Consent Administrative Order issued May 30, 2002
Appendix B –	List of Flaring Devices
Appendix C –	List of Controlled Heaters and Boilers and Compressors
Appendix D -	Reserved
Appendix E –	NSPS Subpart J Compliance Schedule for Flares
Appendix F –	Logic Diagram for Paragraph 20

CONSENT DECREE

WHEREAS, plaintiff, the United States of America ("Plaintiff" or "the United States"), by the authority of the Attorney General of the United States and through its undersigned counsel, acting at the request and on behalf of the United States Environmental Protection Agency ("EPA"), and plaintiff-intervenor the State of Arkansas ("Plaintiff-Intervenor") has simultaneously filed a Complaint and lodged this Consent Decree against Lion Oil Company ("Lion Oil"), for alleged environmental violations at Lion Oil's petroleum refinery in El Dorado, Arkansas ("El Dorado Refinery");

WHEREAS, the United States alleges that Lion Oil has violated and/or continues to violate the following statutory and regulatory provisions:

1) Prevention of Significant Deterioration ("PSD") requirements found 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 C.F.R. § 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 C.F.R. § 51.165(a) and (b) and at Title 40, Part 51, Appendix S, and at 40 C.F.R. § 52.24 ("PSD/NSR Regulations"), for heaters and boilers and fluid catalytic cracking unit catalyst regenerators for NO_x, SO₂, CO and PM;

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

3) Leak Detection and Repair ("LDAR") requirements promulgated pursuant to Sections 111 and 112 of the Act, and found at 40 C.F.R. Part 60 Subparts VV and GGG; 40 C.F.R. Part 61, Subparts J and V; and 40 C.F.R. Part 63, Subparts F, H, and CC ("LDAR Regulations"); and

4) National Emission Standards for Hazardous Air Pollutants (“NESHAP”) for Benzene Waste Operations promulgated pursuant to Section 112(e) of the Act, and found at 40 C.F.R. Part 61, Subpart FF (“Benzene Waste NESHAP Regulations”).

WHEREAS, the State of Arkansas has sought to intervene in this matter alleging violations of their respective applicable SIP provisions and other state rules incorporating and implementing the foregoing federal requirements;

WHEREAS, Lion Oil denies that it has violated and/or continues to violate the foregoing statutory, regulatory, SIP provisions and other state rules incorporating and implementing the foregoing federal requirements, and maintains that it has been and remains in compliance with all applicable statutes, regulations and permits and is not liable for civil penalties and injunctive relief as alleged in the Complaint;

WHEREAS, the United States is engaged in a federal strategy for achieving cooperative agreements with U.S. petroleum refineries to achieve across-the-board reductions in emissions (“Global Settlement Strategy”);

WHEREAS Lion Oil contends that it was not the subject of an EPA investigation, inspection or enforcement program relating to the foregoing programs, but approached EPA and voluntarily has agreed to participate in the Global Settlement Strategy;

WHEREAS Lion Oil consents to the simultaneous filing of the Complaint and lodging of this Consent Decree against Lion Oil despite its denial of the allegations in the Complaint to accomplish its objective of cooperatively reconciling the goals of the United States, Lion Oil and the State of Arkansas under the Clean Air Act and the corollary state statutes, and therefore agrees to undertake the installation of air pollution control equipment and enhancements to its air pollution management practices at the El Dorado Refinery to reduce air emissions by participating in the Global Settlement Strategy;

WHEREAS, the United States and Arkansas agree that the affirmative relief and environmental projects identified in Sections V and VIII of this Consent Decree will reduce

annual emissions from the El Dorado Refinery by the following amounts: 1) nitrogen oxide by approximately 530 tons; 2) sulfur dioxide by approximately 650 tons; and 3) particulate matter (“PM”) by approximately 200 tons;

WHEREAS, notwithstanding the fact that emissions of SO₂ and PM from the Sulfur Recovery Plant will increase above currently permitted limits of 39.5 and 13.1 tons per year in order to comply with Tier II fuels/low sulfur diesel, any increases in SO₂ and PM emissions resulting from the modification will not trigger PSD provided the increase associated with the modification (taking into account the use of any emission reduction credits) does not exceed the PSD significance threshold for SO₂ or PM;

WHEREAS, notwithstanding the fact that emissions from the atmospheric heater (SN-804) will increase above the currently permitted limit of 39 tons per year of NO_x, and be limited to .045 lb/mmBtu of Nox on a 3-hour average basis as measured by a CEMS, this increase will not trigger PSD provided that the increase is not a significant net emissions increase in and of itself;

WHEREAS, with respect to the provisions of Paragraph 20 (“Control of Acid Gas Flaring Incidents and Tail Gas Incidents”) of this Consent Decree, EPA maintains that “[i]t is the intent of the proposed standard [40 C.F.R. § 60.104] that hydrogen-sulfide-rich gases exiting the amine regenerator [or sour water stripper gases] be directed to an appropriate recovery facility, such as a Claus sulfur plant,” see Information for Proposed New Source Performance Standards: Asphalt Concrete Plants, Petroleum Refineries, Storage Vessels, Secondary Lead Smelters and Refineries, Brass or Bronze Ingot Production Plants, Iron and Steel Plants, Sewage Treatment Plants, Vol. 1, Main Text at 28;

WHEREAS, EPA further maintains that the failure to direct hydrogen-sulfide-rich gases to an appropriate recovery facility -- and instead to flare such gases under circumstances that are not sudden or infrequent or that are reasonably preventable -- circumvents the purposes and intentions of the standards at 40 C.F.R. Part 60, Subpart J;

WHEREAS, EPA recognizes that “Malfunctions,” as defined in Paragraph 10 of this Consent Decree and 40 C.F.R. § 60.2, of the “Sulfur Recovery Plants” or of “Upstream Process Units” may result in flaring of “Acid Gas” or “Sour Water Stripper Gas” on occasion, as those terms are defined herein, and that such flaring does not violate 40 C.F.R. § 60.11(d) if the owner or operator, to the extent practicable, maintains and operates such units in a manner consistent with good air pollution control practice for minimizing emissions during these periods;

WHEREAS, by entering into this Consent Decree Lion Oil is committed to pro-actively resolving environmental concerns related to their operations.

WHEREAS, discussions between the Parties has resulted in the settlement embodied in the Consent Decree;

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

WHEREAS, notwithstanding the foregoing reservations, the Parties agree that: (a) settlement of the matters set forth in the Complaint (filed herewith) is in the best interests of the Parties and the public; and (b) entry of the Consent Decree without litigation is the most appropriate means of resolving this matter;

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

NOW THEREFORE, with respect to the matters set forth in the complaint and in Section XVI of the Consent Decree (“Effect of Settlement”), and before the taking of any testimony, without adjudication of any issue of fact or law, and upon the consent and agreement of the Parties to the Consent Decree, it is hereby ORDERED, ADJUDGED and DECREED as follows:

I. JURISDICTION AND VENUE

1. This Court has jurisdiction over the subject matter of this action and over the Parties pursuant to 28 U.S.C. §§ 1331, 1345 and 1355. In addition, this Court has jurisdiction over the subject matter of this action pursuant to Sections 113(b) and 167 of the CAA, 42 U.S.C. §§ 7413(b) and 7477. The United States' complaint states a claim upon which relief may be granted for injunctive relief and civil penalties against Lion Oil under the Clean Air Act. Authority to bring this suit is vested in the United States Department of Justice by 28 U.S.C. §§ 516 and 519, Section 305 of the CAA, 42 U.S.C. § 7605.

1. Venue is proper in the Western District of Arkansas pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b), and 28 U.S.C. §§ 1391(b) and (c), and 1395(a). Lion Oil consents to the personal jurisdiction of this Court, waives any objections to venue in this District, and does not object to the intervention of Arkansas in this action.

2. Notice of the commencement of this action has been given to the State of Arkansas in accordance with Section 113(a)(1) of the Clean Air Act, 42 U.S.C. § 7413(a)(1), and as required by Section 113(b) of the CAA, 42 U.S.C. § 7413(b).

II. APPLICABILITY AND BINDING EFFECT

4. The provisions of the Consent Decree shall apply to the El Dorado Refinery. The provisions of the Consent Decree shall be binding upon the United States, the State of Arkansas, and Lion Oil and its agents, successors, and assigns.

5. Lion Oil agrees not to contest the validity of the Consent Decree in any subsequent proceeding to implement or enforce its terms.

6. Effective from the Date of Entry of the Consent Decree until its termination, Lion Oil agrees that its El Dorado Refinery is covered by this Consent Decree. Effective from the Date of Lodging of the Consent Decree, Lion Oil shall give written notice of the Consent Decree to any successors in interest prior to the transfer of ownership or operation of any portion of the El Dorado Refinery and shall provide a copy of the Consent Decree to any successor in interest. Lion Oil shall notify the United States, and the State of Arkansas in accordance with

the notice provisions set forth in Paragraph 89 (Notice), of any successor in interest at least thirty (30) days prior to any such transfer.

7. Lion Oil shall condition any transfer, in whole or in part, of ownership of, operation of, or other interest (exclusive of any non-controlling non-operational shareholder interest) in, the El Dorado Refinery upon the execution by the transferee of a modification to the Consent Decree, which makes the terms and conditions of the Consent Decree that apply to the El Dorado Refinery applicable to the transferee. In the event of such transfer, Lion Oil shall notify the parties listed in Paragraph 89. By no earlier than thirty days after such notice, Lion Oil may file a motion to modify the Consent Decree with the Court to make the terms and conditions of the Consent Decree applicable to the transferee. Lion Oil shall be released from the obligations and liabilities of this Consent Decree unless the United States opposes the motion and the Court finds that the transferee does not have the financial and technical ability to assume the obligations and liabilities under the Consent Decree.

8. Lion Oil shall provide a copy of the applicable provisions of this Consent Decree to each consulting or contracting firm that is retained to perform work required under this Consent Decree, upon execution of any contract relating to such work. No later than thirty (30) days after the Date of Lodging of the Consent Decree, Lion Oil also shall provide a copy of the applicable provisions of this Consent Decree to each consulting or contracting firm that Lion Oil already has retained to perform the work required under this Consent Decree. Copies of the Consent Decree do not need to be supplied to firms who are retained to supply materials or equipment to satisfy requirements under this Consent Decree.

III. OBJECTIVES

9. It is the purpose of the Parties in this Consent Decree to further the objectives of the federal Clean Air Act and the Arkansas Water and Air Pollution Control Act.

IV. DEFINITIONS

10. Unless otherwise defined herein, terms used in the Consent Decree shall have the meaning given to those terms in the Clean Air Act, and the implementing regulations promulgated thereunder. The following terms used in the Consent Decree shall be defined for purposes of the Consent Decree and the reports and documents submitted pursuant thereto as follows:

A “Acid Gas” shall mean any gas that contains hydrogen sulfide and is generated at a refinery by the regeneration of an amine solution.

B. “Acid Gas Flaring” or “AG Flaring” shall mean the combustion of an Acid Gas and/or Sour Water Stripper Gas in an AG Flaring Device.

C. “Acid Gas Flaring Device” or “AG Flaring Device” shall mean any device at the El Dorado Refinery that is used for the purpose of combusting Acid Gas and/or Sour Water Stripper Gas, except facilities in which gases are combusted to produce sulfur or sulfuric acid. The AG Flaring Devices currently in service at El Dorado Refinery are identified in Appendix B to the Consent Decree. To the extent that, during the duration of the Consent Decree, the El Dorado Refinery utilizes AG Flaring Devices other than those specified in Appendix B for the purpose of combusting Acid Gas and/or Sour Water Stripper Gas, those AG Flaring Devices shall be covered under this Consent Decree.

D. “Acid Gas Flaring Incident” or “AG Flaring Incident” shall mean the continuous or intermittent combustion of Acid Gas and/or Sour Water Stripper Gas that results in the emission of sulfur dioxide equal to, or in excess of, five-hundred (500) pounds in any twenty-four (24) hour period in excess of the permitted limit; 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 in excess of the permitted limit, then only one AG Flaring Incident shall have

occurred. Subsequent, contiguous, non-overlapping periods are measured from the initial commencement of Flaring within the AG Flaring Incident.

E. "ADEQ" shall mean the Arkansas Department of Environmental Quality and any successor departments or agencies of the State of Arkansas.

F "Alternative NOx Control Technology" shall mean NOx control technology, other than current or Next Generation Ultra Low NOx Burners ("ULNBs"), that achieves an emission rate of 0.060 lb/mmBtu or less.

G. "Applicable Federal and State Agencies" shall mean, with respect to the El Dorado Refinery, EPA's Office of Regulatory Enforcement, EPA's Region 6, and the ADEQ;

H. "Calendar quarter" shall mean the three month period ending on March 31st, June 30th, September 30th, and December 31st.

I. "CEMS" shall mean continuous emissions monitoring system.

J. "Consent Decree" or "Decree" shall mean this Consent Decree, including any and all appendices attached to the Consent Decree.

K. "CO" shall mean carbon monoxide.

L. "Controlled Heaters and Boilers" shall mean the heaters and boilers that are listed in Appendix C.

M. "Date of Entry of the Consent Decree" shall mean the date the Consent Decree is approved or signed by the United States District Court Judge.

N. "Date of Lodging of the Consent Decree" shall mean the date the Consent Decree is filed for lodging with the Clerk of the Court for the United States District Court for the Western District of Arkansas.

O. "Day" or "Days" as used herein shall mean a calendar day or days.

P. "El Dorado Refinery" shall mean the refinery owned and operated by Lion Oil in El Dorado, Arkansas.

Q. “FCCU” as used herein shall mean a fluidized catalytic cracking unit and its regenerator and associated CO boiler(s) where present.

R. “Flaring Device” shall mean either an AG and/or an HC Flaring Device.

S. “Fuel Oil” shall mean any liquid fossil fuel with sulfur content of greater than 0.05% by weight.

T. “Hydrocarbon Flaring” or “HC Flaring” shall mean the combustion of refinery-generated gases, except for Acid Gas and/or Sour Water Stripper Gas and/or Tail Gas, in a Hydrocarbon Flaring Device. The combustion of fuel gas that is less than 0.1 grains of H₂S per dry standard cubic foot of fuel gas in a flare shall not be considered hydrocarbon flaring.

U. “Hydrocarbon Flaring Device” or “HC Flaring Device” shall mean, a flare device used to safely control (through combustion) any excess volume of a refinery generated gas other than Acid Gas and/or Sour Water Stripper Off Gas and/or Tail Gas. The HC Flaring Devices currently in service at the El Dorado Refinery are identified in Appendix B to the Consent Decree. To the extent that, during the duration of the Consent Decree, the El Dorado Refinery utilizes HC Flaring Devices other than those specified in Appendix B for the purpose of combusting any excess of a refinery-generated gas other than Acid Gas and/or Sour Water Stripper Gas, those HC Flaring Devices shall be covered under this Consent Decree.

V. “Hydrocarbon Flaring Incident” or “HC Flaring Incident” shall mean the continuous or intermittent Hydrocarbon Flaring, except for Acid Gas or Sour Water Stripper Gas or Tail Gas, at a Hydrocarbon Flaring Device that results in the emission of sulfur dioxide equal to, or greater than five hundred (500) pounds in a 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 HC Flaring Incident shall have

occurred. Subsequent, contiguous, non-overlapping periods are measured from the initial commencement of Flaring within the HC Flaring Incident.

W. “Lion Oil” shall mean the Lion Oil Company, its agents, successors and assigns.

X. “Lo Tox System” shall mean a NO_x control technology that includes a quench tower, sufficient residence time, ozone injection ports, ozone generators, and oxygen supply, that uses the ozone to oxidize NO_x which is then removed in a Wet Gas Scrubber.

Y. “Malfunction” shall mean, as specified in 40 C.F.R. Part 60.2, “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.”

Z. “Natural Gas Curtailment” shall mean a restriction imposed by a public utility by the issuance of an Operational Flow Order limiting Lion Oil’s ability to obtain natural gas.

AA. “Next Generation Ultra-Low NO_x Burners” or “Next Generation ULNBs” shall mean those burners new to the market that are designed to achieve a NO_x emission rate of 0.012 to 0.020 lb/mmBTU HHV when firing natural gas at 3% stack oxygen at full design load without air preheat.

BB. “NO_x” shall mean nitrogen oxides.

CC. “NO_x Control Technology” shall mean Next Generation ULNBs or Alternative NO_x Control Technology.

DD. “Paragraph” shall mean a portion of this Consent Decree identified by an arabic numeral.

EE. “PM” shall mean particulate matter.

FF. "Parties" shall mean the United States, the Plaintiff-Intervenor , and Lion Oil.

GG. “Plaintiff-Intervenor” shall mean the State of Arkansas.

HH. “Root Cause” shall mean the primary cause(s) of an AG Flaring Incident(s), Hydrocarbon Flaring Incident, or a Tail Gas Incident(s) as determined through a process of investigation.

II. “Shutdown”, as specified in 40 C.F.R. Part 60.2, shall mean the cessation of operation of equipment for any purpose.

JJ. “Sour Water Stripper Gas” or “SWS Gas” shall mean the gas produced by the process of stripping refinery sour water.

KK. “SO₂” shall mean sulfur dioxide.

MM. “Startup”, as specified in 40 C.F.R. Part 60.2, shall mean the setting in operation of equipment for any purpose.

NN. “Sulfur Recovery Plant” or “SRP” shall mean a process unit that recovers sulfur from hydrogen sulfide by a vapor phase catalytic reaction of sulfur dioxide and hydrogen sulfide.

OO. “Tail Gas Unit” or “TGU” shall mean a control system utilizing a technology for reducing emissions of sulfur compounds from a Sulfur Recovery Plant.

PP. “Tail Gas Incident” shall mean, for the purpose of this Consent Decree, combustion of Tail Gas that either is:

- i. Combusted in a flare and results in 500 pounds or more of SO₂ emissions in any 24 hour period; or
- ii. Combusted in a thermal incinerator and results in excess emissions of 500 pounds or more of SO₂ emissions in any 24-hour period. Only those time periods which are in excess of a SO₂ concentration of 250 ppm (rolling twelve-hour average) shall be used to determine the amount of excess SO₂ emissions from the incinerator.

Lion Oil shall use engineering judgment and/or other monitoring data during periods in which the SO₂ continuous emission analyzer has exceeded the range of the instrument or is out of service.

RR. “Torch Oil” shall mean FCCU feedstock or light cycle oil that is combusted in the FCCU regenerator to assist in starting up or restarting the FCCU.

SS. “Upstream Process Units” shall mean all amine contactors, amine scrubbers, and sour water strippers at the El Dorado 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.

TT. “Vacuum Distillation Tower” shall mean the vacuum distillation column used to distill a crude fraction under vacuum located within the vacuum distillation unit (SN-852). This term shall include the direct contact barometric condenser and associated cooling tower.

V. AFFIRMATIVE RELIEF/ENVIRONMENTAL PROJECTS

11. NOx Emissions Reductions from FCCU.

A. **Summary.** Lion Oil shall implement a program to reduce NOx emissions from its Fluid Catalytic Cracking Unit (“FCCU”) at the El Dorado Refinery by the installation of a Lo Tox System on emissions from the FCCU. Lion Oil shall conduct an Optimization Study to determine lower NOx emission limits and incorporate those lower NOx emission limits into permits. In the alternative, Lion Oil may opt to accept limits of 20 ppmvd on a 365-day rolling average and 40 ppmvd on a 24-hour rolling average basis, each at 0% oxygen and may use any technology to comply with the limits. Lion shall demonstrate future compliance through the use of CEMS.

B. **Early Acceptance of NOx Emission Limits.** If before December 31, 2005, Lion Oil notifies EPA in writing that it will accept emission limits of 20 ppmvd on a 365-day rolling average and 40 ppmvd on a 24-hour rolling average basis, each at 0% oxygen for emissions from its FCCU, then Paragraphs 11.C. through 11.E shall not apply provided that Lion Oil shall begin to comply with emission limits of 20 ppmvd on a 365-day rolling average and 40 ppmvd on a 24-hour rolling average basis, each at 0% oxygen, no later than June 30, 2007.

C. Lo Tox System Design.

i. By no later than June 30, 2007, Lion Oil shall complete installation and

begin operation of a Lo Tox system designed to achieve a NO_x concentration of 20 ppmvd on a 365-day rolling average at 0% oxygen on emissions from its FCCU. Lion Oil shall design a Lo Tox system to achieve a NO_x concentration of 20 ppmvd, provided that:

- (a) the total cost of achieving such concentration does not exceed, on a design basis, \$10,000 of annualized estimated total installed cost plus projected annual operating cost per projected ton of NO_x removed;
- (b) the incremental cost effectiveness for each 5 ppmvd increment from 40 ppmvd to 20 ppmvd at 0% O₂ is less than \$20,000 per projected ton of NO_x removed; and
- (c) the cost effectiveness for a Lo Tox system to achieve 40 ppmvd at 0% O₂ is less than \$20,000 per ton of annualized estimated total installed cost plus projected annual operating cost.

If the cost effectiveness of a Lo Tox System designed to achieve 20 ppmvd on a 365-day rolling average at 0% oxygen exceeds \$10,000 per ton total cost effectiveness and \$20,000 per ton incremental cost effectiveness, Lion shall design the Lo Tox system to achieve the lowest NO_x concentration at which these costs do not exceed \$10,000 per ton of NO_x removed. If the cost effectiveness of a Lo Tox System designed to achieve 40 ppmvd on a 365-day rolling average at 0% oxygen exceeds \$20,000 per ton total cost effectiveness, Lion shall design the Lo Tox system to achieve the lowest NO_x concentration at which these costs do not exceed \$20,000 per ton of NO_x removed. Lion Oil will not be required to design a system that results in ozone emissions in excess of that allowed by state permitting. When annualizing capital costs, Lion Oil and EPA shall use a 15 year basis at a 10.3% interest rate.

ii. By no later than June 30, 2003, Lion Oil shall submit to EPA the process design specifications for the Quench Tower and Residence Time components of the Lo Tox System, and if available, the ozone injection port numbers, sizes, and locations. If the ozone injection port numbers, sizes, and locations are not available by June 30, 2003, Lion Oil shall

submit the design specifications for those components by not later than December 31, 2003. By no later than June 30, 2005, Lion Oil shall submit to EPA the process design specifications for the complete Lo Tox System. Lion Oil and EPA agree to consult on the development of the proposed process design specifications for the Lo Tox System prior to submission of Lion Oil's final proposal.

iii. The proposed process design specifications for the complete Lo Tox system shall, at a minimum, consider, quench capacity, optimal temperature, sufficient residence time, ozone generation capacity, oxygen supply, ozone injection port numbers, sizes, and locations, and shall include the cost effectiveness calculated as described in 11.B.i above. EPA will provide comments to Lion Oil within (180) one hundred eighty days of receipt of the process design specifications. Within ninety (90) days of receipt of EPA's comments on the proposed design, Lion Oil shall modify the proposal to address EPA's comments, and submit the design to EPA for final approval. Upon receipt of EPA's final approval, Lion Oil shall implement the design. Lion Oil shall notify EPA of any substantial changes to the design of the Lo Tox System, which may affect the performance of the Lo Tox System.

D. Lo Tox System Optimization Study.

i. By no later than September 30, 2007, Lion Oil shall begin a twenty-four (24) month study to optimize the performance of the Lo Tox System to minimize NO_x emissions from its FCCU ("Optimization Study"). However, if prior to startup of the Lo Tox System or during the optimization study, Lion Oil elects to accept NO_x concentration limits of 20 ppmvd on a 365-day rolling average and 40 ppmvd on a 24-hour rolling average basis, each at 0% oxygen, Paragraphs 11.D.ii through 11.E shall not apply.

ii. Lion Oil shall submit protocols for the Optimization Study to EPA that includes a consideration of all important operating parameters including, but not limited to, optimal post-quench flue gas temperature, amounts and locations of ozone addition, and ozone slip. During the first six (6) months of the Optimization Study, Lion Oil shall evaluate the effect

of these operating parameters and shall monitor NO_x emissions and the operating parameters to identify optimum operating levels for the parameters that minimize the NO_x emissions. During the remainder of the Optimization Study Lion shall make all reasonable efforts to operate at the optimal operating levels for those parameters that it can control and consistent with Paragraph 11.C.v.

iii. Lion Oil shall submit the results of the Optimization Study to EPA in a written report no later than ninety (90) days after the completion of the study. The report shall identify the relevant operating parameters and their levels that result in maximum reductions of NO_x emissions from its FCCU. The report shall include, at a minimum, the following information on a monthly average basis (unless otherwise noted below):

- (a) Regenerator flue gas temperature and flow rate;
- (b) Coke burn rate;
- (c) FCCU feed rate;
- (d) FCCU feed composition (i.e. volume % of feed components such as AGO, VGO, CGO, ATB, VTB, etc.);
- (e) Amount and type of hydrotreated feed (i.e. volume % of feed that is hydrotreated and the type of hydrotreated feed such as AGO, VGO, CGO, ATB, VTB, etc.)
- (d) FCCU feed sulfur and nitrogen content;
- (e) Ozone addition rates;
- (f) Quench Tower inlet and outlet temperature; and
- (g) Hourly average NO_x and O₂ concentrations at the point of emission to the atmosphere.
- (h) NO_x concentrations at the inlet to the Lo Tox System during the Optimization Study as available.

iv. As required in Paragraph 11.C.iii.(g) and (h), Lion Oil shall determine the

NO_x and O₂ concentrations at the point of emission to the atmosphere by CEMS, and NO_x concentrations at the inlet to the Lo Tox System during the Optimization Study as available.

v. During the Optimization Study, Lion Oil will not be required to add ozone at a rate that results in total costs for electricity from ozone generation and oxygen production, and from purchased oxygen, for operation of the Lo Tox system in excess of \$550,000 per year.

E. FCCU NO_x Emission Limits.

i. As part of its Optimization Study report, Lion Oil shall propose concentration based limits to EPA, short and long term, and rolling averaging times (i.e., 3-hour, 24-hour, or 7-day short term rolling averages and 365-day for a long term rolling average), each at 0% oxygen for FCCU NO_x emissions, for optimized operation of the Lo Tox System consistent with the provisions of Paragraph 11. These proposed limits may include provisions for alternate operating scenarios for periods of hydrotreater outage, and an exemption for startup and shutdown of the FCCU, and Malfunction of the Lo Tox system, provided that good air pollution control practices are instituted during such events. Lion Oil shall comply with the limits it proposes beginning immediately upon submission of the Optimization Study report to EPA, until such time as Lion Oil is required to comply with the emissions limits set by EPA, pursuant to Paragraphs 11.E.ii. and 11.E.iii.

ii. EPA will use the CEMS data collected during the Optimization Studies and all other available and relevant information to establish limits for NO_x emissions from Lion Oil's FCCU. EPA may establish NO_x concentration limits based on a short term (e.g., 3-hour, 24-hour, or 7-day) rolling average and a long term (i.e., 365-day) rolling average, each at 0% oxygen. EPA will determine the NO_x concentration limits and averaging times for the FCCU based on the level of performance during the Optimization Studies, a reasonable certainty of compliance, and any other available pertinent information. These proposed limits may include provisions for alternate operating scenarios for periods of hydrotreater outage. EPA will not establish emission limits that are lower than 20 ppmvd on a 365-day rolling average and 40

ppmvd on a 24-hour rolling average basis, each at 0% oxygen, and will allow for an exemption for startup and shutdown of the FCCU, and Malfunction of the Lo Tox system, provided that good air pollution control practices are instituted during such events.

iii. EPA will notify Lion Oil of its determination of NO_x concentration limits, averaging times, and alternate operating scenarios (if any), and Lion Oil shall immediately, or within 30 days if EPA's NO_x concentration limits are different from Lion Oil's proposed limit, comply with the established emissions limits.

F. Demonstrating Compliance with FCCU NO_x Emission limits.

i. Beginning no later than December 31, 2004, Lion Oil shall use a NO_x CEMS to monitor performance of the FCCU, and subsequently, the Lo Tox System, and to report compliance with the terms and conditions of this Consent Decree. Lion Oil shall make CEMS data available to EPA upon demand as soon as practicable.

ii. Lion Oil shall install, certify, calibrate, maintain, and operate all CEMS required by this Consent Decree in accordance with the requirements of 40 CFR §§ 60.11, 60.13 and Part 60 Appendix A, B, and F. The CEMS will be used to demonstrate compliance with the NO_x emission limits established pursuant to this Paragraph.

12. SO₂ Emissions Reductions from FCCU.

A. Summary. Lion Oil shall implement a program to reduce SO₂ emissions from its FCCU by the installation and operation of a Wet Gas Scrubber ("WGS") at the El Dorado FCCU. Lion Oil shall incorporate lower SO₂ emission limits into permits and will demonstrate future compliance with the lower emissions limits through the use of CEMS.

B. Installation and Operation of WGS on the El Dorado FCCU. By no later than December 31, 2004, Lion Oil shall complete installation and shall begin operation of a WGS on the El Dorado FCCU. Lion Oil shall design the WGS to achieve an SO₂ concentration of 25 ppmvd or lower on a 365-day rolling average basis and 50 ppmvd on a 7-day rolling average basis, each corrected to 0% oxygen. By December 31, 2004, Lion Oil shall comply with an SO₂

concentration limit of 25 ppmvd or lower on a 365-day rolling average basis and 50 ppmvd on a 7-day rolling average basis, each corrected to 0% oxygen, except during periods of startup and shutdown of the FCCU, and Malfunction of the WGS, provided that good air pollution control practices are instituted during such events.

C. Demonstrating Compliance with FCCU SO₂ Emission Limits. By no later than December 31, 2004, Lion Oil shall install and use a SO₂ and O₂ CEMS to monitor performance of the FCCU and to report compliance with the terms and conditions of this Consent Decree. Lion Oil shall make CEMS and process data available to the Applicable Federal and State Agencies upon demand as soon as practicable. Lion Oil shall install, certify, calibrate, maintain, and operate all CEMS required by this Consent Decree in accordance with the requirements of 40 C.F.R. §§ 60.11, 60.13 and Part 60 Appendix A, and the applicable performance specification test of 40 C.F.R. Part 60 Appendices B and F. These CEMS will be used to demonstrate compliance with the SO₂ emission limits established pursuant to Paragraph 12B.

13. PM Emissions Reductions from FCCU.

A. Summary. Lion Oil shall implement a program to reduce particulate matter (“PM”) emissions from the El Dorado FCCU by the installation and operation of a WGS.

B. Installation and Operation of WGS on the El Dorado FCCU. By no later than December 31, 2004, Lion Oil shall complete installation and shall begin operation of a WGS on its FCCU. Lion Oil shall design the WGS to achieve an emission limit of 0.5 pound PM per 1000 pounds of coke burned on a 3-hour average basis. By no later than December 31, 2004, Lion Oil shall comply with an emission limit of 0.5 pounds of PM per 1000 pounds of coke burned on a 3-hour average basis, except during periods of startup and shutdown of the FCCU, and Malfunction of either the FCCU or the Wet Gas Scrubber, provided that good air pollution control practices are instituted during such events. Lion Oil will examine the capability of the wet gas scrubber to meet the 0.5 pound PM per 1000 pounds of coke burned on

a 3-hour average basis during turn down events by stack testing during the next turn down event where stack testing can be scheduled after installation of the wet gas scrubber. Lion Oil shall submit a report of the PM emissions during the turn down event within 90 days after the scheduled turn down event. If the emissions data show that the wet gas scrubber cannot with reasonable certainty comply with the 0.5 pounds PM per 1000 pounds of coke burned on a 3-hour average basis during turn down events, Lion Oil shall apply to EPA for approval of an alternate emissions limit that shall apply during turn down events not to exceed 1.0 pound PM per 1000 pounds of coke burned on a 3-hour average basis, which shall include a definition of a “turn down” event, but also may include limitations on operating parameters. Until the stack test required by this Paragraph 13. B is completed and a new emissions limit is established, the United States, EPA, and the State of Arkansas agree not to seek civil or stipulated penalties for violations of the 0.5 pounds PM per 1000 pounds of coke burned on a 3-hour average basis that occur during turn down events.

14. CO Emissions Reductions from FCCU.

A. Summary. Lion Oil shall implement a program to reduce CO emissions from the El Dorado FCCU by the use of full combustion.

B. Emissions Limits. By no later than December 31, 2004, the El Dorado FCCU shall meet an emission limit of 500 ppmvd CO corrected to 0% O₂ on a 1-hour average basis and 100 ppmvd CO corrected to 0% O₂ on a 365-day rolling average basis, except during periods of startup, shutdown, and Malfunction of the FCCU, provided that good air pollution control practices are instituted during such events.

C. Demonstrating Compliance with Emission Limits. By no later than December 31, 2004, Lion Oil shall use a CO and O₂ CEMS to monitor compliance of the FCCU with the terms and conditions of this Consent Decree. Lion Oil shall make CEMS and process data

available to the Applicable Federal and State Agencies upon demand as soon as practicable.

Lion Oil shall install, certify, calibrate, maintain, and operate all CEMS required by this Consent Decree in accordance with the requirements of 40 C.F.R. §§ 60.11, 60.13 and Part 60 Appendix A and the applicable performance specification test of 40 C.F.R. Part 50 Appendices B and F. These CEMS will be used to demonstrate compliance with the CO emission limits established pursuant to Paragraph 14B.

15. NSPS Applicability of FCCU Regenerators.

A. Generally. The FCCU Regenerator at the EL Dorado Refinery shall be an affected facility, as that term is used in the Standards of Performance for New Stationary Sources (“NSPS”), 40 C.F.R. Part 60, and shall be subject to and comply with the requirements of NSPS Subparts A and J for each of the following pollutants by the following dates:

SO ₂	<u>December 31, 2004</u>
PM	<u>December 31, 2004</u>
CO	<u>December 31, 2004</u>
Opacity	<u>December 31, 2004</u>

16. NOx Emissions Reductions from Heaters and Boilers, and NOx and CO Emission Reductions from Air Compressor (SN-841).

A. Summary. Lion Oil will implement an eight-year program to reduce NOx emissions from the heaters and boilers listed in Appendix C (“Controlled Heaters and Boilers”) by installing Next Generation Ultra Low-NOx Burners (“Next Generation ULNBs”) or Alternative NOx Control Technology, and demonstrating continuous compliance with lower emission limits through the use of source testing, CEMS, and/or parametric monitoring. Lion Oil will reduce NOx emissions from the air compressor (SN-841, G398TA) by installing an air fuel ratio controller and a catalytic converter, and demonstrating continuous compliance with lower

emission limits through the use of source testing. Lion Oil will conduct a Best Available Control Technology (“BACT”) analysis to determine the best available control technology for reducing CO emissions from the air compressor (SN-841, G398TA). EPA will establish BACT limits for CO for the air compressor. If Lion Oil agrees to comply with the established BACT limit for CO for the air compressor, Lion Oil shall comply with such limit by December 31, 2004.

B. Installation of NOx and CO Control Technology.

i. **Installation of Nox Control Technology:** To achieve the lowest possible emissions of NOx, Lion Oil shall install Next Generation ULNBs for all Controlled Heaters and Boilers and shall control the air compressor (SN-841, G398TA) with an air fuel ratio controller and a catalytic converter listed in Appendix C by the dates specified therein.

ii. **BACT Analysis for CO Control Technology for Compressor SN-841:** To achieve the lowest possible emissions of CO, by no later than April 30, 2003, Lion Oil may conduct and submit to EPA a BACT analysis including proposed control technology and emission limits for CO in lb/mmBtu on a 3-hour average basis for the air compressor (SN-841, G398TA). EPA will review the BACT analysis and establish BACT limits for CO for the air compressor. Lion Oil shall notify EPA whether it accepts the EPA established CO limits within 90 days after EPA’s notice to Lion Oil of the CO emission limits. If Lion Oil agrees to comply with the established BACT limit for CO for the air compressor, Lion Oil shall install controls and comply with such limit by December 31, 2004.

C. **Testing and Monitoring NOx Emissions from Controlled Heaters and Boilers and NOx and CO Emissions for the Compressor.** Lion Oil shall monitor the Controlled Heaters and Boilers and Compressor to meet the requirements of Paragraph 16.B. as follows:

- i. For heaters and boilers with a heat input capacity greater than 100 mmBTU/hr (HHV), Lion Oil shall install or continue to operate CEMS to measure NOx and O₂ by no later than the date of the installation of the applicable NOx Control Technology on the heater or boiler. Lion Oil shall install and operate CEMS to measure NOx and O₂ emissions from the atmospheric heater by no later than December 31, 2004. Lion Oil shall

install, certify, calibrate, maintain, and operate all CEMS required by this Paragraph 16 in accordance with the requirements of 40 C.F.R. §§ 60.11, 60.13 and Part 60 Appendix A and the applicable performance specification test of 40 C.F.R. Part 60 Appendices B and F. These CEMS will be used to demonstrate compliance with emission limits. Lion Oil shall make CEMS and process data available to the Applicable Federal and State Agencies upon demand as soon as practicable; and

- ii. For heaters and boilers with a heat input capacity of equal to or less than 100 mmBTU/hr (HHV), Lion Oil shall, by no later than 60 days after the date of installation of the applicable NOx Control Technology, conduct an initial performance test. The results of this test shall be reported based upon the average of three (3) one hour testing periods and shall be used to develop representative operating parameters for each unit, which will be used as indicators of compliance.
- iii. For the compressor, Lion Oil shall, by no later than 60 days after the date of installation of the applicable NOx and/or CO Control Technology, conduct an initial performance test. The results of this test shall be reported based upon the average of three (3) one hour testing periods and shall be used to develop representative operating parameters for each unit, which will be used as indicators of compliance.

D. Establishing NOx Permit Limits for Heaters and Boilers and the

Compressor. Within 120 days after the start-up of the operation of any NOx Control Technology required by this Paragraph 16, Lion Oil shall submit a permit application to ADEQ in which Lion Oil proposes NOx emission limits in lb/mmBtu on a 3-hour average basis. The proposed permit limits shall be based on actual performance as demonstrated by CEMS and performance tests and shall be low enough to ensure proper operation of the Nox Control Technology and high enough to provide a reasonable certainty of compliance. For the atmospheric heater (SN-804), Lion Oil shall limit emissions to .045 lb/mmBtu of Nox on a 3-hour average basis as measured by a CEMS.

E. Recordkeeping and Reporting. Commencing in 2003 Lion Oil shall submit a report to EPA and the ADEQ on December 31 of each calendar year about the progress of installation of NOx Control Technology required by this Paragraph 16 and other requirements of this Paragraph. This report shall contain:

- (i) A list of all Controlled Heaters and Boilers on which NOx Control Technology was installed;
- (ii) The type of NOx Control Technology that was installed on each heater and boiler with a detailed description of the manufacturer name and model and the designed emission factors;
- (iii) The results of all performance tests conducted on each heater and boiler pursuant to the requirements of Paragraph 16.C;
- (iv) A list of all heaters and boilers scheduled to have NOx Control Technology installed during the next calendar year, the projected date of installation, and the type of NOx Control Technology that will be installed on those units; and
- (v) An identification of proposed and established permit limits applicable to each heater or boiler for which NOx Control Technology has been installed pursuant to this Paragraph.

17. SO₂ Emissions Reductions from and NSPS Applicability of Heaters and Boilers.

A. Summary. Lion Oil shall undertake measures to reduce SO₂ emissions from refinery heaters and boilers by restricting H₂S in refinery fuel gas and by agreeing not to continue and/or commence the burning of fuel oil except under the provisions set forth herein.

B. NSPS Applicability of Heaters and Boilers. Upon the Date of Lodging of the Consent Decree for Lion Oil, the heaters and boilers at the El Dorado Refinery shall be affected facilities, as that term is used in 40 C.F.R. Part 60, Subparts A and J, and shall be subject to and comply with the requirements of NSPS Subparts A and J, except for those heaters and boilers listed in Appendix C, which shall be affected facilities by the dates listed in Appendix C. If there is a revision to NSPS Subpart J that excludes either certain fuel gas combustion devices or fuel gas streams from Subpart J, then that exemption shall apply to this Paragraph as well. By no later than December 31, 2006, Lion Oil shall install, certify, calibrate, maintain and operate a fuel gas CEMS in accordance with the requirements of 40 C.F.R. §§

60.11, 60.13 and Part 60 Appendix A, and the applicable performance specification test of 40 C.F.R. Part 60 Appendices B and F. This CEMS will be used to demonstrate compliance with the SO₂ emission limits established pursuant to this Paragraph.

C. Elimination/Reduction of Fuel Oil Burning.

i. Lion Oil. From the Date of Lodging of this Consent Decree through and after termination, Lion Oil shall continue not to burn Fuel Oil in any combustion unit except:

(a) Lion Oil shall be permitted to burn Torch Oil in the El Dorado FCCU Regenerator during FCCU start-ups; and

(b) Lion Oil shall be permitted to burn Fuel Oil in combustion units after the establishment of FCCU NO_x emission limits pursuant to Paragraph 11.E. of this Consent Decree, provided that emissions from any such combustion units are routed through the FCCU Wet Gas Scrubber and Lion Oil demonstrates, with the approval of EPA, that the NO_x emission limits established therein and the SO₂ emissions limits set forth in Paragraph 12.B. of this Consent Decree will continue to be met.

(c) during periods of natural gas curtailment where Lion Oil shall burn only LPG or low sulfur distillate (e.g. No. 2 oil at less than 0.5% sulfur).

18. NSPS Applicability of and Compliance for Sulfur Recovery Plant.

A. Summary. Lion Oil owns and operates a Sulfur Recovery Plant located at the El Dorado Refinery (“El Dorado SRP”) that was constructed and/or modified after October 4, 1976 and that is currently subject to, and required to comply with, the applicable provisions of 40 C.F.R. Part 60, Subparts A and J.

B. Sulfur Pit Emissions. As of the Date of Lodging, through and after termination of the Consent Decree, Lion Oil shall continue to route all El Dorado SRP sulfur pit emissions from the El Dorado SRP so that sulfur pit emissions to the atmosphere either are eliminated or are included and monitored as part of the applicable Sulfur Recovery Plants tail gas emissions that meet the NSPS Subpart J limit for SO₂: a 12-hour rolling average of 250 ppmvd SO₂ corrected to 0% oxygen, as required by 40 C.F.R. § 60.104(a)(2).

C. Sulfur Recovery Plant Emissions Compliance.

i. By no later than the Date of Lodging of the Consent Decree, Lion Oil shall, for all periods of operation of the El Dorado SRP, comply with 40 C.F.R. § 60.104(a)(2), except during periods of startup, shutdown or Malfunction of the El Dorado SRP, or during a Malfunction of the El Dorado TGU. For the purpose of determining compliance with the Sulfur Recovery Plant emission limits of 40 C.F.R. § 60.104(a)(2), the “start-up/shutdown” provisions set forth in NSPS Subpart A shall apply to the El Dorado SRP.

ii. As of the Date of Lodging of this Consent Decree, Lion Oil shall monitor all emission points (stacks) to the atmosphere for tail gas emissions from the El Dorado SRP, and shall report excess emissions, as required by 40 C.F.R. §§ 60.7(c), 60.13, and 60.105(a)(5). During the life of this Consent Decree, Lion Oil shall continue to conduct emissions monitoring from the El Dorado SRP with CEMS at all of the emission points, unless an SO₂ alternative monitoring procedure has been approved by EPA, per 40 C.F.R. § 60.13(i), for any of the emission points.

iii. At all times, including periods of startup, shutdown, and Malfunction, Lion Oil shall, to the extent practicable, operate and maintain the El Dorado SRP and TGU and any supplemental control devices, in accordance with Lion Oil’s obligation to minimize Sulfur Recovery Plant emissions through implementation of good air pollution control practices as required in 40 C.F.R. § 60.11(d).

D. Good Operation and Maintenance.

i. By no later than June 30, 2003, Lion Oil shall, for the El Dorado SRP, submit to EPA and ADEQ, a summary of a plan, implemented or to be implemented, for enhanced maintenance and operation of the El Dorado SRP, any supplemental control devices, and the appropriate Upstream Process Units. This plan shall be termed a Preventive Maintenance and Operation Plan (“PMO Plan”). The PMO Plan shall be a compilation of Lion Oil’s approaches for exercising good air pollution control practices for minimizing SO₂ emissions at the El Dorado Refinery. The PMO Plan shall provide for continuous operation of the El Dorado SRP between

scheduled maintenance turnarounds with minimization of emissions from the El Dorado SRP. The PMO Plan shall include, but not be limited to, sulfur shedding procedures, new startup and shutdown procedures, emergency procedures and schedules to coordinate maintenance turnarounds of the El Dorado SRP Claus trains and any supplemental control device to coincide with scheduled turnarounds of major Upstream Process Units. The PMO Plan shall have as a goal the elimination of Acid Gas Flaring. Lion Oil shall comply with the PMO Plan at all times, including periods of start up, shut down, and Malfunction of the El Dorado SRP through and after termination of the Consent Decree. Modifications related to minimizing Acid Gas Flaring and/or SO₂ emissions made by Lion Oil to the PMO Plan shall be summarized in an annual submission to EPA and the ADEQ until termination of the Consent Decree.

ii. EPA and the ADEQ do not, by their review of the PMO Plan and/or by their failure to comment on the PMO Plan, warrant or aver in any manner that any of the actions that Lion Oil may take pursuant to the PMO Plan will result in compliance with the provisions of the Clean Air Act, the Arkansas Water and Air Pollution Control Act, or their implementing regulations. Notwithstanding EPA's or ADEQ's review of the PMO Plan, Lion Oil shall remain solely responsible for compliance with the Clean Air Act, the Arkansas Air Pollution and Control Act, and their implementing regulations.

E. Optimization Study. By not later than December 31, 2004, Lion Oil shall complete an optimization study (internal or external) on the El Dorado SRP and report the results to EPA and the ADEQ. The optimization study shall consider:

- i. A detailed evaluation of plant design and capacity, operating parameters and efficiencies - including catalytic activity and material balances;
- ii. An analysis of the composition of the Acid Gas and Sour Water Stripper Gas resulting from the processing of the crude slate actually used, or expected to be used, in the El Dorado SRP;
- iii. A thorough review of each critical piece of process equipment and instrumentation within each Claus train that is designed to correct deficiencies or

problems that prevent each Claus train from achieving their optimal sulfur recovery efficiency and expanded periods of operation;

- iv. Establishment of baseline data through testing and measurement of key parameters throughout each Claus train;
- v. Establishment of a thermodynamic process model of each Claus train;
- vi. For any key parameters that have been determined to be at less than optimal levels, initiation of logical, sequential, or stepwise changes designed to move such parameters toward their optimal values;
- vii. Verification through testing, analysis of continuous emission monitoring data, or other means, of incremental and cumulative improvements in sulfur recovery efficiency, if any;
- viii. Establishment of new operating procedures for long term efficient operation; and
- ix. Each study shall be conducted to optimize the performance of the Claus trains in light of the actual characteristics of the feeds to the El Dorado SRP.

Lion Oil shall incorporate the results of the optimization study into the PMO Plan required under Paragraph 18.D.

19. NSPS Applicability of and Compliance for Flaring Devices.

A. **Summary.** Lion Oil owns and operates the Flaring Devices identified in Appendix B to this Consent Decree. The Flaring Devices in Appendix B already are affected facilities, as that term is used in NSPS, 40 C.F.R. Part 60, and are subject to and are required to comply with the requirements of 40 C.F.R. Part 60, Subparts A and J for fuel gas combustion devices.

B. Compliance with the Emission Limit at 40 C.F.R. § 60.104(a)(1).

i. **Continuous or Intermittent, Routinely-Generated Refinery Fuel Gases.** For continuous or intermittent, routinely-generated refinery fuel gases that are combusted in any of the Flaring Devices identified in Appendix B, Lion Oil shall either take the Flaring Device that is associated with such a gas stream out of service or shall comply with the emission limit at 40 C.F.R. § 60.104(a)(1) by the dates specified in Appendix E.

ii. Non-Routinely Generated Gases. The combustion of gases generated by the startup, shutdown, or Malfunction of a refinery process unit or released to a Flaring Device as a result of relief valve leakage or other emergency Malfunction are exempt from the requirement to comply with 40 C.F.R. § 60.104(a)(1).

C. **Good Air Pollution Control Practices**. For all Flaring Devices identified in Appendix B, Lion Oil shall comply with the NSPS obligation to implement good air pollution control practices as required by 40 C.F.R. § 60.11(d) to minimize HC and AG Flaring Incidents.

D. **Monitoring the Flaring Devices and Reporting**. Lion Oil shall insure that all continuous or intermittent, routinely-generated refinery fuel gases that are combusted in any Flaring Device are monitored by a CEMS as required by 40 C.F.R. § 60.105(a)(4) or with a parametric monitoring system approved by EPA as an alternative monitoring system under 40 C.F.R. § 60.13(i). Lion Oil shall comply with the reporting requirements of 40 C.F.R. Part 60, Subpart J, for all such Flaring Devices.

20. Control of Acid Gas Flaring Incidents and Tail Gas Incidents.

By December 31, 2003, Lion Oil will identify the root causes of AG Flaring Incidents between January 1, 1997 and December 31, 2002 that occurred: (1) after installation of its flare gas recovery system; and (2) before the installation of the flare gas recovery system if the AG Flaring Incident would not have been prevented by the subsequent installation of the flare gas recovery system. Lion Oil has installed a flare gas recovery system and has implemented (or is in the process of identifying and implementing) corrective actions to minimize the number and duration of AG Flaring Incidents. Lion Oil also agrees to implement a program to investigate the cause of future AG Flaring Incidents, to take reasonable steps to correct the conditions that have caused or contributed to such AG Flaring Incidents, and to minimize AG Flaring Incidents through and after termination of the Consent Decree. Lion Oil shall follow the procedures in this Paragraph 20 to evaluate whether future AG Flaring Incidents are due to Malfunctions through and after termination of the Consent Decree or are subject to stipulated penalties through

termination of the Consent Decree. Lion Oil also agrees to undertake the investigative and evaluative procedures in this Paragraph for assessing if Tail Gas Incidents, as described in Paragraph 20.E, are due to Malfunctions through and after termination of the Consent Decree or are subject to stipulated penalties through termination of the Consent Decree. The procedures, as set forth below, require a root cause analysis and corrective action for all types of AG Flaring and Tail Gas Incidents and require stipulated penalties for AG Flaring and Tail Gas Incidents if the root causes were not due to Malfunctions.

A. Investigation and Reporting. No later than forty-five (45) days following the end of an Acid Gas Flaring Incident, until termination of the Consent Decree, Lion Oil shall submit to EPA and ADEQ a report that sets forth the following:

- i. The date and time that the Acid Gas Flaring Incident started and ended. To the extent that the Acid Gas Flaring Incident involved multiple releases either within a twenty-four (24) hour period or within subsequent, contiguous, non-overlapping twenty-four (24) hour periods, Lion Oil shall set forth the starting and ending dates and times of each release;
- ii. An estimate of the quantity of sulfur dioxide that was emitted and the calculations that were used to determine that quantity;
- iii. The steps, if any, that Lion Oil took to limit the duration and/or quantity of sulfur dioxide emissions associated with the Acid Gas Flaring Incident;
- iv. A detailed analysis that sets forth the Root Cause and all contributing causes of that Acid Gas Flaring Incident, to the extent determinable;
- v. An analysis of the measures, if any, that are available to reduce the likelihood of a recurrence of an Acid Gas Flaring Incident resulting from the same Root Cause or contributing causes in the future. The analysis shall discuss the alternatives, if any, that are available, the probable effectiveness and cost of the alternatives, and whether or not an outside consultant should be retained to assist in the analysis. Possible design, operation and maintenance changes shall be evaluated. If Lion Oil concludes that corrective action(s) is (are) required under Paragraph 20.B, 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 Lion Oil concludes that corrective action is not required under Paragraph 20.B, the report shall explain the basis for that conclusion;

- vi. A statement that: (a) specifically identifies each of the grounds for stipulated penalties in Paragraphs 20.C.i and 20.C.ii of this Decree and describes whether or not the Acid Gas Flaring Incident falls under any of those grounds; (b) if an Acid Gas Flaring Incident falls under Paragraph 20.C.iii of this Decree, describes which Paragraph (20.C.iii.a or 20.C.iii.b) applies and why; and (c) if an Acid Gas Flaring Incident falls under either Paragraph 20.C.ii or Paragraph 20.C.iii.b, states whether or not Lion Oil asserts a defense to the Flaring Incident, and if so, a description of the defense; and
- vii. 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 this Paragraph 20.A.iv and 20.A.v shall be submitted; provided, however, that if Lion Oil has not submitted a report or a series of reports containing the information required to be submitted under this Paragraph within the 45 day time period set forth in Paragraph 20.A (or such additional time as EPA may allow) after the due date for the initial report for the Acid Gas Flaring Incident, the stipulated penalty provisions of Paragraph 49 shall apply, but Lion Oil shall retain the right to dispute, under the dispute resolution provision of this Consent Decree, any demand for stipulated penalties that was issued as a result of Lion Oil's failure to submit the report required under this Paragraph within the time frame set forth. Nothing in this Paragraph shall be deemed to excuse Lion Oil from its investigation, reporting, and corrective action obligations under this Section for any Acid Gas Flaring Incident which occurs after an Acid Gas Flaring Incident for which Lion Oil has requested an extension of time under this Paragraph 20.B.
- viii. 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), Lion Oil shall submit a report identifying the corrective action(s) taken and the dates of commencement and completion of implementation.

B. Corrective Action.

- i. In response to any AG Flaring Incident, through and after termination of the Consent Decree Lion Oil shall take, as expeditiously as practicable, such interim and/or long-term corrective actions, if any, as are consistent with good engineering practice to minimize the likelihood of a recurrence of the Root Cause and all contributing causes of that AG Flaring Incident.
- ii. If EPA does not notify Lion Oil in writing within thirty (30) days of receipt of the report(s) required by Paragraph 20.A that it objects to one or more aspects of the 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 compliance with Paragraph 20.B.i of this Decree. EPA does not, however, by its consent to the entry of this Consent Decree or by its failure to object to any corrective action that Lion Oil may take in the future, warrant or aver in any manner that any corrective actions in the future shall result in compliance with the provisions of the Clean Air Act or its implementing regulations. Notwithstanding EPA's review of any plans, reports, corrective actions or procedures under this Paragraph 20, Lion Oil shall remain solely responsible for non-compliance with the Clean Air Act and its implementing regulations. Nothing in this Paragraph 20 shall be construed as a waiver of EPA's rights under the Clean Air Act and its regulations for future violations of the Act or its regulations.

iii. If EPA does object, in whole or in part, to the proposed corrective action(s) and/or the schedule(s) of implementation, or, where applicable, to the absence of such proposal(s) and/or schedule(s), it shall notify Lion Oil of that fact within thirty (30) days following receipt of the report(s) required by Paragraph 20.A above. If EPA and Lion Oil cannot agree on the appropriate corrective action(s), if any, to be taken in response to a particular Acid Gas Flaring Incident, either Party may invoke the Dispute Resolution provisions of Section XV of the Consent Decree.

iv. Nothing in Paragraph 20 shall be construed to limit the right of Lion Oil to take such corrective actions as it deems necessary and appropriate immediately following an Acid Gas Flaring Incident or in the period during preparation and review of any reports required under this Section.

C. Stipulated Penalties. The provisions of Paragraph 20.C are intended to implement the process outlined in the logic diagram attached hereto as Appendix F to this Consent Decree. These provisions shall be interpreted and construed, to the maximum extent feasible, to be consistent with that Attachment. However, in the event of a conflict between the language of Paragraph 20 and Appendix F, the language of this Paragraph shall control.

i. The stipulated penalty provisions of Paragraph 49.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 Sulfur Recovery Plant, TGU, or Upstream Process Units;
- b. Failure to follow written procedures;
- c. A failure of equipment that is due to a failure by Lion Oil to operate and maintain that equipment in a manner consistent with good engineering practice; or
- d. Hydrocarbon carryover from an amine unit or a sour water stripper.

ii. If the Acid Gas Flaring Incident is not a result of one of the root causes identified in Paragraph 20C. i., then the stipulated penalty provisions of Paragraph 49.A. shall apply if the Acid Gas Flaring Incident:

- a. Results in emissions of sulfur dioxide at a rate greater than twenty (20.0) pounds per hour continuously for three (3) consecutive hours or more; or
- b. Causes the total number of Acid Gas Flaring Incidents in a rolling twelve (12) month period to exceed five (5).

In the event that a Flaring Incident falls under both Paragraph 20.C.i and Paragraph 20.C.ii, then Paragraph 20.C.i shall apply.

iii. With respect to any Acid Gas Flaring Incident not identified in Paragraph 20.C.i. or 20.C.ii., the following provisions shall apply:

- a. 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 Acid Gas Flaring Incidents, and the stipulated penalty provisions of paragraph 49.A shall not apply;
- b. First Time: If the Root Cause of the Acid Gas Flaring Incident was not sudden and infrequent, but the Acid Gas Flaring Incident was reasonably preventable

through the exercise of good engineering practices then Lion Oil shall implement corrective action(s) pursuant to Paragraph 20.B.i., and the stipulated penalty provisions of paragraph 49.A shall not apply;

- c. Recurrence: If the Root Cause of the Acid Gas Flaring Incident is a recurrence of the same Root Cause that caused a previous Acid Gas Flaring Incident occurring after the Effective Date of this Consent Decree, unless the Root Cause of the previous Acid Gas Flaring Incident was designated as an agreed-upon Malfunction under Paragraph 20.C.iii.a., then the stipulated penalty provisions of paragraph 49.A shall apply.

- iv. Defenses: Lion Oil may raise the following affirmative defenses in response

to a demand by the United States for stipulated penalties:

- a. Force majeure.
- b. As to Paragraphs 20.C.i.a, 20.C.i.b, 20.C.i.c and 20.C.iii.c only, the Acid Gas Flaring Incident does not meet their identified criteria.
- c. As to Paragraph 20.C.i.d only, the Root Cause substantially differs from the Root Causes that caused Acid Gas Flaring Incidents between January 1, 1997 and December 31, 2002 and that are identified by Lion Oil prior to December 31, 2003.
- d. As to Paragraphs 20.C.ii. and 20.C.iii.c only, Malfunction.
- e. As to Paragraph 20.C.iii.c only, Lion Oil was in the process of timely developing or implementing a corrective action plan under Paragraph 20.B.i for the previous Acid Gas Flaring Incident.

In the event a dispute under Paragraph 20.C.ii. or 20.C.iii.c is brought to the Court pursuant to the dispute resolution provisions of this Consent Decree, Lion Oil may also assert a start up, shutdown and/or upset defense, but the United States shall be entitled to assert that such defenses are not available. If Lion Oil prevails in persuading the Court that the defenses of startup, shutdown, and upset are available for AG Flaring Incidents under 40 C.F.R. 60.104(a)(1), Lion Oil shall not be liable for stipulated penalties for emissions resulting from startup, shutdown or upset. If the United States prevails in persuading the Court that the defenses or startup, shutdown, or upset are not available, Lion Oil shall be liable for such stipulated penalties.

v. Other than for a Malfunction or force majeure, if no Acid Gas Flaring Incident and no violation of the emission limit under Paragraph 18 occurs at the El Dorado Refinery for a rolling 36 month period, then the stipulated penalty provisions of Paragraph 49.A no longer apply. EPA may elect to reinstate the stipulated penalty provision if Lion Oil has an Acid Gas Flaring Incident which would otherwise be subject to stipulated penalties. EPA's decision shall not be subject to dispute resolution. Once reinstated, the stipulated penalty provision shall continue for the remaining life of this Consent Decree for the El Dorado Refinery.

D. Miscellaneous.

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

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

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

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

$$\text{ER} = [\text{FR}][\text{ConcH}_2\text{S}][0.169].$$

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

rounded to 20.0 pounds of SO₂ per hour; for a calculation that results in an emission rate of 20.05 pounds of SO₂ per hour, the emission rate shall be rounded to 20.1.)

iii. Meaning of Variables and Derivation of Multipliers used in the Equations in Paragraph 20.D.i-ii:

ER =	Emission Rate in pounds of SO ₂ per hour
FR =	Average Flow Rate to Flaring Device(s) during Flaring, in standard cubic feet per hour
TD =	Total Duration of Flaring in hours
ConcH ₂ S =	Average Concentration of Hydrogen Sulfide in gas during Flaring (or immediately prior to Flaring if all gas is being flared) expressed as a volume fraction (scf H ₂ S/scf gas)
8.44×10^{-5} =	$[\text{lb mole H}_2\text{S}/379 \text{ scf H}_2\text{S}][64 \text{ lbs SO}_2/\text{lb mole H}_2\text{S}][\text{Ton}/2000 \text{ lbs}]$
0.169 =	$[\text{lb mole H}_2\text{S}/379 \text{ scf H}_2\text{S}][1.0 \text{ lb mole SO}_2/1 \text{ lb mole H}_2\text{S}][64 \text{ lb SO}_2/1.0 \text{ lb mole SO}_2]$

The flow of gas to the AG Flaring Device(s) (“FR”) shall be as measured by the relevant flow meter or reliable flow estimation parameters. Hydrogen sulfide concentration (“ConcH₂S”) shall be determined from the Sulfur Recovery Plant feed gas analyzer, from knowledge of the sulfur content of the process gas being flared, by direct measurement by tutwiler or draeger tube analysis or by any other method approved by EPA or the ADEQ. In the event that any 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 20.A.i. shall include the data used in the calculation and an explanation of the basis for any estimates of missing data points.

E. Tail Gas Incidents.

i. Investigation, Reporting, Corrective Action and Stipulated Penalties. For Tail Gas Incidents, Lion Oil shall follow the same investigative, reporting, corrective action and assessment of stipulated penalty procedures as those outlined in Paragraphs 20.A - 20.C for Acid Gas Flaring Incidents. Those procedures shall be applied to TGU shutdowns, bypasses of a

TGU, unscheduled shutdowns of a Sulfur Recovery Plant, or other miscellaneous unscheduled Sulfur Recovery Plant events which result in a Tail Gas Incident. The investigative and corrective action procedures are applicable through and after termination of the Consent Decree.

ii. Calculation of the Quantity of SO₂ Emissions resulting from a Tail Gas

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

- a. If the Tail Gas Incident is combusted in a flare the SO₂ emissions are calculated using the methods outlined in Paragraph 20.D.; or
- b. If the Tail Gas Incident is a event exceeding the 250 ppmvd (NSPS J limit), from a monitored Sulfur Recovery Plant incinerator, then the following formula applies:

$$ER_{TGI} = \frac{TD_{TGI}}{3} \sum_{i=1} [FR_{Inc.}]_i [Conc. SO_2 - 250]_i [0.169 \times 10^{-6}] \left[\frac{20.9 - \% O_2}{20.9} \right]_i$$

Where:

ER_{TGI} = Emissions from Tail Gas at the Sulfur Recovery Plant incinerator, SO₂ lb over a 24 hour period

TD_{TGI} = Total Duration (number of hours) when the incinerator CEMS exceeded 250 ppmvd SO₂ corrected to 0% O₂ on a rolling twelve hour average, in each 24 hour period of the Incident

i = Each hourly average

$FR_{Inc.}$ = 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

$Conc. SO_2$ = Each actual 12 hour rolling average SO₂ concentration (CEMS data) that is greater than 250 ppm in the incinerator exhaust gas, ppmvd corrected to 0% O₂, for each hour of the Incident

$\% O_2$ = O₂ concentration (CEMS data) in the incinerator exhaust gas in volume % on dry basis for each hour of the Incident

$$0.169 \times 10^{-6} = [lb \text{ mole of } SO_2 / 379 SO_2] [64 \text{ lbs } SO_2 / lb \text{ mole } SO_2] [1 \times 10^{-6}]$$

Standard conditions = 60 degree F; 14.7 lb_{force}/sq.in. absolute

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

21. Control of Hydrocarbon Flaring Incidents. Lion Oil will identify the causes of HC Flaring Incidents that occurred between January 1, 1997 and December 31, 2002 at the El Dorado Refinery. Lion Oil has installed a flare gas recovery system and has implemented (or is in the process of identifying and implementing) corrective actions to minimize the number and duration of HC Flaring Incidents. For future Hydrocarbon Flaring Incidents, Lion Oil shall follow the same investigative, reporting, and corrective action procedures as those outlined in Paragraphs 20.A - 20.B for Acid Gas Flaring Incidents; provided however, that in lieu of analyzing possible corrective actions under Paragraph 20.A.v and taking interim and/or long-term corrective action under Paragraph 20.B.i for a Hydrocarbon Flaring Incident attributable to the start up or shut down of a unit that Lion Oil has previously analyzed under this Paragraph 21, Lion Oil may identify such prior analysis when submitting the report required under this Paragraph 21. Stipulated penalties under either Paragraphs 20.C and 49 shall not apply to Hydrocarbon Flaring Incident(s). The formulas at Paragraph 20.D, used for calculating the quantity and rate of sulfur dioxide emissions during AG Flaring Incidents, shall be used to calculating the quantity and rate of sulfur dioxide emissions during HC Flaring Incidents. The investigative and corrective action procedures (only) are applicable through and after termination of the Consent Decree.

22. Benzene Waste NESHAP Program Enhancements.

In addition to continuing to comply with all applicable requirements of 40 C.F.R. Part 61, Subpart FF (“Benzene Waste NESHAP” or “Subpart FF”), Lion Oil agrees to undertake, at the El Dorado Refinery, the measures set forth in Paragraphs 22.B through 22.N to ensure continuing compliance with Subpart FF and to minimize or eliminate fugitive benzene waste emissions.

A. Current Compliance Status. As of the Date of Lodging of this Consent Decree, Lion Oil believes that the El Dorado Refinery has a Total Annual Benzene (“TAB”) of less than 10 Mg/yr. Lion Oil will review and verify the TAB at the El Dorado Refinery consistent with the requirements of Paragraph 22.C.

B. Refinery Compliance Status Changes. If at any time from the Date of Lodging of the Consent Decree until its termination, the El Dorado Refinery is determined to have a TAB equal to or greater than 10 Mg/yr, Lion Oil shall comply with the compliance option set forth at 40 C.F.R. § 61.342(e) (hereinafter referred to as the “6 BQ compliance option”).

C. One-Time Review and Verification of the El Dorado Refinery’s TAB.

i. **Phase One of the Review and Verification Process.** By no later than September 30, 2003, Lion Oil shall complete a review and verification of the TAB of the El Dorado Refinery. For the El Dorado Refinery, the review and verification process shall include, but is not limited to: (i) an identification of each waste stream that is required to be included in the El Dorado 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); (ii) 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; (iii) an identification of the benzene concentration in each waste stream, including sampling for benzene concentration at no less than 10 waste streams consistent with the requirements of 40 C.F.R. § 61.355(c)(1) and (3); provided however, that previous analytical data or documented knowledge of waste streams may be used, 40 C.F.R.

§ 61.355(c)(2), for streams not sampled; and (iv) an identification of whether or not the stream is controlled consistent with the requirements of Subpart FF. By no later than sixty (60) days following the completion of Phase One of the review and verification process, Lion Oil shall submit a Benzene Waste NESHAP Compliance Review and Verification report (“BWN Compliance Review and Verification Report”) that sets forth the results of Phase One, including but not limited to the items identified in (i) through (iv) of this Paragraph 22.C.i.

ii. Phase Two of the Review and Verification Process. Based on EPA’s review of the BWN Compliance Review and Verification Report(s), EPA may select up to 20 additional waste streams at the El Dorado Refinery for sampling for benzene concentration. Lion Oil will conduct the required sampling and submit the results to EPA within ninety (90) days of receipt of EPA’s request. Lion Oil will use the results of this additional sampling to recalculate the TAB and to amend the BWN Compliance Review and Verification Report, as needed. To the extent that EPA requires Lion Oil to re-sample a Phase One waste stream as part of this Phase Two review, Lion Oil may average the results of the two sampling events. Lion Oil shall submit an amended BWN Compliance Review and Verification Report within ninety (90) days following the date of the completion of the required Phase Two sampling, if Phase Two sampling is required by EPA.

D Implementation of Actions Necessary to Correct Non-Compliance.

i. Amended TAB Reports. If the results of the BWN Compliance Review and Verification Report(s) indicate(s) that the El Dorado Refinery has failed to file the reports required by 40 C.F.R. § 61.357(c), or that the El Dorado Refinery’s most recently-filed report is inaccurate and/or does not satisfy the requirements of Subpart FF, Lion Oil shall submit, by no later than sixty (60) days after completion of the BWN Compliance Review and Verification Report(s), an amended TAB report to the Applicable State Agency. Lion Oil’s BWN Compliance Review and Verification Report(s) shall be deemed an amended TAB report for purposes of Subpart FF reporting to EPA.

ii. If the results of the BWN Compliance Review and Verification Report indicate that the El Dorado Refinery has a TAB of over 10 Mg/yr, Lion Oil shall submit to the Applicable Federal and State Agencies by no later than 180 days after completion of the BWN Compliance Review and Verification Report, a plan that identifies with specificity the compliance strategy and schedule that Lion Oil will implement to ensure that the El Dorado Refinery complies with the 6 BQ compliance option as soon as practicable.

iii. Review and Approval of Plans Submitted Pursuant to Paragraph 22.D.ii. Any plan submitted pursuant to Paragraph 22.D.ii shall be subject to the approval of, disapproval of, or modification by EPA, which shall act in consultation with the Applicable State Agency. Within sixty (60) days after receiving any notification of disapproval or request for modification from EPA, Lion Oil shall submit to the Applicable Federal and State Agencies a revised plan that responds to all identified deficiencies. Upon receipt of approval or approval with conditions, Lion Oil shall implement the plan. Disputes arising under this Paragraph 22.D.iii. shall be resolved in accordance with the dispute resolution provisions of this Decree.

iv. Certification of Compliance with the 6 BQ Compliance Option. By no later than thirty (30) days after completion of the implementation of all actions, if any, required pursuant to Paragraph 22.D.ii or pursuant to Paragraph 22.J.vi to come into compliance with the 6 BQ Compliance Option, Lion Oil shall submit a report to the Applicable Federal and State Agencies that, as to the Refinery, the Refinery complies with the Benzene Waste NESHP.

E. Annual Program. Lion Oil shall establish an annual program of reviewing process information for the El Dorado Refinery, including but not limited to construction projects, to ensure that all new benzene waste streams are included in the El Dorado Refinery's waste stream inventory.

F. Benzene Spills. For each spill at the El Dorado Refinery, Lion Oil shall review such spills to determine if benzene waste was generated. Lion Oil shall include benzene generated by such spills in the TAB for the El Dorado Refinery.

G. Training.

i. If and when the El Dorado's TAB reaches 1 Mg/yr or more, then by no later than 180 days from the receipt of the information showing that the El Dorado Refinery's TAB has reached or exceeded 1 Mg/yr, Lion Oil shall develop and begin implementation of annual (i.e., once each calendar year) training for all employees asked to draw benzene waste samples.

ii. If and when the El Dorado Refinery's TAB reaches 10 Mg/yr or more, Lion Oil shall complete the development of standard operating procedures for all control equipment used to comply with the Benzene Waste NESHAP. Lion Oil shall complete an initial training program regarding these procedures for all operators assigned to this equipment. Comparable training shall be provided to any persons who subsequently become operators, prior to their assumption of this duty. "Refresher" training shall be performed on a periodic basis. Lion Oil shall propose a schedule for the initial and refresher training at the same time that Lion Oil proposes a plan, pursuant to either Paragraph 22.D.ii, or Paragraph 22.J.vi, that identifies the compliance strategy and schedule that Lion Oil will implement to come into compliance with the 6 BQ compliance option.

iii. As part of Lion Oil's training program, they must ensure that the employees of any contractors hired to perform the requirements of this Paragraph are properly trained to implement all provisions of this Paragraph at the El Dorado Refinery.

H. Waste/Slop/Off-Spec Oil Management.

i. By no later than June 30, 2003, Lion Oil shall submit to the Applicable Federal and State Agencies, for the El Dorado Refinery, schematics that: (a) depict the waste management units (including sewers) that handle, store, and transfer waste/slop/off-spec oil streams; (b) identify the control status of each waste management unit; and (c) show how such oil is transferred within the Refinery. Representatives from Lion Oil and EPA thereafter shall confer about the appropriate characterization of the Refinery's waste/slop/off-spec oil streams for the waste management units handling such oil streams, for purposes of the El Dorado

Refinery's TAB calculation. At a mutually-agreed upon time, Lion Oil shall submit, if necessary, revised schematics that reflect the agreements between EPA and Lion Oil regarding the characterization of these oil streams and the appropriate control standards.

ii. Organic Benzene Waste Streams. If and when the El Dorado Refinery's TAB reaches 10 Mg/yr and a compliance strategy is approved, all waste management units handling "organic" benzene wastes, as defined in Subpart FF, shall meet the applicable control standards of Subpart FF. If, as a result of the discussions between the EPA and Lion Oil, pursuant to Paragraph 22.H.i, EPA and Lion Oil agree that controls not already in place are necessary on any waste management unit handling organic benzene wastes, the Parties shall agree, in writing, to a schedule, not to exceed two years, for the completion of the installation of the necessary controls.

iii. Aqueous Benzene Waste Streams. For purposes of calculating the El Dorado Refinery's TAB pursuant to the requirements of 40 C.F.R. § 61.342(a), Lion Oil shall include all waste/slop/off-spec oil streams that become "aqueous" until such streams are recycled to a process or put into a process feed tank (unless the tank is used primarily for the storage of wastes). If and when the El Dorado Refinery's TAB reaches 10 Mg/yr, then, for purposes of complying with the 6BQ compliance option, all waste management units handling aqueous benzene waste streams shall either meet the applicable control standards of Subpart FF or shall have their uncontrolled benzene quantity count toward the applicable 6 megagram limit.

iv. Plan to Quantify Uncontrolled Waste/Slop/Off-Spec Oil Streams. By no later than ninety (90) days after EPA has approved the schematics (revised if necessary) required under Paragraph 22.H.i., Lion Oil shall submit, for the El Dorado Refinery, a plan(s) to quantify waste/slop/off-spec oil movements for all benzene waste streams which are not controlled. EPA will review the plan and may recommend revisions consistent with Subpart FF. Upon plan approval, Lion Oil shall maintain records quantifying such movements.

v. Disputes under this Paragraph 22.H. shall be resolved in accordance with the dispute resolution provisions of this Consent Decree.

I. End of Line Sampling (If the El Dorado Refinery is Found to Have a TAB of 10 Mg/yr or More).

The provisions of this Paragraph 22.I shall apply after the El Dorado Refinery's TAB reaches or exceeds 10 Mg/yr and after the El Dorado Refinery has completed implementation of an approved compliance plan submitted pursuant to either Paragraph 22.D.ii, or Paragraph 22.J.vi. The provisions shall continue to apply until termination ("Applicability Dates for Paragraph 22.I.").

i. By no later than sixty (60) days after the certification required by Paragraph 22.D.iv, Lion Oil shall submit to EPA for approval a plan(s) for an "end of the line" ("EOL") determination of the benzene quantity in uncontrolled waste streams. A copy of this plan shall be submitted to the Applicable State Agency. The proposed plan of Lion Oil, as applicable, shall include, but not be limited to, sampling locations, methods for flow calculations, and the assumed volatilization rate(s) to be used in calculating the uncontrolled benzene quantity. Any disputes regarding plan approval under this Paragraph 22.I. shall be resolved in accordance with the dispute resolution provisions of the Consent Decree.

ii. If, during the Applicability Dates for Paragraph 22.I, changes in processes, operations, or other factors lead Lion Oil, as applicable, to conclude that the approved sampling locations, approved methods for determining flow calculations, and/or assumed volatilization rates no longer provide an accurate measure of the El Dorado Refinery's EOL benzene quantity, Lion Oil shall submit a revised plan to EPA for approval. A copy of this revised plan also shall be provided to the Applicable State Agency.

iii. On a monthly basis, Lion Oil shall conduct EOL sampling, commencing during the first month of the first full calendar quarter after Lion Oil receives written approval from EPA of the sampling plan for the El Dorado Refinery. Lion Oil shall take, and have analyzed, three

representative samples from each approved sampling location. Lion Oil shall use the average of these three samples as the benzene concentration for the stream at the approved location. Based on the EOL monthly sampling results, the approved flow calculations, and the volatilization assumptions, Lion Oil shall calculate the sum of the EOL benzene quantity for the three months contained within the respective quarter. Nothing in this Paragraph 22.I shall preclude Lion Oil from taking representative samples more frequently within any calendar month, provided that Lion Oil identifies the basis for the additional samples. Such samples shall be included in calculating the average monthly EOL benzene quantity.

iv. If the sum of the EOL benzene quantity for the three month period contained within a quarter equals or exceeds 1.2 Mg, Lion Oil shall take and have analyzed three representative samples, drawn on separate days during the subsequent calendar quarter, of each uncontrolled stream containing benzene over 0.05 Mg/yr, as identified in the later of (i) the final BWN Compliance Review and Verification Report; or (ii) the most recently submitted TAB report (hereinafter “Sampling of >0.05 Streams”). Lion Oil shall undertake Sampling of >0.05 Streams for the purpose of trying to identify the cause or source of the potentially elevated benzene quantities.

v. Lion Oil shall continue to undertake Sampling of >0.05 Streams in the second quarter after the EOL benzene quantity exceeded 1.2 Mg unless either: (i) the EOL benzene quantity in the first quarter of the Sampling of > 0.05 Streams demonstrates that the El Dorado Refinery’s EOL benzene quantity, prorated on a yearly basis, will be below 4.8 Mg/yr; or (ii) Lion Oil discovers and corrects the cause of the potentially elevated benzene quantities and EPA concurs in the diagnosis and corrective measures of Lion Oil.

vi If the sum of the EOL benzene quantity for two consecutive quarters indicates that the EOL benzene quantity, prorated on a yearly basis, will exceed 4.8 Mg/yr, and Lion Oil has not discovered and corrected the cause of the potentially elevated benzene through the process of Sampling of >0.05 Streams, Lion Oil shall take and have analyzed three

representative samples, drawn on separate days during the third calendar quarter, of each uncontrolled stream containing benzene over 0.03 Mg/yr, as identified in the later of (i) the final BWN Compliance Review and Verification Report; or (ii) most recently submitted TAB report (hereinafter “Sampling of > 0.03 Streams”). Lion Oil shall undertake Sampling of >0.03 Streams for the purpose of continuing to try to identify the cause or source of the potentially elevated benzene quantities.

vii. Sampling of >0.05 and/or >0.03 Streams shall not be required if Lion Oil advises EPA, and EPA concurs, that the potentially elevated benzene quantities can be attributed to an identifiable event, such as a spill to the sewer or a turnaround. After such an identifiable event, however, Lion Oil shall calculate its projected uncontrolled benzene quantity for the calendar year in which the event occurs. If that projection is greater than 6 mg/yr, then Lion Oil shall submit to EPA for approval a plan that either (a) identifies with specificity the compliance strategy and schedule that Lion Oil will implement to ensure that the El Dorado Refinery does not exceed 6 Megagrams of uncontrolled benzene for the calendar year; or (b) if as a result of the quantity of benzene released during the event Lion Oil is unable to propose a plan to ensure that the El Dorado Refinery’s uncontrolled benzene for the calendar year will be 6 Megagrams or less, then Lion Oil shall identify the actions to be taken to minimize the uncontrolled benzene for the remainder of the year. A copy of this plan shall be submitted to the Applicable State Agency. Lion Oil shall submit this plan within thirty (30) days after the end of the quarter which resulted in a projection of greater than 6 Mg/yr of uncontrolled benzene. Sampling of >0.05 and/or >0.03 Streams shall not excuse Lion Oil from continuing to take monthly EOL samples.

viii. If in three consecutive quarters (a) the sum of the benzene quantity indicates that the EOL benzene quantity, prorated on a yearly basis, will exceed 4.8 Mg; or (b) the sampling of >0.05 and/or >0.03 streams indicates that projected uncontrolled benzene for the calendar year will exceed 6 Megagrams, and Lion Oil has not discovered and corrected, with EPA’s concurrence, the cause of the potentially elevated benzene through the process of

Sampling of >0.05 and >0.03 Streams, then, in the fourth quarter, Lion Oil shall retain a third party contractor to undertake a comprehensive TAB study and compliance review (“Third-Party TAB Study and Compliance Review”). By no later than the last day of the fourth quarter, Lion Oil shall submit a proposal to the Applicable Federal and State Agencies that identifies the contractor, the contractor’s scope of work, and the contractor’s schedule for the Third-Party TAB Study and Compliance Review. Unless, within thirty (30) days after EPA receives this proposal, EPA disapproves or seeks modifications, Lion Oil shall authorize the contractor to commence work. By no later than thirty (30) days after Lion Oil receives the results of the Third-Party TAB Study and Compliance Review, Lion Oil shall submit the results to the Applicable Federal and State Agencies. EPA, the Applicable State Agency, Lion Oil subsequently shall discuss informally the results of the Third-Party TAB Study and Compliance Review. By no later than one-hundred twenty (120) days after Lion Oil receives the results of the Third-Party TAB Study and Compliance Review, or such other time as Lion Oil and EPA may agree, Lion Oil shall submit to EPA for approval a plan that addresses any deficiencies identified in the Third-Party TAB Study and Compliance Review and any deficiencies that EPA brought to the attention of Lion Oil as a result of the Third-Party TAB Study and Compliance Review. A copy of this plan shall be submitted to the Applicable State Agency. The review and approval of this Plan shall be done in accordance with Paragraph 22.D.iii of this Decree. Certification of Compliance shall be done in accordance with Paragraph 22.D.iv.

J. End of Line Sampling (TAB is equal to or greater than 1 Mg/yr but less than 10 Mg/yr). The provisions of this Paragraph 22.J shall apply from the date that the final BWN Compliance Review and Verification Report submitted for the El Dorado Refinery pursuant to Paragraph 22.C shows that the El Dorado Refinery’s TAB is equal to or greater than 1 Mg/yr but less than 10 Mg/yr, through the earlier of: (1) the time that the El Dorado Refinery reaches a TAB of 10 Mg/yr or more (in which case, the provisions of Paragraph 22.I shall begin to apply); or (2) termination of the Consent Decree.

i. Lion Oil shall once per calendar year, conduct sampling, consistent with the requirements of 40 C.F.R. § 61.355(c)(1) and (3), of all waste streams containing benzene that contributed 0.05 Mg/yr or more to the TAB set forth in the final BWN Compliance Review and Verification Report or in the previous year's TAB, whichever is later;

ii. By no later than ninety (90) days after the date of submitting the final BWN Compliance Review and Verification Report, representatives from EPA and the Applicable State Agency shall meet at the El Dorado Refinery with representatives from Lion Oil for the purpose of identifying an appropriate procedure for conducting EOL sampling and measuring EOL benzene quantities at the El Dorado Refinery. EPA, the Applicable State Agency, and Lion Oil shall confer about potential EOL sample locations and shall review process and flow information and oil movement transfers. By no later than sixty (60) days after EPA and the Applicable State Agency have met with Lion Oil at the El Dorado Refinery, Lion Oil shall submit a plan to EPA for approval that contains proposed sampling locations and methods for flow calculations to be used in the EOL determination of benzene quantity. A copy of this plan shall be submitted to the Applicable State Agency. Any disputes regarding plan approval under this Paragraph 22.J shall be resolved in accordance with the dispute resolution provisions of this Consent Decree. If, during the life of this Consent Decree, changes in processes, operations, or other factors lead Lion Oil to conclude that either the approved sampling locations and/or the approved methods for determining flow calculations no longer provide an accurate measure of the El Dorado Refinery's EOL benzene quantity, Lion Oil shall submit a revised plan to EPA for approval. A copy of this revised plan also shall be submitted to the Applicable State Agency.

iii. On a quarterly basis, Lion Oil shall conduct an EOL determination of benzene quantity, commencing in the first full calendar quarter after Lion Oil receives written approval from EPA of the sampling plan for the El Dorado Refinery. Lion Oil shall take, and have analyzed, at least three representative samples from each approved sampling location. Lion Oil

shall use the average of these three samples as the benzene concentration for the stream at the approved location. Based on the EOL quarterly sampling results and the approved flow calculations, Lion Oil shall calculate the quarterly EOL benzene quantity.

iv. If the quarterly EOL benzene quantity exceeds 2.5 Mg, Lion Oil shall submit to the Applicable Federal and State Agencies a plan that identifies with specificity the actions that Lion Oil shall take, and the schedule for such actions, to ensure that the TAB for the El Dorado Refinery does not exceed 10 Mg in the calendar year.

v. On a quarterly basis, Lion Oil shall also calculate a projected calendar year TAB, utilizing all EOL results for that calendar year and any other information (such as process turnarounds) to undertake the projection. If the projected calendar year calculation of the TAB at a El Dorado Refinery equals or exceeds 10 Mg, Lion Oil shall submit to the Applicable Federal and State Agencies a plan that identifies with specificity the actions that Lion Oil shall take, and the schedule for such actions, to ensure that the TAB for the El Dorado Refinery does not exceed 10 Mg in the calendar year. Lion Oil shall submit this plan within thirty (30) days after the end of the quarter which resulted in a projection of greater than 10 Mg.

vi. If it appears that appropriate actions cannot be taken to ensure that the El Dorado Refinery maintains a TAB of under 10 Mg/yr, then Lion Oil shall retain a third party contractor to undertake a comprehensive TAB study and compliance review (“Third-Party TAB Study and Compliance Review”). At a mutually agreed upon date, Lion Oil shall submit a proposal to the Applicable Federal and State Agencies that identifies the contractor, the contractor’s scope of work, and the contractor’s schedule for the Third-Party TAB Study and Compliance Review. Unless, within thirty (30) days after EPA receives this proposal, EPA disapproves or seeks modifications, Lion Oil, as applicable, shall authorize the contractor to commence work. By no later than sixty (60) days after Lion Oil receives the results of the Third-Party TAB Study and Compliance Review, Lion Oil shall submit the results to the Applicable Federal and State Agencies. EPA, the Applicable State Agency, and Lion Oil

subsequently shall discuss informally the results of the Third-Party TAB Study and Compliance Review. By no later than 120 days after Lion Oil receives the results of the Third-Party TAB Study and Compliance Review, or such other time as Lion Oil and EPA may agree, Lion Oil shall submit to EPA for approval a plan that identifies with specificity the compliance strategy and schedule that Lion Oil will implement to ensure that the El Dorado Refinery complies with the 6BQ compliance option as soon as practicable. A copy of this Plan shall be submitted to the Applicable State Agency. The review and approval of this Plan shall be done in accordance with Paragraph 22.D.iii of this Decree. Certification of Compliance shall be done in accordance with Paragraph 22.D.iv.

K. Miscellaneous Measures.

i. Lion Oil, as and to the extent applicable, shall comply with the Benzene Waste NESHAP provisions applicable to groundwater remediation conveyance systems if its Refinery has such a system.

ii. The provisions of this Paragraph 22.K.ii shall apply after the El Dorado Refinery's TAB reaches or exceeds 10 Mg/yr (if prior to termination of the Consent Decree) and after the El Dorado Refinery has completed implementation of an approved compliance plan submitted pursuant to either Paragraph 22.D.ii or Paragraph 22.J.vi. The provisions shall continue to apply until termination of the Consent Decree. Lion Oil shall:

- a. Conduct monthly visual inspections of all water traps within the El Dorado Refinery's individual drain systems; and
- b. On a weekly basis, visually inspect all conservation vents or indicators on process sewers for detectable leaks; 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, Lion Oil may submit a request to the applicable EPA Region to modify the frequency of the inspections. EPA shall not unreasonably withhold its consent. Nothing in this Paragraph 22.K.ii.b. shall require Lion Oil to monitor conservation vents on fixed roof tanks.

iii. From the date that the final BWN Compliance Review and Verification Report submitted for the El Dorado Refinery pursuant to Paragraph 22.C shows that the El Dorado Refinery's TAB is equal to or greater than 1 Mg/yr but less than 10 Mg/yr, and through termination of this Consent Decree, Lion Oil shall identify and mark all area drains that are segregated stormwater drains.

L. Projects/Investigations.

Unless and until the TAB of the El Dorado Refinery reaches or exceeds 10 Mg/yr (or the Consent Decree is terminated), Lion Oil will not be required to undertake any projects or any investigations relating to the Benzene Waste NESHAP other than those required in Paragraphs 22.C - 22.K. Within 60 days of receipt of information indicating that the TAB of the El Dorado Refinery has reached or exceeded 10 Mg/yr, EPA and Lion Oil shall meet and confer to discuss and establish an appropriate project or investigation relating to the Benzene Waste NESHAP.

M. Recordkeeping and Reporting Requirements for this Paragraph

i. Outside of the Reports Required under 40 C.F.R. § 61.357 and under the Quarterly Progress Report Procedures of Section IX (Recordkeeping and Reporting). At the times specified in the applicable provisions of this Paragraph, Lion Oil shall submit, as and to the extent required, the following reports to the Applicable Federal and State Agencies:

- a. BWN Compliance Review and Verification Report (§ 22.C.i.), as amended, if necessary (§ 22.C.ii.);
- b. Amended TAB Report, if necessary (§ 22.D.i.);
- c. Plan for the El Dorado Refinery to come into compliance with the 6 BQ compliance option upon discovering that its TAB equals or exceeds 10 Mg/yr through the BWN Compliance Review and Verification Report (§ 22.D.ii.), or the Third-Party TAB Study and Compliance Review that may result from EOL sampling (§ 22.J.vi);
- d. Compliance certification, if necessary (§ 22.D.iv.);

- e. Schematics of waste/slop/off-spec oil movements (§ 22.H.i.), as revised, if necessary (§ 22.H.i.);
- f. Schedule to complete implementation of controls on waste management units handling organic benzene waste, if necessary (§ 22.H.ii.);
- g. Plan to quantify uncontrolled waste/slop/off-spec oil movements (§ 22.H.iv.)
- h. EOL Sampling Plans (§§ 22.I.i., 22.J.ii.), and revised EOL Sampling Plans, if necessary (§§ 22.I.ii., 22.J.ii.);
- i. Plan, if necessary, to ensure that uncontrolled benzene does not equal or exceed, as applicable, 6 or 10 Mg/yr -- or is minimized -- based on projected calendar year uncontrolled benzene quantities as determined through EOL sampling (§§ 22.I.vii., 22.J.iv.-v.)
- j. Proposal for a Third-Party TAB Study and Compliance Review, if necessary (§§ 22.I.viii., 22.J.vi.);
- k. Third-Party TAB Study and Compliance Review, if necessary (§§ 22.I.viii., 22.J.vi.);
- l. Plan to implement the results of the Third-Party TAB Study and Compliance Review, if necessary (§§ 22.I.viii., 22.J.vi.);

ii. As part of the Reports Required under the Quarterly Progress Report

Procedures of Section IX (Recordkeeping and Reporting).

a. TAB is equal to or greater than 1 Mg/yr but less than 10 Mg/yr. From the date that the final BWN Compliance Review and Verification Report submitted for the El Dorado Refinery pursuant to Paragraph 22.C shows that the El Dorado Refinery's TAB is equal to or greater than 1 Mg/yr but less than 10 Mg/yr, until the earlier of: (1) the time that the El Dorado Refinery reaches a TAB of 10 Mg/yr or more (in which case, the provisions of Paragraph 22.M.ii.b shall begin to apply); or (2) termination of the Consent Decree, Lion Oil shall submit the following information in Quarterly Progress Reports pursuant to the requirements of Section IX of this Consent Decree:

- (1) A description of the measures that it/they took to comply with the training provisions of Paragraph 22;

- (2) The annual, non-EOL sampling required at the El Dorado Refinery pursuant to the requirements of Paragraph 22.J.i (this information shall be submitted in the first quarterly progress report for the first calendar quarter of each year);
- (3) The results of the quarterly EOL sampling undertaken pursuant to Paragraph 22.J.iii. for the calendar quarter. The report shall include a list of all waste streams sampled, the results of the benzene analysis for each sample, and the computation of the EOL benzene quantity for the respective quarter. The El Dorado Refinery shall identify whether the quarterly benzene quantity equals or exceeds 2.5 Mg and whether the projected calendar year benzene quantity equals or exceeds 10 Mg. If either condition is met, the El Dorado Refinery shall include in the quarterly report the plan required pursuant to Paragraph 22.J.iv and/or 22.J.v., and shall specifically seek EPA's concurrence in the plan.

b. TAB is 10 Mg/yr or More. The provisions of this Paragraph 22.M.ii.b shall apply after a El Dorado Refinery's TAB reaches or exceeds 10 Mg/yr (if this occurs prior to termination of the Consent Decree) and after the El Dorado Refinery has completed implementation of an approved compliance plan submitted pursuant to either Paragraph 22.D.ii, or Paragraph 22.J.vi. The provisions shall continue to apply until termination. Lion Oil shall submit the following information in Quarterly Progress Reports pursuant to the requirements of Section IX of this Consent Decree:

- (1) A description of the measures that it/they took to comply with the training provisions of Paragraph 22;
- (2) The results of the three months of monthly EOL sampling undertaken pursuant to Paragraph 22.I.iii. for the calendar quarter. The report shall include a list of all waste streams sampled, the results of the benzene analysis for each sample, and the computation of the EOL benzene quantity for the three months contained within the respective quarter;
- (3) If the quarter is one in which Lion Oil is required to undertake Sampling of >0.05 Streams or Sampling of >0.03 Streams at the El Dorado Refinery, Lion Oil also shall: (A) submit the results of those sampling events; (B) describe the actions that Lion Oil is taking to identify and correct the source of the potentially elevated benzene quantities; and (C) to the extent that Lion Oil identifies actions to correct the potentially elevated benzene quantities, specifically seek EPA's concurrence with the proposal of Lion Oil.

iii. A summary of the reports, plans, and certifications due under the provisions of Paragraph 22 is attached as Appendix G to this Consent Decree.

N. Agencies to Receive Reports, Plans and Certifications Required in the Paragraph; Number of Copies. Lion Oil shall submit all reports, plans and certifications required to be submitted under this Paragraph to the Applicable Federal and State Agencies. For each submission, Lion Oil shall submit two copies to EPA, to the applicable Region, and to the Applicable State Agency. By agreement between each of the offices that are to receive the materials in this Paragraph and Lion Oil the materials may be submitted electronically.

23. Leak Detection and Repair (“LDAR”) Program Enhancements.

In order to minimize or eliminate fugitive emissions of volatile organic compounds (“VOCs”), benzene, volatile hazardous air pollutants (“VHAPs”), and organic hazardous air pollutants (“HAPs”) from equipment in light liquid and/or in gas/vapor service, Lion Oil shall undertake at the El Dorado Refinery the enhancements at Paragraph 23.A through Paragraph 23.P to the El Dorado Refinery’s LDAR program under Title 40 of the Code of Federal Regulations, Part 60, Subpart GGG; 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, Subpart GGG; Part 61, Subparts J and V; Part 63, Subparts F, H and CC; and applicable state LDAR regulations. Lion Oil is not required to include in the enhanced program described herein any equipment or units not otherwise subject to any applicable federal or state LDAR regulation.

A. Written Refinery-Wide LDAR Program. By no later than June 30, 2004, Lion Oil shall develop and maintain, for the El Dorado Refinery, a written Refinery program for compliance with all applicable federal and state LDAR regulations. Until termination of this Decree, Lion Oil shall implement this program at the El Dorado Refinery, and Lion Oil shall

update the El Dorado Refinery's program as necessary to ensure continuing compliance. The Refinery program shall include at a minimum:

- i. An overall, Refinery leak rate goal that will be a target for achievement on a process-unit-by-process-unit basis;
- ii. An identification of all equipment in light liquid and/or in gas/vapor service that has the potential to leak VOCs, HAPs, VHAPs, and benzene within process units that are owned and maintained by the Refinery;
- iii. Procedures for identifying leaking equipment within process units that are owned and maintained by the Refinery;
- iv. Procedures for repairing and keeping track of leaking equipment;
- v. Procedures for identifying and including in the LDAR program new equipment; and
- vi. A process for evaluating new and replacement equipment to promote consideration and installation of equipment that will minimize leaks and/or eliminate chronic leakers.

B. Training. By no later than December 31, 2004, Lion Oil shall implement the following training programs at the Refinery:

- i. For personnel newly-assigned to LDAR responsibilities, Lion Oil shall require LDAR training prior to each employee beginning such work;
- ii. For all personnel assigned LDAR responsibilities, Lion Oil shall provide and require completion of annual LDAR training; and
- iii. For all other Refinery operations and maintenance personnel (including contract personnel), Lion Oil 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 shall be performed on a three year cycle.

C. **LDAR Audits.** Commencing upon the Date of Lodging of the Consent Decree, Lion Oil shall implement at the El Dorado Refinery, the Refinery audits set forth in Paragraphs 23.C.i. and 23.C.ii., to ensure the Refinery's compliance with all applicable LDAR requirements. The 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.

i. **Third-Party Audits.** Lion Oil shall retain a contractor(s) to perform a third-party audit of the Refinery's LDAR program at least once every four years. The first third-party audit for the El Dorado Refinery shall be completed no later than December 31, 2003.

ii. **Internal Audits.** Lion Oil shall conduct internal audits of the El Dorado Refinery's LDAR program. Lion Oil shall complete the first round of these internal LDAR audits by no later than two years from the date of the completion of the third-party audits required in Paragraph 23.C.i. An internal audit of the El Dorado Refinery shall be held every four years thereafter for the life of this Consent Decree.

iii. To ensure that an audit at the El Dorado Refinery occurs every two years, third-party and internal audits shall be separated by two years.

iv. **Alternative.** As an alternative to the internal audit required by Paragraph 23.C.ii., Lion Oil may elect to retain third-parties to undertake the internal audit, provided that an audit of the El Dorado Refinery occurs every two (2) years.

D. Implementation of Actions Necessary to Correct Non-Compliance.

If the results of any of the audits conducted pursuant to Paragraph 23.C at the El Dorado Refinery identify any areas of non-compliance, Lion Oil 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 termination of the Consent Decree, Lion Oil shall retain the audit reports generated pursuant to Paragraphs 23.C.i and 23.C.ii and shall maintain a written record of the corrective actions that Lion Oil take at the El

Dorado Refinery in response to any deficiencies identified in any audits. In the quarterly report submitted pursuant to the provisions of Section IX of this Consent Decree (Recordkeeping and Reporting) for the first calendar quarter of each year, Lion Oil shall submit the audit reports and corrective action records for audits performed and actions taken during the previous year.

E. Internal Leak Definition for Valves and Pumps; Compressor Compliance.

Lion Oil shall utilize the following internal leak definitions for valves and pumps in light liquid and/or gas/vapor service, unless other permit(s), regulations, or laws require the use of lower leak definitions.

i. Leak Definition for Valves. By no later than December 31, 2004, Lion Oil shall utilize an internal leak definition of 500 ppm VOCs for the Refineries' valves, excluding pressure relief devices.

ii. Leak Definition for Pumps. Lion Oil shall utilize an internal leak definition of 2000 ppm for the Refineries' pumps by the following dates:

a. By no later than June 30, 2004, Lion Oil shall utilize this definition for 50% of the total number of pumps that each of them has at the El Dorado Refinery;

b. By no later than December 31, 2004, Lion Oil shall utilize this definition for 85% of the total number of pumps that each of them has at the El Dorado Refinery;

c. By no later than March 30, 2006, Lion Oil shall utilize this definition for all of the pumps that it has at the El Dorado Refinery.

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

i. Reporting. For regulatory reporting purposes, Lion Oil 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 Paragraph 23.E.

ii. Recording, Tracking, Repairing and Remonitoring Leaks. Lion Oil shall record, track, repair and re-monitor all leaks in excess of the internal leak definitions of

Paragraphs 23.E.i and 23.E.ii at such time as those definitions become applicable, except that Lion Oil 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. Beginning no later than March 30, 2003, Lion Oil shall 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. Lion Oil or its designated contractor, however, shall re-monitor, within five (5) business days, all valves that LDAR personnel attempted to repair. Unless the re-monitored leak rate is greater than the applicable leak definition, no further action will be necessary. If, after two years from the commencement of the “first attempt at repair” program set forth in this Paragraph 23.G, Lion Oil can demonstrate with sufficient monitoring data that the “first attempt” repair at 200 ppm will worsen or not improve the Refinery’s leak rates, Lion Oil may request that EPA reconsider or amend this requirement.

H. LDAR Monitoring Frequency.

i. **Pumps.** When the lower leak definition for pumps becomes applicable pursuant to Paragraph 23.E.ii, Lion Oil shall monitor pumps at the lower leak definition on a monthly basis.

ii. **Valves.** At the El Dorado refinery, on and after the Date of Lodging of the Consent Decree, Lion Oil shall continue to implement a program to monitor valves more frequently than is required by applicable regulations by monitoring valves -- 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.

i. **Electronic Storing and Reporting of LDAR Data.** At the El Dorado Refinery, Lion Oil has and will continue to maintain an electronic database for storing and reporting LDAR data. By no later than June 30, 2003, the electronic database shall include data identifying the

date and time of the monitored event, and the operator and instrument used in the monitored event.

ii. Electronic Data Collection During LDAR Monitoring and Transfer Thereafter.

By no later than June 30, 2003, Lion Oil shall submit to the Applicable Federal and State Agencies operational specifications for the data logger, software, and monitoring equipment. Lion Oil shall use dataloggers and/or electronic data collection devices during all LDAR monitoring. Lion Oil, or its designated contractor, shall use its/their best efforts to transfer, by the end of the next business day electronic data from electronic data logging devices to the electronic database of Paragraph 23.I.i. For all monitoring events in which an electronic data collection device is used, the collected monitoring data shall include a time and date stamp. Lion Oil may use paper logs where necessary or more feasible (e.g., small rounds, re-monitoring, or when data loggers 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. Lion Oil shall use its best efforts to transfer any manually recorded monitoring data to the electronic database of Paragraph 23.I.i within seven days of monitoring.

J. QA/QC of LDAR Data. By no later than March 30, 2004, Lion Oil, or a third party contractor retained by Lion Oil shall develop and implement a procedure to ensure a quality assurance/quality control (“QA/QC”) review of all data generated by LDAR monitoring technicians. Lion Oil shall ensure that monitoring data provided to Lion Oil by its contractors is reviewed for QA/QC before the contractor submits the data to Lion Oil. At least once per calendar quarter, Lion Oil shall perform QA/QC of the 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.

K. LDAR Personnel. Lion Oil has established a program that holds LDAR personnel accountable for LDAR performance. Lion Oil shall continue to maintain a position

within the El Dorado Refinery responsible for LDAR management, with the authority to implement improvements.

L. Adding New Valves and Pumps. By no later than June 30, 2004, Lion Oil shall establish a tracking program for maintenance records (e.g., a Management of Change program) to ensure that valves and pumps added to the Refinery during maintenance and construction is integrated into the LDAR program.

M. Calibration/Calibration Drift Assessment.

i. Calibration. Lion Oil shall conduct all calibrations of LDAR monitoring equipment using methane as the calibration gas, in accordance with 40 C.F.R. Part 60, EPA Reference Test Method 21.

ii. Calibration Drift Assessment. Beginning no later than the Date of Lodging of the Consent Decree, Lion Oil shall conduct calibration drift assessments of LDAR monitoring equipment at the end of each monitoring shift, at a minimum. Lion Oil shall conduct the calibration drift assessment using, at a minimum, a 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, Lion Oil 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.

N. Delay of Repair. Beginning no later than the Date of Lodging of the Consent Decree, for any equipment for which Lion Oil is allowed, under the applicable regulations, to place on the "delay of repair" list for repair:

i. For all equipment, Lion Oil shall:

a. Require sign-off by the unit supervisor 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 Lion Oil’s regular LDAR monitoring.

ii. For valves: For valves, other than control valves, leaking at a rate of 10,000 ppm or greater, Lion Oil shall continue to use its “drill and tap” method for fixing such leaking valves, rather than placing the valve on the “delay of repair” list, unless Lion Oil can demonstrate that there is a safety, mechanical, or major environmental concern posed by repairing the leak in this manner. After two unsuccessful attempts to repair a leaking valve through the drill and tap method, Lion Oil may place the leaking valve on its “delay of repair” list. If a new method develops for repairing such valves, Lion Oil will advise EPA prior to implementing such new method.

iii. For pumps: At such time as the lower leak rate definition applies pursuant to Paragraph 23.E.ii, for pumps leaking at a rate of 2000 ppm or greater, Lion Oil shall undertake its best efforts to isolate and repair such pumps with a first attempt at fifteen (15) days.

O. Recordkeeping and Reporting Requirements for this Paragraph.

i. Outside of the Reports Required under 40 C.F.R. § 63.654 and the Quarterly Progress Report Procedures of Section IX (Recordkeeping and Reporting).

a. Written Refinery-Wide LDAR Program No later than thirty (30) days after completion of the development of the written refinery-wide LDAR programs that Lion Oil develop pursuant to Paragraph 23.A, Lion Oil shall submit a copy of the Refinery’s Program to the Applicable Federal and State Agencies.

b. Submission of Operational Specifications for Electronic Data Collection during LDAR Monitoring and Certification of Use of Electronic Data Collection during LDAR Monitoring. By no later than June 30, 2003, Lion Oil shall submit to the Applicable Federal and State Agencies operational specifications designed to minimize the use of any form of data collection and data transfer during and after LDAR monitoring other than electronic data collection and transfer.

ii. As Part of Either the Reports Required under 40 C.F.R. § 63.654 or the Quarterly Progress Report Procedures of Section IX (Recordkeeping and Reporting). Consistent with the requirements of Section IX (Recordkeeping and Reporting), Lion Oil shall include the following information, at the following times, in their 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 in which the requirement becomes due, Lion Oil shall include the following:

- (1) A certification of the implementation of the “first attempt at repair” program of Paragraph 23.G;
- (2) A certification of the implementation of QA/QC procedures for review of data generated by LDAR technicians as required by Paragraph 23.J;
- (3) An identification of the individual at the Refinery responsible for LDAR performance as required by Paragraph 23.K;
- (4) A certification of the development of a tracking program for new valves and pumps added during maintenance and construction as required by Paragraph 23.L;
- (5) A certification of the implementation of the calibration drift assessment procedures of Paragraph 23.M; and
- (6) A certification of the implementation of the “delay of repair” procedures of Paragraph 23.N.

b. Quarterly Progress Report for the First Calendar Quarter of Each Year. Until termination of the Consent Decree, in the quarterly progress report that Lion Oil submit pursuant to Section XI for the first calendar quarter of each year, Lion Oil shall include an identification of each audit that was conducted pursuant to the requirements of Paragraph 23.C in the previous calendar year including, for the El Dorado Refinery, an identification of the auditors, a summary of the audit results, and a summary of the actions that Lion Oil took or intend to take to correct all deficiencies identified in the audits.

c. In Each Report due under 40 C.F.R. § 63.654. In each report due under 40 C.F.R. § 63.654, Lion Oil shall include:

- (1) Training. Information identifying the measures that Lion Oil took to comply with the provisions of Paragraph 23.B; 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.

iii. A summary of the reports, plans, and certifications due under the provisions of Paragraph 23 is attached as Appendix H to this Consent Decree.

P. Agencies to Receive Reports, Plans and Certifications Required in this Paragraph; Number of Copies. Lion Oil shall submit all reports, plans and certifications required to be submitted under this Paragraph to the Applicable Federal and State Agencies. For each submission, Lion Oil shall submit two copies to EPA, to the applicable Region, and to the Applicable State Agency. By agreement between each of the offices that are to receive the materials in this Paragraph and Lion Oil the materials may be submitted electronically.

24. Incorporation of Consent Decree Requirements into Federally-Enforceable Permits.

A. By June 30, 2003. As soon as practicable following the Date of Lodging of the Consent Decree, but in no event later than June 30, 2003, Lion Oil shall submit applications to the Applicable State Agency to incorporate the surviving 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. Following submission of the permit application, Lion Oil shall cooperate with the Applicable State Agency by promptly submitting to the ADEQ all information that the

Applicable State Agency seeks following its receipt of the permit application. Upon issuance of such permits, Lion Oil shall file any applications necessary to incorporate the requirements of those permits into the Title V permit for the El Dorado Refinery. **B. At Variable Times.** As soon as practicable, but in no event later than sixty (60) days after the effective date or establishment of any surviving emission limits and standards under Section V of this Consent Decree, Lion Oil shall submit applications to the Applicable State Agency to incorporate those emission limitations and standards into minor or major new source review permits or other permits (other than Title V permits) which are federally enforceable. Following submission of the permit application, Lion Oil shall cooperate with the Applicable State Agency by promptly submitting to the Applicable State Agency all information that the Applicable State Agency seeks following its receipt of the permit application. Upon issuance of such permit, Lion Oil shall file any applications necessary to incorporate the requirements of that permit into the Title V permit of the El Dorado Refinery.

C. Mechanism for Title V Incorporation. The Parties agree that the incorporation of the requirements of this Consent Decree into the Title V permit shall be in accordance with state Title V rules.

D. Survival of Obligations. The following requirements will continue after termination of the Consent Decree under Section XVIII (Paragraph 93): 11.B or 11.E, 11. F, 12.B, 12.C, 13.B, 14.B, 14.C., 15, 16.B (as specified therein in subparagraph ii), 16.C, 16.D, 17.B, 17.C, 18.A, 18.B, 18.D (as specified in subparagraph i), 19, first paragraph of 20 (as specified therein), 20.B.i (as specified therein), 20.E.i. (as specified therein), 21 (as specified therein), 24A, 24B, 27A, 27B, 27C, 27D, 30, and 31.

25. Obtaining Construction Permits. Lion Oil agrees to use best efforts to obtain all required, federally enforceable permits for the construction of the pollution control technology and/or the installation of equipment necessary to implement the affirmative relief and environmental projects set forth in this Section V and in Section VIII. ADEQ agrees to use best

efforts to issue such permits to enable Lion Oil to fulfill its obligations under the Consent Decree in a timely manner. To the extent that Lion Oil must submit permit applications for this construction or installation to the Applicable State Agencies, Lion Oil shall cooperate with the Applicable State Agency by promptly submitting to the Applicable State Agency all information that the Applicable State Agency seeks following its receipt of the permit application. This Paragraph 25 is not intended to prevent Lion Oil from applying to the Applicable State Agency for a pollution control project exemption.

26. **Title V Compliance Certification** ADEQ issued Permit 868-AOP-R0, a Major Source Title V Permit to Lion Oil on December 11, 2000. Lion Oil appealed Permit 868-AOP-R0. Lion Oil and ADEQ entered into a Permit Appeal Resolution, and ADEQ issued a new Draft Permit 868-AOP-R1 to Lion Oil on May 21, 2002. In a Consent Administrative Order issued on May 30, 2002, ADEQ authorized Lion Oil to operate in accordance with the terms and conditions of Draft Permit 868-AOP-R1, until such time as ADEQ issues a final permitting decision.

i. To satisfy the annual compliance certification requirements of Arkansas Pollution Control & Ecology Commission Regulation 26, Section 26.703(E)(3) and 40 CFR 70.6(c)(5)(iii) for the compliance period January 1, 2001 through December 31, 2001, Lion Oil certified compliance with the appealed and unappealed terms and conditions of Permit 868-AOP-R0, as well as certain of the underlying requirements of the State Operating Permit in effect prior to the issuance of 868-AOP-R0.

ii. To satisfy the annual compliance certification requirements of Arkansas Pollution Control & Ecology Commission Regulation 26, Section 26.703(E)(3) and 40 CFR 70.6(c)(5)(iii) for the compliance period January 1, 2002 through December 31, 2002, until such time as ADEQ issues a final permitting decision, Lion Oil shall certify its compliance with the terms and conditions of Draft Permit 868-AOP-R1 and not the underlying requirements of Permit 868-AOP-R0, 868-AR-7, or any combination thereof.

VI. EMISSION CREDIT GENERATION

27. Emission Credit Generation.

A. Summary. The intent of this Section generally is to prohibit Lion Oil from using the emissions reductions that will result from the installation and operation of the controls required by this Consent Decree (“CD Emissions Reductions”) for the purpose of emissions netting or emissions offsets, while still allowing Lion Oil to use a fraction of the CD Emissions Reductions if: (1) the emissions units for which Lion Oil seeks to use the CD Emissions Reductions are modified or constructed for purposes of compliance with Tier II gasoline or low sulfur diesel requirements; and (2) the emissions from those modified or newly-constructed units are below the levels outlined in Paragraph 27.C.ii prior to the commencement of operation of the emissions units for which Lion Oil seeks to use the CD Emissions Reductions.

B. General Prohibition. Lion Oil shall not generate or use any NO_x, SO₂, PM, VOC, or CO emissions reductions that result from any projects conducted or controls required pursuant to this Consent Decree as netting reductions or emissions offsets in any PSD, major non-attainment and/or minor New Source Review (“NSR”) permit or permit proceeding.

C. Exception to General Prohibition.

i. Conditions Precedent to Utilization of the Exception to the General Prohibition against the Use or Generation of CD Emissions Reductions. Utilization of the exception set forth in Paragraph 27.C.ii to the general prohibition against the generation or utilization of CD Emissions Reductions set forth in Paragraph 27.B. is subject to the following conditions:

- a. Under no circumstances shall Lion Oil use CD Emissions Reductions for netting and/or offsets prior to the time that actual CD Emissions Reductions have occurred;
- b. CD Emissions Reductions may be used only at the El Dorado Refinery that generated them;
- c. The CD Emissions Reductions provisions of this Consent Decree are for purposes of this Consent Decree only and neither Lion Oil, nor any other entity may use CD

Emissions Reductions for any purpose, including in any subsequent permitting or enforcement proceeding, except as provided herein; and

- d. Lion Oil still shall be subject to all federal and state regulations applicable to the PSD, major non-attainment and/or minor NSR permitting process.

- ii. Exception to General Prohibition. Notwithstanding the general prohibition set forth in Paragraph 27.B, Lion Oil may use 10 tons per year of NO_x and 10 tons per year of PM, and 35 tons per year of SO₂ from the CD Emissions Reductions 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 the Consent Decree, provided that the new or modified emissions unit: (1) is being constructed or modified for purposes of compliance with Tier 2 gasoline or low sulfur diesel requirements; and (2) has a federally enforceable, non-Title V Permit that reflects:

- a. For heaters and boilers, where next generation ultra Low NO_x burners are installed and the limit is established pursuant to Paragraph 16.D. of this Consent Decree;
- b. For heaters and boilers, a limit of 0.10 grains of hydrogen sulfide per dry standard cubic foot of fuel gas or 20 ppmvd SO₂ corrected to 0% O₂ both on a 3-hour rolling average;
- c. For heaters and boilers, no liquid or solid fuel firing authorization;
- d. For FCCU, a limit of 20 ppmvd NO_x corrected to 0% O₂ or less on a 365-day rolling average basis;
- e. For FCCU, a limit of 25 ppmvd SO₂ corrected to 0% O₂ or less on a 365-day rolling average basis; and
- f. For SRPs, NSPS Subpart J emission limits.

D. Outside the Scope of the General Prohibition. Nothing in this Section VI is intended to prohibit Lion Oil from seeking to: (1) utilize or generate emissions credits or reductions from refinery units that are covered by this Consent Decree to the extent that the proposed credits or reductions represent the difference between the emissions limitations set forth in this Consent Decree for these refinery units and the more stringent emissions limitations

that Lion Oil may elect to accept for these refinery units in a permitting process; or (2) utilize or generate emissions credits or reductions on refinery units that are not covered by this Consent Decree.

VII. MODIFICATIONS TO IMPLEMENTATION SCHEDULES

28. **Securing Permits.** For any work under Sections V or VIII of this Consent Decree that requires a federal, state and/or local permit or approval, Lion Oil shall be responsible for submitting in a timely fashion applications for federal, state and local permits and approvals for work and activities required so that permit or approval decisions can be made in a timely fashion. Lion Oil shall use its best efforts to: (i) submit permit applications (i.e., applications for permits to construct, operate, or their equivalent) that comply with all applicable requirements; and (ii) secure approval of permits after filing the applications, including timely supplying additional information, if requested. If it appears that the failure of a governmental entity to act upon a timely-submitted permit application may delay Lion Oil's performance of work according to an applicable implementation schedule, Lion Oil shall notify the Applicable Federal and State Agencies of any such delays as soon as Lion Oil reasonably concludes that the delay could affect its ability to comply with the implementation schedule set forth in this Consent Decree. Lion Oil shall propose for approval by EPA a modification to the applicable schedule of implementation. EPA, in consultation with the Applicable State Agency, shall not unreasonably withhold its consent to requests for modifications of schedules of implementation if the requirements of this Paragraph are met. All modifications to any dates initially set forth in this Decree or in any approved schedule of implementation shall be signed in writing by EPA and Lion Oil and neither the United States nor Lion Oil shall be required to file such modifications with the Court in order for the modifications to be effective. Stipulated penalties shall not accrue nor be due and owing during any period between an originally-scheduled implementation date and an approved

modification to such date; provided however, that Applicable Federal and State Agencies shall retain the right to seek stipulated penalties if EPA does not approve a modification to a date or dates. The failure of a governmental entity to act upon a timely-submitted permit or approval application shall not constitute a force majeure event triggering the requirements of Section XIV; this Paragraph shall apply.

29. **Commercial Unavailability of Control Equipment and/or Additives.** Lion Oil shall be solely responsible for compliance with any deadline or the performance of any work described in Sections V and VIII of this Consent Decree that requires the acquisition and installation of control equipment. If it appears that the commercial unavailability of any control equipment may delay Lion Oil's performance of work according to an applicable implementation schedule, Lion Oil shall notify the Applicable Federal and State Agencies of any such delays as soon as Lion Oil reasonably concludes that the delay could affect its/their ability to comply with the implementation schedule set forth in this Consent Decree.

Lion Oil shall propose for approval by EPA a modification to the applicable schedule of implementation. Prior to the notice required by this Paragraph 28, Lion Oil must have contacted a reasonable number of vendors of such equipment or additive and obtained a written representation (or equivalent communication to EPA) from the vendor that the equipment or additive is commercially unavailable. In the notice, Lion Oil shall reference this Paragraph 28 of this Consent Decree, identify the milestone date(s) it/they contend it/they will not be able to meet, provide the Applicable Federal and State Agencies with written correspondence to the vendor identifying efforts made to secure the control equipment, and describe the specific efforts Lion Oil has taken and will continue to take to find such equipment or additive. Lion Oil may propose a modified schedule or modification of other requirements of this Consent Decree to address such commercial unavailability. Section XV ("Retention of Jurisdiction/Dispute Resolution") shall

govern the resolution of any claim of commercial unavailability. EPA, in consultation with the Applicable State Agency, shall not unreasonably withhold its consent to requests for modifications of schedules of implementation if the requirements of this Paragraph are met. All modifications to any dates initially set forth in this Consent Decree or in any approved schedule of implementation shall be signed in writing by EPA and Lion Oil and neither the United States nor Lion Oil shall be required to file such modifications with the Court in order for the modifications to be effective. Stipulated penalties shall not accrue nor be due and owing during any period between an originally-scheduled implementation date and an approved modification to such date; provided however, that the Applicable Federal and State Agencies shall retain the right to seek stipulated penalties if EPA does not approve a modification to a date or dates. The failure by Lion Oil to secure control equipment shall not constitute a force majeure event triggering the requirements of Section XIV; this Paragraph shall apply.

VIII. OTHER ENHANCED INJUNCTIVE RELIEF, ENVIRONMENTALLY BENEFICIAL PROJECTS, AND SUPPLEMENTAL ENVIRONMENTAL PROJECTS

30. **Compliance with NSPS Subpart QQQ at the El Dorado Refinery.**

A. Plan to Comply with NSPS Subpart QQQ. Lion Oil has received approval of its permit application to modify its wastewater treatment system to segregate process wastewater from stormwater in the refinery process areas (CSN:70-0016) (“PASS Project”). By not later than December 31, 2008, Lion Oil agrees to modify all existing process area individual drain systems and aggregate facilities that are a part of the PASS Project, to comply with the New Source Performance Standards, Subpart QQQ. Lion Oil further agrees that all new equipment installed as part of the PASS Project including six (6) aboveground storage tanks, will be designed and constructed to comply with NSPS, Subpart QQQ.

B. NSPS Applicability. By no later than December 31, 2008, the PASS Project process area individual drain systems, oil-water separators, and aggregate facilities, as those terms are defined at 40 C.F.R. § 60.691, at the El Dorado Refinery shall be affected facilities, as that term is used in the NSPS, 40 C.F.R. Part 60, and shall be subject to and comply with the requirements of 40 C.F.R. Part 60, Subpart QQQ.

31. **Installation of BACT Controls - Vacuum Distillation Tower (“VDU”).** By no later than December 31, 2004, Lion Oil shall install a VDU overhead recovery system on the Vacuum Distillation Tower pursuant to the terms and conditions in its October 9, 2002 submission to the Agencies.

32. **Federal Supplemental Environmental Projects**

A. **Installation of Air/Fuel Ratio Controller on Compressors.** By no later than December 31, 2004, Lion Oil shall complete the installation and begin operation of air/fuel ratio controllers and catalytic converters on the North 8 and South 10 SVG compressors (SNs 837 and 838) and the East and West JVG compressors (SNs 839 and 840) to reduce emissions of NO_x and CO. The total value of this Supplemental Environmental Project shall equal or exceed \$160,000.

B. **Conversion of “C” Compressor to Electric Motor.** By no later than December 31, 2006, Lion Oil shall convert the engine of the “C” compressor (8GTL Compressors (SN-836)) from fuel-fired to an electric motor. The total value of this Supplemental Environmental Project shall equal or exceed \$200,000.

C. If Lion Oil does not expend at least 90% of the total value of the SEPs identified in this Paragraph 32, Lion Oil shall pay a stipulated penalty equal to the difference between the amount expended as demonstrated in the certified cost report(s) and \$360,000. The stipulated penalty shall be paid as provided in Paragraph 60 (Stipulated Penalties) of the Consent Decree.

D. Lion Oil represents that these Supplemental Environmental Projects inure solely to the benefit of the United States.

33. By signing this Consent Decree, Lion Oil certifies that it is not required, and has no liability under any federal, state or local law or regulation or pursuant to any agreements or orders of any court, to perform or develop any of the projects identified in Paragraph 32. Lion Oil further certifies that it has not applied for or received, and will not in the future apply for or receive: (1) credit as a Supplemental Environmental Project or other penalty offset in any other enforcement action for the projects set forth in Paragraph 32; or (2) credit for any emissions reductions resulting from the projects set forth in Paragraph 32 in any federal, state or local emissions trading or early reduction program.

34. The Report required by Paragraph 36 of this Consent Decree for the year in which each project identified in Paragraph 32 is completed shall contain the following information with respect to such projects:

- i. A detailed description of each project as implemented;
- ii. A brief description of any significant operating problems encountered, including any that had an impact on the environment, and the solutions for each problem;
- iii. Certification that each project has been fully implemented pursuant to the provisions of this Consent Decree; and
- iv. A description of the environmental and public health benefits resulting from implementation of each project (including quantification of the benefits and pollutant reductions, if feasible).

35. Lion Oil agrees that in any public statements regarding these SEPs, Lion Oil must clearly indicate that these projects are being undertaken as part of the settlement of an enforcement action for alleged violations of the Clean Air Act and the Arkansas Water and Air Pollution Control Act.

IX. REPORTING AND RECORDKEEPING

36. Beginning with the first full calendar quarter after the Date of Entry of the Consent Decree, Lion Oil shall submit to Applicable Federal and State Agencies within thirty (30) days after the end of each calendar quarter for 2003 and 2004, and semi-annually thereafter until termination of this Consent Decree a progress report for the El Dorado Refinery. This report shall contain, for the El Dorado Refinery, the following: progress report on the implementation of the requirements of Section V (Affirmative Relief/Environmental Projects); a summary of the emissions data as required by Section V of this Consent Decree for the calendar quarter; a description of any problems anticipated with respect to meeting the requirements of Section V of this Consent Decree; a description of all environmentally beneficial projects and implementation activity in accordance with Paragraphs 30 - 32 of the Consent Decree; and any such additional matters as Lion Oil believe's should be brought to the attention of the Applicable Federal and State Agencies. The report shall be certified by either the person responsible for environmental management or by a person responsible for overseeing implementation of this Decree across Lion Oil 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.

X. CIVIL PENALTY

37. In satisfaction of the civil claims asserted by the United States and the Plaintiff-Intervenors in the complaint filed in this matter, within thirty (30) days of the Date of Entry of the Consent Decree, Lion Oil shall pay a civil penalty of \$348,000 as follows: (1) \$174,000 to the United States; and (2) \$174,000 to ADEQ.

A. Payment of monies to the United States shall be made by Electronic Funds Transfer ("EFT") to the United States Department of Justice, in accordance with current EFT procedures, referencing USAO File Number _____, DOJ Case Number 90-5-2-1-06064/1, and the civil action case name and case number of this action in the Western District of Arkansas. The costs of such EFT shall be the responsibility of Lion Oil. Payment shall be made in accordance with instructions provided to Lion Oil by the Financial Litigation Unit of the U.S. Attorney's Office for the Western District of Arkansas. Any funds received after 11:00 a.m. (EST) shall be credited on the next business day. Lion Oil shall provide notice of payment, referencing USAO File Number _____, DOJ Case Number 90-5-2-1-06064/1, and the civil action case name and case number to the Department of Justice and to EPA, as provided in Paragraph 91 (Notice).

B. Payment of the civil penalty owed to ADEQ under this Paragraph shall be made by certified or corporate check made payable to the Arkansas Department of Environmental Quality and sent to the following address:

Legal Division
Arkansas Department of Environmental Quality
P. O. Box 8913
Little Rock, AR 72219-8913

38. The civil penalty set forth herein is a penalty within the meaning of Section 162(f) of the Internal Revenue Code, 26 U.S.C. § 162(f), and, therefore, Lion Oil shall not treat these penalty payments as tax deductible for purposes of federal, state, or local law.

39. Upon the Date of Entry of the Consent Decree, the Consent Decree shall constitute an enforceable judgment for purposes of post-judgment collection in accordance with Federal Rule of Civil Procedure 69, the Federal Debt Collection Procedure Act, 28 U.S.C. §§ 3001-3308, and other applicable federal authority. The United States and Arkansas shall be

deemed judgment creditors for purposes of collecting any unpaid amounts of the civil and stipulated penalties and interest.

XI. STIPULATED PENALTIES

40. Lion Oil shall pay stipulated penalties for each failure by Lion Oil to comply with the terms of this Consent Decree as provided herein. Stipulated penalties shall be calculated in the amounts specified in Paragraphs 41 through 57. Stipulated penalties under Paragraphs 41.B, 42.B, and 44.A shall not start to accrue until there is noncompliance with the concentration-based, rolling average emission limits identified in the Subparagraph for 5% or more of the applicable unit's operating time during any calendar quarter.

41. **Paragraph 11 - Requirements for NOx Emission Reductions from FCCU.**

A. For failure to install a Lo Tox system as required by Paragraph 11 per day:

<u>Period of Delay</u>	<u>Penalty per day</u>
1 st through 30 th day after deadline	\$625
31 st through 60 th day after deadline	\$1,500
Beyond 60 th day after deadline	\$2,500 or, an amount equal to 1.2 times the economic benefit of delayed compliance, whichever is greater

B. For failure to meet any emissions limit proposed by Lion Oil or established by EPA (final or interim) for NOx pursuant to Paragraph 11, per day, per unit: \$375 for each calendar day in a calendar quarter on which the short-term rolling average exceeds the applicable limit; and \$ 1,250 for each calendar day in a calendar quarter on which the specified 365-day rolling average exceeds the applicable limit.

C. For failure to prepare and/or submit written deliverables required by Paragraph 11, per day:

<u>Period of Delay</u>	<u>Penalty per day</u>
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1 st through 30 th day after deadline	\$100
31 st through 60 th day after deadline	\$250
Beyond 60 th day after deadline	\$500

These stipulated penalties shall not apply to the process design specifications required to be submitted by Paragraph 11.B.ii. & iii, if the vendor fails to provide the required information to Lion Oil in sufficient time to enable Lion Oil to comply with the deadlines set forth therein.

D. For failure to install and/or certify a NO_x CEMS, per unit, per day:

<u>Period of Delay</u>	<u>Penalty per day</u>
1 st through 30 th day after deadline	\$250
31 st through 60 th day after deadline	\$500
Beyond 60 th day after deadline	\$1,000 or, an amount equal to 1.2 times the economic benefit of delayed compliance, whichever is greater.

42. **Paragraph 12 - Requirements for SO₂ Emission Reductions from FCCU.**

A. For failure to install a wet gas scrubber at the El Dorado Refinery as required by Paragraph 12.B of this Consent Decree, per day:

<u>Period of Delay</u>	<u>Penalty per day</u>
1 st through 30 th day after deadline	\$625
31 st through 60 th day after deadline	\$1,500
Beyond 60 th day after deadline	\$2,500, or an amount equal to 1.2 times the economic benefit of the delayed compliance whichever is greater

B. For each failure to meet SO₂ emission limits established for the El Dorado FCCU in Paragraph 12.B and/or each failure to meet SO₂ emission limits proposed by Lion Oil or established by EPA (final or interim) pursuant to Paragraph 12.C, per day, per unit: \$750 for each

calendar day in a calendar quarter on which the specified 7-day rolling average exceeds the applicable limit; \$1,500 for each calendar day in a calendar quarter on which the specified 365-day rolling average exceeds the applicable limit.

C. For failure to prepare and/or submit written deliverables required by Paragraph 12, per day:

<u>Period of Delay</u>	<u>Penalty per day</u>
1 st through 30 th day after deadline	\$100
31 st through 60 th day after deadline	\$250
Beyond 60 th day after deadline	\$500

D. For failure to install and/or certify a SO₂ CEMS, per unit, per day:

<u>Period of Delay</u>	<u>Penalty per day</u>
1 st through 30 th day after deadline	\$250
31 st through 60 th day after deadline	\$500
Beyond 60 th day after deadline	\$1,000 or, for either, an amount equal to 1.2 times the economic benefit of delayed compliance, whichever is greater.

43. **Paragraph 13 - Requirements for PM Emissions Reductions from FCCU.**

A. For failure to install a wet gas scrubber at the El Dorado Refinery as required by Paragraph 13.B of this Consent Decree, the same stipulated penalties as those in Paragraph 42.A shall apply (stipulated penalties may be sought pursuant to only Paragraph 42 or 43, not both).

44. **Paragraph 14 – Requirements for CO Emissions Reductions from FCCU.**

A. For each failure to meet the CO emission limits established for the El Dorado FCCU in Paragraph 14.B: \$375 for each calendar day in a calendar quarter on which the specified

1-hour rolling average exceeds the applicable limit; and \$1,250 for each calendar day in a calendar quarter on which the specified 365-day rolling average exceeds the applicable limit.

B. For failure to install and/or certify a CO CEMS, per unit, per day:

<u>Period of Delay</u>	<u>Penalty per day</u>
1 st through 30 th day after deadline	\$250
31 st through 60 th day after deadline	\$500
Beyond 60 th day after deadline	\$1,000, or, an amount equal to 1.2 times the economic benefit of delayed compliance, whichever is greater.

45. **Paragraph 16 – Requirements for NOx Emission Reductions from Heaters**

and Boilers and NOx and CO Emission Reductions from Compressor SN-841.

A. For failure to install required NOx and/or CO Control Technology (if applicable as specified in Paragraph 16.B.ii) by the dates specified in Paragraph 16.B and Appendix C, per unit, per day:

<u>Period of Delay</u>	<u>Penalty per day</u>
1 st through 30 th day after deadline	\$1,250
31 st through 60 th day after deadline	\$3,000
Beyond 60 th day after deadline	\$5,000, or an amount equal to 1.2 times the economic benefit of delayed compliance, whichever is greater.

B. For failure to install and/or certify a CEMS on a Controlled Heater or Boiler by the required deadline, per unit, per day:

<u>Period of Delay</u>	<u>Penalty per day</u>
1 st through 30 th day after deadline	\$225
31 st through 60 th day after deadline	\$500

Beyond 60th day after deadline \$1,000, or an amount equal to 1.2 times the economic benefit of delayed compliance, whichever is greater.

C. For failure to submit the written deliverables required by Paragraph 16, per day:

<u>Period of Delay</u>	<u>Penalty per day</u>
1 st through 30 th day after deadline	\$100
31 st through 60 th day after deadline	\$250
Beyond 60 th day	\$500

D. For each failure to meet NOx emission limits proposed by Lion Oil pursuant to Paragraph 16.D, or CO emission limits established by EPA pursuant to Paragraph 16.B (if accepted by Lion Oil as described therein), per day, per unit: \$200 for each calendar day in a calendar quarter on which the specified 3-hour average exceeds the applicable limit.

46. **Paragraph 17 - Requirements for SO₂ Emission Reductions from Heaters and Boilers.**

A. After the date set forth in this Decree for NSPS applicability of any fuel gas combustion device, for burning any refinery fuel gas that contains hydrogen sulfide in excess of 0.1 grains per dry standard cubic foot on a 3-hour rolling average at any fuel gas combustion devices, per day in a calendar quarter:

<u>Period of Non-Compliance</u>	<u>Penalty per day</u>
1 st through 30 th day	\$2,500
Over 30 days	\$3,750 or, an amount equal to 1.2 times the economic benefit of delayed compliance, whichever is greater.

B. For burning Fuel Oil in a manner inconsistent with the requirements of Paragraph 17.C, per day:

<u>Period of Non-Compliance</u>	<u>Penalty per day</u>
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1 st through 30 th day	\$875
Beyond 31 st day	\$2,500

47. **Paragraph 18 – Requirements for NSPS Applicability of Sulfur Recovery**

Plant.

A. For failure to route all sulfur pit emissions in accordance with the requirements of Paragraph 18.B, per day:

<u>Period of Non-Compliance</u>	<u>Penalty per day</u>
1 st through 30 th day	\$500
31 st through 60 th day	\$875
Beyond 60 th day	\$2000 or an amount equal to 1.2 times the amount of delayed compliance whichever is greater.

B. For failure to comply with the NSPS Subpart J emission limits, per day in a calendar quarter:

<u>Period of Non-Compliance</u>	<u>Penalty per day</u>
1 st through 30 th day	\$750
31 st through 60 th day	\$1,000
Over 60 days	\$1,250 or an amount equal to 1.2 times the economic benefit of delayed compliance, whichever is greater.

C. For failure to develop and comply with the Preventive Maintenance and Operation Plan as specified in Paragraph 18.D, per day:

<u>Period of Delay or Non-Compliance</u>	<u>Penalty per day</u>
1 st through 30 th day after deadline	\$250
Beyond 31 st day after deadline	\$750
Beyond 60 th day after deadline	\$1,000

D For failure to submit the optimization study as specified in Paragraph 18.E, per day:

<u>Period of Delay</u>	<u>Penalty per day</u>
1 st through 30 th day after deadline	\$250
Beyond 31 st day after deadline	\$750
Beyond 60 th day after deadline	\$1,000

48. **Paragraph 19 – Requirements for NSPS Applicability of Flaring Devices.**

For failure to install and/or certify a CEMS or submit and comply with an AMP, at flares that combust continuous or intermittent, routinely-generated refinery fuel gases, per unit, per day:

<u>Period of Delay</u>	<u>Penalty per day</u>
1 st through 30 th day after deadline	\$250
31 st through 60 th day after deadline	\$500
Beyond 60 th day after deadline	\$1,000 or, for either, an amount equal to 1.2 times the economic benefit of delayed compliance, whichever is greater.

49. **Paragraph 20 – Requirements for Control of Acid Gas Flaring Incidents**

and Tail Gas Incidents.

A. For AG Flaring Incidents and/or Tail Gas Incidents for which Lion Oil is liable under Paragraphs 20:

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

For purposes of calculating stipulated penalties pursuant to this Paragraph 49.A, only one cell within the matrix shall apply. Thus, for example, for a Flaring Incident in which the 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 \$1,200)]. For purposes of determining which column in the table set forth in this Paragraph applies under circumstances in which Flaring occurs intermittently during a Flaring Incident, the Flaring shall be deemed to commence at the time that the Flaring that triggers the initiation of a Flaring Incident commences, and shall be deemed to terminate at the time of the termination of the last episode of Flaring within the Flaring 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 Flaring occurs within the

Flaring Incident, the Flaring within the Flaring Incident shall be deemed to last 12.5 hours -- not 1.5 hours -- and the column for Flaring of “greater than 3 hours but less than or equal to 24 hours” shall apply.

B. For failure to timely submit any report required by Paragraph 20, or for submitting any report that does not conform to the requirements of Paragraphs 20:

<u>Period of Delay</u>	<u>Penalty per day</u>
Days 1-30	\$400
Days 31-60	\$800
Over 60 days	\$1,500

C. For those corrective action(s) which Lion Oil: (i) agrees to undertake following receipt of an objection by EPA pursuant to Paragraph 20; or (ii) is required to undertake following dispute resolution, then, from the date of EPA’s receipt of Lion Oil’s report under Paragraph 20 of this Consent Decree until the date that either: (i) a final agreement is reached between EPA and Lion Oil regarding the corrective action; or (ii) a court order regarding the corrective action is entered, Lion Oil shall be liable for stipulated penalties as follows:

i.	<u>Period of Delay</u>	<u>Penalty per day</u>
	Days 1-120	\$25
	Days 121-180	\$50
	Days 181 - 365	\$150
	Over 365 Days	\$1,500

or

ii. 1.2 times the economic benefit resulting from Lion Oil’s failure to implement the corrective action(s).

D. For failure to complete any corrective action under Paragraph 20 of this Decree in accordance with the schedule for such corrective action agreed to by Lion Oil or imposed on Lion

Oil pursuant to the dispute resolution provisions of this Decree (with any such extensions thereto as to which EPA and Lion Oil may agree in writing):

<u>Period of Delay</u>	<u>Penalty per day</u>
Days 1-30	\$500
Days 31-60	\$1,000
Over 60	\$2,500

50. **Paragraph 21 – Requirements for Control of Hydrocarbon Flaring Incidents.**

A. For each failure to perform a root cause analysis or submit a written report or perform corrective actions for a Hydrocarbon Flaring Incident:

<u>Period of Delay or Non-Compliance</u>	<u>Penalty per day per Incident</u>
1st through 30th day	\$250
31st through 60th day	\$750
Beyond 60th day	\$1,000

51. **Paragraph 22 - Requirements for Benzene Waste NESHAP Program**

Enhancements. For each violation in which a frequency is specified in Paragraph 22, 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. For requirements where no frequency is specified, penalties will not be doubled.

A. For failure to complete the BWN Compliance Review and Verification Reports as required by Paragraph 22.C, \$3,750 per month.

B. For failure to implement the actions necessary to correct non-compliance as required by Paragraph 22.D:

<u>Period of Delay</u>	<u>Penalty per day</u>
1 st through 30 th day after deadline	\$625

31st through 60th day after deadline \$1,500

Beyond 60th day \$2,500, or an amount equal to 1.2 times the economic benefit of delayed compliance, whichever is greater

C. If TAB equals or exceeds 1 Mg/yr, for failure to implement the training requirements of Paragraph 22.G, \$5,000 per quarter.

D. For failure to submit or maintain any records or materials required by Paragraph 22.H of this Consent Decree, \$1,000 per record or submission.

E. If TAB equals or exceeds 10 Mg/yr, for failure to install controls on waste management units handling organic wastes as required by Paragraph 22.H.ii, \$5,000 per month per waste management unit.

F. If TAB equals or exceeds 1 Mg/yr, for failure to conduct sampling in accordance with the sampling plans required by Paragraphs 22.I (10 Mg/yr or more) or 22.J (1 Mg/yr or more), as applicable:

\$250 per week, per stream, or \$15,000 per quarter, per stream, whichever is greater, but not to exceed \$75,000 per quarter.

G. If TAB equals or exceeds 1 Mg/yr, for failure to submit the plan or retain the third-party contractor required by Paragraphs 22.I.viii (10 Mg/yr or more), 22.J.v (1 Mg/yr or more), or 22.J.vi (1 Mg/yr or more), \$5,000 per month, per refinery.

H. If TAB equals or exceeds 10 Mg/yr, for failure to comply with the miscellaneous compliance measures set forth in Paragraph 22.K.ii, as follows:

For K.ii.a, monthly visual inspections: \$250 per drain not inspected;

For K.ii.b, weekly monitoring of vents: \$250 per vent not monitored;

I. If TAB equals or exceeds 1 Mg/yr, for failure to identify/mark segregated stormwater drains as required in Paragraph 22.K.iii: \$500 per week per drain;

J. For failure to submit the written deliverables required by Paragraph 22.M:

\$500 per week, per report.

K. If it is determined through federal, state, or local investigation that the El Dorado Refinery has failed to include all benzene containing waste streams in its TAB calculation submitted pursuant to Paragraphs 22.C., Lion Oil shall pay the following:

<u>Waste Stream</u>	<u>Penalty</u>
for waste streams < 0.03 Mg/yr	\$125
for waste streams between 0.03 and 0.1 Mg/yr	\$500
for waste streams between 0.1 and 0.5 Mg/yr	\$2,500
for waste streams > 0.5 Mg/yr	\$5,000

52. **Paragraph 23 – Requirements for Leak Detection and Repair Program**

Enhancements. For each violation in which a frequency is specified in Paragraph 23, 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. For requirements where no frequency is specified, penalties will not be doubled.

A. For failure to implement the training programs specified in Paragraph 23.B:
\$5,000 per month, per program.

B. For failure to conduct any of the audits described in Paragraph 23.C:
\$2,500 per month, per audit.

C. For failure to implement any actions necessary to correct non-compliance as required in Paragraph 23.D:

<u>Period of Delay</u>	<u>Penalty per day</u>
1 st through 30 th day after deadline	\$625
31 st through 60 th day after deadline	\$1,500
Beyond 60 th day	\$2,500, or an amount equal to 1.2 times the economic benefit of delayed compliance, whichever is greater

- D. For failure to initiate an internal leak rate definition as specified in Paragraph 23.E:
\$5,000 per month per process unit.
- E. For failure to implement the first attempt repair program in Paragraph 23.G or for failure to implement the QA/QC procedures described in Paragraph 23.J:
\$5,000 per month.
- F. For failure to implement the more frequent monitoring program required by Paragraph 23.H.ii:
\$5,000 per month, per unit.
- G. For failure to designate an individual as accountable for LDAR performance as required in Paragraph 23.K, or for failure to implement the maintenance tracking program in Paragraph 23.L, or for failure to write a LDAR program that meets the requirements of Paragraph 23.A:
\$1,875 per week.
- H. For failure to use dataloggers or maintain electronic data as required by Paragraph 23.I.:
\$2,500 per month.
- I. For failure to conduct the calibration drift assessments or remonitor valves and pumps based on calibration drift assessments in Paragraph 23.M:
\$50 per missed event.
- J. For failure to comply with the requirements for repair set forth at Paragraphs 23.N.ii and 23.N.iii:
\$2,500 per valve or pump
- K. For failure to submit the written deliverables required by Paragraph 23.O:
\$500 per week per report

L. If it is determined through a federal, state, or local investigation that Lion Oil has failed to include all valves and pumps in its LDAR program, Lion Oil shall pay \$87.50 per component that it failed to include.

53. **Paragraph 24 – Requirements to Incorporate Consent Decree Requirements into Federally-Enforceable Permits.**

For each failure to submit an application as required by Paragraph 24:

<u>Period of Delay</u>	<u>Penalty per day</u>
Days 1-30	\$400
Days 31-60	\$800
Over 60 Days	\$1,500

54. **Paragraphs 30 - 32 – Requirements Related to Environmentally Beneficial Projects.**

A. For failure to install and operate the controls required pursuant to the approved schedule of implementation required in Section VIII, Paragraphs 30 and 31, per unit, per day or to implement the SEPs under Paragraph 32, per project, per day:

<u>Period of Delay</u>	<u>Penalty per day</u>
1 st through 30 th day after deadline	\$250
31 st through 60 th day after deadline	\$1,000
Beyond 60 th day	\$1,250 or an amount equal to 1.2 times the economic benefit of the delayed compliance whichever is greater

55. **Paragraph 36 -- Requirements for Reporting and Recordkeeping.**

For failure to submit reports as required by Section IX, per day:

<u>Period of Delay</u>	<u>Penalty per day</u>
1 st through 30 th day after deadline	\$150

31st through 60th day after deadline \$550

Beyond 60th day \$1,000

56. **Paragraph 37 - Requirements for Payment of Civil Penalties.** For Lion Oil's failure to pay the civil penalties as specified in Paragraph 37 of this Consent Decree, Lion Oil shall be liable for \$15,000 per day plus interest on the amount overdue at the rate specified in 28 U.S.C § 1961(a).

57. **Paragraph 59 – Requirement to Escrow Stipulated Penalties.** For failure to escrow stipulated penalties as required by Paragraph 59 of this Consent Decree, Lion Oil shall be liable for \$1,250 per day, and interest on the amount overdue at the rate specified in 28 U.S.C. § 1961(a).

58. **Payment of Stipulated Penalties.** Lion Oil shall pay stipulated penalties upon written demand by the United States, or the Arkansas ADEQ, no later than sixty (60) days after Lion Oil receives such demand. Demand from one agency shall be deemed a demand from all applicable agencies, but the agencies shall consult with each other prior to making a demand. Stipulated penalties owed by Lion Oil shall be paid 50% to the United States and 50% to the State of Arkansas. Stipulated penalties shall be paid to the United States, the State of Arkansas in the manner set forth in Section X (Civil Penalty) of this Consent Decree. A demand for the payment of stipulated penalties will identify the particular violation(s) to which the stipulated penalty relates, the stipulated penalty amount the Applicable Federal or State Agency is demanding for each violation (as can be best estimated), the calculation method underlying the demand, and the grounds upon which the demand is based. After consultation with each other, the United States, the State Arkansas may, in their unreviewable discretion, waive payment of any portion of stipulated penalties that may accrue under this Consent Decree.

59. **Stipulated Penalties Dispute.** Should Lion Oil dispute the United States' and/or ADEQ's demand for all or part of a stipulated penalty, it may avoid the imposition of a stipulated penalty for failure to pay a stipulated penalty under Paragraph 57 by placing the disputed amount demanded in a commercial escrow account pending resolution of the matter and by invoking the dispute resolution provisions of Section XV within the time provided in Paragraph 58 for payment of stipulated penalties. If the dispute is thereafter resolved in Lion Oil's favor, the escrowed amount plus accrued interest shall be returned to Lion Oil otherwise, the Applicable Federal and State Agency(ies) shall be entitled to the amount that was determined to

be due by the Court, plus the interest that has accrued in the escrow account on such amount. The United States and Arkansas reserve the right to pursue any other non-monetary remedies to which they are legally entitled, including but not limited to, injunctive relief for Lion Oil's violations of this Consent Decree.

XII. INTEREST

60. Lion Oil shall be liable for interest on the unpaid balance of the civil penalty specified in Section X, and for interest on any unpaid balance of stipulated penalties to be paid in accordance with Section XI. All such interest shall accrue at the rate established pursuant to 28 U.S.C. § 1961(a) -- i.e., a rate equal to the coupon issue yield equivalent (as determined by the Secretary of Treasury) of the average accepted auction price for the last auction of 52-week U.S. Treasury bills settled prior to the Date of Lodging of the Consent Decree. Interest shall be computed daily and compounded annually. Interest shall be calculated from the date payment is due under the Consent Decree through the date of actual payment. For purposes of this Paragraph 61, interest pursuant to this Paragraph will cease to accrue on the amount of any stipulated penalty payment made into an interest bearing escrow account as contemplated by Paragraph 60 of the Consent Decree. Monies timely paid into escrow shall not be considered to be an unpaid balance under this Section.

XIII. RIGHT OF ENTRY

61. Any authorized representative of EPA or the Applicable State Agency, including independent contractors, upon presentation of credentials, shall have a right of entry upon the premises of the facilities of the El Dorado Refinery, 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 Lion Oil required by this Consent Decree. Lion Oil shall retain such records for the period of the Consent Decree. Nothing in this Consent Decree shall limit the authority of EPA or the Applicable State

Agency to conduct tests, inspections, or other activities under any statutory or regulatory provision.

XIV. FORCE MAJEURE

62. If any event occurs which causes or may cause a delay or impediment to performance in complying with any provision of this Consent Decree, Lion Oil shall notify the Applicable Federal and State Agencies in writing as soon as practicable, but in any event within ten (10) business days of the date when Lion Oil first knew of the event or should have known of the event by the exercise of due diligence. In this notice, Lion Oil shall specifically reference this Paragraph 62 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 Lion Oil to prevent or minimize the delay and the schedule by which those measures shall be implemented. Lion Oil shall take all reasonable steps to avoid or minimize such delays. The notice required by this Section shall be effective upon the mailing of the same by certified mail, return receipt requested, to the Applicable EPA Regional Office as specified in Paragraph 89 (Notice).

63. Failure by Lion Oil to substantially comply with the notice requirements of Paragraph 62 as specified above shall render this Section XIV (Force Majeure) voidable by the United States, in consultation with the Applicable State Agency, as to the specific event for which Lion Oil has failed to comply with such notice requirement, and, if voided, is of no effect as to the particular event involved.

64. The United States, after consultation with the Applicable State Agency, shall notify Lion Oil in writing regarding its claim of a delay or impediment to performance within thirty (30) days of receipt of the force majeure notice provided under Paragraph 62.

65. If the United States, after consultation with the Applicable State Agency, agrees that the delay or impediment to performance has been or will be caused by circumstances beyond the control of Lion Oil including any entity controlled by Lion Oil and that Lion Oil could not have prevented the delay by the exercise of due diligence, the Parties shall stipulate in writing 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. Such stipulation shall be treated as a non-material modification to the Consent Decree pursuant to the modification procedures established in this Consent Decree. Lion Oil shall not be liable for stipulated penalties for the period of any such delay.

66. If the United States, after consultation with the Applicable State Agency, does not accept Lion Oil's claim of a delay or impediment to performance, Lion Oil must submit the matter to the Court for resolution to avoid payment of stipulated penalties, by filing a petition for determination with the Court. Once Lion Oil has submitted this matter to the Court, the United States and the Applicable State Agency shall have twenty (20) business days to file their responses to the petition. If the Court determines that the delay or impediment to performance has been or will be caused by circumstances beyond the control of Lion Oil including any entity controlled by Lion Oil and that the delay could not have been prevented by Lion Oil by the exercise of due diligence, Lion Oil shall be excused as to that event(s) and delay (including stipulated penalties), for a period of time equivalent to the delay caused by such circumstances.

67. Lion Oil shall bear the burden of proving that any delay of any requirement(s) of this Consent Decree was caused by or will be caused by circumstances beyond its/their control, including any entity controlled by it, and that it could not have prevented the delay by the exercise of due diligence. Lion Oil 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 will not necessarily result in an extension of a subsequent compliance date or dates.

68. Unanticipated or increased costs or expenses associated with the performance of Lion Oil's obligations under this Consent Decree shall not constitute circumstances beyond its control, or serve as the basis for an extension of time under this Section XIV.

69. Notwithstanding any other provision of this Consent Decree, this Court shall not draw any inferences nor establish any presumptions adverse to either Party as a result of Lion Oil serving a force majeure notice or the Parties' inability to reach agreement.

70. As part of the resolution of any matter submitted to this Court under this Section XIV, the Parties by agreement, or the Court, by order, may in appropriate circumstances extend or modify the schedule for completion of work under the 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 or approved by this Court. Lion Oil shall be liable for stipulated penalties for their failure thereafter to complete the work in accordance with the extended or modified schedule.

XV. RETENTION OF JURISDICTION/DISPUTE RESOLUTION

71. This Court shall retain jurisdiction of this matter for the purposes of implementing and enforcing the terms and conditions of the Consent Decree and for the purpose of adjudicating all disputes (including, but not limited to, determinations under Section V (Affirmative Relief/Environmental Projects) of the Consent Decree) among the Parties that may arise under the provisions of the Consent Decree, until the Consent Decree terminates in accordance with Paragraph 93 of this Consent Decree (Termination).

72. Except as expressly provided in Paragraph 20.C.ii, the dispute resolution procedure set forth in this Section XV shall be available to resolve any and all disputes arising under this Consent Decree, including assertion of commercial unavailability under Paragraph 29 of this Consent Decree, provided that the Party making such application has made a good faith attempt to resolve the matter with the other Party.

73. 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 the other Party of a dispute pursuant to this Section XV. The notice shall describe the nature of the dispute, and shall state the noticing Party's position with regard to such dispute. The Party receiving such

a notice shall acknowledge receipt of the notice and the Parties shall expeditiously schedule a meeting or conference call to discuss the dispute informally not later than fourteen (14) days from the receipt of such notice.

74. 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 Parties, unless it is agreed that this period should be extended.

75. In the event that the Parties are unable to reach agreement during such informal negotiation period, the United States or the Applicable State Agency, as applicable, shall provide Lion Oil with a written summary of its position regarding the dispute. The position advanced by the United States or the Applicable State Agency, as applicable, shall be considered binding unless, within forty-five (45) calendar days of Lion Oil's receipt of the written summary of the United States' or the Applicable State Agency's position, Lion Oil files with the Court a petition which describes the nature of the dispute. The United States or the Applicable State Agency shall respond to the petition within forty-five (45) calendar days of filing.

76. In the event that the United States and the Applicable State Agency make differing determinations or take differing actions that affect Lion Oil's rights or obligations under this Consent Decree, the final decisions of the United States shall take precedence.

77. Where the nature of the dispute is such that a more timely resolution of the issue is required, the time periods set forth in this Section XV may be shortened upon motion of one of the Parties to the dispute.

78. The Parties do not intend that the invocation of this Section XV by a Party cause the Court to draw any inferences nor establish any presumptions adverse to either Party as a result of invocation of this Section.

79. As part of the resolution of any dispute submitted to dispute resolution, the Parties, by agreement, or this Court, by order, may, in appropriate circumstances, extend or

modify the schedule for completion of work under this Consent Decree to account for the delay in the work that occurred as a result of dispute resolution. Lion Oil shall be liable for stipulated penalties for their failure thereafter to complete the work in accordance with the extended or modified schedule.

XVI. EFFECT OF SETTLEMENT

80. The effect of settlement of this action is governed by this Paragraph 80.

A. Definitions. For purposes of Paragraph 80, the following definitions apply:

- i. “Applicable NSR/PSD Requirements” shall mean:
 - (a) PSD requirements at Part C of Subchapter I of the Act, 42 U.S.C. § 7475, and the regulations promulgated thereunder at 40 C.F.R. § 52.21;
 - (b) “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 C.F.R. §§ 51.165 (a) and (b); Title 40, Part 51, Appendix S; and 40 C.F.R. § 52.24; and
 - (c) Any applicable state regulations that implement, adopt, or incorporate the specific federal regulatory requirements identified above.
- ii. “Applicable NSPS Subparts A and J Requirements” shall mean the standards, monitoring, testing, reporting and recordkeeping requirements, found at 40 C.F.R. §§ 60.100 through 60.109 (Subpart J), relating to a particular pollutant and a particular affected facility, and the corollary general requirements found 40 C.F.R. §§ 60.1 through 60.19 (Subpart A) that are applicable to any affected facility covered by Subpart J.
- iii. “Post-Lodging Compliance Dates” shall mean any dates in this Paragraph 80 after the Date of Lodging. Post-Lodging Compliance Dates include dates certain (e.g., “December 31, 2004”), dates after Lodging represented in terms of “months after Lodging” (e.g., “Twelve Months after the Date of Lodging”), and dates after Lodging represented by actions taken (e.g., “Date of Certification”). The Post-Lodging Compliance Dates represent the dates by

which work is required to be completed or an emission limit is required to be met under the applicable provisions of this Consent Decree.

B. New Source Review/Prevention of Significant Deterioration.

i. Liability Resolution regarding the Applicable NSR/PSD Requirements.

a. With respect to emissions of the following pollutants from the following units, entry of this Consent Decree shall resolve all civil liability of Lion Oil to the United States and the Plaintiff-Intervenor: (i) for violations of the Applicable NSR/PSD Requirements resulting from construction or modification, that occurred prior to the Date of Lodging of the Consent Decree, of the following units; and (ii) for any pre-Lodging construction or modification of the following units that resulted in violations of the Applicable NSR/PSD Requirements that continued up to the following dates:

<u>Unit</u>	<u>Pollutant</u>	<u>Date</u>
FCCU	SO ₂	December 31, 2004
	NO _x	June 30, 2007
	PM and PM ₁₀	December 31, 2004
	CO	December 31, 2004
Heaters, boilers and compressors in Appendix C	NO _x	Dates in Appendix C
All heaters and boilers other than those listed in Appendix C	NO _x	Date of Lodging
All heaters, boilers and compressors listed in Appendix C	SO ₂	Dates in Appendix C.
All heaters and boilers other than those listed in Appendix C	SO ₂	Date of Lodging
Vacuum Distillation Tower	VOC	December 31, 2004
Compressors in Appendix C	CO	Dates in Appendix C.

The resolution of civil liability as set forth in this Subparagraph for CO on the air compressor (SN-841,G398TA) shall apply only if Lion Oil accepts the EPA established emission limit for CO set forth in Paragraph 16.B on air compressor SN-841 by the date set forth in Appendix C.

ii. Reservation of Rights: Release for Violations Continuing After the Date of Lodging Can be Rendered Void. Notwithstanding the resolution of liability in Paragraph

80.B.i, the release of liability by the United States and ADEQ to Lion Oil for violations of the Applicable NSR/PSD Requirements during the period between the Date of Lodging of the Consent Decree and the Post-Lodging Compliance Dates shall be rendered void if Lion Oil materially fails to comply with the obligations and requirements of Paragraphs 11 - 14; provided however, that the release in Paragraph 80.B.i shall not be rendered void if Lion Oil remedies such material failure and pays any stipulated penalties due as a result of such material failure.

iii. Exclusions from Release Coverage: Construction and/or Modification Not Covered by Paragraph 80.B.i. Notwithstanding the resolution of liability in Paragraph 80.B.i, nothing in this Consent Decree precludes the United States and/or ADEQ from seeking from Lion Oil injunctive relief, penalties, or other appropriate relief for violations by Lion Oil of the Applicable NSR/PSD Requirements resulting from construction or modification that:

(1) commenced prior to or commences after the Date of Lodging of the Consent Decree for pollutants or units not covered by the Consent Decree; or (2) commences after the Date of Lodging of the Consent Decree for units covered by this Consent Decree, except for construction and/or modification required by this Consent Decree.

iv. Evaluation of Applicable PSD/NSR Requirements Must Occur. Increases in emissions from units covered by this Consent Decree, where the increases result from the Post-Lodging construction or modification of any units within the El Dorado Refinery, are beyond the scope of the release in Paragraph 80.B.i, and Lion Oil must evaluate any such increases in accordance with the Applicable PSD/NSR Requirements.

C. New Source Performance Standards Subparts A and J.

i. Resolution of Liability. With respect to emissions of the following pollutants from the following units, for violations of the Applicable NSPS Subparts A and J Requirements, entry of this Consent Decree shall resolve all civil liability of Lion Oil to the United States and ADEQ from the date that the claims of the United States and ADEQ accrued through the following dates:

Unit	Pollutant	Date
FCCU	SO ₂ , PM, and CO	December 31, 2004
All heaters and boilers	SO ₂	Date of Lodging or Date in Appendix C if other than Date of Lodging
SRP	SO ₂	Date of Lodging
Flaring Devices	SO ₂	Date of Lodging

ii. Reservation of Rights: Release for NSPS Violations Occurring After the Date of Lodging Can be Rendered Void. Notwithstanding the resolution of liability in Paragraph 80.C.i, the release of liability by the United States and the Plaintiff-Intervenor to Lion Oil for violations of any Applicable NSPS Subparts A and J Requirements that occurred between the Date of Lodging and the Post-Lodging Compliance Dates shall be rendered void if Lion Oil materially fails to comply with the obligations and requirements of Paragraphs 15 - 19; provided however, that the release in Paragraph 80.C.i. shall not be rendered void if Lion Oil remedies such material failure and pays any stipulated penalties due as a result of such material failure.

iii. Prior NSPS Applicability Determinations. Nothing in this Consent Decree shall affect the status of any FCCU, fuel gas combustion device, or sulfur recovery plant currently subject to NSPS as previously determined by any federal, state, or local authority or any applicable permit.

D. LDAR and Benzene Waste NESHAP.

i. Resolution of Liability. Entry of this Consent Decree shall resolve all civil liability of Lion Oil to the United States and ADEQ for violations of the following statutory and regulatory requirements that occurred prior to the Date of Entry of the Consent Decree and that may continue up to the date Lion Oil completes its LDAR obligations under Paragraphs 23.C.i . and/or its Benzene Waste NESHAP obligations under Paragraphs 22.C. and 22.D (if applicable):

a. **LDAR**. For all equipment in light liquid service and gas and/or vapor service, the LDAR requirements promulgated pursuant to Sections 111 and 112 of the Clean Air Act, and codified at 40 C.F.R. Part 60, Subparts VV and GGG; 40 C.F.R. Part 61, Subparts J and V; and 40 C.F.R. Part 63, Subparts F, H, and CC;

b. **Benzene Waste NESHAP**. The National Emission Standard for Benzene Waste Operations, 40 C.F.R. Part 61, Subpart FF, promulgated pursuant to Section 112(e) of the Act, 42 U.S.C. § 7412(e); and

c. Any applicable state regulations that implement, adopt, or incorporate the specific federal regulatory requirements identified in Paragraphs 80.D.i-ii.

ii. **Reservation of Rights**. Except as specifically provided in this Paragraph 80.D.ii, and notwithstanding the resolution of liability in Paragraphs 80.D.i, nothing in this Consent Decree precludes the United States and/or ADEQ from seeking from Lion Oil:

(a) injunctive and/or other equitable relief for violations of Benzene Waste NESHAP and/or LDAR that (A) commenced prior to the Date of Entry of this Consent Decree and continued after the Date of Entry provided such violations are not identified by Lion Oil under Paragraphs 22.C., 22.D. and 23.C.i; or (B) commenced after the Date of Entry of the Consent Decree; or

(b) civil penalties for violations of Benzene Waste NESHAP and/or LDAR that (A) commenced prior to the Date of Entry of this Consent Decree and continued after the Date of Entry provided such violations are not identified by Lion Oil under Paragraphs 22.C., 22.D. and 23.C.i; or (B) commenced after the Date of Entry of the Consent Decree.

For purposes of this subparagraph, the phrase “continued after the Date of Entry” includes a new violation that is a continuation of a violation that commenced prior to the Date of Entry of this Consent Decree.

E. **SIP Provisions** Entry of this Consent Decree shall resolve all civil liability of Lion Oil to the State of Arkansas for violations of their respective applicable SIP provisions and other state regulations adopting, incorporating and implementing the foregoing federal requirements;

F. NSPS Subpart QQQ.

i. Resolution of Liability

Entry of this Consent Decree shall resolve the civil liability of Lion Oil to the United States and the State of Arkansas for violations of 40 C.F.R. §§ 60.690-60.699 (Subpart QQQ) from the date that the claims of the United States and Arkansas accrued through December 31, 2008, for all existing process area individual drain systems and aggregate facilities that are part of the PASS project described in Paragraph 30.A , and all new equipment installed as part of the PASS Project including six (6) aboveground storage tanks provided that they meet the requirements of NSPS, Subpart QQQ, by December 31, 2008; and provided however, that the release of liability for the period between the Date of Lodging and December 31, 2008, shall be rendered void if Lion Oil does not meet the NSPS requirements at 40 C.F.R. §§ 60.690-60.699, on or before December 31, 2008. This provision shall apply separately for each affected facility defined at 40 CFR 60.690.

ii. Reservation of Rights: Release for NSPS Violations Occurring After the Date of Lodging Can be Rendered Void. Notwithstanding the resolution of liability in Paragraph 80.E.i, the release of liability by the United States and ADEQ to Lion Oil for violations of any Applicable NSPS Subparts A and QQQ requirements that occurred between the Date of Lodging and the Post-Lodging Compliance Dates shall be rendered void if Lion Oil, materially fails to comply with the obligations and requirements of Paragraph 30; provided however, that the release in Paragraph 80.E.i. shall not be rendered void if Lion Oil, remedies such material failure and pays any stipulated penalties due as a result of such material failure.

G. Other.

i. Complaint Filed In This Action

Entry of this Consent Decree shall resolve all civil liability of Lion Oil to the United States and the State of Arkansas for the following specific violations as identified during EPA's July 2000 inspection at the El Dorado Refinery and as alleged in the Complaint in this matter at paragraphs 110 through 114:

40 C.F.R. §§ 60.482-6(a)(1) and 60.486(e) standards for open-ended valves and record requirements as follows:

(1) Failure to equip at least 7 open-ended valves with caps or plugs as required by 40 C.F.R. §§ 60.482-6(a)(1); and

(2) Failure to keep records pertaining to at least 10 components in a readily accessible location as is required by 40 C.F.R. §§ 60.486(e).

ii. **Lion Oil's Flaring Devices.** Entry of this Consent Decree shall resolve all civil liability of Lion Oil to the State of Arkansas for violations arising from Lion Oil's use of the High and Low Pressure Flares (SNs 822 and 823) from the date the claims accrued through the Date of Entry of the Consent Decree. Notwithstanding the foregoing resolution of liability, the release shall be rendered void if, prior to the termination of the Consent Decree, Lion Oil materially fails to comply with the obligations and requirements of Paragraph 20; provided however, that the release shall not be rendered void if Lion Oil, remedies such material failure and pays any stipulated penalties due as a result of such material failure.

iii. **ADEQ Permits.** Entry of this Consent Decree shall resolve all civil liability of Lion Oil to the State of Arkansas and to the United States for any violations of (1) ADEQ Air Permit Number 868-AR-7 issued on June 3, 1998; and (2) violations of the terms and conditions of Lion Oil's Title V permit (868-AOP-R0), its underlying State Operating Permit (868-AOP-R8), and their underlying statutory or regulatory requirements, that were reported by Lion Oil in its annual compliance certification dated March 4, 2002, pursuant to 40 CFR 70.6(c)(5) and Ark. Reg. 26.703(E)(3)(a), for the compliance period January 1, 2001 through December 31, 2001,

including the late submission of the annual compliance certification itself, provided the identified violations (other than the late submission of the annual compliance certification) are not violations under the terms and conditions of the new Title V permit (868-AOP-RI) to be issued by Lion Oil. The release will take effect upon issuance of a final Permit by ADEQ; provided however that the United States and ADEQ agree not to take enforcement action related to the issues to be released prior to that time.

iv. **EPCRA/CERCLA Flaring Devices.** Entry of this Consent Decree shall resolve all civil liability of Lion Oil to the United States and the State of Arkansas for violations of EPCRA or Section 103(a) of CERCLA, 42 U.S.C. § 9603(a), from January 1, 1997, through date of lodging, involving incidents identified and reported to EPA by December 31, 2003.

H. **Claim/Issue Preclusion.** In any subsequent administrative or judicial proceeding initiated by the United States or the Plaintiff-Intervenor for injunctive relief, penalties, or other appropriate relief relating to Lion Oil for violations of the PSD/NSR, NSPS, NESHAP, and/or LDAR requirements, not identified in Paragraph 80 of the Consent Decree and/or the Complaint.

a. Lion Oil shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, or claim-splitting. Nor may Lion Oil assert, or maintain, any other defenses based upon any contention that the claims raised by the United States or the Plaintiff-Intervenor in the subsequent proceeding were or should have been brought in the instant case. Nothing in the preceding sentences is intended to affect the ability of Lion Oil to assert that the claims are deemed resolved by virtue of this Paragraph 80 of the Consent Decree.

b. The United States and the State of Arkansas may not assert or maintain that this Consent Decree constitutes a waiver or determination of, or otherwise obviates, any claim or

defense whatsoever, or that this Consent Decree constitutes acceptance by Lion Oil of any interpretation or guidance issued by EPA related to the matters addressed in this Consent Decree.

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

XVII. GENERAL PROVISIONS

81. **Other Laws.** Except as specifically provided by this Consent Decree, nothing in this Consent Decree shall relieve Lion Oil of its obligations to comply with all applicable federal, state and local laws and regulations. Subject to Paragraph 80, nothing contained in this Consent Decree shall be construed to prevent or limit the rights of the United States or Arkansas to seek or obtain other remedies or sanctions available under other federal, state or local statutes or regulations, by virtue of Lion Oil's violation of the Consent Decree or of the statutes and regulations upon which the Consent Decree is based, or for Lion Oil's violations of any applicable provision of law, other than the specific matters resolved herein. This shall include the right of the United States or Arkansas to invoke the authority of the Court to order Lion Oil's compliance with this Consent Decree in a subsequent contempt action.

82. **Post-Permit Violations.** Nothing in this Consent Decree shall be construed to prevent or limit the right of the United States or the State of Arkansas; to seek injunctive or monetary relief for violations of permits issued as a result of the procedure required under Paragraph 24 of this Decree; provided however, that with respect to monetary relief, the United States and the State of Arkansas must elect between filing a new action for such monetary relief or seeking stipulated penalties under this Consent Decree, if stipulated penalties also are available for the alleged violation(s).

83. **Failure of Compliance.** The United States and the State of Arkansas do not, by their consent to the entry of Consent Decree, warrant or aver in any manner that Lion Oil's complete compliance with the Consent Decree will result in compliance with the provisions of the CAA or the Arkansas Water and Air Pollution Control Act. Notwithstanding the review or approval by EPA or ADEQ of any plans, reports, policies or procedures formulated pursuant to the Consent Decree, Lion Oil shall remain solely responsible for compliance with the terms of the Consent Decree, all applicable permits, and all applicable federal, state and local laws and regulations, except as provided in Section XIV (Force Majeure).

84. **Service of Process.** Lion Oil hereby agrees to accept service of process by mail with respect to all matters arising under or relating to the Consent Decree and to waive the formal service requirements set forth in Rule 4 of the Federal Rules of Civil Procedure and any applicable local rules of this Court, including but not limited to, service of a summons. The persons identified by Lion Oil at Paragraph 89 (Notice) are authorized to accept service of process with respect to all matters arising under or relating to the Consent Decree.

85. **Post-Lodging/Pre-Entry Obligations.** Obligations of Lion Oil under this Consent Decree to perform duties scheduled to occur after the Date of Lodging of the Consent Decree, but prior to the Date of Entry of the Consent Decree, shall be legally enforceable on and after the Date of Entry of the Consent Decree. 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; or Arkansas 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 unless and until this Consent Decree is entered by the Court.

86. **Costs.** Each Party to this action shall bear its own costs and attorneys' fees.

87. **Public Documents.** All information and documents submitted by Lion Oil to the Applicable Federal and State Agencies pursuant to this Consent Decree shall be subject to public inspection in accordance with the respective statutes and regulations that are applicable to EPA, and the ADEQ, unless subject to legal privileges or protection or identified and supported as business confidential in accordance with the respective state or federal statutes or regulations.

88. **Public Notice and Comment.** The Parties agree to the Consent Decree and agree that the Consent Decree may be entered upon compliance with the public notice procedures set forth at 28 C.F.R. § 50.7, and upon notice to this Court from the United States Department of Justice requesting entry of the Consent Decree. The United States reserves the right to withdraw or withhold its consent to the Consent Decree if public comments disclose facts or considerations indicating that the Consent Decree is inappropriate, improper, or inadequate.

89. **Notice.** Unless otherwise provided herein, notifications to or communications between the Parties shall be deemed submitted on the date they are postmarked and sent by U.S. Mail, postage pre-paid, except for notices under Section XIV (Force Majeure) and Section XV (Retention Jurisdiction/Dispute Resolution) which shall be sent by overnight mail or by certified or registered mail, return receipt requested. Each report, study, notification or other communication of Lion Oil shall be submitted as specified in this Consent Decree, with copies to EPA Headquarters and the Applicable EPA Region and the Applicable State Agency. If the date for submission of a report, study, notification or other communication falls on a Saturday, Sunday or legal holiday, the report, study, notification or other communication will be deemed timely if it is submitted the next business day. Except as otherwise provided herein, all reports, notifications, certifications, or other communications required or allowed under this Consent Decree to be submitted or delivered to the United States, EPA, the State, Lion Oil shall be addressed as follows:

As to the United States:

Chief
Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611, Ben Franklin Station
Washington, DC 20044-7611
Reference Case No. 90-5-2-1-06064/1

As to EPA:

Director, Air Enforcement Division
Office of Regulatory Enforcement
U.S. Environmental Protection Agency
Mail Code 22452-A
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460-0001

with a hard copy to

Director, Air Enforcement Division
Office of Regulatory Enforcement
c/o Matrix Environmental & Geotechnical Services
215 Ridgedale Avenue
Florham Park, NJ 07932

and an electronic copy to

neichlin@matrixengineering.com
Jorquera.mario@epa.gov
Jackson.james@epa.gov

EPA Region 6:

Chief
Air, Toxics, and Inspections Coordination Branch
Environmental Protection Agency, Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

The State of Arkansas:

Legal Division
Arkansas Department of Environmental Quality
P. O. Box 8913

Little Rock, AR 72219-8913

As to Lion Oil:

Wallace M. Moody, Esquire
General Counsel
Lion Oil Company
El Dorado Refinery
1000 McHENRY
P.O. Box 7005
El Dorado, Arkansas 71731-7005

LeAnn M. Johnson-Koch
Piper Rudnick, LLP
1200 19th Street, NW
Washington, DC 20036

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. In addition, the nature and frequency of reports required by the Consent Decree may be modified by mutual consent of the Parties. The consent of the United States to such modification must be in the form of a written notification from the Department of Justice, but need not be filed with the Court to be effective.

90. **Approvals.** All EPA approvals or comments required under this Decree shall come from EPA, Office of Regulatory Enforcement, Air Enforcement Division, at the address listed in Paragraph 89 (Notice). All Plaintiff-Intervener approvals shall be sent from the offices identified in Paragraph 89.

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

92. **Modification.** The Consent Decree contains the entire agreement of the Parties and shall not be modified by any prior oral or written agreement, representation or understanding. Prior drafts of the Consent Decree shall not be used in any action involving the interpretation or

enforcement of the Consent Decree. Non-material modifications to this Consent Decree shall be in writing, signed by the Parties, but need not be filed with the Court. Material modifications to this Consent Decree shall be in writing, signed by the Parties, and shall be effective upon filing with the Court. Specific provisions in this Consent Decree that govern specific types of modifications shall be effective as set forth in the specific provision governing the modification.

XVIII. TERMINATION

93. A. Provisions of this Consent Decree relating to Lion Oil shall be subject to termination upon motion by the United States or Lion Oil (under the conditions identified in Paragraph 93.C). Lion Oil must have satisfied all of the following requirements of this Consent Decree:

- i. installation of control technology systems as specified in this Consent Decree;
- ii. achieving compliance with all provisions contained in this Consent Decree;
- iii. paying all penalties and other monetary obligations due under the terms of the Consent Decree; no penalties or other monetary obligations due hereunder can be outstanding or owed to the United States, or Arkansas;
- iv. the completion of the projects set forth in Paragraphs 30 - 32;
- v. the receipt of permits incorporating the surviving emission limits and standards established under Section V;
- vi. EPA's receipt of the first calendar quarterly progress report following the conclusion of the operation for at least one year of each unit in compliance with the emission limits established herein; and
- vii. Lion Oil has certified compliance and completion pursuant to Paragraph 93.A.i-vi and 93.B.i.-vi, to the United States and the Applicable State Agency in writing.

B. Certification of Completion. Lion Oil may certify completion of one or more parts of the Consent Decree provided all of the related requirements have been satisfied, as follows:

- i. Paragraph 11 - Fluid Catalytic Cracking Unit
- ii. Paragraphs 12-15 - Fluid Catalytic Cracking Unit.
- iii. Paragraphs 16-17 Heaters and Boilers;
- iv. Paragraph 18 – Sulfur Recovery Plant;
Paragraph 19 and 21 Flaring Devices;
- v. Paragraph 22 – Benzene NESHAP;
Paragraph 23 – Leak Detection and Repair
- vi. Section VIII – Environmentally Beneficial Projects

Within 90 days after Lion Oil concludes that one or more parts of the Paragraph 93.B.i.-vi. have been completed, Lion Oil may submit a written report to the Parties listed in Paragraph 89 (Notice) describing the activities undertaken and certifying that the applicable Paragraphs have been completed in full satisfaction of the requirements of this Consent Decree, and that Lion Oil is in substantial and material compliance with all of the other requirements of the Consent Decree. The report shall contain the following statement, signed by a responsible corporate official of Lion Oil:

To the best of my knowledge, after thorough investigation, I certify that the information contained in or accompanying this submission is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Within 90 days after receipt of above certification, EPA, after reasonable opportunity to review and comment by the State, shall notify Lion Oil whether the requirements set forth in the applicable Paragraphs have been completed in accordance with this Consent Decree. The parties recognize that ongoing obligations under such Paragraphs remain and necessarily continue (e.g.

reporting, recordkeeping, training, auditing requirements), and that Lion Oil's certification is that it is in current compliance with all such obligations. If EPA concludes that the requirements have not been fully complied with, the EPA shall notify Lion Oil as to the activities that must be undertaken to complete the applicable Paragraphs of the Consent Decree. Lion Oil shall perform all activities described in the notice, subject to its right to invoke the dispute resolution procedures set forth in Section XV (Dispute Resolution). If EPA concludes that the requirements of the applicable Paragraphs have been completed in accordance with this Consent Decree, EPA will so certify in writing to Lion Oil. This certification shall constitute the certification of completion of the applicable Paragraphs for purposes of this Consent Decree. Nothing in Paragraph 93.B. shall preclude the United States or the State of Arkansas from seeking stipulated penalties for a violation of any of the requirements of the Consent Decree regardless of whether a Certification of Completion has been issued with respect to Paragraph 93.B i.-vi. of the Consent Decree. In addition, nothing in Paragraph 93.B. shall permit Lion Oil to fail to implement any ongoing obligations under the Consent decree regardless of whether a Certification of Completion has been issued with respect to Paragraph 93.B i.-vi. of the Consent Decree.

C. Unless, within 120 days of receipt of the certification required by Paragraph 93.A.vii., either the United States or the Applicable State Agency objects in writing with specific reasons, the Court may upon motion by Lion Oil order that this Consent Decree be terminated. If either the United States or the Applicable State Agency objects to the certification by Lion Oil then the matter shall be submitted to the Court for resolution under Section XV (Retention of Jurisdiction/Dispute Resolution) of this Consent Decree. In such case, Lion Oil shall bear the burden of proving that this Consent Decree should be terminated.

XIX. SIGNATORIES

94. Each of the undersigned representatives certify that they are fully authorized to enter into the Consent Decree on behalf of such Parties, and to execute and to bind such Parties to the Consent Decree.

Dated and entered this _____ day of _____, 2003.

UNITED STATES DISTRICT JUDGE

WE HEREBY CONSENT to the entry of the Consent Decree in United States, et al. v. Lion Oil Company, subject to the public notice and comment requirements of 28 C.F.R. § 50.7.

FOR PLAINTIFF THE UNITED STATES OF AMERICA:

Date: _____

THOMAS L. SANSONETTI
Assistant Attorney General
Environment and Natural Resources Division
United States Department of Justice

Date: _____

RICHARD GLADSTEIN
Trial Attorney
Environmental Enforcement Section
Environment and Natural Resources
Division
United States Department of Justice
P.O. Box 7611
Ben Franklin Station
Washington, D.C. 20044-7611

WE HEREBY CONSENT to the entry of the Consent Decree in United States, et al. v. Lion Oil Company, subject to the public notice and comment requirements of 28 C.F.R. § 50.7.

FOR PLAINTIFF THE UNITED STATES OF AMERICA:

Date: _____

THOMAS C. GEAN
United States Attorney for the
Western District of Arkansas

Date: _____

By: _____
Assistant United States Attorney
United States Attorneys Office for the Western
District of Arkansas
P.O. Box 1524
Fort Smith, Arkansas 72902

WE HEREBY CONSENT to the entry of the Consent Decree in United States, et al. v. Lion Oil Company, subject to the public notice and comment requirements of 28 C.F.R. § 50.7.

FOR THE UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY:

Date: _____

JOHN PETER SUAREZ
Assistant Administrator for
Enforcement and Compliance Assurance
United States Environmental
Protection Agency
Washington, D.C. 20460

WE HEREBY CONSENT to the entry of the Consent Decree in United States, et al. v. Lion Oil Company, subject to the public notice and comment requirements of 28 C.F.R. § 50.7.

FOR PLAINTIFF-INTERVENOR THE STATE OF
ARKANSAS

Date: _____

Chief
Arkansas Department of Environmental Quality
P.O. Box 8913
Little Rock, Arkansas 72219-8913

WE HEREBY CONSENT to the entry of the Consent Decree in United States, et al. v. Lion Oil Company.

FOR DEFENDANT LION OIL COMPANY

Date: _____

Steve Cousins, Vice President of Refining
Lion Oil Company
1000 McHenry
P.O. Box 7005
El Dorado, Arkansas 71731-7005

Date: _____

LeAnn M. Johnson-Koch
Piper Rudnick, LLP
1200 Nineteenth Street, N.W.
Washington, D.C. 20036-2412
(202) 861-6442
(202) 689-7524 (fax)

ATTORNEY FOR LION OIL COMPANY

APPENDIX A

**ADEQ AIR PERMIT #868-AR-7
ISSUED ON JUNE 3, 1998;**

**ADEQ CONSENT ADMINISTRATIVE ORDER
ISSUED ON MAY 30, 2002**

APPENDIX B

LIST OF FLARING DEVICES AT THE EL DORADO REFINERY

A. ACID GAS FLARING DEVICES

- 1. Low Pressure Flare (SN-822)**
- 2. High Pressure Flare (SN-823)**

B. HYDROCARBON FLARING DEVICES

- 1. Low Pressure Flare (SN-822)**
- 2. High Pressure Flare (SN-823)**

APPENDIX C

LIST OF CONTROLLED HEATERS , BOILERS AND COMPRESSORS

Source	Installation Deadline
#4 Pre-flash Column Reboiler (SN-803)	December 31, 2009
#4 Atm Atmospheric Furnace (S-804)	December 31, 2004
#4 Vacuum Furnace (SN-805)	December 31, 2009
#7 FCCU Furnace (SN-808)	December 31, 2009
#9 Hydrotreater Furnace/Reboiler (SN-810)	December 31, 2009
#9 Reformer Furnace (SN-811)	December 31, 2009
#10 Hydrotreater Furnace/Reboiler (SN-813)	December 31, 2009
#12 Distillate Hydrotreater Furnace (SN-842)	December 31, 2009
#10 Boiler (SN-816) Shutdown by	December 31, 2006
#11 Boiler (SN-817) Shutdown by	December 31, 2006
#12 Boiler (SN-818) Shutdown by	December 31, 2006
#13 Boiler (SN-819) Shutdown by	December 31, 2006
#14 Boiler (SN-820) Shutdown by	December 31, 2006
New Boiler #1	December 31, 2006
New Boiler #2	December 31, 2006
New Boiler #3	December 31, 2006
G398TA Air Compressor (SN-841)	December 31, 2004
8GTL Compressor (SN-836) (“C” Compressor)	December 31, 2006

Source	NSPS Applicability Deadline
#10 Boiler (SN-816)	January 31, 2006
#11 Boiler (SN-817)	January 31, 2006
New Boiler #1	December 31, 2006
New Boiler #2	December 31, 2006
New Boiler #3	December 31, 2006
Asphalt Fume Incinerator (SN-824)	December 31, 2008

APPENDIX E

NSPS SUBPART J COMPLIANCE SCHEDULE FOR FLARES

<u>Source</u>	<u>Date of Compliance</u>	<u>Method/Proof of Compliance</u>
SN-822, SN-823	Immediate	For each routinely-generated refinery fuel gas stream that is directed to this flare on a continuous or intermittent basis, Lion Oil will monitor this stream with either (i) a CEMS; or (ii) will submit for EPA approval, a fully-approvable alternative monitoring plan (“AMP”) by no later than 90 days after the Date of Lodging of this Consent Decree.

**APPENDIX F
(LOGIC DIAGRAM FOR PARAGRAPH 20)**

ALL FLARING INCIDENTS

ú

Was the Root Cause:
 - error resulting from careless operation by the personnel charged with the responsibility for the SRP, TGU, or Upstream Process Units? Or
 - equipment failure due to a failure by Lion to operate and maintain that equipment in a manner consistent with good engineering practices? or

yes

!

Paragraph 51 applies except in cases of Force Majeure

ú No

Did the Flaring incident:
 - result in emissions of SO2 at a rate greater than 20 lbs/hr continuously for three consecutive hours and no scheduled maintenance exception? or
 -cause the total number of Flaring Incidents in a rolling 12 month period to exceed 5?

yes

!

Paragraph 51 applies with caveats set forth in Paragraph 20.C.ii

NO ú

Is this the first time for the Root Cause of this Flaring Incident?

Is the Root Cause on the list of agreed upon Malfunctions?

yes

ú

NO

ú

STOP

Was the Root Cause sudden, infrequent, and not reasonable preventable through the exercise of good engineering practice?

Paragraph 51.d applies With caveats set forth in Paragraph 22.C.i.c.2

NO

Implement Corrective Action Pursuant to Paragraph 20.B

Yes ú

Establish and update a list of agreed-upon Malfunctions

ú

STOP