IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW JERSEY

UNITED STATES OF AMERICA, STATE OF NEW JERSEY,	)	
Plaintiffs,	)	**Civil No.**
v.	)	
COASTAL EAGLE POINT OIL COMPANY,	)	
Defendant.	)	

CONSENT DECREE

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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, through its undersigned counsel and at the request and on behalf of the United States Environmental Protection Agency ("EPA"), and co-plaintiff, the State of New Jersey (“New Jersey”) at the request and on behalf of the New Jersey Department of Environmental Protection (“NJDEP”), have simultaneously filed a Complaint and lodged this Consent Decree against Coastal Eagle Point Oil Company (“CEPOC”), for alleged environmental violations at its petroleum refinery in Westville, New Jersey (“Eagle Point Refinery”) and civil penalties;

WHEREAS, the United States alleges that CEPOC 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 nitrogen oxide (“NO_X”), sulfur dioxide (“SO_2"), carbon monoxide (“CO”) and particulate matter (“PM”), including particulate matter with an aerodynamic diameter less than or equal to 10 micrometers (“PM_{10}");

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, with respect to LDAR, EPA inspected the Eagle Point Refinery in July 1999 and issued Compliance Order CAA-02-2003-1011 based on CEPOC's failure to comply with the LDAR regulations.

WHEREAS, CEPOC denies that it has violated and/or continues to violate the foregoing statutory and regulatory rules and maintains that it has been and remains in compliance with all applicable statutes and regulations and is not liable for civil penalties and injunctive relief as alleged in the Complaint;

WHEREAS, New Jersey has sought to join in this matter alleging violations of its respective applicable SIP provisions and other state rules incorporating and implementing the foregoing federal requirements;

WHEREAS, New Jersey also alleges that in 1998, 1999, 2000, 2002, and 2003, CEPOC violated maximum allowable emission limits in its air pollution control permits-to-construct and certificates-to-operate that NJDEP issued to CEPOC for the Eagle Point Refinery pursuant to the applicable SIP provisions and the Air Pollution Control Act, N.J.S.A. 26:2C-1 et seq., ("New Jersey Air Act") and regulations adopted by NJDEP pursuant thereto at N.J.A.C. 7:27-1 *et seq*. such allegations being based on emissions data from stack emissions tests in 2000, 2002 and 2003 and continuous emission monitors for 1998, 1999, 2000 and 2003 which CEPOC reported to NJDEP. NJDEP also alleges that CEPOC failed to comply with certain conditions of NJDEP-issued air Permits and Certificates issued by NJDEP, concerning the monitoring of pH at a

Venturi scrubber, the submitting of documentation of maximum flue gas rate from the Belco scrubber for 2002, and modification of Permits and Certificates for certain tanks. These allegations resulted in NJDEP's issuance of 18 Administrative Orders and Notices of Civil Administrative Penalty Assessment ("AO/NOCAPAs").

WHEREAS, CEPOC submitted requests to NJDEP for administrative hearings to contest the above-referenced 18 AO/NOCAPAs. NJDEP referred some of the requests to the New Jersey Office of Administrative Law and , with the consent of CEPOC, has not referred the remaining requests, pending the resolution of settlement negotiations. NJDEP and CEPOC intend to resolve the 18 AO/NOCAPAs by entering into this Consent Decree.

WHEREAS, CEPOC consents to the simultaneous filing of the Complaint, despite its denial of the United States' allegations, and lodging of this Consent Decree against CEPOC to accomplish its objective of resolving the allegations and cooperatively reconciling the goals of the United States, CEPOC and the State of New Jersey under the Clean Air Act and the New Jersey Air Act, and therefore agrees to undertake the installation of air pollution control equipment and enhancements to its air pollution management practices at the Eagle Point Refinery to reduce air emissions by participating in a federal strategy for achieving cooperative agreements to achieve across-the-board reductions in emissions ("Global Settlement Strategy");

WHEREAS, with respect to the provisions of Section V.K, 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 CEPOC is committed to pro-actively resolving environmental concerns related to its operation of the Eagle Point Refinery;

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

WHEREAS, CEPOC 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; and

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 CEPOC 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.

2. Venue is proper in the United States District Court for the District of New Jersey 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). CEPOC consents to the personal jurisdiction of this Court, waives any objections to venue in this District and does not object to New Jersey filing as a co-plaintiff in this action.

3. Notice of the commencement of this action has been given to New Jersey 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 Eagle Point Refinery and be binding upon the United States, New Jersey, and CEPOC, its agents, successors and assigns.

5. CEPOC 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, CEPOC agrees that its Eagle Point Refinery is covered by this Consent Decree. Effective from the Date of Lodging of the Consent Decree, CEPOC 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 Eagle Point Refinery and shall provide a copy of the Consent Decree to any successor in interest. CEPOC shall notify the United States and New Jersey in accordance with the notice provisions

set forth in Paragraph 192 (Notice) of any successor in interest thirty (30) days, or as soon as possible, prior to any such transfer.

7. CEPOC shall condition any transfer, in whole or in part, of ownership of, operation of, or other ownership interest (exclusive of any security interest as defined by the Uniform Commercial Code, non-controlling non-operational shareholder interest, or access or utility easement) in the Eagle Point Refinery upon the execution by the transferee of a modification to the Consent Decree which makes the terms and conditions of the Consent Decree, except for Section VIII (Environmentally Beneficial Projects) and Section X (Civil Penalty), applicable to the transferee. In the event of such transfer, CEPOC shall notify and certify to the parties listed in Paragraph 192 that the transferee has the financial and technical ability to assume the obligations and liabilities under this Consent Decree. By no later than thirty (30) days after the transferee executes a document agreeing to substitute itself for CEPOC for all provisions in this Consent Decree except for Section VIII (Environmentally Beneficial Projects) and Section X (Civil Penalty), the Parties will jointly file a motion requesting the Court to substitute the transferee as Defendant and releasing CEPOC from the obligations and liabilities of this Consent Decree, except for Section VIII (Environmentally Beneficial Projects) and Section X (Civil Penalty). CEPOC shall not be released from the obligations and liabilities of this Consent Decree unless and until the Court grants the joint motion.

8. CEPOC 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, CEPOC also shall provide a copy of the applicable provisions of this Consent Decree to each consulting or contracting firm that CEPOC 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 to this Consent Decree to further the objectives of the federal Clean Air Act and the New Jersey Air 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 Eagle Point 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 Eagle Point Refinery are identified in Appendix A to the Consent Decree. To the extent that, during the duration of the Consent Decree, the Eagle Point Refinery utilizes AG Flaring Devices other than those specified in Appendix A for the purpose of combusting Acid Gas and/or Sour Water Stripper Gas, those AG Flaring Devices shall also 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; provided, however, that if five-hundred (500) pounds or more of sulfur dioxide have been emitted in a twenty-four (24) hour period and AG Flaring continues into subsequent,

contiguous, non-overlapping twenty-four (24) hour period(s), each period of which results in emissions equal to, or in excess of five-hundred (500) pounds of sulfur dioxide, then only one AG Flaring Incident shall have occurred. Subsequent, contiguous, non-overlapping periods are measured from the initial commencement of AG Flaring within the AG Flaring Incident.

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

F. “CEMS” shall mean continuous emissions monitoring system.

G. “CEPOC” shall mean the Coastal Eagle Point Oil Company, its agents, successors and assigns.

H. “Consent Decree” or “Decree” shall mean this Consent Decree, including any and all appendices attached to the Consent Decree.

I. “CO” shall mean carbon monoxide.

J. “Controlled Heaters and Boilers” shall mean the heaters and boilers that are listed in Appendix D.

K. "Date of Entry" shall mean the date the Consent Decree is entered by the United States District Court.

L. "Date of Lodging" 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 District of New Jersey.

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

N. “Eagle Point Refinery” or the “Refinery” shall mean the refinery owned and operated by CEPOC in Westville, New Jersey, but shall not include the co-generation plant physically located within the property boundaries of the Refinery and identified by New Jersey Air Program Interest Number 55223.

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

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

Q. "Fuel Oil" shall mean any liquid fossil fuel with sulfur content of greater than 0.05% by weight.

R. "Heaters & Boilers NO_X Control Technology" shall mean Next Generation ULNBs or, if Next Generation ULNB installation is infeasible for a particular heater or boiler, another NO_X control technology designed to achieve less than 0.040 pounds of NO_X per million BTU heat input for that heater or boiler.

S. "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.

T. "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 Gas and/or Tail Gas. The HC Flaring Devices currently in service at the Eagle Point Refinery are identified in Appendix A to the Consent Decree. To the extent that, during the duration of the Consent Decree, the Eagle Point Refinery utilizes HC Flaring Devices other than those specified in Appendix A 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 also be covered under this Consent Decree.

U. "Hydrocarbon Flaring Incident" or "HC Flaring Incident" shall mean the continuous or intermittent combustion of refinery-generated gases, 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 HC 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 HC Flaring within the HC Flaring Incident.

V. "Low NO_x Combustion Promoter" shall mean a catalyst that is added to an FCCU or RCCU that minimizes NO_x emissions while maintaining its effectiveness as a combustion promoter.

W. "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.

X. "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."

Y. "Natural Gas Curtailment" shall mean a restriction imposed by a public utility by the issuance of an Operational Flow Order limiting CEPOC's ability to obtain natural gas.

Z. "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.

AA. "NJDEP" shall mean the New Jersey Department of Environmental Protection and any successor departments or agencies of the State of New Jersey.

BB. "NO_X" shall mean nitrogen oxides.

CC. "NO_X Additives" shall mean Low NO_X Combustion Promoters and NO_X Reducing Catalyst Additives.

DD. "NO_X Reducing Catalyst Additive" shall mean a catalyst additive that is introduced into a FCCU or RCCU to reduce NO_X emissions through reduction or controlled oxidation of intermediates.

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

FF. “PM” shall mean particulate matter, including Total Suspended Particulate (“TSP”).

GG. “PM_{10}" shall mean particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers.

HH. "Parties" shall mean the United States, New Jersey, and CEPOC.

II. “Co- Plaintiff” shall mean the State of New Jersey.

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

KK. “Selective Catalytic Reduction” or “SCR” shall mean an air pollution control device consisting of ammonia injection and a catalyst bed to selectively catalyze the reduction of NO_X with ammonia to nitrogen and water.

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

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

NN. “SO_2" shall mean sulfur dioxide.

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

PP. “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.

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

RR. “Tail Gas Incident” shall mean, for the purpose of this Consent Decree, the combustion of tail gas in a thermal incinerator that results in excess emissions of 500 pounds or

more of SO_2 emissions in any 24-hour period. Only those time periods which are in excess of a SO_2 concentration of 250 ppm (1 hour block average) shall be used to determine the amount of excess SO_2 emissions from the incinerator. CEPOC shall use engineering judgment and/or other monitoring data during periods in which the SO_2 continuous emission analyzer has exceeded the range of the instrument or is out of service.

SS. "Total Catalyst" shall mean all forms of catalyst added to a FCCU, including but not limited to base catalysts and equilibrium catalysts, but excluding NO_X Reducing Catalyst Additive.

TT. "Upstream Process Units" shall mean all amine contactors, amine scrubbers, and sour water strippers at the Eagle Point 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.

UU. "Weight % NO_X Reducing Catalyst Additive Rate" shall mean

$$\frac{\text{Amount of } NO_x \text{ Reducing Catalyst Additive in pounds per Day}}{\text{Amount of Total Catalyst added in pounds per day}} \times 100\%$$

V. AFFIRMATIVE RELIEF/ENVIRONMENTAL PROJECTS

A. NO_X Emissions from the FCCU.

11. Interim NO_X Emission Limits. By no later than the Date of Entry, CEPOC shall comply with FCCU NO_X emission limits of 75 ppmvd on a 3-hour rolling average at 0% oxygen and 50 lbs/hour on a 1-hour block average. CEPOC shall continue to use the low NO_x Promoter Eliminox or another EPA-approved catalyst additive at the FCCU.

12. Baseline Data. By no later than October 31, 2003, CEPOC shall submit the following data on a daily average basis for the period July 1, 2000, through September 30, 2003:

a. Regenerator dense bed, dilute phase, cyclone and flue gas temperatures;
b. Coke burn rate;
c. FCCU feed rate;
d. FCCU feed API gravity;
e. FCCU feed sulfur and nitrogen content in weight %;
f. Percentage by volume of each type of FCCU feed component (i.e. atmospheric gas oil, vacuum gas oil, atmospheric tower bottoms, vacuum tower bottoms, etc.);
g. Percentage by volume of the FCCU feed that is hydrotreated;
h. NO_X Reducing Catalyst Additive, conventional combustion promoter addition rates, and/or Low NO_X Combustion Promoter addition rates;
i. Hourly and daily volume percent oxygen in the regenerator flue gas and at the point of CEMS measurement; and
j. Hourly and daily SO_2, NO_X, and CO mass emission rates in pounds per hour and tons per year and concentrations in ppmvd at 0% oxygen.

Upon request by EPA, CEPOC shall submit any additional data that EPA may request.

13. FCCU NO_X Control Technology Study. By no later than March 31, 2004, CEPOC shall submit the results of a study that evaluates NO_X control technologies that are available to reduce emissions at the FCCU. This FCCU NO_X Control Technology Study shall include, but not be limited to:

a. identifying available NO_X control technologies that could reduce emissions from the FCCU including but not limited to Selective Catalytic Reduction, Lo Tox, other add-on control technologies and the use of NO_x Additives;

b. estimating annual costs for implementing each available FCCU NO_X control technology (i.e., annualized capital costs to install a technology and its anticipated annual operating costs, as described in EPA's NSR/PSD Guidance);

c. describing each available FCCU NO_X control technology and detailing its effects upon energy and the environment and its economic impacts and costs;

d. projecting emission levels achievable on a ton per year basis and in ppmvd at 0% oxygen basis for 365-day and short term averages (1-hour, 3-hour, 24-hour) under each available FCCU NO_X control technology; and

e. either proposing a FCCU NO_X control technology and schedule to install that technology as soon as practicable but by no later than April 30, 2008, or agreeing to accept by no later than April 30, 2008, a NO_X emission limit of 20 ppmvd on a 365-day rolling average and 40 ppmvd on a 3-hour rolling average basis, each at 0% oxygen.

14. <u>FCCU NO_X Control Technology Determination and Schedule</u>.

a. Unless CEPOC accepts the emission limits identified in Paragraph 13(e), EPA will review CEPOC's FCCU Study and either approve/conditionally approve CEPOC's proposed technology and schedule or specify another FCCU NO_X control technology to be implemented by CEPOC based upon the information and data provided by CEPOC under Paragraphs 12 and 13 and such other information/data as may be relevant and available to EPA. EPA will not specify a FCCU NO_X control technology that would result in total annual costs (annualized capital costs of the FCCU NO_X control technology plus projected annual operating costs of the FCCU NO_X control technology) in excess of $10,000 per ton of NO_X removed beyond 50 lbs/hour on a 1 hour block average, as set forth in Paragraph 11.

b. If EPA conditionally approves CEPOC's proposed technology (e.g., based on its submission of a revised implementation schedule) or if EPA specifies that a different FCCU NO_X control technology be implemented by CEPOC under Paragraph 14(a), then within sixty (60) days of its receipt of EPA's determination, CEPOC shall either submit a schedule for

implementing the EPA-specified FCCU NO_X control technology which would be installed as soon as practicable, but by no later than April 30, 2008; submit a revised proposal that responds to EPA's conditional approval; or invoke the Dispute Resolution provisions of Section XV. If NO_x Additives are selected as the FCCU NO_X control technology, then CEPOC shall comply with the Optimization Protocol set forth in Appendix B.

c. CEPOC shall comply with the implementation schedule resulting from the provisions of either Paragraphs 14(a) or 14(b), whichever is applicable.

15. Final NO_X Emission Limit

a. If, on or before November 1, 2003, CEPOC accepts the emissions limits identified in Paragraph 13(e), then CEPOC shall comply with such limits as soon as practicable but by no later than April 30, 2008.

b. By the earlier of: (1) 90 days after the startup of the FCCU NO_X control technology for any technology selected other than NO_X Additives; (2) 90 days after completion of the determination of the optimized addition rate for NO_X Additives if NO_X Additives are the selected technology; or (3) July 31, 2008, CEPOC shall begin operating the FCCU and FCCU NO_X control technology in a way that minimizes NO_X emissions to the maximum extent practicable and shall commence an eighteen (18) month demonstration of the emissions achieved or achievable with that technology ("Demonstration Period").

c. CEPOC will report the result of the demonstration to EPA and NJDEP within thirty (30) days of completion, but no later than February 28, 2010. Such Demonstration Report shall include, at a minimum, the following data on a daily average basis:

i. Regenerator dense bed, dilute phase, cyclone and flue gas temperatures;
ii. Coke burn rate;
iii. FCCU feed rate;
iv. FCCU feed API gravity;

v. FCCU feed sulfur and nitrogen content in weight %;
vi. Percentage of each type of FCCU feed component (i.e. atmospheric gas oil, vacuum gas oil, atmospheric tower bottoms, vacuum tower bottoms, etc.);
vii. Percentage by volume of the FCCU feed that is hydrotreated;
viii. FCCU NO_X control technology operating parameters as defined in Appendix C;
ix. NO_X Reducing Catalyst Additive, conventional combustion promoter addition rates and/or Low NO_X Combustion Promoter addition rates;
x. Hourly and daily volume percent oxygen in the regenerator flue gas and at the point of CEMS measurement; and
xi. Hourly and daily SO_2, NO_X, and CO mass emission rates in pounds per hour and tons per year and concentrations in ppmvd at 0% oxygen.

CEPOC shall propose in the Demonstration Report short term limits (for example, 1-hour, 3-hour, and 24-hour) and a 365-day rolling average NO_X emission limit as measured in ppmvd at 0% oxygen. CEPOC shall comply with the emission limits it proposes upon submission of the Demonstration Report and shall continue to comply with these limits unless and until it is required to comply with the emissions limits set by EPA pursuant to Paragraph 15(d) below. Upon request by EPA, CEPOC shall submit any additional data that EPA determines it needs to evaluate the demonstration.

d. EPA will use the data collected about the FCCU during the Baseline Period and the Demonstration Period, as well as all other available and relevant information, to establish limits for NO_X emissions from CEPOC's FCCU. EPA will establish short term limits (for example, 1-hour, 3-hour, and 24-hour) and a 365-day rolling average NO_X emission limit, as measured in ppmvd at 0% oxygen. EPA will determine the limits based on: (i) the level of performance during the Baseline and Demonstration Periods; (ii) a reasonable certainty of compliance; and (iii) any other available and relevant information. EPA will notify CEPOC of its determination of the concentration-based NO_X emissions limit and averaging times. CEPOC shall immediately (or within thirty (30) days if EPA's limit is more stringent than the limit

proposed by CEPOC) operate the FCCU so as to comply with the EPA-established emission limits. Disputes regarding the appropriate emission limits shall be resolved under the Dispute Resolution provisions of this Decree (Section XV), provided such procedures are invoked within thirty (30) days of CEPOC's receipt of the aforementioned notice by EPA.

B. SO_2 Emissions from the FCCU.

16. By no later than the Date of Entry, CEPOC shall comply with FCCU SO_2 emission limits of 25 ppmvd or lower on a 365-day rolling average basis, 50 ppmvd on a 7-day rolling average basis, each corrected to 0% oxygen, and 67.4 lbs/hour on a 1-hour block average.

C. PM and PM_{10} Emissions from FCCU.

17. Emission Limits By no later than the Date of Entry, CEPOC shall comply with the following emission limits:

i. 0.5 pounds of PM per 1000 pounds of coke burned on a 3-hour average basis, as measured by either 40 C.F.R. Part 60, Appendix A Methods 5B or 5F;

ii. 19.0 lbs/hour of Total Suspended Particulate, as measured by N.J.A.C. 7:27B-1, Air Test Method 1, or such other emission limit as may be established by NJDEP; and

iii. 48.0 lbs/hour of PM_{10} on a 1-hour block average, as measured by EPA Method 201 (or an alternative method approved by EPA) and Method 202.

17A. Future PM_{10} Emissions and Limits

a. CEPOC shall submit to EPA and NJDEP for EPA's review and approval, in consultation with NJDEP, a design for upgrading its current wet gas scrubber, *inter alia* to reduce PM10 emissions significantly (hereinafter "EDV 6000"). CEPOC shall address EPA comments (if any) on its proposed design, implement such upgrade in accordance with the

design approved by EPA and comply with a PM_{10} emission limit of 30.0 lbs/hour on a 1-hour block average by no later than February 1, 2006.

b. After optimizing the operation of the EDV 6000 to minimize PM_{10} emissions, CEPOC shall begin a three (3) month demonstration period of the EDV 6000 ("Demonstration Study") that maximizes PM_{10} emission reductions and produces data that can serve as the basis for proposing and establishing appropriate PM_{10} emission limits.

c. By no later than May 31, 2006, CEPOC shall submit a report to EPA and NJDEP that describes the results of the Demonstration Study, including test results, relevant operating parameters and/or other data, and that proposes emission limits for PM_{10} in pounds per thousand pounds of coke burned and lbs/hour, as measured by EPA Method 201 (or an alternative approved by EPA) and Method 202. This Demonstration Study Report shall include at least nine (9) runs of test data for PM_{10} with the EDV 6000 operating at optimized conditions. For all test runs, the sulfur content of the feed to the FCCU shall be the same or within 0.10 $\pm$ weight percent sulfur.

d. EPA will use the data submitted in the Demonstration Study Report, as well as other available and relevant information, to establish emission limits for PM_{10} in pounds per thousands pounds of coke burned and lbs/hour on a 1-hour block average, in consultation with NJDEP, but provided that such emission limits shall be no less stringent than 30.0 lbs/hour on a 1-hour block average.

e. Emission limits for PM_{10} shall be in pounds per thousand pounds of coke burned and lbs/hr, as measured by EPA Method 201 (or an alternative method as approved by EPA) and Method 202, and lbs/hour on a 1-hour block average. CEPOC shall immediately (or within thirty (30) days, if EPA's limit is more stringent than the limit proposed by CEPOC) operate the FCCU and the EDV 6000 so as to comply with the EPA-determined emission limits

under Subparagraph 17A.d. Disputes regarding the appropriate emission limits shall be resolved under the Dispute Resolution provisions of this Decree (Section XV), provided such procedures are invoked within thirty (30) days of CEPOC's receipt of the aforementioned notice and emission limit determinations by EPA.

f. By no later than December 31, 2003, CEPOC shall withdraw, if necessary, sections of its current permit application, PCP030013 (8/7/03), to address and/or propose revised PM_{10} emission limits from the FCCU.

D. <u>CO Emissions from the FCCU</u>.

18. By no later than the Date of Entry, CEPOC shall comply with FCCU CO emission limits of 100 ppmvd CO corrected to 0% oxygen on a 365-day rolling average basis and its current State emission limit of 72.5 lbs/hour of CO on a 1-hour block average basis or such other State emission limit as may be determined by NJDEP.

E. <u>Demonstrating Compliance with FCCU Emission Limits</u>.

19. By no later than the Date of Entry, CEPOC shall use NO_X, SO_2, CO and oxygen CEMS to monitor performance of the FCCU and to report compliance with the terms and conditions of this Consent Decree. The CEMS will be used to demonstrate compliance with the NO_X, SO_2 and CO emission limits established pursuant to Paragraphs 11-16 and 18. CEPOC shall make CEMS data available to EPA upon demand as soon as practicable. CEPOC shall install, certify, calibrate, maintain, and operate all CEMS required by this Consent Decree in accordance with 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.

F. NSPS Applicability of the FCCU Regenerator.

20. By no later than the Date of Entry, the FCCU Catalyst Regenerator at the Eagle Point 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 all pollutants.

G. NO_X Emissions Reductions from Heaters and Boilers.

21. CEPOC will implement a three-year program to reduce NO_X emissions from the heaters and boilers at the Refinery. Reductions will be accomplished through the installation of NO_X controls and the acceptance and establishment of federally-enforceable emission limits on all heaters and boilers listed in Appendix D so that the weighted average of individual heater and boiler permitted emissions at the Refinery are $\leq$ 0.040 lb/mmBTU. Compliance with these emission limits will be determined through source testing or the use of CEMS.

22. Installation of Heater & Boiler NO_X Control Technology. On or before December 31, 2006, CEPOC shall complete a program to reduce the overall NO_X emissions from the heaters and boilers listed in Appendix D so as to satisfy the following inequality:

$$\left[\sum_{i=1}^{n}\left(EL_i \times HIC_i\right)\right] \Big/ \left[\sum_{i=1}^{n} HIC_i\right] \leq 0.040$$

Where:

EL_i	=	the permitted emission limit for heater or boiler i in pounds per million BTU higher heating value on 3-hour average basis;
HIC_i	=	the heat input capacity for heater or boiler i in million BTU higher heating value per hour;
i	=	each heater and boiler listed in Appendix D; and
n	=	the total number of heaters and boilers listed in Appendix D.

23. Appendix D to this Consent Decree provides the following information:

i. the maximum heat input capacities and permitted heat input capacities in mmBTU/hr (HHV);
ii. the baseline actual and permitted emission rate in tons per year for calendar years 2001 and 2002;
iii. the actual and permitted emission factor in pounds of NO_X per million BTU for calendar years 2001 and 2002;
iv. the type of data used to derive the emission factor (i.e. manufacturer's or AP-42 emission factor, stack test, or CEMS data) and the averaging period for the data used;
v. the baseline utilization rate in annual average mmBTU/hr (HHV) for calendar years 2001 and 2002; and
vi. CEPOC's initial identification of the heaters and boilers that are likely to be controlled to comply with Paragraph 21.

24. CEPOC shall submit a detailed NO_X control plan ("Control Plan") for EPA's review and comment by no later than December 31, 2003, with annual updates on December 31 of each year thereafter until termination of the Consent Decree. CEPOC shall implement the Control Plan in accordance with the requirements of the Consent Decree. The Control Plan and its updates shall describe the progress of the NO_X emissions reduction program for heaters and boilers and contain the following for each heater and boiler at the refinery:

i. All of the information in Appendix D;
ii. Identification of all heaters and boilers that CEPOC has controlled and plans to control to reduce NO_X emissions;
iii. Identification of the type of controls installed or planned with date installed or planned (including identification of the heaters and boilers to be permanently shutdown);
iv. The permitted NO_X emissions (in lbs/mmBTU [HHV]), with averaging period) and permitted heat input rate (in mmBTU/hr [HHV]) obtained or planned with dates obtained or planned;
v. The results of emissions tests and annual average CEMS data (in ppmvd at 3% oxygen, lb/mmBTU, and tons per year) conducted pursuant to Paragraph 25; and
vi. A description of the achieved and anticipated annual progress towards meeting its December 31, 2006 compliance obligation.

25. Testing and Monitoring NO_X, CO and Oxygen Emissions from Controlled Heaters and Boilers. CEPOC shall monitor the Controlled Heaters and Boilers to meet the requirements of Paragraph 21 as follows:

i. For heaters and boilers with a capacity greater than 100 mmBTU/hr (HHV), install or continue to operate NO_X, CO and oxygen CEMs; and

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

26. Within 180 days after installing the controls on a heater and boiler, CEPOC shall certify, calibrate, maintain, and operate all CEMS required by Paragraph 25 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. With respect to 40 C.F.R. Part 60, Appendix F, in lieu of the requirements of 40 C.F.R. Part 60, Appendix F §§ 5.1.1, 5.1.3 and 5.1.4, CEPOC shall conduct either a Relative Accuracy Audit ("RAA") or a Relative Accuracy Test Audit ("RATA") once every twelve (12) calendar quarters, provided that a Cylinder Gas Audit is conducted each calendar quarter. Where installed, CEMS will be used to demonstrate compliance with emission limits established under this Consent Decree.

27. Establishing NO_x Permit Limits for Heaters and Boilers. Within 120 days after the start-up of the operation of any Heater & Boiler NO_x Control Technology required by this Section V.G., CEPOC shall submit a permit application to NJDEP which proposes NO_x 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 or based on the manufacturer's guarantee, and shall be low enough to ensure proper operation of the H&B NO_x

Control Technology and high enough to provide reasonable certainty of compliance. The requirements of this Section V.G. do not exempt CEPOC from complying with any and all Federal, state and local requirements that may require technology upgrades based on actions or activities occurring after the Date of Lodging of this Consent Decree.

28. CEPOC shall retain all records required to support their reporting requirements under Section V.G. until termination of the Consent Decree. CEPOC shall submit such records to EPA and NJDEP upon request.

29. Recordkeeping and Annual Reporting. Commencing on January 31, 2004 (and on January 31 of each calendar year thereafter), CEPOC shall submit a report to EPA and the NJDEP about the progress of installation of H&B NO_X Control Technology required by Paragraph 22. This report shall contain:

i. A list of all heaters and boilers in Appendix D on which H&B NO_X Control Technology was installed;

ii. The type of H&B NO_X 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 25;

iv. A list of all heaters and boilers scheduled to have H&B NO_X Control Technology installed during the next calendar year, the projected date of installation, and the type of H&B NO_X 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 H&B NO_X Control Technology has been installed pursuant to Paragraph 22.

H. SO_2 and PM_{10} Emissions Reductions from Heaters and Boilers.

30. NSPS Applicability of Heaters and Boilers. Upon the Date of Lodging of the Consent Decree, all heaters and boilers at the Eagle Point 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. CEPOC shall 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 NSPS SO_2 emission limit.

31. Elimination/Reduction of Fuel Oil Burning. From the Date of Lodging of this Consent Decree, CEPOC shall not burn Fuel Oil in any combustion unit except during periods of Natural Gas Curtailment.

31A: PM_{10} Emissions. By no later than the Date of Entry, CEPOC shall comply with an emission limit of 0.00427 pounds of total PM_{10} per million BTU heat input on a 1-hour average basis, as measured by individual 1 hour runs of EPA Methods 201 (or alternative method as approved by EPA) and 202, at Boilers 5, 6, 7 and 8.

I. Sulfur Recovery Plant.

32. NSPS Applicability. CEPOC owns and operates a Sulfur Recovery Plant with two Claus trains located at the Eagle Point Refinery ("Eagle Point SRP") that was constructed after October 4, 1976, but is physically restricted to a sulfur input capacity of 19.5 long tons per day pursuant to the NJDEP permit PCP 960212. The Eagle Point SRP is currently subject to, and required to comply with, the applicable provisions of the NJDEP permit. By no later than December 31, 2006, the Eagle Point SRP will be subject to, and required to comply with, the provisions of 40 C.F.R. Part 60, Subparts A and J.

33. Sulfur Pit Emissions. CEPOC shall continue to route all sulfur pit emissions from the Eagle Point SRP so that sulfur pit emissions to the atmosphere either are eliminated or are included and monitored as part of the Sulfur Recovery Plant tail gas emissions that meet the NJDEP permit PCP 960212 and, by no later than December 31, 2006, the NSPS Subpart J limit

for SO_2: a 12-hour rolling average of 250 ppmvd SO_2 corrected to 0% oxygen, as required by 40 C.F.R. § 60.104(a)(2).

34. Sulfur Recovery Plant Emissions Compliance.

a. By no later than the Date of Lodging of the Consent Decree, CEPOC shall, for all periods of operation of the Eagle Point SRP, comply with NJDEP permit PCP 960212 . By no later than December 31, 2006, the Eagle Point SRP shall comply with 40 C.F.R. § 60.104(a)(2), except during periods of startup, shutdown or Malfunction of the Eagle Point SRP, or during a Malfunction of the Eagle Point TGU. For the purpose of making a determination of 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 Eagle Point SRP.

b. As of the Date of Lodging of this Consent Decree, CEPOC shall monitor all emission points (stacks) to the atmosphere for tail gas emissions from the Eagle Point SRP, and shall report excess emissions, as required by NJDEP permit PCP 960212. By no later than December 31, 2006, CEPOC shall monitor and report excess emissions, for all subsequent periods of operation of the Eagle Point SRP, as required by 40 C.F.R. §§ 60.7(c), 60.13, and 60.105(a)(5). During the life of this Consent Decree, CEPOC shall continue to conduct emissions monitoring from the Eagle Point SRP with CEMS at all of the emission points, unless an SO_2 alternative monitoring procedure has been approved by EPA, after consultation with NJDEP, per 40 C.F.R. § 60.13(i), for any of the emission points.

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

35. Good Operation and Maintenance.

a. By no later than March 31, 2004, CEPOC shall submit to EPA and NJDEP, a summary of a plan, implemented or to be implemented, for enhanced maintenance and operation of the Eagle Point 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 CEPOC's approaches for exercising good air pollution control practices for minimizing SO_2 emissions at the Eagle Point Refinery. The PMO Plan shall provide for continuous operation of the Eagle Point SRP between scheduled maintenance turnarounds with minimization of emissions from the Eagle Point 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 Eagle Point SRP, its 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. CEPOC shall comply with the PMO Plan at all times, including periods of start up, shut down, and Malfunction of the Eagle Point SRP. Any modifications made by CEPOC to the PMO associated with the installation of new equipment or with changes/improvements in procedures minimizing AG Flaring and/or SO_2 emissions made by CEPOC to the PMO Plan shall be identified in annual submissions to EPA and the NJDEP until termination of the Consent Decree.

b. EPA and the NJDEP 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 CEPOC may take pursuant to the PMO Plan will result in compliance with the provisions of the Clean Air Act or any other applicable federal, state or local law or regulations. Notwithstanding EPA's or NJDEP's review of the PMO Plan, CEPOC shall remain solely responsible for compliance with the Clean Air Act, the New Jersey Air Act and such other laws and regulations.

36. Optimization Study. By not later than March 31, 2004, CEPOC shall complete an optimization study (internal or external) on the Eagle Point SRP and report the results to EPA and the NJDEP. The optimization study shall include:

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 Eagle Point 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 (for example, plant enthopy summary and/or heat and material balance calculation) 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. The study shall be conducted to optimize the performance of the Claus trains in light of the actual characteristics of the feeds to the Eagle Point SRP.

CEPOC shall incorporate the Good Operation and Maintenance recommendations of the optimization study into the PMO Plan required under Paragraph 35 (Good Operation and Maintenance).

J. Flaring Devices

37. **NSPS Applicability**: CEPOC owns and operates the Flaring Devices identified in Appendix A to this Consent Decree. The Flaring Devices identified in Appendix A to this Consent Decree shall be affected facilities as that term is used in NSPS, 40 C.F.R. Part 60, and shall be subject to and required to comply with the requirements of 40 C.F.R. Part 60, Subparts A and J for fuel gas combustion devices by no later than the dates set forth in Appendix A. CEPOC shall meet the NSPS Subparts A and J requirements for each of the Flaring Devices listed in Appendix A using one of the following methods:

a. Operating and maintaining a flare gas recovery system designed to prevent continuous or routine combustion in the Flaring Device. Use of a flare gas recovery system on the Flaring Device obviates the need to continuously monitor the emissions as otherwise required by 40 C.F.R. § 60.105(a)(4);

b. Eliminating the routes of continuous or intermittent, routinely-generated refinery fuel gases to a Flaring Device and operating the Flaring Device such that it receives only non-routinely generated gases, process upset gases, fuel gas released as a result of relief valve leakage, or gases released due to other emergency malfunctions; or

c. Operating the Flaring Device as a fuel gas combustion device and monitoring the Flaring Device or the continuous or intermittent, routinely-generated refinery fuel gases streams put into the flare header, with 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).

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

a. Continuous or Intermittent, Routinely-Generated Refinery Fuel Gases. For continuous or intermittent, routinely-generated refinery gases that are combusted in any of the Flaring Devices identified in Appendix A, CEPOC shall comply with the emission limit at 40 C.F.R. § 60.104(a)(1) by June 30, 2005, as specified in Appendix A.

b. 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).

39. **Good Air Pollution Control Practices.** For all Flaring Devices identified in Appendix A, CEPOC 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 Flaring Incidents by investigating, reporting and correcting the cause of all Flaring Incidents in accordance with the procedures in Sections V.K and L.

K. Acid Gas and Sour Water Stripper Gas Flaring Incidents.

CEPOC agrees to implement a program to investigate the cause of AG Flaring Incidents, to take reasonable steps to correct the conditions that have caused or contributed to such AG Flaring Incidents, and to minimize the flaring of Acid Gas and Sour Water Stripper Gases at the Refinery. CEPOC shall follow the procedures in this Section to evaluate whether future Acid Gas/Sour Water Stripper Gas Flaring Incidents are due to Malfunctions or are subject to stipulated penalties. The investigative and evaluative procedures in this Section V.K. are also to be used for assessing if Tail Gas Incidents, as described in Paragraph 46, are due to Malfunctions or are subject to stipulated penalties. The procedures, as set forth below, require a root cause analysis and corrective action for all types of flaring and impose stipulated penalties for Acid/Sour Water Stripper Gas Flaring Incidents or Tail Gas Incidents if the root causes were not due to Malfunctions.

40. **Flaring History**.

a. CEPOC shall conduct a look-back analysis of AG Flaring Incidents that occurred from July 1, 1998, through July 31, 2003 to the extent data is

available, and submit a report ("Flaring History Analysis Report") to EPA and NJDEP by no later than December 31, 2003, which contains:

i. The date and time that the AG Flaring Incident started and ended;

ii. An estimate of the quantity of sulfur dioxide emitted and the calculations used to determine that quantity;

iii. An analysis that sets forth the Root Cause, to the extent such information is available, and all contributing causes of that AG Flaring Incident, identifying those causes that CEPOC considers Malfunctions;

iv. An identification of the corrective actions, if any, that were taken to reduce the likelihood of a recurrence of that AG Flaring Incident. This identification shall include the implementation dates of the corrective actions, and a description of the effectiveness of the corrective action(s) in addressing the Root Cause;

v. If no corrective actions were taken, or if the corrective actions that were taken were ineffective, a description of and schedule for corrective actions that will be taken to prevent a recurrence of the Root Cause of the AG Flaring Incident;

vi. If no corrective actions were taken, and CEPOC concludes that none were necessary or appropriate, a statement of the basis for that conclusion;

vii. An identification of those Root Causes for past AG Flaring Incidents which are not Malfunctions and which should be included in Paragraph 43(a) after EPA's review of CEPOC's flaring history under this Paragraph; and

viii. An identification of all periods of time for which records are not available or are inadequate for determining the cause of AG Flaring Incidents, with a description of the search undertaken to locate such records, and an explanation for the unavailability of such records.

b. Upon the completion of the corrective actions identified in the Flaring History Analysis Report, CEPOC shall certify to EPA and NJDEP that it has completed any and all corrective actions identified in that report.

41. **Investigation and Reporting.** For AG Flaring Incidents occurring after lodging of the Consent Decree and before termination CEPOC shall submit to EPA and NJDEP a report no later than forty-five (45) days following the end of an Acid Gas Flaring Incident that sets forth the following:

a. 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, CEPOC shall set forth the starting and ending dates and times of each release;

b. An estimate of the quantity of sulfur dioxide that was emitted and the calculations that were used to determine that quantity;

c. The steps, if any, that CEPOC took to limit the duration and/or quantity of sulfur dioxide emissions associated with the Acid Gas Flaring Incident;

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

e. An analysis of the measures, if any, that are available to reduce the likelihood of a recurrence of 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 CEPOC concludes that corrective action(s) is (are) required under Paragraph 42, 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 CEPOC concludes that corrective action

is not required under Paragraph 42, the report shall explain the basis for that conclusion;

f. A statement that: (a) specifically identifies each of the grounds for stipulated penalties in Paragraph 43(a) and 43(b) 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 43.d of this Decree, describes which Subparagraph applies and why; and (c) states whether or not CEPOC asserts a defense to the Flaring Incident, and if so, a description of the defense; and

g. To the extent that investigations of the causes and/or possible corrective actions still are underway on the due date of the report, a statement of the anticipated date by which a follow-up report fully conforming to the requirements of this Paragraph shall be submitted; provided, however, that if CEPOC 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 41 (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 113 shall apply, but CEPOC 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 CEPOC'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 CEPOC 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 CEPOC has requested an extension of time under this Paragraph.

h. To the extent that completion of the implementation of corrective action(s), if any, is not finalized at the time of the submission of the report required under this

Paragraph, then, by no later than thirty (30) days after completion of the implementation of corrective action(s), CEPOC shall submit a report identifying the corrective action(s) taken and the dates of commencement and completion of implementation.

42. **Corrective Action**.

a. In response to any AG Flaring Incident and as expeditiously as practicable, CEPOC shall take such interim and/or long-term corrective actions, if any, as are consistent with good engineering practice to minimize the likelihood of a recurrence of the Root Cause and all contributing causes of that AG Flaring Incident.

b. If EPA does not notify CEPOC in writing within forty-five (45) days of receipt of the report(s) required by Paragraph 41 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 42(a) 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 CEPOC 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 Section V.K., CEPOC shall remain solely responsible for compliance with the Clean Air Act and New Jersey Air Act and its implementing regulations. Nothing in this Section 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.

c. If EPA objects, 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 CEPOC of that fact within forty-five (45) days following receipt of the report(s) required by Paragraph 41, above. If EPA and CEPOC 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.

d. Nothing in this Section V.K. shall be construed to limit the right of CEPOC 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 Paragraph 41.

43. **Stipulated Penalties**. The provisions of this Paragraph are to be used by EPA in assessing stipulated penalties for AG Flaring Incidents occurring after lodging of this Consent Decree, after an opportunity for consultation with NJDEP, and by the United States in demanding stipulated penalties under this Section V.K.

a. The stipulated penalty provisions of Paragraph 112 shall apply to any Acid Gas Flaring Incident for which the Root Cause was one or more or the following acts, omissions, or events:

i. Error resulting from careless operation by the personnel charged with the responsibility for the Sulfur Recovery Plant, TGU, or Upstream Process Units;

ii. Failure to follow written procedures;

iii. A failure of equipment that is due to a failure by CEPOC to operate and maintain that equipment in a manner consistent with good engineering practice; or

iv. After EPA's review of the flaring history that CEPOC provides pursuant to Paragraph 40, EPA and CEPOC jointly shall move, if necessary, to modify the Consent Decree so that this Subparagraph identifies any Root Causes of past Flaring Incidents that will trigger the application of stipulated penalties pursuant to this Subparagraph. A Malfunction defense will not be available for the Root Causes, if any, that are identified on this list.

b. If the Acid Gas Flaring Incident is not a result of one of the Root Causes identified in Paragraph 43.a, then the stipulated penalty provisions of Paragraph 112 shall apply if the Acid Gas Flaring Incident:

i. 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 and CEPOC fails to take action consistent with the PMO Plan and/or to take any action during the AG Flaring Incident to limit the duration and/or quantity of sulfur dioxide emissions; or

ii. Causes the total number of Acid Gas Flaring Incidents in a rolling twelve (12) month period to exceed five (5).

c. In the event that a Flaring Incident falls under both (a) and (b) of Paragraph 43, then Paragraph 43.a shall apply.

d. With respect to any Acid Gas Flaring Incident not identified in Paragraph 43.a or 43.b, the following provisions shall apply:

i. First Time: If the Root Cause of the Acid Gas Flaring Incident was not a recurrence of the same Root Cause that resulted in a previous Acid Gas Flaring Incident that occurred since the effective date of this Decree, then:

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

(2) If the Root Cause of the Acid Gas Flaring Incident was sudden and infrequent, and was reasonably preventable through the exercise of good engineering practice, then CEPOC shall implement corrective action(s) pursuant to Paragraph 42, and the stipulated penalty provisions of Paragraph 112 shall not apply.

ii. Recurrence: If the Root Cause is a recurrence of the same Root Cause that resulted in a previous Acid Gas Flaring Incident that occurred since the Effective Date of this Consent Decree, then CEPOC shall be liable for stipulated penalties under Paragraph 112 unless:

(1) the Flaring Incident resulted from a Malfunction; or

(2) the Root Cause previously was designated as an agreed-upon malfunction under Paragraph 43.d.i.(1); or

(3) the AG Flaring Incident had as its Root Cause the recurrence of a Root Cause for which CEPOC had previously developed, or was in

the process of developing, a corrective action plan and for which CEPOC had not yet completed implementation.

e. Defenses: CEPOC may raise the following affirmative defenses in response to a demand by the United States for stipulated penalties:

i. Force majeure.

ii. As to Paragraph 43.a, the Acid Gas Flaring Incident does not meet the identified criteria.

iii. As to Paragraph 43.b, Malfunction

iv. As to Paragraph 43.d, the Incident does not meet the identified criteria and/or was due to a Malfunction.

In the event a dispute under Paragraph 43 is brought to the Court pursuant to the Dispute Resolution provisions of this Consent Decree, CEPOC 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 CEPOC prevails in persuading the Court that the defenses of startup, shutdown and/or upset are available for AG Flaring Incidents under 40 C.F.R. 60.104(a)(1), CEPOC shall not be liable for stipulated penalties for emissions resulting from such startup, shutdown and/or upset. If the United States prevails in persuading the Court that the defenses or startup, shutdown and/or upset are not available, CEPOC shall be liable for such stipulated penalties.

44. Other than for a Malfunction or force majeure, if no Acid Gas Flaring Incident and no violation of the emission limits under Paragraphs 34 and 38 occurs at the Refinery for a rolling 36 month period, then the stipulated penalty provisions of Paragraph 112 shall no longer apply. EPA may elect to reinstate the stipulated penalty provision if CEPOC 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 that Refinery.

45. **Miscellaneous**.

a. Calculation of the Quantity of Sulfur Dioxide Emissions resulting from AG Flaring. For purposes of this Consent Decree, the quantity of SO_2 emissions resulting from AG Flaring shall be calculated by the following formula:

Tons of SO_2 = [FR][TD][ConcH_2S][8.44 x 10^{-5}].

The quantity of SO_2 emitted shall be rounded to one decimal point. (Thus, for example, for a calculation that results in a number equal to 10.050 tons, the quantity of SO_2 emitted shall be rounded to 10.1 tons.) For purposes of determining the occurrence of, or the total quantity of SO_2 emissions resulting from, an AG Flaring Incident that is comprised of intermittent AG Flaring, the quantity of SO_2 emitted shall be equal to the sum of the quantities of SO_2 flared during each such period of intermittent AG Flaring.

b. Calculation of the Rate of SO_2 Emissions During AG Flaring. For purposes of this Consent Decree, the rate of SO_2 emissions resulting from AG Flaring shall be expressed in terms of pounds per hour, and shall be calculated by the following formula:

ER = [FR][ConcH_2S][0.169].

The emission rate shall be rounded to one decimal point. (Thus, for example, for a calculation that results in an emission rate of 19.95 pounds of SO_2 per hour, the emission rate shall be rounded to 20.0 pounds of SO_2 per hour; for a calculation that results in an emission rate of 20.05 pounds of SO_2 per hour, the emission rate shall be rounded to 20.1.)

c. Meaning of Variables and Derivation of Multipliers used in the Equations in Paragraph 45:

ER = Emission Rate in pounds of SO_2 per hour

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

TD = Total Duration of Flaring in hours

$ConcH_2S$ = Average Concentration of Hydrogen Sulfide in gas during Flaring (or immediately prior to Flaring if all gas is being flared) expressed as a volume fraction (scf H_2S/scf gas)

8.44×10^{-5} = [lb mole H_2S/379 scf H_2S][64 lbs SO_2/lb mole H_2S][Ton/2000 lbs]
0.169 = [lb mole H_2S/379 scf H_2S][1.0 lb mole SO_2/1 lb mole H_2S][64 lb SO_2/1.0 lb mole SO_2]

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 ("$ConcH_2S$") 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 NJDEP. 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 41 shall include the data used in the calculation and an explanation of the basis for any estimates of missing data points.

46. Tail Gas Incidents.

a. Investigation, Reporting, Corrective Action and Stipulated Penalties. For Tail Gas Incidents, CEPOC shall follow the same investigative, reporting, corrective action and assessment of stipulated penalty procedures as those outlined in Paragraphs 41 through 43 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 the life of the Consent Decree.

b. Calculation of the Quantity of SO_2 Emissions resulting from a Tail Gas Incident: For the purposes of this Consent Decree, the quantity of SO_2 emissions resulting

from a Tail Gas Incident shall be calculated by one of the following methods, based on the type of event:

i. If the Tail Gas Incident is combusted in a flare, the SO_2 emissions are calculated using the methods outlined in Paragraph 45; or

ii. 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:

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

Where:

ER_{TGI} = Emissions from Tail Gas at the Sulfur Recovery Plant incinerator, SO_2 lb over a 24 hour period

TD_{TGI} = Total Duration (number of hours) when the incinerator CEMS exceeded 250 ppmvd SO_2 corrected to 0% oxygen 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 SO_2 concentration (CEMS data) that is greater than 250 ppm in the incinerator exhaust gas, ppmvd corrected to 0% oxygen, for each hour of the Incident

% oxygen = Oxygen concentration (CEMS data) in the incinerator exhaust gas in volume % on dry basis for each hour of the Incident

0.169×10^{-6} = [lb mole of SO_2 / 379 SO_2] [64 lbs SO_2 / lb mole SO_2] [1 x 10^{-6}]
Standard conditions = 60 degree F; 14.7 lb_{force}/sq.in. absolute

In the event the concentration SO_2 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.

L. Control of Hydrocarbon Flaring Incidents.

47. CEPOC shall follow the same investigative, reporting, and corrective action procedures as those outlined in Paragraphs 41 and 42 for Acid Gas Flaring Incidents; provided however, that in lieu of analyzing possible corrective actions under Paragraph 41 and taking interim and/or long-term corrective action under Paragraph 42 for a Hydrocarbon Flaring Incident attributable to the start up or shut down of a unit that CEPOC has previously analyzed under this Paragraph, CEPOC may identify such prior analysis when submitting the report required under this Paragraph. Stipulated penalties under Paragraphs 43 and 112 shall not apply to Hydrocarbon Flaring Incident(s). The formulas at Paragraph 45, used for calculating the quantity and rate of sulfur dioxide emissions during AG Flaring Incidents, shall be used for calculating the quantity and rate of sulfur dioxide emissions during HC Flaring Incidents.

M. Benzene Waste NESHAP Program Enhancements.

48. 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"), CEPOC agrees to undertake the measures set forth in this Section V.M. to ensure continuing compliance with Subpart FF and to minimize or eliminate fugitive benzene waste emissions at the Refinery.

49. **Current Compliance Status.** On the Date of Lodging, the Refinery shall comply with the compliance option set forth at 40 C.F.R. § 61.342(c) (herein referred to as the "2BQ compliance option").

50. **Refinery Compliance Status Changes**. Commencing on the Date of Lodging of the Consent Decree and continuing through termination, CEPOC shall consult with EPA and NJDEP before changing its compliance option. All changes must be undertaken in accordance with the regulatory provisions of the Benzene Waste NESHAP.

51. **One-Time Review and Verification of the Refinery's TAB and Compliance with the Benzene Waste NESHAP, including the 2 BQ Compliance Option.**

a. Phase One of the Review and Verification Process. By no later than June 30, 2004, CEPOC shall complete a review and verification of the Refinery's TAB and its compliance with the Benzene Waste NESHAP, including the 2 BQ compliance option. CEPOC's review and verification process shall include, but not be limited to:

i. an identification of each waste stream that is required to be included in the Refinery's TAB (e.g., slop oil, tank water draws, spent caustic, spent caustic hydrocarbon layer, 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 thirty (30) days following the completion of Phase One of the review and verification process, CEPOC 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 Paragraph 51.a.

b. 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 Refinery for sampling for benzene concentration. CEPOC will conduct the required sampling and submit the results to EPA within sixty (60) days of receipt of EPA's request. CEPOC will use the results of this additional sampling to recalculate the TAB and the

uncontrolled benzene quantity and to amend the BWN Compliance Review and Verification Report, as needed. CEPOC shall submit an amended BWN Compliance Review and Verification Report within ninety (90) days following the date of the completion of Phase Two sampling, if required by EPA.

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

a. Amended TAB Reports. If the results of the BWN Compliance Review and Verification Report indicate that the Refinery's most recently-filed TAB report does not satisfy the requirements of Subpart FF, CEPOC 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 EPA and NJDEP.

b. If the results of the BWN Compliance Review and Verification Report indicate that CEPOC is not in compliance with the Benzene Waste NESHAP, including the 2BQ compliance option, CEPOC shall submit to EPA and NJDEP, by no later than sixty (60) days after completion of the BWN Compliance Review and Verification Report, a plan that identifies with specificity the compliance strategy and schedule that CEPOC will implement to ensure that the subject Refinery complies with its applicable compliance option as soon as practicable.

c. Review and Approval of Plans. Any plan submitted pursuant to Paragraph 52.b shall be subject to the approval of, disapproval of, or modification by EPA, after an opportunity for consultation with NJDEP. Within sixty (60) days after receiving any notification of disapproval or request for modification from EPA, CEPOC shall submit to EPA and NJDEP a revised plan that responds to all identified deficiencies. Upon receipt of approval or approval with conditions, CEPOC shall implement the plan. Disputes arising under this Paragraph 52.c shall be resolved in accordance with the dispute resolution provisions of this Decree.

d. Certification of Compliance. By no later than thirty (30) days after completion of all actions required pursuant to Subparagraphs 52.b and 52.c to come into compliance with the

applicable compliance option, CEPOC shall submit its certification and a report to EPA and NJDEP that the Refinery is in compliance with the Benzene Waste NESHAP.

53. **Carbon Canisters.** If CEPOC elects to use carbon canisters as a control device(s) under the Benzene Waste NESHAP, CEPOC shall comply with the requirements of this Paragraph.

a. CEPOC shall not use single carbon canisters for any new units or installations that require control pursuant to the Benzene Waste NESHAP.

b. For dual carbon canister systems, "breakthrough" between the primary and secondary canister is defined as any reading equal to or greater than 50 ppm volatile organic compounds ("VOC") or 1 ppm benzene.

c. Commencing no later than seven (7) days after installation of a dual carbon canister system, CEPOC shall monitor for breakthrough between the primary and secondary carbon canisters at times when there is actual flow to the carbon canister, in accordance with the frequency specified in 40 C.F.R. § 61.354(d), and shall monitor the outlet of the secondary canister on a monthly basis or at 20% of its design replacement interval (whichever is less) to verify the proper functioning of the system .

d. CEPOC shall replace the original primary carbon canisters with fresh carbon canisters immediately when breakthrough is detected. The original secondary carbon canister will become the new primary carbon canister and a new fresh carbon canister will become the secondary canister. For this Paragraph, "immediately" shall mean eight (8) hours for canisters of 55 gallons or less, and twenty-four (24) hours for canisters greater than 55 gallons.

e. Temporary Applications: CEPOC may continue to operate existing, properly sized single carbon canisters for short-term operations such as with temporary storage tanks or as temporary control devices. For canisters operated as part of

a single canister system, breakthrough is defined for purposes of this Decree as any reading of VOC or benzene above background. Beginning no later than December 31, 2003, CEPOC shall monitor for breakthrough from a single carbon canister each business day there is actual flow to the carbon canister. CEPOC shall replace the single carbon canister with a fresh carbon canisters, discontinue flow or route the stream to an alternate, appropriate device immediately when breakthrough is detected. For this Paragraph, "immediately" shall mean eight (8) hours for canisters of 55 gallons or less and twenty-four (24) hours for canisters greater than 55 gallons. If CEPOC discontinues flow to the single carbon canister or routes the stream to an alternate, appropriate control device, such canister must be replaced before it is returned to service.

f. CEPOC shall maintain a supply of fresh carbon canisters at the Refinery at all times.

g. Records for the requirements of this Paragraph shall be maintained in accordance with 40 C.F.R. § 61.356(j)(10).

54. **Annual Program.** By no later than December 31, 2003, CEPOC shall modify (or establish) its existing management of change procedures or shall develop and implement new written procedures to provide for performance of an annual review of process information for the Refinery, including but not limited to construction projects, to ensure that all new benzene waste streams are included in the Refinery's waste stream inventory. CEPOC shall conduct such reviews on an annual basis through and after termination of this Consent Decree.

55. **Alternative to Laboratory Audits**. Pursuant to New Jersey law, CEPOC is required to submit its Benzene Waste NESHAP samples to laboratories audited and certified by New Jersey for the testing method required by the Benzene Waste NESHAP. CEPOC shall continue to comply with this New Jersey law.

56. **Benzene Spills.** For each spill at the Refinery after the Date of Lodging, CEPOC shall review the spill to determine if benzene waste, as defined by Subpart FF, was generated. For each spill involving the release of more than ten (10) pounds of benzene in a 24-hour period, CEPOC shall: (1) include benzene waste generated by the spill in the Refinery's TAB, as required by 40 C.F.R. § 61.342; and (2) account for such benzene waste in accordance with the applicable compliance option.

57. **Training.**

a. By no later than December 31, 2003, CEPOC shall develop and begin implementation of annual (i.e., once each calendar year) training for all employees asked to draw benzene waste samples.

b. By no later than December 31, 2003, CEPOC shall complete the development of Standard Operating Procedures for all control equipment used to comply with the Benzene Waste NESHAP. By no later than December 31, 2004, CEPOC shall complete an initial training program regarding these procedures for all operators assigned to this equipment. Comparable training shall also be provided to any persons who subsequently become operators, prior to their assumption of this duty. "Refresher" training in these procedures shall be performed on a three year cycle.

c. As part of CEPOC's training program, CEPOC must ensure that the employees of any contractors hired to perform the requirements of this Section are properly trained to implement all applicable provisions of this Consent Decree.

58. **Waste/Slop/Off-Spec Oil Management**.

a. By no later than March 31, 2004, CEPOC shall submit to EPA and NJDEP 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 CEPOC and EPA thereafter may confer about the appropriate characterization of the Refinery's

waste/slop/off-spec oil streams and the necessary controls, if any, for the waste management units handling such oil streams for purposes of the Refinery's TAB calculation and compliance option. If requested by EPA and by no later than March 30, 2004, CEPOC shall submit revised schematics that reflect the Parties' agreements regarding the characterization of these oil streams and the appropriate control standards. These schematics will be used in preparing the "end of the line"("EOL") sampling plan required under Paragraph 59.

b. Organic Benzene Waste Streams. All waste management units handling "organic" benzene wastes, as defined in Subpart FF, shall meet the applicable control standards of Subpart FF or shall have their uncontrolled benzene quantity count toward the applicable 2 megagram limit.

c. Aqueous Benzene Waste Streams. For purposes of calculating the Refinery's TAB pursuant to the requirements of 40 C.F.R. § 61.342(a), CEPOC 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). For purposes of complying with the 2BQ 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 2 megagram limit.

d. Plan to Quantify Uncontrolled Waste/Slop/Off-Spec Oil Streams. By no later than March 30, 2004, CEPOC shall develop a plan to quantify waste/slop/off-spec oil movements for all benzene waste streams which are not controlled at each of its Refinery. This plan will be used in preparing the EOL sampling plan required under Paragraph 59.

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

59. **End of Line Sampling (2 BQ Compliance Option)**. CEPOC shall conduct a quarterly "end of the line" benzene determination at the Refinery under the terms of this Paragraph.

a. By no later than March 30, 2004, CEPOC shall submit to EPA and NJDEP for EPA approval a plan designed to determine the benzene quantity in uncontrolled waste streams that includes, but need not be limited to, sampling locations and methods for flow calculations to be used in the quarterly "end of the line" benzene determination ("EOL Plan"). Such plan shall require quarterly sampling.

b. If changes in processes, operations, or other factors lead CEPOC to conclude that its EOL Plan may no longer provide an accurate measure of the Refinery's quarterly "end of the line" benzene determination or uncontrolled waste streams, CEPOC shall submit a revised EOL Plan to EPA for approval.

c. CEPOC shall commence sampling under its EOL Plan (as submitted or revised in response to comments by EPA) during the third calendar quarter of 2004. CEPOC shall take and have analyzed three representative samples from each approved sampling location (one each month). CEPOC shall use the average of these three samples and approved flow calculations to make its quarterly "end of the line" benzene determination and in estimating a calendar year value for the Refinery.

d. The plan shall also include sampling of (1) each uncontrolled stream, at the point of waste generation, that contributes 0.05 Mg/yr or more to the Refinery's TAB and (2) uncontrolled streams that qualify for the 10 ppm exemption and contain greater than 0.1 Mg/year. CEPOC shall commence sampling of these streams during the third calendar quarter of 2004.

60. Calculation of Quarterly and Projected Calendar Year Benzene Quantities. At the end of each calendar quarter and based on the EOL sampling results, non-EOL sampling results and the approved flow calculations for the Refinery, CEPOC shall calculate a quarterly

benzene quantity for the Refinery. CEPOC shall submit the benzene quantity calculations in the semi-annual reports due under Paragraph 90 of this Decree.

a. Corrective Measures.

i. Based on the calculations made pursuant to this Paragraph, CEPOC shall determine if either of the following conditions exist: (1) the quarterly benzene quantity equals or exceeds 0.5 Mg, or (2) the projected calendar year benzene quantity equals or exceeds 2.0 Mg.

ii. If either condition exists, CEPOC shall then submit to EPA and NJDEP for EPA approval a compliance plan that identifies: (1) the cause of the potentially elevated benzene quantities; (2) all corrective actions that CEPOC has taken or plans to take to ensure that the cause will not recur; and (3) a specific compliance strategy and schedule that CEPOC shall implement to ensure that CEPOC complies with the 2.0 Mg option for the calendar year. CEPOC shall submit the compliance plan by no later than sixty (60) days after the end of the calendar quarter in which one or more of the conditions are met. CEPOC shall implement the EPA-approved compliance plan in accordance with the schedule included in the approved plan.

b. Third-Party TAB Study and Compliance Review.

i. If in two consecutive quarters at least one of the conditions in Paragraph 60(a)(i) exists, then in the third quarter, CEPOC shall retain a third-party contractor to undertake a comprehensive TAB study and compliance review.

ii. By no later than the last day of the third quarter, CEPOC shall submit a proposal to EPA and NJDEP 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 EPA disapproves or seeks modification within thirty (30) days after EPA receives this proposal, CEPOC shall authorize the contractor to commence work, and CEPOC shall ensure that the Third-Party TAB Study and Compliance Review is completed in accordance with the approved schedule.

iii. By no later than thirty (30) days after CEPOC receives the results of the Third-Party TAB Study and Compliance Review, CEPOC shall submit the results to EPA and NJDEP. After CEPOC submits the report, EPA, NJDEP and CEPOC may discuss informally the results of the Third-Party TAB Study and Compliance Review.

iv. By no later than ninety (90) days after CEPOC receives the results of the Third-Party Compliance Review, or at such other time as the Parties may agree, CEPOC shall submit to EPA and NJDEP for EPA approval a plan and schedule for remedying any deficiencies identified in the Third-Party TAB Study and Compliance Review, as well as any deficiencies that EPA or NJDEP brought to CEPOC's attention as a result of the Third-Party TAB Study and Compliance Review. CEPOC shall implement the approved remedial plan in accordance with the schedule included in the approved plan.

61. **Miscellaneous Measures.** CEPOC shall manage all groundwater remediation conveyance systems in accordance with the Benzene Waste NESHAP and shall:

a. Conduct monthly visual inspections of all water traps (if any) within the Refinery's individual drain systems;

b. Identify and mark all area drains that are segregated stormwater drains;

c. On a weekly basis, visually inspect all conservation vents and indicators (if any) 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, CEPOC may submit a request to EPA to modify the frequency of the inspections. EPA shall not unreasonably withhold its consent. Nothing in this Paragraph shall require CEPOC to monitor conservation vents on fixed roof tanks.

62. **Recordkeeping and Reporting Requirements for this Paragraph** CEPOC shall submit to EPA and NJDEP, as and to the extent required, the following materials in the progress report(s) for the six (6) month period in which the following identified activities occurred or are required:

a. A description of the measures taken during that six (6) month period to comply with the training provisions of Paragraph 57; and

b. A summary of the sampling results required under Paragraphs 59 and 60 for the second six (6) month period covered by the progress report. The report shall include a list of all waste streams sampled and the results of the benzene analysis for each sample.

N. Leak Detection and Repair ("LDAR") Program Enhancements.

63. 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, CEPOC shall undertake the enhancements identified in this Section V.N. to its LDAR programs 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.

CEPOC 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.

64. **Written Refinery-Wide LDAR Program**. By no later than March 31, 2004, CEPOC shall develop and maintain a written program for compliance with all applicable federal and state LDAR regulations at the Refinery. CEPOC shall update the program as may be necessary to ensure continuing compliance. Such program shall include at a minimum:

a. An overall, Refinery leak rate goal that will be a target for achievement on a process-unit-by-process-unit basis;
b. An identification of all equipment in light liquid and/or in gas/vapor service that has the potential to leak VOCs, HAPs, VHAPs, and benzene within process units that are owned and maintained by the Refinery;
c. Procedures for identifying leaking equipment within process units that are owned and maintained by the Refinery;
d. Procedures for repairing and keeping track of leaking equipment;
e. Procedures for identifying and including in the LDAR program new equipment;
f. A process for evaluating new and replacement equipment to promote consideration and installation of equipment that will minimize leaks and/or eliminate chronic leakers; and
g. A designation of the "LDAR Personnel" and the "LDAR Coordinator" who are responsible for implementing the enhanced LDAR program at the Refinery.

65. **Training.** By no later than June 30, 2004, CEPOC shall implement the following training programs at the Refinery:

a. For personnel newly-assigned to LDAR responsibilities, CEPOC shall require LDAR training prior to each employee beginning such work;
b. For all personnel assigned LDAR responsibilities, CEPOC shall provide and require completion of annual LDAR training (initial annual LDAR training for all such personnel will be completed no later than December 31, 2004); and
c. For all other Refinery operations and maintenance personnel (including contract personnel), CEPOC shall provide and require completion of an initial training program that includes instruction on aspects of LDAR that are relevant to the person's duties. Initial LDAR training for all such personnel will be

completed no later than March 30, 2004. "Refresher" training shall be performed annually.

66. **LDAR Audits**. Commencing June 30, 2004, CEPOC shall implement at the Refinery the refinery-wide audits set forth in this Paragraph, 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 to ensure monitoring and repairs were completed in the required periods, component identification procedures, tagging procedures, data management procedures and observation of the LDAR technicians' calibration and monitoring techniques. During the LDAR audits, leak rates shall be calculated for each process unit where comparative monitoring was performed.

a. Initial Compliance Audit. By no later than June 30, 2004, CEPOC shall complete a refinery-wide audit of its compliance with the LDAR regulations at the Eagle Point Refinery, to include, at a minimum, each of the audit requirements set forth in this Paragraph. Within 30 days of completion of the audit, CEPOC shall report to EPA and NJDEP any areas of non-compliance identified as a result of its refinery-wide audit and submit in writing a proposed compliance schedule for correcting the non-compliance. Within 60 days of completing the audit, CEPOC shall certify to EPA and NJDEP that the audit and related corrective action have been completed and that the Refinery is in compliance.

b. Third-Party Audits. CEPOC shall retain a contractor(s) with expertise in the LDAR program requirements to perform a third-party audit of the Refinery's LDAR program at least once every two years. The first third-party audit shall be completed no later than June 30, 2004. Subsequent third-party audits shall be held every two years thereafter. CEPOC may retain a third-party contractor to perform the initial audit required by Paragraph 66.a, and that third-party audit will satisfy the provisions of both Paragraphs 66.a and 66.b.

67. **Implementation of Actions Necessary to Correct Non-Compliance**. If the results of any of the audits conducted pursuant to Paragraph 66 identify any areas of non-

compliance, CEPOC 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 such non-compliance. CEPOC shall retain the audit reports generated pursuant to Paragraph 66 and shall maintain a written record of the corrective actions that CEPOC takes in response to deficiencies identified in any audits. In the semi-annual report submitted pursuant to the provisions of Section IX of this Consent Decree (Recordkeeping and Reporting) for the fourth calendar quarter of each year, CEPOC shall submit the audit reports and corrective action records for audits performed and actions taken during that calendar year.

68. **Internal Leak Definition for Valves and Pumps**. CEPOC 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.

a. Leak Definition for Valves. By no later than March 31, 2004, CEPOC shall utilize an internal leak definition of 500 ppm VOCs for the Refinery's valves, excluding pressure relief devices.

b. Leak Definition for Pumps. By no later than March 31, 2004, CEPOC shall utilize an internal leak definition of 2000 ppm for the Refinery's pumps.

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

a. Reporting. For regulatory reporting purposes, CEPOC 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 68.

b. Recording, Tracking, Repairing and Remonitoring Leaks. CEPOC shall record, track, repair and re-monitor all leaks in excess of the internal leak definitions of Paragraph 68 at such time as those definitions become applicable. CEPOC shall make a first attempt at repair and re-monitor leaks within five (5) days of identification and either complete

repairs and re-monitor leaks or place such component on the Refinery's delay of repair list pursuant to Paragraph 77 within thirty (30) days of identification.

70. **Initial Attempt at Repair of Valves.** Beginning no later than December 31, 2003, CEPOC shall make an "initial attempt" to repair any valve that has a reading greater than 200 ppm of VOCs, excluding control valves and components that LDAR personnel are not authorized to repair. CEPOC or its designated contractor shall make this "initial attempt" at repair and remonitor the leak within one (1) day of identification. If the re-monitored leak reading is greater than the applicable leak definition, CEPOC may delay further repairs up to five (5) days after initial identification in order to assess the persistence of the leak (re-monitoring again). If the re-monitored leak reading is below the applicable leak definition, no further action will be necessary.

71. **LDAR Monitoring Frequency.**

a. Pumps. Unless more frequent monitoring is required by applicable federal, state and/or local requirements, CEPOC shall monitor pumps at the internal leak definition on a monthly basis.

b. Valves. Unless more frequent monitoring is required by applicable federal, state and/or local requirements, CEPOC shall monitor valves at the internal leak definition on a quarterly basis (other than difficult to monitor or unsafe to monitor valves), with no ability to skip periods on a process-unit-by-process-unit basis.

72. **Electronic Monitoring, Storing, and Reporting of LDAR Data**.

a. Electronic Storing and Reporting of LDAR Data. By no later than March 30, 2004, CEPOC shall maintain an electronic database for storing and reporting LDAR data. By no later than March 30, 2004, 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.

b. Electronic Data Collection During LDAR Monitoring and Transfer Thereafter. By no later than March 31, 2004, CEPOC shall use dataloggers and/or electronic data collection devices during all LDAR monitoring. CEPOC, or its designated contractor, shall use its best efforts to transfer on a daily basis the electronic data from electronic data logging devices to the electronic database of Paragraph 72(a). For all monitoring events in which an electronic data collection device is used, the collected monitoring data shall include a time and date stamp, and identification of the instrument and operator. CEPOC 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 identity of the technician, the date, monitoring starting and ending times, and an identification of the monitoring equipment. CEPOC shall transfer any manually recorded monitoring data to the electronic database of Paragraph 72(a) within seven (7) days of monitoring.

73. **QA/QC of LDAR Data**. By no later than the Date of Entry of this Decree, CEPOC (or a third-party contractor retained by CEPOC) shall have developed and begun implementing procedures for quality assurance/quality control ("QA/QC") reviews of all data generated by LDAR monitoring technicians. CEPOC shall ensure that monitoring data provided by its contractors is reviewed for QA/QC before the contractor submits such data to CEPOC. At least once per calendar quarter, CEPOC shall perform a QA/QC review of each 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. CEPOC shall communicate results from LDAR monitoring to the Refinery unit supervisors during weekly meetings.

74. **LDAR Personnel**. CEPOC has established a program that holds LDAR personnel accountable for LDAR performance. CEPOC shall continue to maintain a position at the Refinery that is responsible for LDAR management and that has the authority to implement LDAR improvements.

75. **Adding New Valves and Pumps**. By no later than the Date of Entry of this Decree, CEPOC 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 are integrated into the Refinery's LDAR program.

76. **Calibration/Calibration Drift Assessment.**

a. Calibration. CEPOC 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.

b. Calibration Drift Assessment. Beginning no later than the Date of Entry of this Decree, CEPOC shall conduct calibration drift assessments of LDAR monitoring equipment at the end of each monitoring shift, at a minimum. CEPOC 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, CEPOC 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.

c. CEPOC shall maintain records of all instrument calibrations for the duration of this Consent Decree.

77. **Delay of Repair.** Beginning no later than the December 31, 2003, CEPOC shall take the following actions for any equipment that it intends and is allowed to place on the "delay of repair" list under applicable regulations:

a. Require sign-off by the unit supervisor (as identified in the Refinery's written LDAR program and within thirty (30) days of identifying that a piece of equipment is leaking at a rate greater than the applicable leak definition) that such equipment is technically infeasible to repair without a process unit shutdown.

b. Include equipment that is placed on the "delay of repair" list in CEPOC's regular LDAR monitoring.

c. Use the "drill and tap" method (or an equivalent), rather than place a non-control valve on the "delay of repair" list, if it is leaking at a rate of 10,000 ppm or greater unless CEPOC can demonstrate that there is a safety, mechanical or major environmental concern posed by repairing the leak in this manner. CEPOC shall perform the first "drill and tap" (or equivalent repair method) within fifteen (15) days and a second such attempt within thirty (30) days (if necessary).

d. Use its best efforts to isolate and repair pumps identified as leaking at a rate of 2000 ppm or greater.

e. After two unsuccessful attempts to repair a leaking valve through the drill and tap (or equivalent) method, CEPOC may place the leaking valve on its "delay of repair" list. If a new method develops for repairing such valves, CEPOC will advise EPA and NJDEP prior to implementing such new method.

78. Following the identification of a "chronic leaker" non-control valve, CEPOC shall replace, repack, or perform similarly effective repairs on the chronic leaker during the next process unit turnaround occurring six months after the Date of Entry of this Decree or June 30, 2004, whichever is later. A component shall be classified as a "chronic leaker" under this Paragraph if it leaks above 5000 ppm twice in any consecutive four quarters, unless the component has not leaked in the six consecutive quarters prior to the relevant process unit turnaround.

79. **Recordkeeping and Reporting Requirements for this Section**.

a. As Part of the Semi-Annual Progress Reports - Section IX (Recordkeeping and Reporting). Consistent with the requirements of Section IX (Recordkeeping and Reporting), CEPOC shall include the following information in the

progress report(s) for the six (6) month period in which the identified activity occurred or was required:

i. A certification that training has been implemented as required by Paragraph 65;

ii. A certification of the implementation of the "first attempt at repair" program of Paragraph 70;

iii. A certification of the implementation of QA/QC procedures for review of data generated by LDAR technicians as required by Paragraph 73;

iv. An identification of the individual at the Refinery responsible for LDAR performance as required by Paragraph 74;

v. A certification of the development of a tracking program for new valves and pumps added during maintenance and construction as required by Paragraph 75;

vi. A certification of the implementation of the calibration drift assessment procedures of Paragraph 76;

vii. A certification of the implementation of the "delay of repair" procedures of Paragraph 77; and

viii. A copy of the Refinery's LDAR program under Paragraph 64.

b. In each progress report due on July 31 of each year, CEPOC shall identify each audit that was conducted under Paragraph 66.b in the previous year, including an identification of the auditors, a summary of the audit results, and the actions that CEPOC took or intends to take to correct identified deficiencies.

c. In Each Report due under 40 C.F.R. § 63.654. In each report due under 40 C.F.R. § 63.654, CEPOC shall include the following information on LDAR monitoring:

i. a list of the process units monitored during the quarter;
ii. the number of valves and pumps monitored in each process unit;
iii. the number of valves and pumps found leaking;
iv. the number of "difficult to monitor" pieces of equipment monitored;

v. the projected month of the next monitoring event for that unit;
vi. a list of all equipment currently on the "delay of repair" list and the date each component was placed on the list; and
vii. the number of repair attempts not completed within one (1) day according to Paragraph 70;
viii. the number of repair attempts not completed within five (5) days according to Paragraph 69.b;
ix. the number of repairs not completed within thirty (30) days or placed on the delay of repair list according to Paragraph 69.b; and
x. the number of repairs not completed within the required timeframes under Paragraph 77 (Delay of Repair).

O. Incorporation of Consent Decree Requirements into Federally Enforceable Permits.

80. By no later than December 31, 2003, CEPOC shall submit applications to NJDEP to incorporate emission limits and standards required by the Consent Decree that are effective as of the Date of Lodging and/or the Date of Entry 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, CEPOC shall cooperate with the NJDEP by promptly submitting to NJDEP all information that NJDEP seeks following its receipt of the permit application. Upon issuance of such permits, CEPOC shall file any applications necessary to incorporate the requirements of those permits into the Title V permit for the Refinery. CEPOC does not waive its right to appeal more stringent emission limits or standards than those required by this Consent Decree.

81. **At Variable Times.** As soon as practicable, but in no event later than ninety (90) days after the effective date or establishment of any emission limits or standards under Section V of this Consent Decree, CEPOC shall submit applications to NJDEP 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, CEPOC shall cooperate with NJDEP by promptly submitting to NJDEP all information that NJDEP seeks following its receipt of the permit application. Upon issuance

of such permit, CEPOC shall file any applications necessary to incorporate the requirements of that permit into the Title V permit for the Refinery. CEPOC does not waive its right to appeal more stringent emission limits or standards than those required by this Consent Decree.

82. **Mechanism for Title V Incorporation.** The Parties agree that the incorporation of the requirements of this Consent Decree into the Title V permits for the Refinery shall be in accordance with NJDEP Title V rules.

83. **Construction Permits.** CEPOC 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. To the extent that CEPOC must submit permit applications for this construction or installation to NJDEP, CEPOC shall cooperate with NJDEP by promptly providing it with all information that it may seek following its receipt of the permit application. This Paragraph is not intended to prevent CEPOC from applying to NJDEP for a pollution control project exemption.

VI. EMISSION CREDIT GENERATION

Summary. The intent of this Section generally is to prohibit CEPOC 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 CEPOC to use a fraction of the CD Emissions Reductions if: (1) the emissions units for which CEPOC 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 84.B. prior to the commencement of operation of the emissions units for which CEPOC seeks to use the CD Emissions Reductions.

84. **General Prohibition.** CEPOC shall not generate or use any NO_X, SO_2, CO, PM, PM_{10} or VOC 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.

84A. **Conditions Precedent to Utilizing Exception to General Prohibition.** Utilization of the exception set forth in Paragraph 84B to the general prohibition against the generation or utilization of CD Emissions Reductions set forth in Paragraph 84 is subject to the following conditions:

i. Under no circumstances shall CEPOC use CD Emissions Reductions for netting and/or offsets prior to the time that actual CD Emissions Reductions have occurred;

ii. CD Emissions Reductions may be used only at the Refinery;

iii. The CD Emissions Reductions provisions of this Consent Decree are for purposes of this Consent Decree only and neither CEPOC, 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

iv. CEPOC remains subject to all federal, state, and local regulations applicable to the PSD, major non-attainment and/or minor NSR permitting process.

84B. **Exception to General Prohibition**. Notwithstanding the general prohibition set forth in Paragraph 84, CEPOC may request that EPA allow it to use NO_X and/or SO_2 CD Emission Reductions as netting reductions or emissions offsets, in such amounts as are shown to be necessary for the construction or modification of emission units required for CEPOC to comply with the Tier II Gasoline and/or Low Sulfur Diesel requirements, not to exceed 5% of

the NO_X and/or 5% of the SO_2 CD Emissions Reductions, 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 II Gasoline and/or Low Sulfur Diesel requirements; and (2) has a federally enforceable, non-Title V Permit with the following limits, as applicable:

i. For a heater or boiler: a limit of 0.020 lbs NO_X per million BTU or less on a 3-hour rolling average basis; a limit of 0.10 grains of hydrogen sulfide per dry standard cubic foot of fuel gas or 20 ppmvd SO_2 corrected to 0% oxygen both on a 3-hour rolling average; and neither liquid nor solid fuel firing authorization.

i. For an FCCU: a limit of 20 ppmvd NOx corrected to 0% oxygen or less on a 365-day rolling average basis; and a limit of 25 ppmvd SO_2 corrected to 0% oxygen or less on a 365-day rolling average basis.

iii. For an SRP: NSPS Subpart J emission limits.

Any request that CEPOC submits to EPA under this Paragraph 84.B. shall include sufficient information to demonstrate the actual Consent Decree Emission Reductions that CEPOC has achieved through the installation and operation of the controls required by this Consent Decree. EPA, after consultation with NJDEP, may grant CEPOC the right to use up to, but no more than, 5% of the actual NO_X and/or 5% of the actual SO_2 Consent Decree Emissions Reductions for netting or offset purposes.

84C. **Outside the Scope of the General Prohibition.** Nothing in this Section VI is intended to prohibit CEPOC 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 CEPOC 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 subject to an emission limitation pursuant to this Consent Decree.

VII. MODIFICATIONS TO IMPLEMENTATION SCHEDULES

85. **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, CEPOC 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. CEPOC shall use its best efforts to: (1) submit permit applications (i.e., applications for permits to construct, operate, or their equivalent) that comply with all applicable requirements; and (2) 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 or approve a timely-submitted permit application may delay CEPOC's performance of work according to an applicable implementation schedule, CEPOC shall notify EPA and NJDEP of any such delays as soon as CEPOC reasonably concludes that the delay could affect its ability to comply with the implementation schedule set forth in this Consent Decree. CEPOC shall propose for approval by EPA a modification to the applicable schedule of implementation. EPA, after an opportunity for consultation with NJDEP, 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 CEPOC and neither the United States nor CEPOC 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 EPA and NJDEP 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.

86. **Commercial Unavailability of Control Equipment or Additives**. CEPOC shall be solely responsible for compliance with any deadline or the performance of any work described in Section V of this Consent Decree that requires the acquisition and installation of control equipment and/or additives. If it appears that the commercial unavailability of any control equipment or additives may delay CEPOC's performance of work according to an applicable implementation schedule, CEPOC shall notify EPA and NJDEP of any such delays as soon as CEPOC reasonably concludes that the delay could affect its/their ability to comply with the implementation schedule set forth in this Consent Decree. CEPOC shall propose for approval by EPA a modification to the applicable schedule of implementation. Prior to the notice required by this Paragraph, CEPOC 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, CEPOC shall reference this Paragraph, identify the milestone date(s) it/they contend it/they will not be able to meet, provide EPA and NJDEP with written correspondence to the vendor identifying efforts made to secure the control equipment or additives, and describe the specific efforts CEPOC has taken and will continue to take to find such equipment or additive. CEPOC 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, after an opportunity for consultation with the NJDEP, 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 CEPOC and neither the United States nor CEPOC 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 EPA and NJDEP shall retain the right to seek stipulated penalties if EPA does not approve a modification to a date or dates. The failure by CEPOC to secure control equipment or additives shall not constitute a force majeure event triggering the requirements of Section XIV; this Paragraph shall apply.

VIII. ENVIRONMENTALLY BENEFICIAL PROJECT

87. **New Jersey Environmentally Beneficial Project.** In conjunction with the Northeast States for Coordinated Air Use Management ("NESCAUM") and NJDEP, CEPOC will participate in an environmentally beneficial project designed to eliminate diesel emissions from idling trucks at the Paulsboro Travel Center located at Exit 18A of Interstate 295 in Paulsboro, New Jersey. By no later than 30 days after the Date of Entry of this Consent Decree, CEPOC shall submit a certified or corporate check in the amount of $1 million made payable to NESCAUM, to the following address:

NESCAUM

101 Merrimac St.
Boston, MA 02114
Attn: Coralie Cooper

CEPOC shall provide notice of this payment to the Parties in accordance with the provisions in Paragraph 192 (Notice). CEPOC's payment will be used exclusively to install IdleAire technology at approximately 100 parking spaces at the Paulsboro Travel Center in order to significantly reduce emissions of NO_X, particulate matter, and hydrocarbons.

88. By signing this Consent Decree, CEPOC 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 the project identified in Paragraph 87. CEPOC further certifies that it has not applied for or received, and will not in the future apply for or receive: (1) credit as an Environmentally Beneficial Project or other penalty offset in any other enforcement action for the project set forth in Paragraph 87; or (2) credit for any emissions reductions resulting from the project set forth in Paragraph 87 in any federal, state or local emissions trading or early reduction program.

89. CEPOC agrees that in any public statements regarding this project, CEPOC must clearly indicate that this project is being undertaken as part of the settlement of an enforcement action for alleged violations of the Clean Air Act.

IX. REPORTING AND RECORD KEEPING

90. CEPOC shall submit semi-annual reports to EPA and NJDEP that contain the following information:

a. a progress report on the implementation of the requirements of Section V (Affirmative Relief/Environmental Projects) at the Refinery;

b. a summary of the emissions data for the Refinery as required by Section V of this Consent Decree for the six (6) month period covered by the report;

c. a description of any problems anticipated with respect to meeting the requirements of Section V of this Consent Decree at the Refinery;

d. any such additional matters as CEPOC believes should be brought to the attention of EPA and NJDEP.

CEPOC's initial semi-annual report shall be due on January 31, 2004, and shall cover the time period between the Date of Lodging and December 31, 2003. Thereafter, on July 31 and January 31 of each year in which this Consent Decree remains in effect, CEPOC shall submit a semi-annual report covering the six month period ending on the preceding June 30 or December 31, as applicable. The report shall be certified by either the person responsible for environmental management at the Refinery or by a person responsible for overseeing implementation of this Decree across CEPOC 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

91. In satisfaction of the civil claims asserted by the United States in the complaint filed in this matter, by no later than thirty (30) days after the Date of Entry of this Consent Decree, CEPOC shall pay a civil penalty of $1.25 million to the United States, of which $300,000 is in satisfaction of the claims resulting from LDAR violations identified through inspections performed by National Enforcement Investigation Center. Payment 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 2003V01786, DOJ Case Number 90-5-2-1-08096, and the civil action case name and case number of this action in the District of

New Jersey. The costs of such EFT shall be the responsibility of CEPOC. Payment shall be made in accordance with instructions provided to CEPOC by the Financial Litigation Unit of the United States Attorney's Office for the District of New Jersey. Any funds received after 11:00 a.m. (EDT) shall be credited on the next business day. CEPOC shall provide notice of payment, referencing USAO File Number 2003V01786, DOJ Case Number 90-5-2-1-08096, and the civil action case name and case number to the Department of Justice and to EPA, as provided in Paragraph 192 (Notice).

92. In satisfaction of the civil claims asserted by New Jersey both in the Administrative Orders listed in Paragraph 179 of this Consent Decree and in the complaint filed in this matter, by no later than thirty (30) days after the Date of Entry of this Consent Decree, CEPOC shall pay a civil penalty of $1.25 million to New Jersey, of which $300,000 is in satisfaction of the claims resulting from LDAR violations identified through inspections performed by National Enforcement Investigation Center. Payment shall be made by certified or corporate check made payable to the "Treasurer, State of New Jersey" and sent to the following address:

Administrator, Air Compliance & Enforcement Program
New Jersey Department of Environmental Protection
P.O. Box 422
401 East State Street
Trenton, New Jersey 08625

93. On the Date of Entry of this Consent Decree, this 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 New Jersey shall be deemed judgment creditors for purposes of collecting any unpaid amounts of the civil and stipulated penalties and interest.

XI. STIPULATED PENALTIES

CEPOC shall pay stipulated penalties to the United States and the State of New Jersey for each failure by CEPOC to comply with the terms of this Consent Decree as provided herein. Stipulated penalties shall be calculated in the amounts specified in Paragraphs 94 through 147. Stipulated penalties for failure to comply with the concentration-based, rolling average emission limits referenced in the Paragraphs 15d, 16, 17A.d-e (if applicable), and 18 shall not start to accrue until there is noncompliance for 5% or more of the applicable unit's operating time during any calendar quarter. For those provisions where a stipulated penalty of either a fixed amount or 1.2 times the economic benefit of delayed compliance is available, the decision of which alternative to seek shall rest exclusively within the discretion of the EPA and NJDEP.

A. Requirements for NO_X Emission Reductions from FCCUs.

94. For failure to meet the Interim NO_x Emission limits set forth in Paragraph 11, except for the 1-hour block average limit, or any emissions limit proposed by CEPOC or established by EPA (final or interim) for NO_X pursuant to Paragraph 15, per day, per unit: $750 for each calendar day in a calendar quarter in which the 3-hour rolling average exceeds the applicable limit; and $2,500 for each calendar day in a calendar quarter on which the specified 365-day rolling average exceeds the applicable limit.

95. For failure to prepare and/or submit written deliverables required by Paragraph 13 and, if applicable Paragraph 14, per day:

Period of Delay	Penalty per day
1st through 30th day after deadline	$200
31st through 60th day after deadline	$500
Beyond 60th day after deadline	$1000

96. For failure to install and/or certify a NO_X, SO2, CO or oxygen CEMS, per CEMS, per day, as required by Paragraph 19:

Period of Delay	Penalty per day
1st through 30th day after deadline	$1,000
31st through 60th day after deadline	$1,500
Beyond 60th day after deadline	$2,000 or an amount equal to 1.2 times the economic benefit of delayed compliance, whichever is greater.

B. Requirements for SO_2 Emission Reductions from FCCUs.

97. For each failure to meet SO_2 emission limits, except for the 1-hour block average limit, at the FCCU as required in Paragraph 16, per day: $1,500 for each calendar day in a calendar quarter on which the specified 7-day rolling average exceeds the applicable limit; $3,000 for each calendar day in a calendar quarter on which the specified 365-day rolling average exceeds the applicable limit.

C. Requirements for PM and PM_{10} Emissions Reductions from FCCU.

98. For each failure to meet PM emission limits, except for the State PM emission limits, as required by Paragraph 17: $500 for the first day of non-compliance in which the specified 3-hour rolling average exceeds the applicable limit, and $1,500 for each day thereafter until CEPOC demonstrates compliance with the applicable limit.

98A. For failure to prepare and/or submit written deliverables in accordance with the requirements of Paragraph 17A, per day:

Period of Delay	Penalty per day
1st through 30th day after deadline	$200
31st through 60th day after deadline	$500
Beyond 60th day after deadline	$1000

98B. For failure to install and/or operate EDV 6000 required by Paragraph 17A, per day:

Period of Delay	Penalty per day
1st through 30th day after deadline	$1,000
31st through 60th day after deadline	$1,500
Beyond 60th day after deadline	$2,000 or an amount equal to 1.2 times the economic benefit of delayed compliance, whichever is greater.

98C. For failure to meet PM_{10} emission limits at the FCCU as required in Paragraph17A, per day: $500 for the first day of non-compliance in which an applicable emission limit is exceeded, and $1,500 for each day thereafter until CEPOC demonstrates compliance with the applicable emission limit.

D. Requirements for CO Emissions Reductions from FCCU.

99. For each failure to meet the CO emission limits, except for the 1-hour block average limit, as required in Paragraph 18: $2,500 for each calendar day in a calendar quarter on which the specified 365-day rolling average exceeds the applicable limit.

E. Requirements for NO_X Emission Reductions from Heaters and Boilers.

100. For failure to install required Heater & Boiler NO_X Technology by December 31, 2006, per unit, per day:

Period of Delay	Penalty per day
1st through 30th day after deadline	$2,500
31st through 60th day after deadline	$6,000
Beyond 60th day after deadline	$10,000, or an amount equal to 1.2 times the economic benefit of delayed compliance, whichever is greater.

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

Period of Delay	Penalty per day
1st through 30th day after deadline	$450
31st through 60th day after deadline	$1,000
Beyond 60th day after deadline	$2,000, or an amount equal to 1.2 times the economic benefit of delayed compliance, whichever is greater.

102. For failure to submit the written deliverables required by Section V.G., per day:

Period of Delay	Penalty per day
1st through 30th day after deadline	$200
31st through 60th day after deadline	$500
Beyond 60th day	$1,000

103. For each failure to meet NO_X emission limits proposed by CEPOC pursuant to Paragraph 27, per day, per unit: $500 for each calendar day in a calendar quarter on which the specified 3-hour average exceeds the applicable limit.

F. Requirements for SO_2 and PM_{10} Emission Reductions from Heaters and Boilers.

104. For burning in any heater or boiler 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, per day in a calendar quarter:

Period of Non-Compliance	Penalty per day
1st through 30th day	$2,500
Over 30 days	$5,000 or, an amount equal to 1.2 times the economic benefit of delayed compliance, whichever is greater.

105. For burning Fuel Oil in a manner inconsistent with the requirements of Paragraph 31, per day:

Period of Non-Compliance	Penalty per day
1st through 30th day	$1,750
Beyond 31st day	$5,000

105A. For each failure to meet PM_{10} emission limits, except for the State PM_{10} emission limits, as required by Paragraph 31A: $500 for the first day of non-compliance in which the specified 1-hour average basis exceeds the applicable limit, and $1,500 for each day thereafter until CEPOC demonstrates compliance with the applicable limit.

G. Requirements for NSPS Applicability of Sulfur Recovery Plant.

106. For failure to route all sulfur pit emissions in accordance with the requirements of Section V.I., per day:

Period of Non-Compliance	Penalty per day
1st through 30th day	$1,000

31st through 60th day	$1,750
Beyond 60th day	$4,000 or an amount equal to 1.2 times the amount of delayed compliance whichever is greater.

107. For failure to comply with the NSPS Subpart J emission limits under Paragraphs 32, 33 or 34, per day in a calendar quarter:

Period of Non-Compliance	Penalty per day
1st through 30th day	$1,000
31st through 60th day	$2,000
Over 60 days	$3,000 or an amount equal to 1.2 times the of delayed compliance, whichever is greater.

108. For failure to develop and comply with the Preventive Maintenance and Operation Plan as specified in Paragraph 35, per day:

Period of Delay or Non-Compliance	Penalty per day
1st through 30th day after deadline	$500
Beyond 31st day after deadline	$1,500
Beyond 60th day after deadline	$2,000

109. For failure to submit the optimization study as specified in Paragraph 36, per day:

Period of Delay	Penalty per day
1st through 30th day after deadline	$500
Beyond 31st day after deadline	$1,500
Beyond 60th day after deadline	$2,000

H. Requirements for NSPS Applicability of Flaring Devices.

110. For failure to comply with NSPS Subparts A and J, including emission limits, for the Flaring Devices identified in Appendix A after the compliance dates specified therein:

Period of Delay	Penalty per day
1st through 30th day after deadline	$500
Beyond 31st day after deadline	$1,500
Beyond 60th day after deadline	$2,000

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

Period of Delay	Penalty per day
1st through 30th day after deadline	$500

31st through 60th day after deadline	$1,000
Beyond 60th day after deadline	$2,000 or an amount equal to 1.2 times the economic benefit of delayed compliance, whichever is greater.

I. Requirements for Acid Gas and Sour Water Stripper Flaring Incidents.

112. For AG Flaring Incidents and/or Tail Gas Incidents for which CEPOC is liable (only the United States may demand stipulated penalties under this Paragraph):

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, 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

$1200)]. 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.

113. For failure to timely submit any report required by Section V.K., or for submitting any report that does not conform to its requirements:

Period of Delay	Penalty per day
Days 1-30	$750
Days 31-60	$1,500
Over 60 days	$3,000

114. For those corrective action(s) which CEPOC: (i) agrees to undertake following receipt of an objection by EPA pursuant to Paragraph 42; or (ii) is required to undertake following dispute resolution, then, from the date of EPA's receipt of CEPOC's report under Paragraph 41 of this Consent Decree until the date that either: (i) a final agreement is reached between EPA and CEPOC regarding the corrective action; or (ii) a court order regarding the corrective action is entered, CEPOC shall be liable for stipulated penalties as follows:

a.

Period of Delay	Penalty per day
Days 1-120	$50
Days 121-180	$100
Days 181 - 365	$300

Over 365 Days	$3,000

or

b. 1.2 times the economic benefit resulting from CEPOC's failure to implement the corrective action(s).

115. For failure to complete any corrective action under Paragraph 42 of this Decree in accordance with the schedule for such corrective action agreed to by CEPOC or imposed on CEPOC pursuant to the dispute resolution provisions of this Decree (with any such extensions thereto as to which EPA and CEPOC may agree in writing):

Period of Delay	Penalty per day
Days 1-30	$1,000
Days 31-60	$2,000
Over 60	$5,000

J. Requirements for Control of Hydrocarbon Flaring Incidents.

116. For each failure to perform a Root Cause analysis or submit a written report or perform corrective actions for a Hydrocarbon Flaring Incident:

Period of Delay or Non-Compliance	Penalty per day per Incident
1st through 30th day	$500
31st through 60th day	$1,500
Beyond 60th day	$3,000

K. Requirements for Benzene Waste NESHAP Program Enhancements. For each violation in which a frequency is specified in Section V.L. 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.

117. For failure to complete the BWN Compliance Review and Verification Reports as required by Paragraph 51: $7,500 per month.

118. For failure to implement the actions necessary to correct non-compliance as required by Paragraph 52:

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

119. For failure to comply with the requirements related to the use of carbon canisters as BWN control devices pursuant to Paragraph 53:

Period of Delay	Penalty per day
1st through 30th day after deadline	$500
31st through 60th day after deadline	$1,000
Beyond 60th day	$3,000

120. For failure to implement the training requirements of Paragraph 57, $10,000 per quarter.

121. For failure to submit or maintain any records or materials required by Paragraph 58 (Waste/Slop/Off Spec Oil Management) of this Consent Decree, $2,000 per record or submission.

122. For failure to install controls on waste management units handling organic wastes as required by Paragraph 58, $10,000 per month per waste management unit.

123. For failure to conduct sampling in accordance with the sampling plans required by Paragraph 59- $5,000 per week, per stream, or $30,000 per quarter, per stream, whichever is greater, but not to exceed $150,000 per quarter.

124. For failure to submit the plan or retain the third-party contractor required by Paragraph 60, $10,000 per month.

125. For Paragraph 61.a, monthly visual inspections: $500 per drain not inspected;

126. For Paragraph 61.c, weekly monitoring of vents: $500 per vent not monitored;

127. Failure to identify/mark segregated stormwater drains as required in Paragraph 61.b: $1,000 per week per drain;

128. For failure to submit the written deliverables required by Section V.K. (except for the BWN Compliance Review and Verification Report) - $1,000 per week, per report.

129. If it is determined through federal, state, or local investigation that the Refinery has failed to include all benzene-containing waste streams in its TAB calculation submitted pursuant to Paragraph 51, CEPOC shall pay the following:

Waste Stream	Penalty
for waste streams < 0.03 Mg/yr	$250
for waste streams between 0.03 and 0.1 Mg/yr	$1,000
for waste streams between 0.1 and 0.5 Mg/yr	$5,000
for waste streams > 0.5 Mg/yr	$10,000

L. Requirements for Leak Detection and Repair Program Enhancements. For each violation in which a frequency is specified in Section V.N., 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.

130. For failure to implement the training programs specified in Paragraph 65- $10,000 per month, per program.

131. For failure to conduct any of the audits described in Paragraph 66 - $5,000 per month, per audit.

132. For failure to implement any actions necessary to correct non-compliance as required in Paragraph 67:

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

133. For failure to initiate an internal leak rate definition as specified in Paragraph 68 - $10,000 per month, per process unit.

134. For failure to implement the first attempt repair program in Paragraph 70 or for failure to implement the QA/QC procedures described in Paragraph 73 - $10,000 per month.

135. For failure to implement the more frequent monitoring program required by Paragraph 71- $10,000 per month, per unit.

136. For failure to designate an individual as accountable for LDAR performance as required in Paragraph 74, or for failure to implement the maintenance tracking program in Paragraph 75, or for failure to write a LDAR program that meets the requirements of Paragraph 64: - $3,500 per week.

137. For failure to use dataloggers or maintain electronic data as required by Paragraph 72 - $5,000 per month.

138. For failure to conduct and record the calibrations and the calibration drift assessments or remonitor valves and pumps based on calibration drift assessments in Paragraph 76 - $100 per missed event.

139. For failure to comply with the requirements for delay of repair set forth at Paragraph 77 - $5,000 per valve or pump.

140. For failure to submit the written deliverables required by Section V.N. - $500 per week per report.

141. For each valve or pump that CEPOC failed to include in its LDAR program within sixty (60) days of the date of completion of the initial audit under Paragraph 66, CEPOC shall pay $175. If it is determined through a federal, state, or local investigation that CEPOC has failed to include any valves or pumps in its LDAR program, CEPOC shall pay $2000 per component that it failed to include.

M. Requirements to Incorporate Consent Decree Requirements into Federally-Enforceable Permits.

142. For each failure to submit an application as required by Paragraphs 80 and 81:

Period of Delay	Penalty per day
Days 1-30	$800
Days 31-60	$1,500
Over 60 Days	$3,000

N. Requirements for Reporting and Recordkeeping.

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

Period of Delay	Penalty per day
1st through 30th day after deadline	$300
31st through 60th day after deadline	$1,000
Beyond 60th day	$2,000

O. **Requirements for Payment of Environmentally Beneficial Projects and Civil Penalties.**

144. For CEPOC's failure to make the payment as specified in Section VIII or Section X of this Consent Decree, CEPOC shall be liable for $15,000 per day, per Section, plus interest on the amount overdue at the rate specified in 28 U.S.C. § 1961(a).

P. **Requirement to Pay Stipulated Penalties.**

145. For failure to pay stipulated penalties as required by Paragraph 146 of this Consent Decree, CEPOC shall be liable for $2,500 per day, and interest on the amount overdue at the rate specified in 28 U.S.C. § 1961(a).

Q. **Payment of Stipulated Penalties.**

146. CEPOC shall pay stipulated penalties upon written demand by the United States or New Jersey, no later than sixty (60) days after CEPOC receives such demand. Demand from either the United States or New Jersey shall be deemed a demand from both, but the United States and New Jersey shall consult with each other prior to making a demand. Stipulated penalties owed by CEPOC shall be paid 50% to the United States and 50% to New Jersey. Stipulated penalties shall be paid to the United States and New Jersey 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 United States or New Jersey is demanding for each violation (as can be best estimated), the calculation method underlying the demand, and the grounds upon which the demand is based. After consultation with each other, the United States and New Jersey may, in their unreviewable discretion, waive payment of any portion of stipulated penalties that may accrue under this Consent Decree. Payment of stipulated penalties shall relieve CEPOC from liability to EPA and NJDEP for civil penalties under its permit for the same violation.

147. **Stipulated Penalties Dispute.** Should CEPOC dispute the United States' and/or New Jersey'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 145 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 146 for payment of stipulated penalties. If the dispute is thereafter resolved in CEPOC's favor, the escrowed amount plus accrued interest shall be returned to CEPOC; otherwise, the United States and New Jersey 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 New Jersey reserve the right to pursue any other non-monetary remedies to which they are legally entitled, including but not limited to, injunctive relief for CEPOC's violations of this Consent Decree.

XII. INTEREST

148. CEPOC 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, 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 147 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

149. Any authorized representative of EPA or NJDEP, including independent contractors, upon presentation of credentials, shall have a right of entry upon the premises of the 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 CEPOC required by this Consent Decree. CEPOC shall retain such records for the period of the Consent Decree. Nothing in this Consent Decree shall limit the authority of EPA or NJDEP to conduct tests, inspections, or other activities under any statutory or regulatory provision.

XIV. FORCE MAJEURE

150. If any event occurs which causes or may cause a delay or impediment to performance in complying with any provision of this Consent Decree, CEPOC shall notify EPA and NJDEP in writing as soon as practicable, but in any event within ten (10) business days of

the date when CEPOC first knew of the event or should have known of the event by the exercise of due diligence. In this notice, CEPOC shall specifically reference this Paragraph of this Consent Decree and describe the anticipated length of time the delay may persist, the cause or causes of the delay, and the measures taken or to be taken by CEPOC to prevent or minimize the delay and the schedule by which those measures shall be implemented. CEPOC 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 EPA as specified in Paragraph 192 (Notice).

151. Failure by CEPOC to substantially comply with the notice requirements of Paragraph 150 as specified above shall render this Section XIV (Force Majeure) voidable by the United States, in consultation with the NJDEP, as to the specific event for which CEPOC has failed to comply with such notice requirement. If voided, the provisions of this Section shall have no effect as to the particular event involved.

152. The United States, after consultation with the NJDEP, shall notify CEPOC 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 150.

153. If the United States, after consultation with the NJDEP, agrees that the delay or impediment to performance has been or will be caused by circumstances beyond the control of CEPOC including any entity controlled by CEPOC and that CEPOC 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. CEPOC shall not be liable for stipulated penalties for the period of any such delay.

154. If the United States, after consultation with NJDEP, does not accept CEPOC's claim of a delay or impediment to performance, CEPOC 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 CEPOC has submitted this matter to the Court, the United States and the NJDEP 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 CEPOC including any entity controlled by CEPOC and that the delay could not have been prevented by CEPOC by the exercise of due diligence, CEPOC 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.

155. CEPOC shall bear the burden of proving that any delay of any requirement(s) of this Consent Decree was caused by or will be caused by circumstances beyond its control, including any entity controlled by it, and that it could not have prevented the delay by the exercise of due diligence. CEPOC 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.

156. Unanticipated or increased costs or expenses associated with the performance of CEPOC'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.

157. 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 CEPOC serving a force majeure notice or the Parties' inability to reach agreement.

158. As part of the resolution of any matter submitted to this Court under this Section XIV, the appropriate 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. CEPOC shall be liable for stipulated penalties for its failure thereafter to complete the work in accordance with the extended or modified schedule.

XV. RETENTION OF JURISDICTION/DISPUTE RESOLUTION

159. 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 between the United States and New Jersey and CEPOC that may arise under the provisions of the Consent Decree, until the Consent Decree terminates in accordance with Section XVIII (Termination) of this Consent Decree.

160. 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 86 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.

161. 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.

162. 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 sixty (60) calendar days from the date of the first meeting between representatives of the Parties, unless it is agreed that this period should be modified.

163. In the event that the Parties are unable to reach agreement during such informal negotiation period, the United States or New Jersey, as applicable, shall provide CEPOC with a written summary of its position regarding the dispute. The position advanced by the United States or New Jersey, as applicable, shall be considered binding unless, within forty-five (45) calendar days of CEPOC's receipt of the written summary of the United States' or New Jersey's position, CEPOC files with the Court a petition which describes the nature of the dispute. The United States or New Jersey shall respond to the petition within forty-five (45) calendar days of filing. In resolving the dispute between the parties, the position of the United States and/or New Jersey shall be upheld if supported by substantial evidence in the administrative record.

164. In the event that the United States and New Jersey make differing determinations or take differing actions that affect CEPOC's rights or obligations under this Consent Decree, the final decisions of the United States shall take precedence.

165. 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.

166. 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.

167. 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. CEPOC 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

168. **Definitions**. For purposes of Section XVI, the following definitions apply:

a. "Applicable NSR/PSD Requirements" shall mean: 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; "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 any state, regional, or local statutes, ordinances or regulations that implement, adopt, or incorporate the specific federal regulatory requirements identified above.

b. "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 at 40 C.F.R. §§ 60.1 through 60.19 (Subpart A) that are applicable to any affected facility covered by Subpart J.

c. "Post-Lodging Compliance Dates" shall mean any dates in this Section XVI 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.

169. **Liability Resolution regarding the Applicable NSR/PSD Requirements.** With respect to emissions of the following pollutants from the following units, entry of this Consent Decree shall resolve all civil liability of CEPOC to the United States and New Jersey for violations of the Applicable NSR/PSD Requirements resulting from pre-Lodging construction or modification from the date of the pre-Lodging construction or modification up to the following dates:

Refinery/Unit	Pollutant	Date
FCCU	NO_X	Date of Entry
	SO_2	Date of Entry
	CO	Date of Entry
	PM	Date of Entry

	PM_{10}	Date of Entry
Heaters and boilers listed in Appendix D	NO_X	December 31, 2006
All Heaters and Boilers other than those listed in Appendix D	NO_x	Date of Lodging
All Heaters and boilers	SO_2	Date of Lodging
Boilers 5-8	PM_{10}	Date of Entry

170. **Reservation of Rights regarding Applicable NSR/PSD Requirements: Release for Violations Continuing After the Date of Lodging Can Be Rendered Void.** Notwithstanding the resolution of liability in Paragraph 169, the release of liability by the United States and New Jersey to CEPOC 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 CEPOC materially fails to comply with the obligations and requirements of Paragraphs 11-19 and 21-29; provided however, that the release in Paragraph 169 shall not be rendered void if CEPOC remedies such material failure and pays any stipulated penalties due as a result of such material failure.

171. **Exclusions from Release Coverage regarding Applicable NSR/PSD Requirements: Construction and/or Modification Not Covered by Paragraph 169.** Notwithstanding the resolution of liability in Paragraph 169, nothing in this Consent Decree precludes the United States and/or New Jersey from seeking from CEPOC injunctive relief, penalties, or other appropriate relief for violations by CEPOC of the Applicable NSR/PSD Requirements resulting from construction or modification that: (1) commenced prior to or 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 pollutants or units covered by this Consent Decree.

172. Increases in emissions from units covered by this Consent Decree, where the increases result from the Post-Lodging construction or modification of any units at the Eagle Point Refinery, are beyond the scope of the release in Paragraph 169 and CEPOC must evaluate any such increases in accordance with the Applicable PSD/NSR Requirements.

173. **Resolution of Liability Regarding Applicable NSPS Subparts A and J Requirements**. With respect to emissions of the following pollutants from the following units, entry of this Consent Decree shall resolve all civil liability of CEPOC to the United States and New Jersey for violations of the Applicable NSPS Subparts A and J Requirements from the date that the claim(s) of the United States and/or New Jersey accrued up to the following dates:

Unit	Pollutant	Date
FCCU	SO_2, PM, and CO	Date of Lodging
All heaters and boilers	SO_2	Date of Lodging
SRP	SO_2	Date of Lodging
Sour Water Stripper Flare	SO_2	Date of Lodging
East Flare West Flare ZTOF Flare	SO_2	June 30, 2005

174. **Reservation of Rights regarding Applicable NSPS Subparts A and J Requirements: Release for Violations Occurring After the Date of Lodging Can be Rendered Void.** Notwithstanding the resolution of liability in Paragraph 173, the release of liability by the United States and New Jersey to CEPOC 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 CEPOC materially fails to comply with the

obligations and requirements of Paragraphs 20 and 30-47; provided however, that the release in Paragraph 173 shall not be rendered void if CEPOC remedies such material failure and pays any stipulated penalties due as a result of such material failure.

175. **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.

176. **Resolution of Liability Regarding Benzene Waste NESHAP Requirements.** With respect to the National Emission Standard for Benzene Waste Operations, 40 C.F.R. Part 61, Subpart FF ("Benzene Waste NESHAP"), and any applicable state, regional, or local regulations that implement, adopt or incorporate the Benzene Waste NESHAP, entry of this Consent Decree shall resolve all civil liability of CEPOC to the United States and New Jersey for violations that: (1) commenced and ceased prior to the Date of Entry of the Consent Decree; and/or (2) are based on events identified in the BWN Compliance Review and Verification Report required under Paragraph 51 and are corrected pursuant to the requirements of Paragraph 52.

177. **Resolution of Liability Regarding LDAR Requirements.** With respect to the Leak Detection and Repair requirements relating to equipment in light liquid service and gas and/or vapor service set forth 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 (collectively "LDAR Requirements"), and any applicable state, regional, or local regulations that implement, adopt or incorporate the LDAR Requirements, entry of this Consent Decree shall resolve the civil liability of CEPOC to the United States and New Jersey for violations that: (1) commenced and ceased prior to the Date of Entry of the Consent Decree; and/or (2) are based on events identified in the

first third-party audit required under Paragraph 66.b and are corrected pursuant to the requirements of Paragraph 67.

178. **Reservation of Rights Regarding the Benzene Waste NESHAP and LDAR Requirements**. Notwithstanding the resolution of liability in Paragraphs 176 and 177, nothing in this Consent Decree precludes the United States and/or New Jersey from seeking from CEPOC civil penalties and/or injunctive relief and/or other equitable relief for violations by CEPOC of Benzene Waste NESHAP and/or LDAR requirements that: (1) commenced prior to the Date of Entry of this Consent Decree and continued after the Date of Entry if CEPOC fails to identify in its Paragraph 51 report or its Paragraph 66.b audit, as applicable, such violations, and/or fails to correct such violations pursuant to Paragraphs 52 or 67, as applicable; or (2) commenced after the Date of Entry of the Consent Decree but are not identified in CEPOC's Paragraph 51 report or its Paragraph 66.b audit, as applicable and/or are not corrected pursuant to Paragraphs 52 or 67, as applicable. Notwithstanding the resolution of liability regarding the Benzene Waste NESHAP and LDAR requirements in Paragraph 176 and 177, respectively, nothing in this Decree shall constitute a resolution of CEPOC's liability, if any, regarding compliance with N.J.A.C. 7:27-16.17.

179. **New Jersey Administrative Orders.** Entry of this Consent Decree shall resolve all civil liability of CEPOC to the New Jersey and the United States for violations identified in the following New Jersey Administrative Orders and Notices of Civil Administrative Penalty Assessments ("AO/NOCAPAs"): AEA990002 (5/10/99); PEA000008 (7/19/00); AEA990004 (5/20/99); AEA990006 (5/27/99); PEA000004 (4/20/00); PEA000003 (3/20/00); PEA000006 (6/12/00); PEA000009 (8/15/00); PEA000011 (8/31/00); PEA000012 (9/6/00); PEA000016 (1/11/01); PEA010001 (3/16/01); PEA030001 (3/19/03); PEA030004 (5/6/03); PEA030005 (6/24/03); PEA 030006 (7/8/03); PEA030007 (7/9/03); and PEA030008 (8/22/03). CEPOC will

seek to withdraw, with prejudice, its requests to NJDEP for administrative hearings on the above AO/NOCAPAs.

179A. **PM_{10} Emission Limit under NJDEP Permit PCP010010 (U241) .** Entry of this Consent Decree shall resolve all civil liability of CEPOC to New Jersey and the United States for violations of the current PM_{10} emission limit set forth in NJDEP Permit # PCP010010 (U241) from the Date of Lodging through the date NJDEP issues a permit or permit modification establishing a new PM_{10} emission limit, so long as CEPOC makes a timely permit application in accordance with Paragraph 81.

180. **Resolution of Liability under Sections 304 and 313 of EPCRA and Section 103(a) of CERCLA for Certain Acid Gas Flaring Incidents.** Entry of this Consent Decree shall resolve all civil liability of CEPOC to the United States and New Jersey for violations of Sections 304 and 313 of the Emergency Planning and Community Right-to-Know Act ("EPCRA"), 42 U.S.C. § 11004, and Section 103(a) of Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9603(a), relating to Acid Gas Flaring Incidents that occurred between January 1, 1998, and the Date of Lodging, provided that CEPOC has identified such Incidents and potential violations, by December 31, 2003, in its report submitted to EPA pursuant to Paragraph 40 above.

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

182. **Claim/Issue Preclusion.** In any subsequent administrative or judicial proceeding initiated by the United States or New Jersey for injunctive relief, penalties, or other appropriate

relief relating to CEPOC for violations of the PSD/NSR, NSPS, NESHAP, and/or LDAR requirements, not identified in Section XVI of the Consent Decree and/or the Complaint:

a. CEPOC 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 CEPOC assert, or maintain, any other defenses based upon any contention that the claims raised by the United States or the State of New Jersey 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 CEPOC to assert that the claims are deemed resolved by virtue of this Section XVI of the Consent Decree.

b. The United States and New Jersey 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 CEPOC of any interpretation or guidance issued by EPA related to the matters addressed in this Consent Decree.

183. **Other Reservations.**

a. Nothing in this Consent Decree shall be construed to limit the authority of the United States and New Jersey to undertake any action against any person, including CEPOC, to abate or correct conditions which may present an imminent and substantial endangerment to the public health, welfare, or the environment.

b. New Jersey reserves all rights under the New Jersey Air Act and common law, to take additional action(s) if New Jersey determines that such action(s) are necessary to protect public health, safety, welfare and the environment.

Nothing in this Consent Decree shall constitute a waiver of any statutory or common law right of New Jersey to require such additional action(s) should New Jersey determine that such action(s) are necessary.

XVII. GENERAL PROVISIONS

184. **Other Laws**. Except as specifically provided by this Consent Decree, nothing in this Consent Decree shall relieve CEPOC of its obligations to comply with all applicable federal, state, regional, and local laws and regulations. Subject to Section XVI, nothing contained in this Consent Decree shall be construed to prevent or limit the rights of the United States or the State of New Jersey to seek or obtain other remedies or sanctions available under other federal, state, regional, or local statutes or regulations, by virtue of CEPOC's violation of the Consent Decree or of the statutes and regulations upon which the Consent Decree is based, or for CEPOC'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 the State of New Jersey to invoke the authority of the Court to order CEPOC's compliance with this Consent Decree in a subsequent contempt action.

185. **Permit Violations**. Nothing in this Consent Decree shall be construed to prevent or limit the right of the United States or the State of New Jersey to seek injunctive or monetary relief for violations of permits; provided however, that with respect to violations of both a permit and this Consent Decree for which monetary relief is sought, the United States and the State of New Jersey jointly must elect between taking an enforcement action for such monetary relief or seeking stipulated penalties under this Consent Decree.

186. **Failure of Compliance.** The United States and New Jersey do not, by their consent to the entry of Consent Decree, warrant or aver in any manner that CEPOC's complete compliance with the Consent Decree will result in compliance with the provisions of the CAA or

the New Jersey Air Act. Notwithstanding the review or approval by EPA or NJDEP of any plans, reports, policies or procedures formulated pursuant to the Consent Decree, CEPOC shall remain solely responsible for compliance with the terms of the Consent Decree, all applicable permits, and all applicable federal, state, regional, and local laws and regulations.

187. **Service of Process.** CEPOC 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 CEPOC at Paragraph 192 (Notice) are authorized to accept service of process with respect to all matters arising under or relating to the Consent Decree.

188. **Post-Lodging/Pre-Entry Obligations.** Obligations of CEPOC 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 New Jersey 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.

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

190. **Public Documents**. All information and documents submitted by CEPOC to EPA and NJDEP 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 NJDEP, 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.

191. **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 motion to this Court from the United States Department of Justice requesting entry of the Consent Decree. The United States and New Jersey reserve 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.

192. **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 CEPOC shall be submitted as specified in this Consent Decree, with copies to EPA Headquarters and EPA Region 2 and NJDEP. 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, New Jersey, and CEPOC 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. 90-5-2-1-08096

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 2:

Director, Division of Enforcement and Compliance Assistance
U.S. EPA, Region 2
21th Floor
290 Broadway
New York, New York 10007

and

Chief, Air Compliance Branch
Division of Enforcement and Compliance Assistance
U.S. EPA, Region 2

21st Floor
290 Broadway
New York, New York 10007

and

Chief, Air Compliance Branch
Office of Regional Counsel
U.S. EPA, Region 2
16st Floor
290 Broadway
New York, New York 10007

State of New Jersey:

Administrator, Air Compliance & Enforcement
New Jersey Department of Environmental Protection
Post Office Box 422
401 East State Street
Trenton, New Jersey 08625-0422

and

Manager, Southern Air Compliance & Enforcement Office
New Jersey Department of Environmental Protection
2 Riverside Drive
Camden, New Jersey 08103

and

Deputy Attorney General, Section Chief
Environmental Enforcement
Division of Law
P.O. Box 093
25 Market Street
Trenton, New Jersey 08625-0093

As to CEPOC:

Refinery Manager
Coastal Eagle Point Refinery
Rt. 130 and I-295
Westville, New Jersey 08093

and

Office of General Counsel
Costal Eagle Point Oil Company
1001 Louisiana Street
P.O. Box 2511
Houston, Texas 77002

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.

193. **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 192 (Notice). All State of New Jersey approvals shall be sent from the offices identified in Paragraph 192.

194. **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.

195. **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. For purposes of this Paragraph, modifications to schedules for the catalyst additive programs and to frequency of reporting obligations shall be considered non-material, provided that such changes are agreed upon in writing by the United States, New Jersey and CEPOC. 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

196. This Consent Decree shall be subject to termination upon motion by the United States, in consultation with New Jersey, or CEPOC (under the procedure identified in Paragraph 198). Prior to either party seeking termination, CEPOC must have completed and satisfied all of the following requirements of this Consent Decree:

i. installation of control technology systems as specified in this Consent Decree;
ii. compliance with all provisions contained in this Consent Decree, which compliance may be established for specific parts of the Consent Decree in accordance with Paragraph 197, below;
iii. payment of 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 New Jersey;
iv. completion of the "environmentally beneficial" projects set forth in Paragraph 87;
v. application for and receipt of permits incorporating the surviving emission limits and standards established under Section V; and
vi. operation for at least one year of each unit in compliance with the emission limits established herein, and certification of such compliance for each unit within the first six (6) month period progress report following the conclusion of the compliance period.

197. **Certification of Completion**.

a. Prior to moving for termination, CEPOC may certify completion of one or more of the following parts of the Consent Decree, provided that all of the related requirements have been satisfied:

i. Paragraphs 11- 15 - Fluid Catalytic Cracking Unit (including operation of the unit for one year after completion in compliance with the final emission limit set pursuant to the Consent Decree);

ii. Paragraph 16-18 - Fluid Catalytic Cracking Unit (including operation of the unit for one year after completion in compliance with the emission limit set pursuant to the Consent Decree);

iii. Paragraphs 21-31 Heaters and Boilers (including operation of the relevant units for one year after completion in compliance with the emission limit set pursuant to the Consent Decree);

iv. Section VIII – Environmentally Beneficial Projects

b. Within 90 days after CEPOC concludes that any of the parts of the Consent Decree identified in Paragraph 197.a have been completed, CEPOC may submit a written report to the Parties listed in Paragraph 192 (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 CEPOC 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 CEPOC:

> 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.

c. Upon receipt of CEPOC's certification, EPA, after reasonable opportunity for review and comment by NJDEP, shall notify CEPOC 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, record keeping, training, auditing requirements), and that CEPOC's certification is that it is in current compliance with all such obligations.

i. If EPA concludes that the requirements have not been fully complied with, EPA shall notify CEPOC as to the activities that must be undertaken to complete the applicable Paragraphs of the Consent Decree. CEPOC 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).

ii. 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 CEPOC. This certification shall constitute the certification of completion of the applicable Paragraphs for purposes of this Consent Decree.

d. Nothing in Paragraph 197.c shall preclude the United States or New Jersey 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 under Paragraph 197 of the Consent Decree. In addition, nothing in Paragraph 197.c shall permit CEPOC 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 197 of the Consent Decree.

198. At such time as CEPOC believes that it has satisfied the requirements for termination set forth in Paragraph 196, CEPOC shall certify such compliance and completion to

the United States and New Jersey in writing as provided in Paragraph 192 (Notice). Unless, within 120 days of receipt of CEPOC's certification under this Paragraph, either the United States or New Jersey objects in writing with specific reasons, CEPOC may move this Court for an order that this Consent Decree be terminated. If either the United States or New Jersey objects to the certification by CEPOC under this Paragraph 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, CEPOC shall bear the burden of proving that this Consent Decree should be terminated.

XIX. SIGNATORIES

199. 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. Coastal Eagle Point 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

_____

ANNETTE M. LANG
Trial Attorney
Environmental Enforcement Section
Environment and Natural Resources Division
Unit ed States Department of Justice
P.O. Box 7611
Ben Franklin Station
Washington, D.C. 20044-7611
(202) 514-4213

CHRISTOPHER J. CHRISTIE
UNITED STATES ATTORNEY
FOR THE DISTRICT OF NEW JERSEY

Date:_____

By:_____

PAUL BLAINE
Assistant United States Attorney
United States Attorneys Office
401 Market St., 4th Floor
Camden, NJ 08101
(856) 757-5137

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

FOR THE STATE OF NEW JERSEY

Date: _____

_____
NEW JERSEY DEPARTMENT OF
ENVIRONMENTAL PROTECTION

By:_____

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

FOR THE STATE OF NEW JERSEY

Date:_____

_____
PETER C. HARVEY
ATTORNEY GENERAL OF NEW JERSEY

By: _____

WE HEREBY CONSENT to the entry of the Consent Decree in United States, et al. v. Coastal Eagle Point Refining Company.

FOR DEFENDANT COASTAL EAGLE POINT OIL COMPANY

Date: _____

_____
Name:
Title:

APPENDIX A

LIST OF FLARING DEVICES AT THE REFINERY AND NSPS SUBPART J COMPLIANCE SCHEDULE

Identification	Date of Compliance	Method/Proof of Compliance
ACID GAS FLARING DEVICES		
Sour Water Stripper Flare	Immediate	Emergency Use Only
HYDROCARBON FLARING DEVICES		
East Flare	June 30, 2005	For each routinely-generated refinery fuel gas stream that is directed to this Flaring Device on a continuous or intermittent basis, CEPOC will either (i) monitor this stream with a CEMS; or (ii) will submit for EPA approval, a fully-approvable alternative monitoring plan ("AMP") by no later than December 31, 2005
West Flare	June 30, 2005	Same as above
ZTOF Ground Flare	June 30, 2005	Same as above

APPENDIX B
NO_x Additives Optimization Protocol

This Appendix shall apply if EPA approves the use of NO_x Reducing Additives as the NO_x control technology pursuant to Paragraph 14.

I. Schedules and Deadlines for Use of NO_x Reducing Catalyst Additives and Low NO_x Combustion Promoter to Reduce NO_x from the FCCU: In order to reduce NO_x emissions and establish lower FCCU NO_x emission limits at the FCCU, CEPOC shall use NO_x reducing catalyst additive and low NO_x Combustion promoter. The program to reduce NO_x emissions at these FCCUs shall consist of the following steps: a baseline data collection period for use in developing a model of NO_x emissions; a short term trial period to determine which NO_x reducing catalyst additive works best in each FCCU; an optimization period to determine optimized addition rates of NO_x reducing catalyst additive and low NO_x Combustion promoter; and a demonstration period to establish long term (*e.g.*, 365-day rolling average) and short term (*e.g.*, 3-hour, 24-hour or 7-day rolling average) NO_x emission limits.

a. NO_x Baseline Data and NO_x Model. By March 31, 2004, CEPOC shall submit to EPA the following two reports: 1) a report of 72 months of baseline data from January 1, 1998 to December 31, 2003 and 2) a report describing a model to predict uncontrolled NO_x concentration and mass emission rate.

The baseline data shall include all data considered in development of the model on a daily average basis, and, at a minimum, the following data on a daily average basis:

i. Regenerator dense bed, dilute phase, cyclone and flue gas temperatures;
ii. Coke burn rate in pounds per hour;
iii. FCCU feed rate in barrels per day;
iv. FCCU feed API gravity;
v. FCCU feed sulfur and basic nitrogen content as a weight %;
vi. Percentage of each type of FCCU feed component (i.e. atmospheric gas oil, vacuum gas oil, atmospheric tower bottoms, vacuum tower bottoms, etc.);
vii. Percentage by volume of the FCCU feed that is hydrotreated;
viii. Total Catalyst addition rate;
ix. NO_x and SO_2 Reducing Catalyst Additive and addition rates, conventional combustion promoter addition rates, and/or Low NO_x Combustion Promoter addition rates; and
x. Hourly and daily SO_2, NO_x, CO, and oxygen concentrations.

Upon request by EPA, CEPOC shall submit any additional data that EPA determines it needs to evaluate the model. The report describing the model shall include a description of how the model was developed including which parameters were considered, why parameters were

eliminated, efforts and results of model validation, and the statistical methods used to arrive at the equation to predict uncontrolled NO_x concentration and mass emission rate.

b. Use of Low-NO_x Combustion Promoter:

i. CEPOC shall identify, for EPA approval, the Low NO_x Combustion Promoter that CEPOC proposes to use by December 31, 2003.

ii. CEPOC shall commence and complete a program of minimization of use of conventional Pt-based combustion promoter to that amount necessary to control afterburn and then complete replacement of its use with Low NO_x Promoter. CEPOC shall complete this program in accordance with the protocol set forth in this Appendix by January 31, 2004.

iii. CEPOC shall submit a report on the above-described program by January 31, 2004. This report shall identify the reductions in NO_x emissions from the baseline and levels of afterburn at the minimized level of use of conventional Pt-based combustion promoter and when Low NO_x Combustion Promoter is used.

iv. CEPOC may, upon EPA approval, discontinue use of Low NO_x promoter at a FCCU if CEPOC demonstrates that the Low NO_x promoter is ineffective at adequately controlling afterburn and does not limit CO production at that FCCU to the level necessary to allow CEPOC to meet its CO emission limit for that FCCU.

c. NO_x Reducing Catalyst Additives - Short Term Trials

i. By January 31, 2004, CEPOC shall identify, for EPA approval, at least two commercially available NO_x reducing additives that CEPOC proposes to use for short term trials with a protocol for conducting the trials.

ii. CEPOC shall propose use of at least two NO_x reducing additives that are likely to perform the best in each FCCU. EPA will base its approval or disapproval on its assessment of the performance of the proposed additives in other FCCUs and the similarity of those FCCUs to CEPOC's FCCUs, with the objective of trialing NO_x additives likely to have the best performance in reducing NO_x emissions. In the event that CEPOC submits less than two approved additives, EPA shall identify other approvable additives to CEPOC.

iii. CEPOC shall trial at least two additives and shall conduct the trials in accordance with the protocol set forth in this Appendix. CEPOC shall commence and complete the trials of the NO_x reducing additives by June 30, 2004.

iv. By July 31, 2004, CEPOC shall submit a report to EPA that describes the performance of each NO_x reducing catalyst additive that CEPOC trialed.

v. CEPOC shall propose to use the best performing additive as measured by percentage of NO_x emissions reduced and the concentration to which NO_x emissions were reduced in the trials. EPA will either approve the proposed additive or approve another additive that was trialed for use in the optimization study. Upon request by EPA, CEPOC shall submit any additional data that EPA determines it needs to evaluate the trials.

d. NO_x Reducing Catalyst Additives - Optimization Study:

i. By July 31, 2004, CEPOC shall submit, for EPA approval, a proposed protocol consistent with the requirements of this Appendix for optimization studies to establish the optimized NO_x Reducing Additive and Low NO_x Combustion Promoter addition rates. The protocol shall include identification of the additive, methods to calculate effectiveness, cost effectiveness, methods for baseloading, and percent additive used at each increment tested.

ii. By December 31, 2004, CEPOC shall commence and complete the optimization study of the NO_x reducing additive and low NO_x CO Promoter in accordance with the approved protocol and this Appendix.

iii. By January 31, 2005, CEPOC shall report the results of the optimization study and propose optimized addition rates of all catalysts and promoters to be used for the demonstration period for EPA approval. Upon request by EPA, CEPOC shall submit any additional data that EPA determines it needs to evaluate the optimization study.

e. NO_x Reducing Catalyst Additives - Demonstration:

i. By June 30, 2006, CEPOC shall commence and complete an 18-month demonstration of the EPA-approved NO_x Reducing Additive and Low NO_x CO Promoter at the EPA-approved optimized addition rates.

ii. During the demonstration period, CEPOC shall operate the FCCU and shall add NO_x reducing catalyst, in a manner that minimizes NO_x emissions to the extent practicable without interfering with conversion or processing rates.

f. NO_x Additive Performance Demonstration Report ("NO_x Additive Demonstration Report"). CEPOC will report the results of the demonstration to EPA and NJDEP ("NO_x Additive Demonstration Report") by July 31, 2006. The NO_x Additive Demonstration Report shall include, at a minimum, the NO_x and oxygen CEMS data recorded during the Demonstration Period and all applicable baseline data on a daily average basis for the Demonstration Period.

II. Procedures and Criteria for establishing optimized addition rates of Low NO_x combustion promoter and NO_x reducing additives

a. Overview of Establishing Optimized Addition Rates of Low NO_x Combustion Promoter. Establishing an Optimized Low NO_x Combustion Promotor Addition Rate for the FCCUs is a three-step process: (1) establishing a minimum addition rate for the conventional combustion promotor that CEPOC currently uses such that the effectiveness of the conventional combustion promotor is maintained (the "Minimum Conventional Combustion Promotor Addition Rate"); (2) replacing the conventional combustion promotor with Low NO_x Combustion Promotor at an addition rate that is the functional equivalent of the Minimum Conventional Combustion Promotor Addition Rate (the "Initial Low NO_x Combustion Promotor Addition Rate"); and (3) increasing the addition rate up to two times the Initial Low NO_x Combustion Promotor Addition Rate if the Initial Low NO_x Combustion Addition Rate is not effective (the "Optimized Low NO_x Combustion Promotor Addition Rate").

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

c. Establishing the Minimum Conventional Combustion Promotor Addition Rate. CEPOC shall reduce its historical usage of conventional combustion promotors to the point that the addition rate is the minimum necessary to retain the effectiveness of the conventional combustion promotor that CEPOC is using ("Minimum Conventional Combustion Promotor Addition Rate").

d. Establishing the Initial Low NO_x Combustion Promotor Addition Rate. Based on the activity of conventional combustion promotor historically used and the activity of the Low NO_x combustion promotor, CEPOC shall replace conventional combustion promotor with Low NO_x Combustion Promotor at a rate that is the functional equivalent in promotion activity of the Minimum Conventional Combustion Promotor Addition Rate. This functionally equivalent rate shall be called the Initial Low NO_x Combustion Promotor Addition Rate.

e. Establishing the Optimized Low NO_x Combustion Promotor Addition Rate. If the Low NO_x Combustion Promotor is not effective at the Initial Low NO_x Combustion Promotor Addition Rate, CEPOC shall increase, by up to two times, the Initial Low NO_x Combustion Promotor Addition Rate. If, at two times the Initial Low NO_x Combustion Promotor Addition Rate, the Low NO_x Combustion Promotor is not effective, CEPOC may apply for EPA approval to discontinue the use of Low NO_x Combustion Promotor.

f. Overview of Establishing an Optimized NO_x Reducing Additive Addition Rate. The Optimized NO_x Reducing Catalyst Additive Addition Rate shall be determined by evaluating NO_x emissions reductions and annualized costs at three different addition rates.

g. The Increments. The three addition rates or "increments" shall be:

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

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

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

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

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

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

PR_i = Pollutant (NO_x) reduction rate at increment i in pounds per day from the baseline model

PR_{i-1} = Pollutant (NO_x) reduction rate at the increment prior to increment i in pounds per day from the baseline model

CAR_i = Total Catalyst Additive Rate at increment i in pounds per day

CAR_{i-1} = Total Catalyst Additive Rate at the increment prior to increment i in pounds per day

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

APPENDIX C
FCCU NO_X Control Technology Operating Parameters

All air pollution control equipment designed pursuant to this Appendix will be designed and built in accordance with accepted engineering practice and any regulatory requirements that may apply.

I. Selective Catalytic Reduction (SCR)

A. Design Considerations

1. Catalyst

    a. Type
    b. Size/Pitch
    c. Volume of Initial Charge
    d. Operating Life
    e. Periodic Mid-Run Replacement
    f. Complete Change Out Schedule

2. Reactor

    a. Reactor Volume
    b. Internal Configuration
    c. Location in Process Train
    d. Soot Blowers
    e. Pressure Drop

3. Reductant Addition

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

4. Flue Gas Characteristics

    a. Inlet/Outlet NO_x Concentration

b. Flue Gas Volumetric Flow
c. Inlet/Outlet Temperature Range
d. Inlet/Outlet SO_2/SO3 Concentrations
e. Inlet/Outlet CO/H2O/O_2 Concentrations
f. Inlet/Outlet Particulate/Ash Loading and Characteristics

5. Efficiency

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

6. Safety Considerations

B. Operating Considerations

1. Catalyst

a. Periodic Mid-Run Replacement to Maintain Efficiency
b. Complete Change Out

2. Reactor

a. Operation of Soot Blowers
b. Pressure Drop

3. Reductant Addition

a. Reductant Addition Rates
b. Ammonia Slip

4. Flue Gas Characteristics

a. Inlet/Outlet NO_x Concentration
b. Flue Gas Volumetric Flow
c. Inlet/Outlet Temperature Range
d. Inlet/Outlet SO_2/SO_3 Concentrations
e. Inlet/Outlet CO/H_2O/O_2 Concentrations
f. Inlet/Outlet Particulate/Ash Loading and Characteristics

5. Efficiency

a. Actual Outlet NO_x Concentration
b. Actual Removal Efficiency

6. Safety Considerations

II. Lo Tox System

A. Design Considerations

1. Quench Vessel and Capacity

    a. Dimensions
    b. Quench Water Capacity
    c. Initial and Final Temperatures

2. Reaction Temperature Profile

    a. Location and Number of Sensors

3. Reaction Residence Time

    a. Reaction Vessel Volume at Temperature
    b. Gas Flow Rates

4. Oxygen Supply

    a. Type of Supply
    b. Capacity of Oxygen Supply

5. Ozone Generators and Injection

    a. Number and Capacity
    b. Electricity Demand
    c. Concentration Ozone and Volume Oxygen/Ozone Produced and Injected
    d. Flow Distribution Manifold
    e. Injection Grid / Nozzles
        i. Number
        ii. Size
        iii. Location
        iv. Controls
    f. Ozone Slip

6. Flue Gas Characteristics

    a. Inlet/Outlet NO_x Concentration
    b. Flue Gas Volumetric Flow
    c. Inlet/Outlet Temperature Range
    d. Inlet/Outlet SO_2/SO_3 Concentrations
    e. Inlet/Outlet $CO/H_2O/O_2$ Concentrations
    f. Inlet/Outlet Particulate/Ash Loading and Characteristics

7. Efficiency

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

8. Safety Considerations

B. Operating Considerations

1. Reaction Temperature Profile

2. Reaction Residence Time

a. Residence Time at Temperature
b. Gas Flow Rates

3. Ozone Addition

a. Ozone Addition Rates
b. Ozone Slip

4. Flue Gas Characteristics

a. Inlet/Outlet NO_x Concentration
b. Flue Gas Volumetric Flow
c. Inlet/Outlet Temperature Range
d. Inlet/Outlet SO_2/SO_3 Concentrations
e. Inlet/Outlet $CO/H_2O/O_2$ Concentrations
f. Inlet/Outlet Particulate/Ash Loading and Characteristics

5. Efficiency

a. Actual Outlet NO_x Concentration
b. Actual Removal Efficiency

III. Selective Non-Catalytic Reduction

A. Design Considerations

1. Reductant Addition

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

iv. Controls

f. Ammonia Slip

2. Flue Gas Characteristics

a. Inlet/Outlet NO_x Concentration
b. Flue Gas Volumetric Flow
c. Inlet/Outlet Temperature Range
d. Inlet/Outlet SO_2/SO_3 Concentrations
e. Inlet/Outlet $CO/H_2O/O_2$ Concentrations
f. Inlet/Outlet Particulate/Ash Loading and Characteristics

3. Efficiency

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

4. Safety Considerations

B. Operating Considerations

1. Reductant Addition

a. Reductant Addition Rates
b. Ammonia Slip

2. Flue Gas Characteristics

a. Inlet/Outlet NO_x Concentration
b. Flue Gas Volumetric Flow
c. Inlet/Outlet Temperature Range
d. Inlet/Outlet SO_2/SO_3 Concentrations
e. Inlet/Outlet $CO/H_2O/O_2$ Concentrations
f. Inlet/Outlet Particulate/Ash Loading and Characteristics

3. Efficiency

a. Actual Outlet NO_x Concentration
b. Actual Removal Efficiency

4. Safety Considerations

APPENDIX D

LIST OF CONTROLLED HEATERS , BOILERS AND COMPRESSORS

Appendix D

	Unit ID	Permitted mmBTU/hr HHV	Number of burners	current allowable NOx lb/mmBTU	current allowable NOx tpy	weighted average current allowable NOx lb/mmBTU
Stack # 4	FCCU B-5A & B-5B Heaters	64				
	B-5A	32	4	0.2000	28.032	0.0017
	B-5B	32	4	0.2000	28.032	0.0017
Stack # 53	PH-3	113.4	16	0.0617	30.660	0.0018
	PH-4A	161.8	16	0.0612	43.406	0.0026
	PH-4B	59.4	8	0.0616	16.031	0.0010
Stack # 55	PH-2 CRU Heater	66.7	4	0.0547	15.970	0.0010
Stack # 63	PH-5A	36.6	6	0.2000	32.062	0.0019
	PH-5B	49	4	0.2000	42.924	0.0026
Stack # 71	PH-1 CRU Heater	78	4	0.0546	18.650	0.0011
Stack # 86	Power House Boiler # 3	400	6	0.2800	490.560	0.0294
Stack # 87	Power House Boiler #4	400	6	0.2800	490.560	0.0294
	Power House Boiler #5	350		0.0033	4.340	0.0003
	Power House Boiler #6	350	1	0.0033	4.340	0.0003
	Power House Boiler #7	350	1	0.0033	4.340	0.0003
	Power House Boiler #8	175	1	0.0033	4.340	0.0002
Stack # 88	HA-1	400	32	0.0730	127.896	0.0077
	HA-3A	78.2	16	0.0748	25.623	0.0015
	HA-3B	13.3	4	0.1293	7.534	0.0005
Stack # 97	HTU #1 HH-1 Heater	80	4	0.0546	19.130	0.0011
Stack # 99	DWU 2H-201 Heater	48	4	0.2000	42.048	0.0025
Stack # 100	2H-202	75	8	0.0700	22.995	0.0014
	2H-203	38	6	0.0711	11.826	0.0007
Stack # 102	B-2	78.6	18	0.0569	19.579	0.0012
	B-4	49	10	0.2271	48.749	0.0029
Stack # 217	PH-1	36	24	0.2000	31.536	0.0019
	PH-4	34	4	0.2000	29.784	0.0018
Stack # 219	PH-6 CRU Heater	60.8	4	0.1808	48.140	0.0029
Stack # 226	Gas Oil Heater HA-4	165	8	0.1162	84.000	0.0050
	Total	**3809.8**			**Weighted Average:**	**0.1063**