STATE OF LOUISIANA

DEPARTMENT OF ENVIRONMENTAL QUALITY

IN THE MATTER OF:	*	**Settlement Tracking No.**
	*	**SA-MM-11-0021**
PLACID REFINING COMPANY LLC	*	
	*	**Enforcement Tracking Nos.**
	*	**MM-CN-03-0114**
AI NO. 2366	*	**As Amended by**
	*	**MM-CN-03-0114A**
	*	**AE-N-05-0225**
PROCEEDINGS UNDER THE LOUISIANA	*	
ENVIRONMENTAL QUALITY ACT	*	**Docket Nos. 2004-8083-EQ**
LA. R.S. 30:2001, ET SEQ.	*	**2006-1355-EQ**

SETTLEMENT

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SETTLEMENT

WHEREAS, the Secretary of the State of Louisiana Department of Environmental Quality ("LDEQ"), or his designee, pursuant to the Louisiana Environmental Quality Act, La. R.S. 30:2001, et seq. (the "Act") and the regulations promulgated thereto, is authorized to issue any Order necessary to effectuate the purposes of the Act;

WHEREAS, Placid Refining Company LLC ("Placid") is a limited liability company authorized to do business in the State of Louisiana, and, as a limited liability company, is a person as that term is defined in La. R.S. 30:2004;

WHEREAS, Placid owns and operates the Port Allen Refinery (the "Refinery") located at 1940 Louisiana Highway 1 North, Port Allen, West Baton Rouge Parish, Louisiana;

WHEREAS, Placid, in its operation of the Refinery, is subject to the Act and the regulations promulgated thereto;

WHEREAS, the LDEQ issued to Placid a Consolidated Compliance Order & Notice of Potential Penalty for the Refinery, dated June 11, 2004, Enforcement Tracking No. MM-CN-03-0114;

WHEREAS, the LDEQ issued to Placid an Amended Consolidated Compliance Order & Notice of Potential Penalty for the Refinery, dated January 10, 2006, Enforcement Tracking No. MM-CN-03-0114A;

WHEREAS, the LDEQ issued to Placid a Notice of Violation, dated January 19, 2006, Enforcement Tracking No. AE-N-05-0225;

WHEREAS, Placid has identified and self-reported certain potential violations of environmental regulations and agreed that settlement of these issues in this Settlement is the most appropriate means of resolving these matters;

WHEREAS, Placid denies and continues to deny that it has violated any law or regulation with respect to its operation of the Refinery;

WHEREAS, Placid has volunteered to enter into negotiations with LDEQ regarding the above referenced actions;

WHEREAS, the United States Environmental Protection Agency has been fully informed regarding matters addressed in this Settlement and has participated in meetings and conference calls as requested during discussions leading to the Settlement;

WHEREAS, Placid has agreed to undertake the installation of air pollution control equipment and enhancements to air pollution management practices at the Refinery to reduce air emissions;

NOW, THEREFORE, without any admission of fact or law, LDEQ and Placid hereby agree as follows:

I. AUTHORITY TO ENTER INTO SETTLEMENT

1. The Secretary of LDEQ has the authority to enter into this Settlement pursuant to La. R.S. 30:2001, et seq., including in pertinent part, La. R.S. 30:2025, La. R.S. 30:2050.3, and La. R.S. 30:2050.7.

II. APPLICABILITY AND BINDING EFFECT

2. The provisions of this Settlement shall apply to the Refinery. The provisions of this Settlement shall be binding upon LDEQ and Placid and its officers, successors and assigns.

3. Placid agrees not to contest the validity of this Settlement in any subsequent proceeding to implement or enforce its terms.

4. Effective from the Effective Date of this Settlement until its termination, Placid

agrees that its Refinery is covered by this Settlement. Effective from the Effective Date of this Settlement until its termination, Placid shall give written notice of this Settlement to any successors in interest prior to the transfer of ownership or operation of any portion of the Port Allen Refinery and shall provide a copy of this Settlement to any successor in interest. Placid shall notify LDEQ in accordance with the notice provisions set forth in Paragraph 75 (Notice), of any successor in interest at least thirty (30) days prior to any such transfer.

5. Placid shall condition any transfer, in whole or in part, of ownership of, operation of, or other interest (exclusive of any non-controlling non-operational interest) in, the Port Allen Refinery upon the execution by the transferee of a modification to this Settlement, which makes the terms and conditions of this Settlement that apply to such Port Allen Refinery applicable to the transferee. In the event of any such transfer of ownership or other interest in the Port Allen Refinery, Placid shall be released from the obligations and liabilities of this Settlement provided that, at the time of such transfer, the transferee has the financial and technical ability to assume and has contractually agreed with Placid to assume these obligations and liabilities.

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

III. OBJECTIVES

7. It is the purpose of LDEQ and Placid in this Settlement to further the objectives of the Louisiana Environmental Quality Act.

IV. DEFINITIONS

8. Unless otherwise defined herein, terms used in this Settlement shall have the meaning given to those terms in the Louisiana Environmental Quality Act, La. R.S. 30:2001, et seq., and the implementing regulations promulgated thereunder. The following terms used in this Settlement shall be defined for purposes of this Settlement 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. "Acid Gas" does not include NSPS J quality fuel gas burned in fuel gas combustion devices (40 C.F.R. § 60.104.).

B. "Acid Gas Flaring" or "AG Flaring" shall mean the combustion of 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 Port Allen 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 the Port Allen Refinery are identified in Appendix A to this Settlement. To the extent that, during the duration of this Settlement, the Port Allen 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 be covered under this Settlement.

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 at an AG Flaring Device 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. "Controlled Heaters and Boilers" shall mean the heaters and boilers with a capacity greater than 40 mmBTU/hr (HHV) at the Port Allen Refinery; the current Controlled Heaters and Boilers are listed in Appendix C.

H. "Covered Heaters and Boilers" shall mean the heaters and boilers that have been permitted by LDEQ, have been installed, and are being operated by Placid at the Port Allen Refinery; the current Covered Heaters and Boilers are listed in Appendix B.

I. " CO" shall mean carbon monoxide.

J. "Current Generation Ultra-Low NO_x Burners" or "Current Generation ULNBs" shall mean those burners that designed to achieve a NO_x emission rate of less than or equal to 0.040 lb NO_x/mmBTU (HHV) when firing natural gas at 3% stack oxygen at full design load without air preheat, even if upon installation actual emissions exceed 0.040 lb NO_x/mmBTU (HHV).

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

L. "Effective Date of this Settlement" or "Effective Date" shall mean the date the Settlement has been executed by all parties.

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

N. "Flaring Device" shall mean either an AG Flaring Device and/or an HC Flaring Device.

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

P. "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.

Q. "Hydrocarbon Flaring Device" or "HC Flaring Device" shall mean a flaring 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 Port Allen Refinery are identified in Appendix A to this Settlement. To the extent that, during the duration of this Settlement, the Port Allen Refinery utilizes HC Flaring Devices other than those specified in Appendix A for the purpose of combusting any excess volume of a refinery-generated gas other than Acid Gas and/or Sour Water Stripper Gas and/or Tail Gas, those HC Flaring Devices shall be covered under this Settlement.

R. "Hydrocarbon Flaring Incident" or "HC Flaring Incident" shall mean the continuous or intermittent flaring of refinery-generated gases, except for Acid Gas and/or Sour Water Stripper Gas and/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 any 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.

S. "LDEQ" shall mean the Louisiana Department of Environmental Quality and any successor departments or agencies of the State of Louisiana.

T. "Malfunction" shall mean, as specified in 40 C.F.R. § 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."

U. "Next Generation Ultra-Low NO_x Burners" or "Next Generation ULNBs" shall mean those burners 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.

V. "NO_x" shall mean nitrogen oxides.

W. "Paragraph" shall mean a portion of this Settlement identified by an arabic numeral.

X. "PM" shall mean particulate matter.

Y. "Parties" shall mean LDEQ and Placid and "Party" shall mean LDEQ or Placid, as applicable.

Z. "Placid" shall mean Placid Refining Company LLC, its successors and assigns.

AA. "Port Allen Refinery" or "Refinery" shall mean the refinery owned and operated by Placid in Port Allen, Louisiana.

BB. "Qualifying Controls" for the purposes of NO_x control technology for heaters and boilers, shall mean:

i. SCR or SNCR;

ii. Current Generation Ultra-Low NO_x Burners or Next Generation Ultra-Low NO_x Burners;

iii. Other technologies or combination of technologies which Placid demonstrates, to LDEQ's satisfaction, will reduce the Refinery-wide weighted average NO_x emissions to 0.044 lbs per mmBtu or lower; or

iv. The permanent shutdown of a heater or boiler with revocation of its operating permits.

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

DD. "Scheduled Maintenance" shall mean any shutdown of any emission unit or control equipment that Placid schedules at least fourteen (14) days in advance of the shutdown for the purpose of undertaking maintenance of such unit or control equipment.

EE. "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.

FF. "Selective Non-Catalytic Reduction" or "SNCR" shall mean an air pollution control system consisting of ammonia or urea injection without a catalyst bed to selectively catalyze the

reduction of NO_x with ammonia or urea to nitrogen and water.

GG. "Settlement" shall mean this settlement agreement including any and all appendices attached to this settlement agreement.

HH. "Shutdown" shall mean the cessation of operation of equipment for any purpose.

II. "Sour water stream" shall mean a stream that: (i) contains ammonia or sulfur compounds (usually hydrogen sulfide) at concentrations of 10 ppm by weight or more; (ii) is generated from separation of water from a feed stock, intermediate, or product that contained ammonia or sulfur compounds; and (iii) requires treatment to remove the ammonia or sulfur compounds.

JJ. "Sour water stripper" means a unit that: (i) is designed and operated to remove ammonia or sulfur compounds (usually hydrogen sulfide) from sour water streams; (ii) has the sour water streams transferred to the stripper through hard piping or other enclosed system; and (iii) is operated in such a manner that the offgases are sent to a sulfur recovery unit, processing unit, incinerator, flare, or other combustion device.

KK. "Sour Water Stripper Gas" or "SWS Gas" shall mean the gas produced by the process of stripping refinery sour water streams.

LL. "Startup" shall mean the setting in operation of equipment for any purpose.

MM. "SO_2" shall mean sulfur dioxide.

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

OO. "Tail Gas" or "TG" shall mean exhaust from a Claus train and/or a TGTU.

PP. "Tail Gas Treatment Unit" or "TGTU" shall mean a control system utilizing a technology for reducing emissions of sulfur compounds from a Sulfur Recovery Plant.

QQ. "Tail Gas Incident" shall mean, for the purpose of this Settlement, combustion of Tail Gas that either is:

i. Combusted in a flare and results in 500 pounds or more of SO_2 emissions in any 24 hour period; or

ii. Combusted in a thermal incinerator and 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 (rolling twelve-hour average) shall be used to determine the amount of excess SO_2 emissions from the incinerator.

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

SS. "Upstream Process Units" shall mean all amine contactors, amine scrubbers, and sour water strippers at the Port Allen 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.

V. AFFIRMATIVE RELIEF/ENVIRONMENTAL PROJECTS

9. NOx Emissions Reductions from the Refinery FCCU.

A. By no later than December 31, 2016, Placid shall limit NOx emissions from the Refinery FCCU to 30 ppmvd NOx or less on a 365-day rolling average basis and 60 ppmvd NOx or less on a 7-day rolling average basis, each at 0% Oxygen ("O_2"). For purposes of this Settlement only, NOx emissions during periods of Startup, Shutdown, or Malfunction shall not be used in determining compliance with the 60 ppmvd 7-day emissions limit, provided that during such periods Placid implements good air pollution control practices to minimize NOx emissions. Placid currently meets its permit limit for NOx emissions from the Refinery FCCU of 80 ppmvd NOx or less on a 365-day rolling average basis at 0% O_2 and will continue to meet

this permit limit until the new emissions limits set forth in this Paragraph 9.A become effective.

B. By no later than the Effective Date of this Settlement, Placid shall use a NOx CEMS to monitor the performance of the Refinery FCCU and to report compliance with the terms and conditions of this Settlement.Placid shall make CEMS data available to LDEQ upon demand.

10. SO_2 Emissions Reductions from the Refinery FCCU.

A. Summary. Placid has implemented a program to reduce SO_2 emissions from its FCCU by the installation and operation of a Wet Gas Scrubber ("WGS") at the Refinery FCCU. Placid will continue to operate the WGS at the Refinery FCCU. Placid has incorporated lower SO_2 emission limits into permits and has demonstrated, and will continue to demonstrate, compliance with the lower emissions limits through the use of CEMS.

B. Installation and Operation of WGS on the Refinery FCCU. Placid has completed installation and begun operation of a WGS on emissions from the Refinery FCCU. Placid designed the WGS to achieve an SO_2 concentration of 25 ppmvd or lower on a 365-day rolling average basis and 50 ppmvd on a 7-day rolling average basis, each corrected to 0% O_2. Placid is complying, and shall continue to comply, with an SO_2 concentration limit of 25 ppmvd or lower on a 365-day rolling average basis and 50 ppmvd on a 7-day rolling average basis, each corrected to 0% O_2.

C. Demonstrating Compliance with FCCU SO_2 Emission Limits. Placid has installed and is using an SO_2 and O_2 CEMS to monitor performance of the Refinery FCCU, and Placid shall use such SO_2 and O_2 CEMS to report compliance with the terms and conditions of this Settlement. Placid shall make CEMS and process data available to the LDEQ upon demand as soon as practicable. Placid has installed and shall certify, calibrate, maintain, and operate all CEMS required by this Paragraph in accordance with the requirements of 40 C.F.R. Part 60

Appendices A and F and the applicable performance specification test of 40 C.F.R. Part 60 Appendix B. These CEMS will be used to demonstrate compliance with emission limits.

11. PM Emissions Reductions from the Refinery FCCU.

A. General. Placid has implemented a program to reduce particulate matter ("PM") emissions from the Refinery FCCU by the installation and operation of a WGS.

B. Installation and Operation of WGS on the Refinery FCCU. Placid has completed installation and begun operation of a WGS on emissions from its FCCU. Placid designed the WGS to achieve an emission limit of 0.5 pound PM per 1,000 pounds of coke burned on a 3-hour average basis. Placid is complying, and shall continue to comply, with an emission limit of 0.5 pounds PM per 1,000 pounds of coke burned on a 3-hour average basis.

C. PM Testing for the Refinery FCCU. Placid follows, and shall continue to follow, the test protocol specified in 40 C.F.R. § 60.106(b)(2) using EPA Reference Method 5B or 5F to measure PM emissions for the Refinery FCCU. Placid proposed and submitted the test protocol to LDEQ, and LDEQ approved that test protocol. Placid conducted the first test on February 19, 2009 and submitted the results to LDEQ on April 10, 2009. Placid shall continue to conduct annual PM tests on the Refinery FCCU and shall submit the results in the first Calendar Quarterly Report due under Section IX that is at least three (3) months after the test. Upon demonstrating through at least three (3) annual tests that the PM limits are not being exceeded at the Refinery FCCU, Placid may request LDEQ approval to conduct tests less frequently than annually. Such approval will not be unreasonably withheld.

D. Opacity Monitoring at the FCCU. As an alternative to the requirement to install, certify, maintain, and operate a Continuous Opacity Monitoring System ("COMS") to monitor opacity at the Refinery FCCU in accordance with 40 C.F.R. Part 60 Appendices A and F and the

applicable performance specification test of 40 C.F.R. Part 60 Appendix B, Placid requested from LDEQ, and on January 31, 2008, was granted, an alternative monitoring plan ("AMP") to demonstrate compliance with the NSPS opacity limits at 40 C.F.R. § 60.102(a)(2) for the FCCU. Placid shall utilize the AMP in lieu of a COMS.

12. CO Emissions Reductions from the Refinery FCCU.

A. Summary. Placid shall continue to reduce CO emissions from the Refinery FCCU by the use of full combustion.

B. Emissions Limits. The Refinery FCCU has met, and shall continue to meet, an emission limit of 500 ppmvd CO corrected to 0% O_2 on a 1-hour average basis and 100 ppmvd CO corrected to 0% O_2 on a 365-day rolling average basis.

C. Demonstrating Compliance with Emission Limits. Placid has installed and is using and shall continue to use a CO and O_2 CEMS to monitor compliance of the Refinery FCCU with the terms and conditions of this Settlement. Placid shall make CEMS and process data available to LDEQ upon demand as soon as practicable. Placid has installed and shall certify, calibrate, maintain, and operate all CEMS required by this Paragraph in accordance with the requirements of 40 C.F.R. Part 60 Appendices A and F and the applicable performance specification test of 40 C.F.R. Part 60 Appendix B. These CEMS will be used to demonstrate compliance with emission limits.

13. NSPS Applicability of the Refinery FCCU Catalyst Regenerator.

The Refinery FCCU catalyst regenerator 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 Subpart J, and shall be subject to and comply with the requirements of NSPS Subparts A and J for each of the following pollutants by the following dates:

Refinery FCCU	SO_2	Effective Date of this Settlement
	PM	Effective Date of this Settlement
	CO	Effective Date of this Settlement
	Opacity	Effective Date of this Settlement

For the FCCU catalyst regenerator that becomes an affected facility under NSPS Subpart J pursuant to this Paragraph 13, execution of this Settlement and compliance with the relevant monitoring requirements of this Settlement for the FCCU will satisfy the notice requirements of 40 C.F.R. § 60.7(a) and the initial performance test requirement of 40 C.F.R. § 60.8(a).

14. NOx Emissions Reductions from Heaters and Boilers.

A. Control of NOx Emissions from Heaters and Boilers.

i. Placid shall install one or any combination of Qualifying Controls on, or otherwise limit NOx emissions from, the Covered Heaters and Boilers such that: (i) no later than the Effective Date of this Settlement, the Refinery-wide weighted-average NOx emissions from all Covered Heaters and Boilers is no greater than 0.064 lbs. NOx/mmBtu ("the Interim Limit"); and (ii) no later than December 31, 2016, the refinery-wide weighted-average NOx emissions from all Covered Heaters and Boilers is no greater than 0.044 lbs. NOx/mmBtu ("the Final Limit"). Any heaters and boilers that may be permitted by LDEQ, installed, and operated by Placid at the Port Allen Refinery in the future also will be subject to the Final Limit by no later than December 31, 2016 and will not cause the refinery-wide weighted average NOx emissions from all Covered Heaters and Boilers, as then in existence, to be any greater than the Final Limit as of December 31, 2016.

ii. Appendix B to this Settlement contains an initial list of the Covered Heaters and Boilers. This list identifies constructed heaters and boilers at the Port Allen Refinery and provides the following information concerning the Covered Heaters and Boilers:

(a) Placid's designation for the heater or boiler;

(b) The heat input capacity and the source of such information ("heat input capacity"). For the purposes of this subparagraph, the heat input capacity for each Covered Heater or Boiler shall be that provided in the applicable permit limitation (annual average hourly firing rate) based on the higher heating value ("HHV") for the fuel;

(c) All applicable NOx emission limits, in pounds per million BTU; and

(d) Whether a NOx CEMS is installed and operating.

iii. Placid shall submit to LDEQ an annual update to the initial list of Covered Heaters and Boilers and the initial list of Controlled Heaters and Boilers on or before March 31 of each calendar year beginning in 2012 (covering the prior calendar year). Upon receipt by LDEQ, such lists shall replace Appendices B and C to this Settlement.

iv. On or before July 1, 2012, Placid shall submit to LDEQ a compliance plan for attainment of both the Interim and Final Limits for refinery-wide weighted-average NOx emissions for all Covered Heaters and Boilers. The compliance plan will reflect Placid's then-current strategy for satisfying the requirements of Paragraph 14.A.i. Placid shall not be bound by the terms in this compliance plan.

v. Placid shall demonstrate compliance with the refinery-wide weighted-average NOx emissions limits for all Covered Heaters and Boilers by meeting the following inequalities:

(a) For the Interim Limit:

$$0.064 \text{ lbs. NOx/MMBTU} \geq \sum_{i}^{n} (ELR_i \times HIR_i) / \sum_{i}^{n} HIR_i$$

Where:

ELR_i = The relevant NOx emission limit for Covered Heater or Boiler "i" in lbs.-NOx per Million BTU (HHV);

HIR_i = Heat input capacity of Covered Heater or Boiler "i" as reported in the

latest annual update to the initial inventory; and

n = Total number of Covered Heaters and Boilers.

(b) For the Final Limit:

$$0.044 \text{ lbs. NOx/MMBTU} \geq \sum_{i}^{n} (ELR_i \times HIR_i) / \sum_{i}^{n} HIR_i$$

Where:

ELR_i = The relevant NOx emission limit for Covered Heater or Boiler "i" in lbs.-NOx per Million BTU (HHV);

HIR_i = Heat input capacity of Covered Heater or Boiler "i" as reported in the latest annual update to the initial inventory; and

n = Total number of Covered Heaters and Boilers.

vi. Subject to Paragraph 14.A.i, within 18 months after the Effective Date of this Settlement, Placid shall monitor each Covered Heater or Boiler as follows:

(a) For a Covered Heater or Boiler with a Heat Input Capacity greater than 100 MMBTU/hr (HHV), Placid shall install or continue to operate a CEMS for NOx;

(b) For a Covered Heater or Boiler with a Heat Input Capacity of less than or equal to 100 MMBTU/hr (HHV), Placid shall conduct an initial performance test and any periodic tests that may be required by LDEQ. Placid shall report the results of the initial performance testing to LDEQ. Placid shall use Method 7E or an EPA-approved alternative test method to conduct initial performance testing for NOx emissions required by this subparagraph.

vii. With respect to each CEMS required by Paragraph 14.A.vi, in lieu of the requirements of 40 C.F.R. Part 60, Appendix F §§ 5.1.1, 5.1.3, and 5.1.4, Placid must conduct either a Relative Accuracy Audit ("RAA") or a Relative Accuracy Test Audit ("RATA") on each CEMS at least once every three years. Placid must also conduct Cylinder Gas Audits ("CGA") each calendar quarter during which a RAA or a RATA is not performed.

viii. Placid shall install, conduct a performance evaluation, calibrate, maintain, and operate the CEMS required by Paragraph 14, in accordance with the requirements of 40 C.F.R. Part 60 Appendices A and F and the applicable performance specification test of 40 C.F.R. Part 60 Appendix B. All CEMS required by this Paragraph will be used to demonstrate compliance with emission limits, and shall be operated and data recorded pursuant to applicable law.

B. Recordkeeping and Reporting. Commencing in 2013, Placid shall submit a report to LDEQ by no later than March 31 of each calendar year (covering the prior calendar year) about the progress of installation of NOx Qualifying Controls required by this Paragraph 14 and other requirements of this Paragraph. This report shall contain:

(i) A list of all Controlled Heaters and Boilers on which NOx Qualifying Controls were was installed;

(ii) The type of NOx Qualifying Controls that were 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 to date;

(iv) A list of all heaters and boilers scheduled to have NOx Qualifying Controls installed during the next calendar year, the projected date of installation, and the type of NOx Qualifying Controls that will be installed on those units; and

(v) An identification of proposed and established permit limits applicable to each heater or boiler for which NOx Qualifying Controls have been installed pursuant to this Paragraph.

15. SO_2 Emissions Reductions from and NSPS Applicability of Heaters and Boilers.

A. General. Placid shall undertake measures to reduce SO_2 emissions from refinery heaters and boilers by restricting hydrogen sulfide ("H_2S") in refinery fuel gas and by agreeing not to continue and/or commence the burning of Fuel Oil.

B. NSPS Applicability of Heaters and Boilers. Upon the Effective Date of this

Settlement, the heaters and boilers at the Port Allen 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. By no later than the Effective Date of this Settlement, Placid shall install, conduct a performance evaluation, calibrate, maintain and operate a fuel gas CEMS at the Port Allen Refinery in accordance with the requirements of 40 C.F.R. Part 60 Appendices A and F and the applicable performance specification test of 40 C.F.R. Part 60 Appendix B. These CEMS will be used to demonstrate compliance with emission limits. For any heater or boiler that is or becomes an affected facility under NSPS Subpart J pursuant to this Paragraph, execution of this Settlement and compliance with the relevant monitoring requirements of this Settlement shall satisfy the notice requirements of 40 C.F.R. § 60.7(a) and the initial performance test requirement of 40 C.F.R. § 60.8.

C. Elimination of Fuel Oil Burning. From the Effective Date of this Settlement through termination, Placid shall continue not to burn Fuel Oil in any combustion unit. This prohibition is not intended to limit, nor shall be interpreted as limiting, the use of Torch Oil in any FCCU regenerator to assist in starting, restarting, maintaining hot standby, or maintaining regenerator heat balance.

16. NSPS Applicability of and Compliance for the Refinery Sulfur Recovery Plant.

A. NSPS Applicability of Sulfur Recovery Plant.

i. Refinery Sulfur Recovery Plant Description. Placid owns and operates one Sulfur Recovery Plant located at the Port Allen Refinery. The Sulfur Recovery Plant at the Port Allen Refinery ("Refinery SRP") consists of two units: one with a processing capacity of 20 long tons per day ("LTD") and the other with a processing capacity of 30 LTD, Units 1 and 2, respectively. Unit 1 and Unit 2 each have their own tail gas treatment unit (TGTU) as a control

device. Unit 1 and Unit 2 each have their own incinerator. When the TGTU for Unit 1 is down, Placid can use the TGTU for Unit 2. When the incinerator for Unit 1 is down, Placid can use the incinerator for Unit 2. When the incinerator for Unit 2 is down, Placid can use the incinerator for Unit 1. Unit 1 and Unit 2 each have their own SO_2 CEMS.

ii. **Refinery Sulfur Recovery Plant NSPS Applicability.** The Refinery SRP at the Port Allen Refinery (Unit 1 and Unit 2) is an affected facility under NSPS Subpart J as of the Effective Date of this Settlement and shall comply with all applicable requirements of 40 C.F.R. Part 60, Subparts A and J by such date.

B. Sulfur Pit Emissions. Placid shall route all refinery SRP sulfur pit emissions from the Refinery SRP so that sulfur pit emissions to the atmosphere either are eliminated or are included and monitored as part of the applicable unit's Tail Gas emissions that meet 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)(i), by no later than the Effective Date of this Settlement.

C. Sulfur Recovery Plant Emissions Compliance.

i. By no later than the Effective Date of this Settlement, Placid shall, for all periods of operation of the Refinery SRP, comply with 40 C.F.R. § 60.104(a)(2), except during periods of Startup, Shutdown or Malfunction of the overall Refinery SRP or during a Malfunction of a Refinery SRP TGTU. For the purpose of determining compliance with the Sulfur Recovery Plant emission limits of 40 C.F.R. § 60.104(a)(2), Claus unit Tail Gas bypasses of a Refinery SRP TGTU to a Refinery SRP incinerator are covered by the NSPS Subpart A startup and shutdown exemptions only when such Refinery SRP TGTU bypasses occur as part of executing the standard operating procedure for the Startup or Shutdown of the overall Refinery SRP. The NSPS Subpart A startup and shutdown exemptions do not apply to planned Refinery SRP TGTU

outages where Claus unit Tail Gas is bypassed to a Refinery SRP incinerator while routine maintenance is performed on the out-of-service Refinery SRP TGTU. The malfunction exemption set forth in NSPS Subpart A (and as defined in this Settlement at Paragraph 8) does apply to unplanned Refinery SRP TGTU outages where Claus unit Tail Gas is bypassed to a Refinery SRP incinerator as a result of a Malfunction.

ii. By no later than the Effective Date of this Settlement, Placid shall monitor all emission points (stacks) to the atmosphere for Tail Gas emissions from the Refinery SRP, and shall report excess emissions, as required by 40 C.F.R. §§ 60.7(c), 60.13, and 60.105. During the life of this Settlement, Placid shall continue to conduct emissions monitoring from the Refinery SRP with CEMS at all of the emission points, unless an SO_2 alternative monitoring procedure has been approved by LDEQ or EPA, as applicable, per 40 C.F.R. § 60.13(i), for any of the emission points. The requirement for continuous monitoring of the Refinery SRP emission points is not applicable to the Acid Gas Flaring Devices used to flare the Acid Gas or Sour Water Stripper Gas for the Refinery SRP.

iii. At all times, including periods of Startup, Shutdown, and Malfunction, Placid shall, to the extent practicable, operate and maintain the Refinery SRP and the Refinery SRP TGTUs, and any incinerators, in accordance with Placid's obligation to minimize Sulfur Recovery Plant emissions through implementation of good air pollution control practices as required in 40 C.F.R. § 60.11(d).

D. <u>Good Operation and Maintenance</u>.

i. By no later than 270 days from the Effective Date of this Settlement, Placid shall, for the Refinery SRP, submit to LDEQ, a summary of a plan, implemented or to be implemented, for maintenance and operation of the Refinery SRP, any incinerators, 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 Placid's approaches for exercising good air pollution control practices for minimizing SO_2 emissions at the Refinery. The PMO Plan shall provide for continuous operation of the Refinery SRP between Scheduled Maintenance turnarounds with minimization of emissions from the Refinery SRP. The PMO Plan shall include, but not be limited to, sulfur shedding procedures, Startup and Shutdown procedures, emergency procedures and schedules to coordinate maintenance turnarounds of the Refinery SRP Claus trains, TGTUs, and any incinerators to coincide with scheduled turnarounds of major Upstream Process Units. The PMO Plan shall have as a goal the elimination of Acid Gas Flaring. Placid shall comply with the PMO Plan at all times, including periods of Startup, Shutdown, and Malfunction of the Refinery SRP. Modifications related to minimizing Acid Gas Flaring and/or SO_2 emissions made by Placid to the PMO Plan shall be summarized in an annual submission to LDEQ.

ii. LDEQ does not, by its review of the PMO Plan and/or by its failure to comment on the PMO Plan, warrant or aver in any manner that any of the actions that Placid may take pursuant to the PMO Plan will result in compliance with the provisions of the Louisiana Environmental Quality Act or its implementing regulations. Notwithstanding LDEQ's review of the PMO Plan, Placid shall remain solely responsible for compliance with the Louisiana Environmental Quality Act and its implementing regulations.

17. NSPS Applicability of and Compliance for Flaring Devices.

A. Identification of and NSPS Applicability for Flaring Devices. Placid owns and operates the Flaring Device identified in Appendix A to this Settlement. Consistent with the terms of this Paragraph 17, the Flaring Device in Appendix A and any new Flaring Device at the

Port Allen Refinery shall be affected facilities, as that term is used in NSPS, 40 C.F.R. Part 60, and shall be subject to and comply with the requirements of 40 C.F.R. Part 60, Subparts A and J for fuel gas combustion devices.

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

i. Continuous or Intermittent, Routinely-Generated Refinery Fuel Gases--Existing Flaring Device.

Placid shall identify all continuous or intermittent, routinely-generated refinery fuel gases that are combusted in the Flaring Device identified in Appendix A and determine whether all such gases are monitored and comply with applicable NSPS Subpart J requirements. By no later than the Effective Date of this Settlement, Placid shall:

a. certify compliance with applicable NSPS requirements and accept NSPS Subpart J applicability for the Flaring Device identified in Appendix A; and

b. operate and maintain a flare gas recovery system to control continuous or routine combustion in the Flaring Device. Use of a properly sized and operated flare gas recovery system on a flare may obviate the need to continuously monitor and maintain records of hydrogen sulfide in the gas as otherwise required by 40 C.F.R. §§ 60.105(a)(4) and 60.7.

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

C. Good Air Pollution Control Practices. For all Flaring Devices identified in Appendix A, Placid shall on or after the Effective Date of this Settlement, comply with the NSPS

obligation to implement good air pollution control practices as required by 40 C.F.R. § 60.11(d) to minimize emissions.

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

By no later than two years from the Effective Date of this Settlement, Placid shall, to the extent reasonably possible, identify the Root Causes of AG Flaring Incidents that occurred between January 1, 2006 and December 31, 2010, at the Port Allen Refinery. Placid shall identify and implement corrective actions to minimize the number and duration of AG Flaring Incidents. Placid also agrees to implement a program to investigate the cause of future AG Flaring Incidents, to take reasonable steps to correct the conditions that have caused or contributed to such AG Flaring Incidents, and to minimize AG Flaring Incidents. Placid shall follow the procedures in this Paragraph 18 to evaluate whether future AG Flaring Incidents are due to Malfunctions or are subject to stipulated penalties. Placid also agrees to undertake the investigative and evaluative procedures in this Paragraph for assessing if future Tail Gas Incidents, as described in Paragraph 18.E, 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 future AG Flaring Incidents and Tail Gas Incidents and require stipulated penalties for future AG Flaring Incidents and Tail Gas Incidents if the Root Causes were not due to Malfunctions.

A. Investigation and Reporting. No later than sixty (60) days following the end of an Acid Gas Flaring Incident, Placid shall submit to LDEQ a report that sets forth the following:

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

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

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

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

v. An analysis of the measures, if any, that are available to reduce the likelihood of a recurrence of an Acid Gas Flaring Incident resulting from the same Root Cause or contributing causes in the future. The analysis shall discuss the alternatives, if any, that are available, the probable effectiveness and cost of the alternatives, and whether or not an outside consultant should be retained to assist in the analysis. Possible design, operation and maintenance changes shall be evaluated. If Placid concludes that corrective action(s) is (are) required under Paragraph 18.B, the report shall include a description of the action(s) and, if not already completed, a schedule for its (their) implementation, including proposed commencement and completion dates. If Placid concludes that corrective action is not required under Paragraph 18.B, the report shall explain the basis for that conclusion;

vi. A statement that: (a) specifically identifies each of the grounds for stipulated penalties in Paragraphs 18.C.i and 18.C.ii of this Settlement 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 18.C.iii of this Settlement, describes which Paragraph (18.C.iii.a or 18.C.iii.b) applies and why; and (c) if an Acid Gas Flaring Incident falls under either Paragraph 18.C.ii or Paragraph 18.C.iii.b, states whether or not Placid asserts a defense to the AG Flaring Incident, and if so, a description of the defense; and

vii. To the extent that investigations of the causes and/or possible corrective actions still are underway on the due date of the report, a statement of the anticipated date by which a follow-up report fully conforming to the requirements of Paragraphs 18.A.iv and 18.A.v shall be submitted; provided, however, that if Placid has not submitted a report or a series of reports containing the information required to be submitted under this Paragraph within the 60 day time period set forth in Paragraph 18.A (or such additional time as LDEQ may allow) after the due date for the initial report for the Acid Gas Flaring Incident, the stipulated penalty provisions of Paragraph 40 shall apply, but Placid shall retain the right to dispute, under the dispute resolution provision of this Settlement, any demand for stipulated penalties that was issued as a result of Placid'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 Placid 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 Placid has requested an extension of time under this Paragraph 18.A.vii.

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

B. Corrective Action.

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

ii. If LDEQ does not notify Placid in writing within thirty (30) days of receipt of the report(s) required by Paragraph 18.A that it objects to one or more aspects of the proposed corrective action(s), if any, and schedule(s) of implementation, if any, then that (those) action(s) and schedule(s) shall be deemed acceptable for purposes of compliance with Paragraph 18.B.i of this Settlement. LDEQ does not, however, by its signing of this Settlement or by its failure to object to any corrective action that Placid 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 Louisiana Environmental Quality Act or its implementing regulations. Notwithstanding LDEQ's review of any plans, reports, corrective measures or procedures under this Paragraph 18, Placid shall remain solely responsible for non-compliance with the Louisiana Environmental Quality Act and its implementing regulations. Nothing in this Paragraph 18 shall be construed as a waiver of LDEQ's rights under the Louisiana Environmental Quality Act and its regulations for future violations of the Act or its regulations.

iii. If LDEQ does object, in whole or in part, to the proposed corrective action(s) and/or

the schedule(s) of implementation, or, where applicable, to the absence of such proposal(s) and/or schedule(s), it shall notify Placid of that fact within thirty (30) days following receipt of the report(s) required by Paragraph 18.A above. If LDEQ and Placid 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 this Settlement.

iv. Nothing in Paragraph 18 shall be construed to limit the right of Placid to take such corrective actions as it deems necessary and appropriate immediately following an Acid Gas Flaring Incident or in the period during preparation and review of any reports required under this Section.

C. Stipulated Penalties.

i. The stipulated penalty provisions of Paragraph 40 shall apply to any Acid Gas Flaring Incident for which the Root Cause was one or more or the following acts, omissions, or events:

a. Inadvertent human error by the personnel charged with the responsibility for the Sulfur Recovery Plant, TGTU, or Upstream Process Units;

b. Failure to follow written procedures by the personnel charged with the responsibility for the Sulfur Recovery Plant, TGTU, or Upstream Process Units; or

c. A failure of equipment that is due to a failure by Placid to operate and maintain that equipment in a manner consistent with good engineering practice.

Except for a force majeure event, Placid shall have no defenses to a demand for stipulated penalties for an Acid Gas Flaring Incident falling under this Paragraph 18.C.i.

ii. The stipulated penalty provisions of Paragraph 40 shall apply to any Acid Gas Flaring Incident that either:

a. Results in emissions of sulfur dioxide at a rate greater than twenty (20.0) pounds per hour continuously for three (3) consecutive hours or more; or

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

In response to a demand by LDEQ for stipulated penalties, LDEQ and Placid agree that Placid shall be entitled to assert a Malfunction and/or force majeure defense with respect to any Acid Gas Flaring Incident falling under this Paragraph 18.C.ii. In the event that the dispute resolution provisions of this Settlement are invoked with respect to a particular matter arising under this Paragraph, nothing in this Paragraph is intended or shall be construed to stop Placid from asserting that, in addition to the Malfunction and/or force majeure defense, the defenses of startup, shutdown, and upset are available for AG Flaring Incidents under 40 C.F.R. § 60.104(a)(1), nor to stop LDEQ from asserting its view that such defenses are not available. If Placid prevails in persuading the dispute resolution decision maker that the defenses of startup, shutdown, and upset are available for the AG Flaring Incidents under 40 C.F.R. § 60.104(a)(1), Placid shall not be liable for stipulated penalties for emissions resulting from startup, shutdown, or upset. If LDEQ prevails in persuading the dispute resolution decision maker that the defenses of startup, shutdown, or upset are not available, Placid shall be liable for such stipulated penalties unless subject to a Malfunction and/or force majeure defense. In the event that a Flaring Incident falls under both Paragraph 18.C.i and Paragraph 18.C.ii, then Paragraph 18.C.i shall apply.

iii. With respect to any Acid Gas Flaring Incident other than those identified in Paragraphs 18.C.i and 18.C.ii, the following provisions shall apply:

a. 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 at the Refinery that occurred since the effective date of this Settlement, 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 Placid shall implement corrective action(s) pursuant to Paragraph 18.B.i.

b. 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 Settlement, then Placid shall be liable for stipulated penalties under Paragraph 40 of this Settlement unless:

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

(2) the Root Cause previously was designated as an agreed-upon malfunction under Paragraph 18.C.iii.a.(1); provided however, that in the event that a dispute arising under this Paragraph is brought pursuant to the dispute resolution provisions of this Settlement, nothing in this Paragraph is intended or shall be construed to stop Placid from asserting its view that, in addition to a Malfunction and/or force majeure defense, the defenses of startup, shutdown, and upset are available for Acid Gas Flaring Incidents under 40 C.F.R. § 60.104(a)(1), nor to stop LDEQ from asserting its view that such defenses are not available. If Placid prevails in persuading the dispute resolution decision maker that the defenses of startup, shutdown, or upset are available, Placid shall not be liable for such stipulated penalties; or

(3) the AG Flaring Incident had as its Root Cause the recurrence of a Root Cause for which Placid had previously developed, or was in the process of developing, a corrective action plan for and for which Placid had not yet completed implementation.

iv. Other than for a Malfunction or force majeure, if no Acid Gas Flaring Incident and no violation of the emission limit under Paragraph 17.B occurs at the Refinery for a rolling 36 month period, then the stipulated penalty provisions of Paragraph 40 shall no longer apply to the Refinery. LDEQ may elect to reinstate the stipulated penalty provision if Placid has an Acid Gas Flaring Incident which would otherwise be subject to stipulated penalties. LDEQ's decision shall not be subject to dispute resolution. Once reinstated, the stipulated penalty provision shall continue for the remaining life of this Settlement for the Refinery.

D. Miscellaneous.

i. Calculation of the Quantity of Sulfur Dioxide Emissions resulting from AG Flaring. For purposes of this Settlement, 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.

ii. Calculation of the Rate of SO_2 Emissions During AG Flaring. For purposes of this Settlement, 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.)

iii. Meaning of Variables and Derivation of Multipliers used in the Equations in Paragraph 18.D.i-ii:

ER = Emission Rate in pounds of SO_2 per hour

FR =	Average Flow Rate to Flaring Device(s) during Flaring, in standard cubic feet per hour
TD =	Total Duration of Flaring in hours
$ConcH_2S$ =	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/2,000 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 LDEQ in writing. 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 18.A shall include the data used in the calculation and an explanation of the basis for any estimates of missing data points.

E. Tail Gas Incidents.

i. Investigation, Reporting, Corrective Action and Stipulated Penalties. For Tail Gas Incidents, Placid shall follow the same investigative, reporting, corrective action and assessment of stipulated penalty procedures as those outlined in Paragraphs 18.A - 18.C for Acid Gas Flaring Incidents. Those procedures shall be applied to TGTU shutdowns, bypasses of a TGTU, unscheduled shutdowns of a Sulfur Recovery Plant, or other miscellaneous unscheduled Sulfur Recovery Plant events which result in a Tail Gas Incident.

ii. Calculation of the Quantity of SO_2 Emissions resulting from a Tail Gas Incident.

For the purposes of this Settlement, 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:

a. If the Tail Gas Incident is combusted in a flare the SO_2 emissions are calculated using the methods outlined in Paragraph 18.D; or

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

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

Where:

ER_{TGI} = Emissions from the Tail Gas Incident 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% O_2 on a rolling twelve hour average, in each 24 hour period of the Tail Gas 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 Tail Gas 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% O_2, for each hour of the Tail Gas Incident

% O_2 = O_2 concentration (CEMS data) in the incinerator exhaust gas in volume % on dry basis for each hour of the Tail Gas 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.

19. Control of Hydrocarbon Flaring Incidents. Placid shall identify the causes of HC Flaring Incidents that occurred between January 1, 2006 and December 31, 2010 at the Port Allen Refinery. Placid shall identify and implement corrective actions to minimize the number and duration of HC Flaring Incidents. For future Hydrocarbon Flaring Incidents, Placid shall follow the same investigative, reporting, and corrective action procedures as those outlined in Paragraphs 18.A - 1 8.B for Acid Gas Flaring Incidents; provided however, that in lieu of analyzing possible corrective actions under Paragraph 18.A.v and taking interim and/or long-term corrective action under Paragraph 18.B.i for a Hydrocarbon Flaring Incident attributable to the Startup or Shutdown of a unit that Placid has previously analyzed under this Paragraph 19, Placid may identify such prior analysis when submitting the report required under this Paragraph 19. Stipulated penalties under either Paragraphs 18.C or 40 shall not apply to Hydrocarbon Flaring Incident(s). The formulas at Paragraph 18.D, used for calculating the quantity and rate of sulfur dioxide emissions during AG Flaring Incidents, shall be used to calculate the quantity and rate of sulfur dioxide emissions during HC Flaring Incidents.

20. Benzene Waste NESHAP Program Enhancements.

In addition to continuing to comply with all applicable requirements of 40 C.F.R. Part 61, Subpart FF ("Benzene Waste NESHAP" or "Subpart FF"), Placid agrees to undertake, at the Port Allen Refinery, the measures set forth in Paragraphs 20.B through 20.V to ensure continuing compliance with Subpart FF and to minimize or eliminate fugitive benzene waste emissions.

A. Current Compliance Status. As of the Effective Date of this Settlement, Placid believes that the Port Allen Refinery has a Total Annual Benzene ("TAB") of less than 10 Mg/yr. Placid will review and verify the TAB at the Port Allen Refinery consistent with the

requirements of Paragraph 20.C.

B. Refinery Compliance Status Changes. If at any time from the Effective Date of this Settlement through its termination, the Port Allen Refinery is determined to have a TAB equal to or greater than 10 Mg/yr, Placid shall comply with the compliance option set forth at 40 C.F.R. 61.342(e) (hereinafter referred to as the "6 BQ compliance option").

C. One-Time Review and Verification of the Port Allen Refinery's TAB.

i. Phase One of the Review and Verification Process. By no later than 270 days from the Effective Date of this Settlement, Placid shall complete a compliance review of the Benzene Waste NESHAP and verification of the TAB of the Port Allen Refinery. For the Port Allen Refinery, the review and verification process shall include, but not be limited to: (a) an identification of each waste stream that is required to be included in the Port Allen Refinery's TAB (e.g., slop oil (flo ating oil and solids that accumulate on the surface of an oil-water separator), tank water draws (water drawn off a tank), spent caustic (an industrial caustic liquor that has become loaded and is no longer useful), desalter rag layer dumps (the rag layer is an emulsion of water, paraffin, and oil which develops between the oil and water layers; a desalter rag layer is the rag layer that is generated in the desalter; and the dump is when it is removed and disposed of), desalter vessel process sampling points (sites on the desalter where sampling is done), other sample wastes (lab samples, quality assurance samples, and whatever other samples are taken and become wastes), maintenance wastes (waste derived from maintenance activities at the Refinery, e.g., benzene residue from emptying and cleaning out a tank), and turnaround wastes (waste generated when the facility shuts down for a turnaround)) that meet the definition of waste under Subpart FF; (b) a review and identification of the calculations and/or measurements used to determine the flows of each waste stream for the purpose of ensuring the

accuracy of the annual waste quantity for each waste stream; (c) an identification of the benzene concentration in each waste stream, including sampling for benzene concentration at no less than 10 waste streams at the Port Allen Refinery 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, in accordance with 40 C.F.R. 61.355(c)(2), for streams not sampled; and (d) an identification of whether or not the stream is controlled consistent with the requirements of Subpart FF. By no later than ninety (90) days following the completion of Phase One of the review and verification process, Placid shall submit to LDEQ 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 (a) through (d) of this Paragraph 20.C.i.

ii. Phase Two of the Review and Verification Process. Based on LDEQ's review of the BWN Compliance Review and Verification Report(s), LDEQ may select up to 20 additional waste streams at the Port Allen Refinery for sampling for benzene concentration. Placid shall conduct the required sampling and submit the results to LDEQ within one hundred twenty (120) days of receipt of LDEQ's request. Placid shall use the results of this additional sampling to reevaluate the TAB and the uncontrolled benzene quantity and to amend the BWN Compliance Review and Verification Report, as needed. To the extent that LDEQ requires Placid to re-sample a Phase One waste stream as part of this Phase Two review, Placid may average the results of the two sampling events. Placid shall submit an amended BWN Compliance Review and Verification Report within ninety (90) days following the date of the completion of the required Phase Two sampling, if Phase Two sampling is required by LDEQ. This amended BWN Compliance Review and Verification Report will supersede and replace the originally-

submitted BWN Compliance Review and Verification Report. If Phase Two sampling is not required by LDEQ, the originally-submitted BWN Compliance Review and Verification Report will constitute the final report.

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

i. Amended TAB Reports. If the results of the BWN Compliance Review and Verification Report indicate that the Port Allen Refinery's most recently-filed TAB report is inaccurate and/or does not satisfy the requirements of Subpart FF, Placid shall submit, by no later than one hundred twenty (120) days after completion of the BWN Compliance Review and Verification Report, an amended TAB report to LDEQ. Placid's BWN Compliance Review and Verification Report shall be deemed an amended TAB report for purposes of this Settlement and Subpart FF reporting to LDEQ.

ii. If the results of the BWN Compliance Review and Verification Report indicate that the Port Allen Refinery has a TAB of over 10 Mg/yr, Placid shall submit to LDEQ by no later than 180 days after completion of the BWN Compliance Review and Verification Report, a plan that identifies with specificity the compliance strategy and schedule that Placid will implement to ensure that the Port Allen Refinery complies with the 6 BQ compliance option as soon as practicable but no later than two years from the date that LDEQ approves such plan and schedule.

iii. Review and Approval of Plans Submitted Pursuant to Paragraph 20.D.ii. Any plan submitted pursuant to Paragraph 20.D.ii shall be subject to the approval of, disapproval of, or modification by LDEQ. Within ninety (90) days after receiving any notification of disapproval or request for modification from LDEQ, Placid shall submit to the LDEQ a revised plan that responds to all identified deficiencies. Unless LDEQ responds to Placid's revised plan within sixty (60) days, Placid shall implement its proposed revised plan.

iv. Certification of Compliance with the 6 BQ Compliance Option. By no later than

thirty (30) days after completion of the implementation of all actions, if any, required pursuant to Paragraph 20.D.ii to come into compliance with the 6 BQ compliance option, Placid shall submit its report and certification to LDEQ that, as to the Refinery, the Refinery complies with the Benzene Waste NESHAP.

E. Review. By no later than one year from the Effective Date of this Settlement, Placid shall modify existing management of change procedures required pursuant to 29 C.F.R. 1910.119(l) or develop a new program to review process and project information for the Port Allen Refinery, including but not limited to construction projects, to ensure that all new benzene waste streams are included in the Port Allen Refinery's waste stream inventory during the life of the Settlement.

F. LELAP Laboratories. All laboratories that Placid uses to perform analyses of Placid's Benzene Waste NESHAP samples shall be properly accredited under the Louisiana Environmental Laboratory Accreditation Program provided for in LAC 33:I.Subpart 3 ("LELAP").

G. Benzene Spills. Beginning no later than the Effective Date of this Settlement, (i) Placid shall review each spill of a material containing benzene to determine whether more than 10 pounds of benzene waste was generated in any twenty-four hour (24) hour period, and (ii) if a spill generated more than 10 pounds of benzene waste in a twenty-four (24) hour period, Placid shall include the benzene generated by such spill in the TAB and in the uncontrolled benzene quantity calculations for the Port Allen Refinery in accordance with the applicable compliance option as required by Subpart FF.

H. Training.

i. By no later than ninety (90) days after the Effective Date of this Settlement, Placid shall develop and begin implementation of annual (i.e., once each calendar year) training for all employees asked to draw benzene waste samples.

ii. Additional Training. If and when the Port Allen Refinery's TAB reaches 10 Mg/yr,

Placid shall comply with the following. Placid shall complete the development of standard operating procedures for all control equipment used to comply with the Benzene Waste NESHAP. Within 180 days of the discovery that the Port Allen Refinery's TAB is greater than 10 Mg/yr, Placid shall complete an initial training program regarding these procedures for all operators assigned to this equipment. Comparable training shall also be provided to any persons who subsequently become operators, prior to their assumption of this duty. Until termination of this Settlement, "refresher" training in these procedures shall be performed at a minimum on a three (3) year cycle.

Placid shall propose a schedule for training at the same time that it proposes a plan, pursuant to Paragraph 20.D.ii, that identifies the compliance strategy and schedule that the Port Allen Refinery will implement to come into compliance with the 6 BQ compliance option.

iii. Training: Contractors. As part of Placid's training program, it must ensure that the employees of any contractors hired to perform the requirements of this Paragraph 20.H are properly trained to implement all provisions of this Paragraph 20 at the Port Allen Refinery. Placid shall be deemed to have satisfied this requirement if, in Placid's written contract with the relevant contractor, Placid requires the contractor hired to perform the requirements of this Paragraph 20.H to be accredited under LELAP.

I. Waste/Slop/Off-Spec Oil Management: Schematics (simplified block flow diagrams that show waste, slop, and off-spec oil (oil that must be recycled or handled as waste) movements within the facility).

By no later than one hundred eighty (180) days after the Effective Date of this Settlement, Placid shall submit to LDEQ, for the Port Allen Refinery, schematics that: (a) depict the waste management units (including sewers) that handle, store, and transfer

waste/slop/off-spec oil streams; (b) identify the control status of each waste management unit; and (c) show how such oil is transferred within the Port Allen Refinery. Placid shall include with the schematics a quantification of all uncontrolled waste, slop, or off-spec oil movements at the Port Allen Refinery. If requested by LDEQ, Placid shall submit to LDEQ within ninety (90) days of the request, revised schematics regarding the characterization of these waste, slop, or off-spec oil streams and the appropriate control standards.

J. Waste/Slop/Off-Spec Oil Management: Non-Aqueous Benzene Waste Streams (waste streams with less than 10% water).

All waste management units handling non-exempt, non-aqueous benzene wastes, as defined in Subpart FF, will meet the applicable control standards of Subpart FF.

K. Waste/Slop/Off-Spec Oil Management: Aqueous Benzene Waste Streams (waste streams with more than 10% water). For purposes of calculating the Port Allen Refinery's TAB pursuant to the requirements of 40 C.F.R. 61.342(a), Placid 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). Appropriate adjustments shall be made to such calculations to avoid the double-counting of benzene. For purposes of complying with the 6BQ compliance option, all waste management units handling benzene waste streams shall either meet the applicable control standards of Subpart FF or shall have their uncontrolled benzene quantity count toward the applicable 6 BQ limit.

L. Benzene Waste Operations Sampling Plans: General. By no later than ninety (90) days after the Effective Date of this Settlement, Placid shall submit to LDEQ benzene waste operations sampling plans designed to describe the sampling of benzene waste streams that

Placid shall undertake to estimate quarterly and annual TABs for the Port Allen Refinery.

M. Benzene Waste Operations Sampling Plans: Content Requirements.

i. General. The sampling plan shall identify:

(a) all waste streams that contributed 0.05 Mg/yr or more at the point of generation to the previous year's TAB calculations; and

(b) the proposed sampling locations and methods for flow calculations to be used in calculating projected quarterly and annual TAB calculations under the terms of Paragraph 20.P; or

(c) the items identified under Paragraph 20.M.ii if it is determined that the TAB equals or exceeds 10 Mg/yr and it is then subject to the 6 BQ compliance option under Paragraph 20.B.

The sampling plan will require the Refinery to take, and have analyzed, in each calendar quarter, at least three representative samples from all waste streams identified in Subparagraph M.i(a) and all locations identified in Subparagraph M.i(b).

ii. 6 BQ Compliance Option. The sampling plans will identify:

(a) all uncontrolled waste streams that count toward the 6BQ calculation and contain greater than 0.05 Mg/yr of benzene at the point of generation;

(b) the proposed sampling locations and calculation methods to be used in calculating projected quarterly and calendar year annual uncontrolled benzene quantity calculations under the terms of Paragraph 20.P; and

(c) the proposed sampling locations on the schematic developed pursuant to Paragraph 20.I.

The sampling plan will require the Refinery to take, and have analyzed, in each calendar quarter, at least three representative samples from all waste streams identified in Paragraph M.ii(a) and all locations identified in Paragraph M.ii(b).

iii. Compliance Plan under Paragraph 20.D. If Placid must implement a compliance plan under Paragraph 20.D, Placid may submit a proposed sampling plan that does not include sampling points in locations within the Refinery that are subject to changes proposed in the compliance plan. To the extent that Placid believes that such sampling will not be effective until it completes implementation of the compliance plan and by no later than sixty (60) days prior to the due date for the submission of the sampling plan, Placid may request LDEQ approval for postponing its submitting a sampling plan and commencing sampling until the compliance plan is completed. Should LDEQ disapprove, Placid shall submit a plan by the due date in Paragraph 20.D.

N. Benzene Waste Operations Sampling Plans: Timing for Implementation. Placid shall implement the sampling required by the sampling plans during the first full calendar quarter after Placid submits the plans for the Port Allen Refinery. Placid shall continue to implement the sampling plans (i) unless and until LDEQ disapproves the plans; or (ii) unless and until Placid modifies the plans, with LDEQ's approval, under Paragraph 20.O.

O. Benzene Waste Operations Sampling Plans: Modifications.

i. Changes in Processes, Operations or Other Factors. If changes in processes, operations or other factors lead Placid to conclude that a sampling plan may no longer provide an accurate basis for estimating the Port Allen Refinery's quarterly or annual TABs or benzene quantities under Paragraph 20.P, then by no later than ninety (90) days after Placid determines that the plan no longer provides an accurate measure, Placid shall submit to LDEQ a revised plan

for LDEQ approval. In the first full calendar quarter after submitting the revised plan, Placid shall implement the revised plan. Placid shall continue to implement the revised plan unless and until LDEQ disapproves the revised plan.

ii. **Requests for Modifications.** After two (2) years of implementing a sampling plan, the Refinery may submit a request to LDEQ for approval to revise its sampling plan, including sampling frequency. LDEQ will not unreasonably withhold its consent. Placid shall not implement any proposed revisions under this Subparagraph until LDEQ provides its approval.

P. **Quarterly and Annual Estimations of TABs and Uncontrolled Benzene Quantities.** At the end of each calendar quarter and based on sampling results and approved flow calculations, Placid shall calculate a quarterly and projected annual TAB. In making these calculations, Placid shall use the average of the three samples collected at each sampling location. If these calculations do not identify any potential violations of the Benzene Waste NESHAP, Placid shall submit these calculations in the reports due under Paragraph 20.U of this Settlement.

Q. **Corrective Measures: Basis.** Except as set forth in Paragraph 20.R, Placid shall implement corrective measures such as waste minimization or recycling if a quarterly TAB equals or exceeds 2.5 Mg or the projected annual TAB equals or exceeds 10 Mg for the then-current compliance year.

R. **Exception to Implementing Corrective Measures.** If Placid can identify the reason(s) in any particular calendar quarter that the quarterly or projected annual calculations result in benzene quantities equal to or in excess of those identified in Paragraph 20.Q and states that it does not expect such reason or reasons to recur, then Placid may exclude the benzene

quantity attributable to the identified reason(s) from the projected calendar year quantity. If that exclusion results in no potential violation of the Benzene Waste NESHAP, Placid shall not be required to implement corrective measures under Paragraph 20.Q, and Placid may exclude the uncontrolled benzene attributable to the identified reason(s) in determining the applicability of Paragraph 20.S. At any time that Placid proceeds under this Paragraph, Placid shall describe how Placid satisfied the conditions in this Paragraph in the reports due under Paragraph 20.U of this Settlement.

S. **Third-Party Assistance.** If at least one of the conditions in Paragraph 20.Q exists at the Port Allen Refinery in two consecutive quarters, then Placid shall retain a third-party contractor during the following quarter to undertake a TAB study and compliance review at the Port Allen Refinery. By no later than ninety (90) days after Placid receives the results of the third-party TAB study and compliance review, Placid shall submit such results and a plan and schedule for implementing the 6 BQ compliance option strategy. Placid shall implement the proposed plan unless and until LDEQ disapproves.

T. **Miscellaneous Measures.** The provisions of this Paragraph shall apply to the Port Allen Refinery if and when the Port Allen Refinery's TAB exceeds 10 Mg/yr of benzene. In such event, Placid shall:

i. Conduct monthly visual inspections of all Subpart FF water traps within the Port Allen Refinery's individual drain systems;

ii. Identify and mark all area drains (drains that collect waste water from more than one source) that are segregated storm water drains (drains that collect storm water and do not combine it with process waste water);

iii. On a weekly basis, visually inspect all Subpart FF conservation vents (safety devices that relieve in case of overpressure in vessel or piping and close themselves when pressure returns to baseline) 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, Placid may submit a request to LDEQ to modify the frequency of the inspections. LDEQ shall not unreasonably withhold its consent. Nothing in this Paragraph (iii) shall require the Port Allen Refinery to monitor conservation vents on fixed roof tanks. Alternatively, for conservation vents with indicators that identify whether flow has occurred, Placid may elect to visually inspect such indicators on a monthly basis and, if flow is then detected, Placid shall then visually inspect that indicator on a weekly basis for four (4) weeks. If flow is detected during any two (2) of those four (4) weeks, Placid shall install a carbon canister on that vent until appropriate corrective action(s) can be implemented to prevent such flow;

iv. Conduct quarterly monitoring of the oil-water separators in benzene service controlled in accordance with the "no detectable emissions" provision in 40 C.F.R. § 61.347. Should Placid elect to use floating roof storage vessels in oil water separator service, the storage vessel inspections per 40 C.F.R. Part 60 Subpart Kb shall be used in-lieu of the "no detectable emissions" provision; and

v. Manage all groundwater remediation wastes that are covered by Subpart FF at the Port Allen Refinery in appropriate waste management units under and as required by the Benzene Waste NESHAP.

U. Recordkeeping and Reporting Requirements for this Paragraph: Outside of the Reports Required under 40 C.F.R. 61.357 and under the Quarterly Progress Report Procedures of Section IX (Recordkeeping and Reporting). At the times specified in the applicable provisions of this Paragraph, Placid shall submit, as and to the extent required, the following reports to LDEQ:

i. BWN Compliance Review and Verification Report (¶ 20.C.i.), as amended, if necessary (¶ 20.C.ii.);

ii. Amended TAB Report, if necessary (¶ 20.D.i.);

iii. Plan for the Port Allen Refinery to come into compliance with the 6 BQ compliance option upon discovering that its TAB equals or exceeds 10 Mg/yr through the BWN Compliance Review and Verification Report (¶ 20.D.ii.), or the Third-Party TAB Study and Compliance Review (¶ 20.S);

iv. Compliance certification, if necessary (¶ 20.D.iv.);

v. Reserved;

vi. Schematics of waste/slop/off-spec oil movements (¶ 20.I), as revised, if necessary(¶ 20.I); and

vii. Sampling Plans (¶ 20.L), and revised Sampling Plans, if necessary (¶ 20.O).

V. Recordkeeping and Reporting Requirements for this Section: As Part of Either the Reports Required under 40 C.F.R. § 61.357 or the Progress Report Procedures of Part IX (Recordkeeping and Reporting). Placid shall submit the following information as part of the information submitted in either the quarterly report required pursuant to 40 C.F.R. § 61.357(d)(6) and (7) ("Section 61.357 Reports") or in the reports due pursuant to Part IX of this Settlement:

i. **Sampling Results under Paragraph 20.N.** The report shall include a list of all waste streams sampled, the results of the benzene analysis for each sample, and the computation of the quarterly and projected calendar year TAB; and

ii. **Training.** Initial and/or subsequent training conducted in accordance with Paragraph 20.H.

W. At any time after two years of reporting pursuant to the requirements of Paragraph 20.V, Placid may submit a request to LDEQ to modify the reporting frequency for any or all of the reporting categories of Paragraph 20.V. Placid shall not change the due dates for their reports under Paragraph 20.V unless and until LDEQ approves Placid's request.

X. Certifications Required in this Paragraph 20. Certifications required under this Paragraph 20 shall be made in accordance with the provisions of Part IX.

Y. Reserved.

Z. Agencies to Receive Reports, Plans and Certifications Required in the Paragraph; Number of Copies. Placid shall submit all reports, plans and certifications required to be submitted under this Paragraph 20 to LDEQ. By agreement between LDEQ and Placid, the materials may be submitted electronically.

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

In order to minimize or eliminate fugitive emissions of volatile organic compounds

("VOCs"), benzene, volatile hazardous air pollutants ("VHAPs"), and organic hazardous air pollutants ("HAPs") from equipment in light liquid and/or in gas/vapor service, Placid shall undertake at the Port Allen Refinery the enhancements at Paragraph 21.A through Paragraph 21.K to the Port Allen Refinery's LDAR program under Title 40 of the Code of Federal Regulations, Part 60, Subpart GGGa and LAC 33:III.2122. 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 GGGa and LAC 33:III.2122. Nothing in this Paragraph 21 shall be construed to require Placid to include in the enhanced program described herein any equipment or units not otherwise subject to any applicable federal or state LDAR regulation.

By Louisiana Fugitive Emission Program Consolidation Source Notice and Agreement, dated March 2, 2009 ("Fugitive Emission Program Consolidation Agreement"), Placid notified LDEQ of Placid's consolidation of the LAC 33:III.2122 and 40 C.F.R. Part 60 Subparts VVa and GGGa fugitive emission programs for the entire Port Allen Refinery, effective June 1, 2009, with the overall most stringent program being 40 C.F.R. Part 60 Subparts VVa and GGGa ("Consolidated Program"). In the Fugitive Emission Program Consolidation Agreement, Placid agreed to implement the Consolidated Program in accordance with the Louisiana Fugitive Emission Program Consolidation Guidelines ("Guidelines") and accepted federal and state enforceability of the Consolidated Program by EPA and LDEQ; Placid further acknowledged that compliance with the Consolidated Program in accordance with the Guidelines will serve to comply with each of the fugitive emission programs being consolidated; in addition, Placid acknowledged that noncompliance with the Consolidated Program in accordance with the

Guidelines may subject Placid to enforcement action for one or more of the fugitive emissions programs being consolidated.

A. Written Refinery-Wide LDAR Program. By no later than 180 days after the Effective Date of this Settlement, Placid shall develop and maintain, for the Port Allen Refinery, a written, Refinery-wide program for compliance with all applicable federal and state LDAR regulations. Until termination of this Settlement, Placid shall implement this program on a Refinery-wide basis, and Placid shall update the Port Allen Refinery's program as necessary to ensure continuing compliance. The Refinery-wide program shall include at a minimum:

i. An overall, Refinery-wide leak rate goal of less than or equal to 2.0 percent leaking components that will be a target for achievement on a process unit by process unit basis;

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

iii. Procedures for identifying leaking equipment within process units that are owned and maintained by the Refinery;

iv. Procedures for repairing and keeping track of leaking equipment;

v. Procedures for identifying and including in the LDAR program new equipment; and

vi. A process for evaluating new and replacement equipment to promote consideration and installation of equipment that will minimize leaks and/or eliminate chronic leakers, defined as any components that leak above 5,000 ppm in any two consecutive quarters during the life of this Settlement.

B. Training. By no later than one year from the Effective Date of this Settlement, Placid shall implement the following training programs at the Refinery:

i. For personnel newly-assigned to LDAR responsibilities, Placid shall require LDAR training prior to each employee beginning such work;

ii. For all personnel assigned LDAR responsibilities, Placid shall provide and require completion of annual LDAR training; and

iii. For all other Refinery operations and maintenance personnel (including contract personnel), Placid shall provide and require completion of an initial training program that includes instruction on aspects of LDAR that are relevant to the person's duties. Until termination of this Settlement, "refresher" training in LDAR shall be performed on a three year cycle.

C. LDAR Audits. Commencing upon the Effective Date of this Settlement, Placid shall implement at the Port Allen Refinery the Refinery-wide audits set forth in Paragraph 21.C.i to ensure the Refinery's compliance with all applicable LDAR requirements. The LDAR audits shall include but not be limited to, comparative monitoring, records review, tagging, data management, and observation of the LDAR technicians' calibration and monitoring techniques.

i. Third-Party Audits. Placid shall retain a contractor(s) to perform a third-party audit of the Refinery's LDAR program at least once every three years for the life of this Settlement. The first third-party audit for the Port Allen Refinery shall be completed no later than one year from the Effective Date of this Settlement.

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

If the results of any of the audits conducted pursuant to Paragraph 21.C at the Port Allen Refinery identify any areas of non-compliance, Placid shall implement, as soon as practicable, all steps necessary to correct the area(s) of non-compliance, and to prevent, to the extent practicable, a recurrence of the cause of the non-compliance. Until termination of this Settlement, Placid

shall retain the audit reports generated pursuant to Paragraph 21.C.i and shall maintain a written record of the corrective actions that Placid takes at the Port Allen Refinery in response to any deficiencies identified in any audits. In the quarterly report submitted pursuant to the provisions of Section IX of this Settlement (Recordkeeping and Reporting) for the first calendar quarter of each year, Placid shall submit the audit reports and corrective action records for audits performed and actions taken during the previous year.

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

i. Electronic Storing and Reporting of LDAR Data. At the Port Allen Refinery, Placid has and will continue to maintain an electronic database for storing and reporting LDAR data. By no later than six months after the Effective Date of this Settlement, the electronic database shall include data identifying the date and time of the monitored event, and the operator and instrument used in the monitored event.

ii. Electronic Data Collection During LDAR Monitoring and Transfer Thereafter. By no later than six months after the Effective Date of this Settlement, Placid shall submit to the LDEQ operational specifications for the data logger, software, and monitoring equipment. By no later than six months after the Effective Date of this Settlement, Placid shall use dataloggers and/or electronic data collection devices during all LDAR monitoring. Placid, or its designated contractor, shall use its/their best efforts to transfer, on a daily basis, electronic data from electronic datalogging devices to the electronic database described in Paragraph 21.E.i. For all monitoring events in which an electronic data collection device is used, the collected monitoring data shall include a time and date stamp. Placid may use paper logs where necessary or more feasible (e.g., small rounds, remonitoring, or when dataloggers are not available or broken), and shall record, at a minimum, the identification of the technician undertaking the monitoring, the

date, and the identification of the monitoring equipment. Placid shall use its best efforts to transfer any manually recorded monitoring data to the electronic database described in Paragraph 21.E.i within seven days of monitoring.

F. QA/QC of LDAR Data. By no later than ninety (90) days after the Effective Date of this Settlement, Placid, or a third party contractor retained by Placid, shall develop and implement a procedure to ensure a quality assurance/quality control ("QA/QC") review of all data generated by LDAR monitoring technicians. Placid shall ensure that monitoring data provided to Placid by its contractors is reviewed for QA/QC before the contractor submits the data to Placid. At least once per calendar quarter, Placid shall perform QA/QC of the contractor's monitoring data which shall include, but not be limited to: number of components monitored per technician, time between monitoring events, and abnormal data patterns.

G. LDAR Personnel. By no later than the Effective Date of this Settlement, Placid shall establish a program that will hold LDAR personnel accountable for LDAR performance. Placid shall maintain a position within the Port Allen Refinery responsible for LDAR management, with the authority to implement improvements. For purposes of this Settlement, this position shall be the responsible official, as such term is defined in LAC 33:III.502. No less than quarterly, the responsible official shall meet with each unit supervisor to review LDAR performance and potential improvements; records of such meetings shall be available to LDEQ, upon request. For purposes of this Settlement, "LDAR personnel" shall mean refinery employees and contractor employees having LDAR responsibilities.

H. Adding New Valves and Pumps. By no later than one hundred and twenty (120) days from the Effective Date of this Settlement, Placid 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 LDAR program.

I. Delay of Repair. Beginning no later than the Effective Date of this Settlement, for any equipment for which Placid is allowed, under the applicable regulations, to place on the "delay of repair" list for repair:

i. For all equipment, Placid shall:

a. Require sign-off by the responsible official, as defined in LAC 33:III.502, that the piece of equipment is technically infeasible to repair without a process unit shutdown, before the component is eligible for inclusion on the "delay of repair" list; and

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

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

J. Recordkeeping and Reporting Requirements for this Paragraph.

i. Outside of the Quarterly Progress Report Procedures of Section IX (Recordkeeping and Reporting).

a. Written Refinery-Wide LDAR Program. No later than thirty (30) days after

completion of the development of the written Refinery-wide LDAR program that Placid develops pursuant to Paragraph 21.A, Placid shall submit a copy of the Refinery's program to LDEQ.

b. Submission of Operational Specifications for Electronic Data Collection during LDAR Monitoring and Certification of Use of Electronic Data Collection during LDAR Monitoring. By no later than six months after the Effective Date of this Settlement, Placid shall submit to LDEQ operational specifications designed to minimize the use of any form of data collection and data transfer during and after LDAR monitoring other than electronic data collection and transfer.

ii. As Part of the Quarterly Progress Report Procedures of Section IX (Recordkeeping and Reporting). Consistent with the requirements of Section IX (Recordkeeping and Reporting), Placid shall include the following information, at the following times, in Placid's quarterly progress reports:

a. First Quarterly Progress Report Due under this Settlement. At the later of: (i) the first quarterly progress report due under this Settlement; or (ii) the first quarterly progress report in which the requirement becomes due, Placid shall include the following:

(1) A certification of the implementation of QA/QC procedures for review of data generated by LDAR technicians as required by Paragraph 21.F;

(2) An identification of the individual at the Refinery responsible for LDAR performance as required by Paragraph 21.G;

(3) A certification of the development of a tracking program for new valves and pumps added during maintenance and construction as required by Paragraph 21.H;

(4) A certification of the implementation of the calibration drift assessment procedure described in Paragraph 21.L.iv; and

(5) A certification of the implementation of the "delay of repair" procedures

as required in Paragraph 21.I.

b. Quarterly Progress Report for the First Calendar Quarter of Each Year. Until termination of this Settlement, in the quarterly progress report that Placid submits pursuant to Section IX for the first calendar quarter of each year, Placid shall include an identification of each audit, if any, that was conducted pursuant to the requirements of Paragraph 21.C in the previous calendar year including, for the Port Allen Refinery, an identification of the auditors, a summary of the audit results, and a summary of the actions that Placid took or intends to take to correct all deficiencies identified in the audits.

c. In Each Quarterly Report. In each quarterly report, Placid shall include:

(1) Training. Information identifying the measures that Placid took to comply with the provisions of Paragraph 21.B; and

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

K. Agency to Receive Reports, Plans and Certifications Required in this Paragraph. Placid shall submit all reports, plans and certifications required to be submitted under this Paragraph to LDEQ. By agreement between LDEQ and Placid, the materials may be submitted electronically.

L. Compliance with Title 40 of the Code of Federal Regulations, Part 60, Subpart GGGa. Placid shall comply with the following requirements of Subpart GGGa of 40 C.F.R. Part 60, on a Refinery-wide basis:

i. Leak definitions for valves and pumps;

ii. Reporting, recording, tracking, repairing and remonitoring leaks of valves and

pumps based on leak definitions;

iii. LDAR monitoring frequency; and

iv. Calibration/calibration drift assessment.

M. First Attempt at Repairs on Valves. Beginning no later than ninety (90) days after the Effective Date of this Settlement, Placid shall make a "first attempt" at repair on any valve that has a reading greater than 200 ppm of VOCs, excluding control valves, pumps, and components that LDAR personnel are not authorized to repair. Placid, or its designated contractor, however, shall remonitor, by no later than the end of the next calendar day, all valves that LDAR personnel attempted to repair. Unless the remonitored leak rate is greater than the applicable leak definition, no further action will be necessary. If, after two years from the commencement of the "first attempt at repair" program set forth in this Paragraph 21.M, Placid can demonstrate with sufficient monitoring data that the "first attempt" repair at 200 ppm will worsen or not improve the Refinery's leak rates, Placid may request that LDEQ reconsider or amend this requirement.

N. Skip Periods. As long as this Settlement remains effective, Placid shall not skip any leak detection period for components at the Port Allen Refinery, even if Placid would otherwise be entitled to under LAC 33:III.2121 or 2122, as applicable.

22. Incorporation of Settlement Requirements into Federally-Enforceable Permits.

A. Within 180 Days After the Effective Date of this Settlement. As soon as practicable following the Effective Date of this Settlement, but in no event later than 180 days following the Effective Date of this Settlement, Placid shall submit applications to LDEQ to incorporate the emission limits, standards, and/or schedules required by this Settlement that are effective as of the Effective Date of this Settlement into the Title V permit(s) of the Port Allen

Refinery. Following submission of the permit applications, Placid shall cooperate with LDEQ by promptly submitting to LDEQ all information that LDEQ seeks following its receipt of the permit applications.

B. At Variable Times. As soon as practicable, but in no event later than thirty (30) days after the effective date or establishment of any emission limits, standards and schedules under Section V of this Settlement (other than emission limits, standards, and/or schedules established under Section V of this Settlement that are effective as of the Effective Date of this Settlement), Placid shall submit applications to LDEQ to incorporate those emission limits, standards, and/or schedules into the Title V permit(s) of the Port Allen Refinery. Following submission of the permit applications, Placid shall cooperate with LDEQ by promptly submitting to LDEQ all information that LDEQ seeks following its receipt of the permit applications.

C. Mechanism for Title V Incorporation. The Parties agree that the incorporation of the requirements of this Settlement into Title V permits shall be in accordance with LDEQ Title V rules.

VI. EMISSION CREDIT GENERATION

23. Emission Credit Generation. Anything contained in this Section VI to the contrary notwithstanding, the prohibitions in this Section VI apply solely to future permitting actions involving Placid; i.e., the prohibitions contained in this Section VI shall only apply to permits issued after the date of issuance of the following permit: 3120-00012-V7.

A. Summary. The intent of this Section generally is to prohibit Placid from using the emissions reductions that will result from the installation and operation of the controls required by this Settlement ("Settlement Emissions Reductions") for the purpose of emissions netting or emissions offsets.

B. General Prohibition. Placid shall not generate or use any NO_x, SO_2, PM, VOC, or CO emissions reductions that result from any projects conducted or controls required pursuant to this Settlement as netting reductions or emissions offsets in any PSD, major non-attainment and/or minor New Source Review ("NSR") permit or permit proceeding.

C. Outside the Scope of the General Prohibition. Nothing in this Section VI is intended to prohibit Placid from seeking to: (1) utilize or generate emissions credits or reductions from refinery units that are covered by this Settlement to the extent that the proposed credits or reductions represent the difference between the emissions limitations set forth in this Settlement for these refinery units and the more stringent emissions limitations that Placid may elect to accept for these refinery units in a permitting process; or (2) utilize or generate emissions credits or reductions on refinery units that are not covered by this Settlement.

VII. MODIFICATIONS TO IMPLEMENTATION SCHEDULES

24. Securing Permits. For any work under Sections V or VIII of this Settlement that requires a federal, state and/or local permit or approval, Placid 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. Placid shall use its best efforts to: (i) submit permit applications (i.e., applications for permits to construct, operate, or their equivalent) that comply with all applicable requirements; and (ii) secure approval of permits after filing the applications, including timely supplying additional information, if requested. If it appears that the failure of a governmental entity to act upon a timely-submitted permit application may delay Placid's performance of work according to an applicable implementation schedule, Placid shall notify LDEQ of any such delays as soon as Placid reasonably concludes that the delay could affect its ability to comply with the

implementation schedule set forth in this Settlement. Placid shall propose for approval by LDEQ a modification to the applicable schedule of implementation. LDEQ 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 Settlement or in any approved schedule of implementation shall be signed in writing by LDEQ and Placid. 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 LDEQ shall retain the right to seek stipulated penalties if LDEQ 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.

25. **Commercial Unavailability of Control Equipment and/or Additives**. Placid shall be solely responsible for compliance with any deadline or the performance of any work described in Sections V and VIII of this Settlement that requires the acquisition and installation of control equipment and/or catalyst additive. If it appears that the commercial unavailability of any control equipment and/or catalyst additive may delay Placid's performance of work according to an applicable implementation schedule, Placid shall notify LDEQ of any such delays as soon as Placid reasonably concludes that the delay could affect its ability to comply with the implementation schedule set forth in this Settlement. Placid shall propose for approval by LDEQ a modification to the applicable schedule of implementation. Prior to the notice required by this Paragraph 25, Placid must have contacted a reasonable number of vendors of such equipment or additive and obtained a written representation (or equivalent communication to LDEQ) from the vendor that the equipment or additive is commercially unavailable. In the

notice, Placid shall reference this Paragraph 25 of the Settlement, identify the milestone date(s) it contends it will not be able to meet, provide LDEQ with written correspondence to the vendor identifying efforts made to secure the control equipment or catalyst additive, and describe the specific efforts Placid has taken and will continue to take to find such equipment or additive. To establish commercial unavailability, Placid must demonstrate through appropriate documentation that given the nature of Placid's operations, Placid undertook a reasonable, active effort to timely obtain the relevant control equipment and/or catalyst additive. Placid may propose a modified schedule or modification of other requirements of this Settlement to address such commercial unavailability. Section XV ("Dispute Resolution") shall govern the resolution of any claim of commercial unavailability. LDEQ 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 Settlement or in any approved schedule of implementation shall be signed in writing by LDEQ and Placid. 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 LDEQ shall retain the right to seek stipulated penalties if LDEQ does not approve a modification to a date or dates. The failure by Placid to secure control equipment and/or catalyst additive shall not constitute a force majeure event triggering the requirements of Section XIV; this Paragraph shall apply.

VIII. ENVIRONMENTALLY BENEFICIAL PROJECTS

26. Compliance with NSPS Subpart QQQ.

A. Plan to Comply with NSPS Subpart QQQ. By no later than 180 days after the Effective Date of this Settlement, Placid shall submit a plan to LDEQ that sets forth with specificity the actions, including but not limited to, the installation of any necessary control

equipment, that Placid will take to ensure that the Port Allen Refinery complies, within 36 months after LDEQ's written approval of the plan, with the requirements of the NSPS at Subpart QQQ, 40 C.F.R. §§ 60.690 - 60.699. The plan shall include a proposed schedule of implementation for the installation of any necessary control equipment. The plan shall also include proposed schedules for compliance with the monitoring, testing, recordkeeping, and reporting requirements of 40 C.F.R. §§ 60.695 - 60.698. The plan shall be subject to the approval of, disapproval of, or modification by LDEQ. Within sixty (60) days after receiving any notification of disapproval or request for modification from LDEQ, Placid shall submit to LDEQ a revised plan that responds to all identified deficiencies. Upon receipt of approval or approval with conditions, Placid shall implement the plan. Disputes arising under this Paragraph 26 shall be resolved in accordance with the dispute resolution provisions of this Settlement.

B. NSPS Applicability. Within 36 months after LDEQ's written approval of Placid's plan to comply with NSPS Subpart QQQ, the individual drain systems, oil-water separators, and aggregate facilities, as those terms are defined at 40 C.F.R. § 60.691, at the Port Allen Refinery shall be affected facilities, as that term is used in the NSPS, 40 C.F.R. Part 60, and shall be subject to and comply with the requirements of 40 C.F.R. Part 60, Subpart QQQ.

27. Beneficial Environmental Project. Placid will donate $225,000.00 toward the Beneficial Environmental Project ("BEP") described in this Paragraph. Placid shall make the donation to the West Baton Rouge Parish Council within thirty (30) days of the Effective Date of this Settlement to be used specifically for the following purpose:

> The West Baton Rouge Parish Council will use the donation to defray the costs of the purchase of a Mobile Command Center that would allow 911 emergency dispatching from virtually any location in the parish. The Mobile Command Center is expected to prove vitally important in emergency situations should current dispatching capabilities become disabled or should problems with its

communication tower arise. The Mobile Command Center would also be used to help ensure the safety of the public at large events in the parish.

The purchase of the Mobile Command Center shall be completed over a period not to exceed one year from the date that the donation is received by the West Baton Rouge Parish Council.

28. By signing this Settlement, Placid certifies that it is not required, and has no liability under any federal, state or local law or regulation or pursuant to any agreements or orders of any court, to perform or develop any of the projects identified in Paragraph 27. Placid further certifies that it has not applied for or received, and will not in the future apply for or receive: (1) credit as a Beneficial Environmental Project or other penalty offset in any other enforcement action for the projects set forth in Paragraph 27; or (2) credit for any emissions reductions resulting from the projects set forth in Paragraph 27 in any federal, state or local emissions trading or early reduction program.

29. The Calendar Quarterly Report required by Paragraph 31 of this Settlement shall contain the following information with respect to the BEP identified in Paragraph 27 for the calendar quarter in which the following were completed:

i. Certification that (a) the funds have been donated to the West Baton Rouge Parish Council and (b) the donated funds have been expended by the donee for the purpose specified in Paragraph 27 of this Settlement.

ii. If for any reason all or some of the BEP money cannot be used for the specific purpose as described in Paragraph 27, Placid shall propose in its next Calendar Quarterly report after making this determination, additional BEPs for the Department's approval or pay to the Department an amount equal to the difference between the amount of money agreed to be spent and the amount of money actually spent.

30. Placid agrees that in any public statements regarding these BEPs, Placid must clearly indicate that these projects are being undertaken as part of the settlement of an enforcement action for alleged violations of the Louisiana Environmental Quality Act.

IX. REPORTING AND RECORDKEEPING

31. Beginning with the first full calendar quarter after the Effective Date of this Settlement, Placid shall submit to LDEQ within thirty (30) days after the end of each calendar quarter until termination of this Settlement a calendar quarterly progress report ("Calendar Quarterly Report") for the Port Allen Refinery. This Calendar Quarterly Report shall contain, for the Port Allen Refinery, the following: progress report on the implementation of the requirements of Section V (Affirmative Relief/Environmental Projects); a summary of the emissions data as required by Section V of this Settlement for the calendar quarter; a description of any problems anticipated with respect to meeting the requirements of Section V of this Settlement; a description of all environmentally beneficial projects and implementation activity in accordance with Paragraphs 26 and 27 of this Settlement; and any such additional matters as Placid believes should be brought to the attention of LDEQ. Each portion of the Calendar Quarterly Report which relates to the Port Allen Refinery shall be certified by the responsible official for the Port Allen Refinery, as such term is defined in LAC 33:III.502, 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

32. In satisfaction of the civil claims asserted by LDEQ, within thirty (30) days of the Effective Date of this Settlement, Placid shall pay a civil penalty of Six Hundred Seventy-five Thousand and No/100 ($675,000.00) Dollars to LDEQ. Payment of the civil penalty owed to LDEQ under this Paragraph 32 shall be made by check made payable to the Louisiana

Department of Environmental Quality and sent to Fiscal Director, Office of Management and Finance, LDEQ, P. O. Box 4303, Baton Rouge, LA 70821-4303.

33. The total amount of money expended by Placid on cash payments to LDEQ and on the BEPs, as described in Paragraph 27 shall be considered a civil penalty for tax purposes, as required by La. R. S. 30:2050.7(E)(1).

XI. STIPULATED PENALTIES

34. Placid shall pay stipulated penalties for each failure by Placid to comply with the terms of this Settlement as provided herein. Stipulated penalties shall be calculated in the amounts specified in Paragraphs 35 through 48. For purposes of seeking stipulated penalties under Paragraph 35.A, stipulated penalties shall not start to accrue until there is noncompliance with the concentration-based, rolling average emission limit identified in the Subparagraph for 5% or more of the applicable unit's operating time during any calendar quarter. In no event shall any penalty assessed against Placid exceed the maximum civil penalty that may be assessed under La. R.S. 30:2025 for any individual violation under the Louisiana Environmental Quality Act, La. R.S. 30:2001, et seq.

35. Paragraphs 9-12 - Requirements for Emission Reductions from the FCCU at the Refinery.

A. For failure to meet any emissions limit established by LDEQ pursuant to Paragraphs 9-12, per day: $500 for each calendar day in a calendar quarter on which the specified short-term rolling average exceeds the applicable limit; and $1,500 for each calendar day in a calendar quarter on which the specified 365-day rolling average exceeds the applicable limit.

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

Period of Delay	Penalty per day
1st through 30th day after deadline	$300
31st through 60th day after deadline	$600
Beyond 60th day after deadline	$1,200

36. Paragraph 14 – Requirements for NO_x Emission Reductions from Heaters and Boilers.

A. For failure to install required NO_x Qualifying Controls by the dates specified in Paragraph 14.A, 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

B. For failure to install and/or certify a CEMS or a parametric emission monitoring system on a Controlled Heater or Boiler by the required deadline in Paragraph 14.A.vi, 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

C. For failure to submit the written deliverables required by Paragraphs 14.A.iii and iv and 14.B, per day:

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

37. Paragraph 15 - Requirements for SO_2 Emission Reductions from Heaters and Boilers.

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

Period of Non-Compliance	Penalty per day
1st through 5th day	$500
6th through 15th day	$1,000
Over 15 days	$2,000

B. For failure to install and/or certify a fuel gas CEMS, 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

C. For burning Fuel Oil in a manner inconsistent with the requirements of Paragraph 15.C, at the Port Allen Refinery, per day:

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

38. Paragraph 16 – Requirements for NSPS Applicability of Sulfur Recovery Plant.

A. For failure to route all sulfur pit emissions in accordance with the requirements of Paragraph 16.B, per day:

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

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

Period of Non-Compliance	Penalty per day
1st through 5th day	$500
6th through 15th day	$1,000
Over 15 days	$2,000

C. For failure to develop and comply with the Preventive Maintenance and Operation Plan as specified in Paragraph 16.D, per day:

Period of Delay or Non-Compliance	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

39. Paragraph 17 – Requirements for NSPS Applicability of Flaring Devices.

A. For failure to comply with NSPS Subpart J at the flares listed in Appendix A after the date on which Placid accepted NSPS applicability for the relevant flare as set forth in Paragraph 17, per unit, per day:

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

40. Paragraph 18 – Requirements for Control of Acid Gas Flaring Incidents and Tail Gas Incidents.

A. For AG Flaring Incidents and/or Tail Gas Incidents for which Placid is liable under Paragraphs 18.C and/or 18.E:

Tons Emitted in AG Flaring Incident or Tail Gas Incident	Length of Time from Commencement of Flaring within the AG Flaring Incident to Termination of Flaring within the AG 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 AG Flaring Incident to Termination of Flaring within the AG 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 AG 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 AG Flaring Incident or Tail Gas Incident lasts

For purposes of calculating stipulated penalties pursuant to this Paragraph 40.A, only one cell within the matrix shall apply. Thus, for example, for an AG Flaring Incident in which the AG Flaring starts at 1:00 p.m. and ends at 3:00 p.m., and for which 14.5 tons of sulfur dioxide are emitted, the penalty would be $17,400 (14.5 x $1,200). 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 AG Flaring within an AG Flaring Incident that (i) starts at 1:00 p.m. on Day 1 and ends at 1:30 p.m. on Day 1; (ii) recommences at 4:00 p.m. on Day 1 and ends at 4:30 p.m. on Day 1; (iii) recommences at 1:00 a.m. on Day 2 and ends at 1:30 a.m. on Day 2; and (iv) no further AG Flaring occurs within the AG Flaring Incident, the AG Flaring within the AG Flaring Incident shall be deemed to last 12.5 hours -- not 1.5 hours -- and the column for AG Flaring of "greater than 3 hours but less than or equal to 24 hours" shall apply.

B. For failure to timely submit any report required by Paragraph 18, or for submitting any report that does not substantially conform to the requirements of Paragraph 18:

Period of Delay	Penalty per day
Days 1-30	$500
Days 31-60	$1,000
Over 60 days	$2,000

C. For failure to complete any corrective action required under Paragraph 18 of this Settlement in accordance with the schedule for such corrective action agreed to by Placid or imposed on Placid pursuant to the dispute resolution provisions of this Settlement (with any such extensions thereto as to which LDEQ and Placid may agree in writing):

Period of Delay	Penalty per day
Days 1-30	$500
Days 31-60	$1,000
Over 60	$2,000

41. Paragraph 19 – Requirements for Control of Hydrocarbon Flaring Incidents.

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

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

42. Paragraph 20 - Requirements for Benzene Waste NESHAP Program Enhancements. For each violation in which a frequency is specified in Paragraph 20, the amounts identified below shall apply on the first day of violation, shall be calculated for each incremental period of violation (or portion thereof), and shall be doubled beginning on the fourth consecutive, continuing period of violation. For requirements where no frequency is specified, penalties will not be doubled.

A. For failure to complete the BWN Compliance Review and Verification Reports as required by Paragraph 20.C:

Period of Delay or Non-Compliance	Penalty per day
1st through 30th day	$100
31st through 60th day	$250
Beyond 60th day	$500

B. For failure to implement the actions necessary to correct non-compliance as required by Paragraph 20.D:

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

C. Port Allen Refinery (if TAB equals or exceeds 10 Mg/yr). For failure to implement the training requirements of Paragraph 20.H:

Period of Delay or Non-Compliance	Penalty per day
1st through 30th day	$100
31st through 60th day	$250
Beyond 60th day	$500

D. For failure to submit or maintain any records or materials required by Paragraph 20.D of this Settlement:

$2,000 per record or submission

E. For failure to install controls on waste management units handling non-exempt, non-aqueous benzene wastes as required by Paragraph 20.J:

Period of Delay or Non-Compliance	Penalty per day
1st through 30th day	$500

31st through 60th day	$1,000
Beyond 60th day	$2,000

F. For failure to conduct sampling in accordance with the sampling plans required by Paragraph 20.L:

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

G. For failure to submit the plan or retain the third-party contractor required by Paragraph 20.S:

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

H. For failure to comply with the miscellaneous compliance measures set forth in Paragraph 20.T, as follows:

For T.i, monthly visual inspections: $500 per drain not inspected;

For T.iii, weekly monitoring of vents: $500 per vent not monitored;

I. For failure to identify/mark segregated stormwater drains as required in Paragraph 20.T.ii: $500 per week per drain;

J. For failure to submit the applicable written deliverables required by Paragraph 20.U:

Period of Delay or Non-Compliance	Penalty per day
1st through 30th day	$100

31st through 60th day	$250
Beyond 60th day	$500

K. If it is determined through an LDEQ investigation that the Port Allen Refinery has failed to include all benzene containing waste streams in its TAB calculation submitted pursuant to Paragraph 20.C, Placid 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

43. Paragraph 21 – Requirements for Leak Detection and Repair Program Enhancements. For each violation in which a frequency is specified in Paragraph 21, the amounts identified below shall apply on the first day of violation, shall be calculated for each incremental period of violation (or portion thereof), and shall be doubled beginning on the fourth consecutive, continuing period of violation. For requirements where no frequency is specified, penalties will not be doubled.

A. For failure to implement the training programs specified in Paragraph 21.B:

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

B. For failure to conduct any of the audits described in Paragraph 21.C:

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

C. For failure to implement any actions necessary to correct non-compliance as required in Paragraph 21.D:

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

D. For failure to implement the first attempt repair program as required under Part 60, Subpart GGGa or for failure to implement the QA/QC procedures described in Paragraph 21.F:

Period of Delay or Non-Compliance	Penalty per day
1st through 30th day	$100
31st through 60th day	$250
Beyond 60th day	$500

E. For failure to implement the maintenance tracking program as required in Paragraph 21.H, or for failure to write an LDAR program that meets the requirements of Paragraph 21.A:

Period of Delay or Non-Compliance	Penalty per day
1st through 30th day	$100
31st through 60th day	$250
Beyond 60th day	$500

F. For failure to use dataloggers or maintain electronic data as required by Paragraph 21.E.ii:

Period of Delay or Non-Compliance	Penalty per day
1st through 30th day	$100
31st through 60th day	$250
Beyond 60th day	$500

G. For failure to conduct the calibration drift assessments or remonitor valves and pumps based on calibration drift assessments as required in Paragraph 21.L:

$100 per missed event

H. For failure to comply with the requirements for delay of repair set forth at Paragraph 21.I:

$5,000 per valve or pump

I. For failure to submit the written deliverables required by Paragraph 21.J:

Period of Delay or Non-Compliance	Penalty per day
1st through 30th day	$100
31st through 60th day	$250
Beyond 60th day	$500

J. If it is determined through an LDEQ investigation that Placid has failed to include all valves and pumps in its LDAR program, Placid shall pay $175 per component that it failed to include.

44. Paragraph 22 – Requirements to Incorporate Settlement Requirements into Federally-Enforceable Permits.

For each failure to submit an application as required by Paragraph 22:

Period of Delay	Penalty per day
Days 1-30	$500
Days 31-60	$1,000
Over 60 Days	$2,000

45. Paragraph 26 – Requirements Related to Environmentally Beneficial Projects.

A. For failure to submit a plan conforming to the requirements of Paragraph 26.A, per day:

Period of Delay	Penalty per day
1st through 30th day after deadline	$100
31st through 60th day after deadline	$200
Beyond 60th day	$500

B. For failure to install the controls required pursuant to the approved schedule of implementation required in Paragraph 26, 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	$2,000

46. Paragraph 31 -- Requirements for Reporting and Recordkeeping.

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

Period of Delay	Penalty per day
1st through 30th day after deadline	$100
31st through 60th day after deadline	$250

Beyond 60th day	$500

47. Paragraph 32 -- Requirements for Payment of Civil Penalties. If Placid fails to timely pay the civil penalties as specified in Paragraph 32 of this Settlement, (a) Placid shall be liable for $2,500 per day plus interest on the amounts overdue at the judicial interest rate, as specified in Paragraph 51, and (b) LDEQ, in its sole discretion, may terminate this Settlement by providing written notice thereof to Placid within 60 days after the payment due date.

48. Paragraph 50 – Requirement to Escrow Stipulated Penalties. If Placid fails to escrow stipulated penalties in the manner set forth in Paragraph 50 of this Settlement, Placid shall be liable for (a) $625 per day and (b) interest on the amounts overdue at the judicial interest rate, as specified in Paragraph 51.

49. Payment of Stipulated Penalties. Placid shall pay stipulated penalties upon written demand by LDEQ no later than sixty (60) days after Placid receives such demand. Stipulated penalties owed by Placid shall be paid to LDEQ. Stipulated penalties shall be paid to LDEQ in the manner set forth in Section X (Civil Penalty) of this Settlement. A demand for the payment of stipulated penalties will identify the particular violation(s) to which the stipulated penalty relates, the stipulated penalty amount LDEQ 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. LDEQ may, in its unreviewable discretion, waive payment of any portion of stipulated penalties that may accrue under this Settlement.

50. Stipulated Penalties Dispute. Should Placid dispute its obligation to pay part or all of a stipulated penalty, it may avoid the imposition of a stipulated penalty for failure to pay a stipulated penalty under Paragraph 48 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 period provided in Paragraph 49 for payment of stipulated penalties. If the dispute is thereafter resolved in Placid's favor, the escrowed amount plus accrued interest shall be returned to Placid; otherwise, LDEQ shall be entitled to the amount that was determined to be due by dispute resolution, plus the interest that has accrued in the escrow account on such amount. LDEQ reserves the right to pursue any other non-monetary remedies to which it is entitled, including but not limited to, additional injunctive relief for Placid's violations of this Settlement.

XII. INTEREST

51. Placid 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 specified as the judicial interest rate as determined by the Louisiana Commissioner of Financial Institutions per La. R.S. 13:4202(B)(1). Interest shall be calculated from the date payment is due under this Settlement through the date of actual payment. For purposes of this Paragraph 51, 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 50 of this Settlement. Monies timely paid into escrow shall not be considered to be an unpaid balance under this Section.

XIII. RIGHT OF ENTRY

52. Any authorized representative of LDEQ, including independent contractors, upon presentation of credentials, shall have a right of entry upon the premises of the facilities of the Port Allen Refinery, at any reasonable time for the purpose of monitoring compliance with the provisions of this Settlement, including inspecting plant equipment, and inspecting and copying all records maintained by Placid required by this Settlement. Placid shall retain such records for

the period of this Settlement. Nothing in this Settlement shall limit the authority of LDEQ to conduct tests, inspections, or other activities under any statutory or regulatory provision.

XIV. FORCE MAJEURE

53. If any event occurs which causes or may cause a delay or impediment to performance in complying with any provision of this Settlement, Placid shall notify LDEQ in writing as soon as practicable, but in any event within ten (10) business days of the date when Placid first knew of the event or should have known of the event by the exercise of due diligence. In this notice, Placid shall specifically reference this Paragraph 53 of the Settlement 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 Placid to prevent or minimize the delay and the schedule by which those measures shall be implemented. Placid shall adopt all reasonable measures to avoid or minimize such delays. The notice required by this Section XIV (Force Majeure) shall be effective upon the mailing of the same by certified mail, return receipt requested, to LDEQ as specified in Paragraph 75 (Notice).

54. Failure by Placid to substantially comply with the notice requirements of Paragraph 53 as specified above shall render this Section XIV (Force Majeure) voidable by LDEQ as to the specific event for which Placid has failed to comply with such notice requirement, and, if voided, is of no effect as to the particular event involved.

55. LDEQ shall notify Placid 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 53.

56. If LDEQ agrees that the delay or impediment to performance has been or will be caused by circumstances beyond the control of Placid, including any entity controlled by Placid,

and that Placid could not have prevented the delay by the exercise of due diligence, the Parties shall stipulate to an extension of the required deadline(s) for all requirement(s) affected by the delay by a period equivalent to the delay actually caused by such circumstances. Such stipulation shall be filed as a modification to the Settlement pursuant to the modification procedures established in this Settlement. Placid shall not be liable for stipulated penalties for the period of any such delay.

57. If LDEQ does not accept Placid's claim of a delay or impediment to performance, Placid must submit the matter for dispute resolution to avoid payment of stipulated penalties. If it is determined that the delay or impediment to performance has been or will be caused by circumstances beyond the control of Placid, including any entity controlled by Placid, and that the delay could not have been prevented by Placid by the exercise of due diligence, Placid 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.

58. Placid shall bear the burden of proving that any delay of any requirement(s) of this Settlement 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. Placid 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.

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

60. As part of the resolution of any matter submitted for dispute resolution under this Section XIV, the Parties by agreement or by order, may in appropriate circumstances extend or modify the schedule for completion of work under the Settlement to account for the delay in the work that occurred as a result of any delay or impediment to performance agreed to by LDEQ. Placid shall be liable for stipulated penalties for its failure thereafter to complete the work in accordance with the extended or modified schedule.

XV. DISPUTE RESOLUTION

61. The dispute resolution procedure set forth in this Section XV shall be available to resolve all disputes arising under this Settlement, including assertion of commercial unavailability under Paragraph 25 of this Settlement, provided that the Party making such application has made a good faith attempt to resolve the matter with the other Party.

62. The dispute resolution procedure required herein shall be invoked upon the giving of written notice by one of the Parties to this Settlement to another advising of a dispute pursuant to this Section XV. The notice shall describe the nature of the dispute, and shall state the noticing Party's position with regard to such dispute. The Party receiving such a notice shall acknowledge receipt of the notice and the Parties shall expeditiously schedule a meeting to discuss the dispute informally not later than fourteen (14) days from the receipt of such notice.

63. Disputes submitted to dispute resolution shall, in the first instance, be the subject of informal negotiations between the Parties. Such period of informal negotiations shall not extend beyond thirty (30) calendar days from the date of the first meeting between representatives of the Parties, unless it is agreed that this period should be extended.

64. In the event that the Parties are unable to reach agreement during such informal

negotiation period, LDEQ shall provide Placid with a written summary of its position regarding the dispute. The position advanced by LDEQ shall be considered binding unless, within forty-five (45) calendar days of Placid's receipt of the written summary of LDEQ's position, Placid files a request for a hearing with the Secretary of LDEQ. If the request for hearing is granted, the issues raised in the request shall be resolved by an adjudicatory hearing before a Division of Administrative Law administrative law judge. The administrative law judge's final decision or order after this hearing is a final agency action for the purpose of judicial review. In the event Placid fails to object to LDEQ's written notice of non acceptance or decision made pursuant to this Settlement, Placid will be bound by such written notice of non acceptance or decision.

65. 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 request of one of the Parties to the dispute.

66. As part of the resolution of any dispute submitted to dispute resolution, the Parties, by agreement or by order, may, in appropriate circumstances, extend or modify the schedule for completion of work under this Settlement to account for the delay in the work that occurred as a result of dispute resolution. Placid shall be liable for stipulated penalties for its failure thereafter to complete the work in accordance with the extended or modified schedule.

XVI. EFFECT OF SETTLEMENT

67. The effect of settlement of this action is governed by this Paragraph 67.

A. Definitions. For purposes of Paragraph 67, the following definitions apply:

i. "Applicable NSR/PSD Requirements" shall mean NSR requirements at LAC 33:III.504 and PSD requirements at LAC 33:III.509.

ii. "Applicable NSPS Subparts A and J Requirements" shall mean the standards,

monitoring, testing, reporting and recordkeeping requirements, found at 40 C.F.R. §§ 60.100 through 60.109 (Subpart J), relating to a particular pollutant and a particular affected facility, and the corollary general requirements found at 40 C.F.R. §§ 60.1 through 60.19 (Subpart A) that are applicable to any affected facility covered by Subpart J.

iii. "Post Effective Date Compliance Dates" shall mean any dates in this Paragraph 67 after the Effective Date of this Settlement. Post Effective Date Compliance Dates include dates certain (e.g., "December 31, 2011"), dates after the Effective Date represented in terms of "months after the Effective Date" (e.g., "Twelve Months after the Effective Date"), and dates after the Effective Date represented by actions taken (e.g., "Date of Certification"). The Post Effective Date 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 Settlement.

B. New Source Review/Prevention of Significant Deterioration.

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

a. Specific Pollutant and Units. With respect to emissions involved in determining NSR/PSD applicability for the following pollutants as a result of any physical changes or changes in method of operation of the following units, this Settlement shall resolve all civil liability of Placid to LDEQ: (i) for violations of the Applicable NSR/PSD Requirements resulting from construction or modification, that occurred prior to the Effective Date of this Settlement, of the following units; and (ii) for any pre-Effective Date construction or modification of the following units that resulted in violations of the Applicable NSR/PSD Requirements that continued up to the following dates:

Unit	Pollutant	Date
Refinery FCCU	SO_2	Effective Date
	NOx	Later of Effective Date or date of installation of control technology as contemplated in Paragraph 9
	PM and PM_{10}	Effective Date
	CO	Effective Date
All heaters and boilers	SO_2	Effective Date
	NOx	Later of Effective Date or date of installation of Qualifying Controls as contemplated in Paragraph 14

ii. Reservation of Rights: Release for Violations Continuing After the Effective Date Can be Rendered Void. Notwithstanding the resolution of liability in Paragraph 67.B.i, the release of liability by LDEQ to Placid for violations of the Applicable NSR/PSD Requirements during the period between the Effective Date of this Settlement and the Post Effective Date Compliance Dates shall be rendered void if Placid materially fails to comply with the obligations and requirements of Paragraphs 9 - 12 and 14; provided however, that the release in Paragraph 67.B.i shall not be rendered void if Placid remedies such material failure and pays any stipulated penalties due as a result of such material failure.

iii. Exclusions from Release Coverage: Construction and/or Modification Not Covered by Paragraph 67.B.i. Notwithstanding the resolution of liability in Paragraph 67.B.i, nothing in this Settlement precludes the LDEQ from seeking from Placid injunctive relief,

penalties, or other appropriate relief for violations by Placid of the Applicable NSR/PSD Requirements resulting from construction or modification that: (1) commenced prior to or commences after the Effective Date of this Settlement for pollutants or units not covered by the Settlement; or (2) commences after the Effective Date of this Settlement for units covered by this Settlement, except for construction and/or modification required by this Settlement.

iv. Evaluation of Applicable NSR/PSD Requirements Must Occur. Increases in emissions from units covered by this Settlement, where the increases result from the Post Effective Date construction or modification of any units within the Port Allen Refinery, are beyond the scope of the release in Paragraph 67.B.i, and Placid must evaluate any such increases in accordance with the Applicable NSR/PSD Requirements.

C. New Source Performance Standards Subparts A and J.

i. Resolution of Liability.

a. Specific Pollutants and Units. With respect to emissions of the following pollutants from the following units, for violations of the Applicable NSPS Subparts A and J Requirements, this Settlement shall resolve all civil liability of Placid to LDEQ from the date that the claims of LDEQ accrued through the following dates:

Unit	Pollutant	Date
Refinery FCCU	SO_2, PM, PM_{10} and CO	Effective Date
All heaters and boilers	SO_2	Effective Date
Refinery SRP	SO_2	Effective Date
Flaring Devices	SO_2	Effective Date

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

67.C.i.a, the release of liability by LDEQ to Placid for violations of any Applicable NSPS Subparts A and J Requirement that occurred between the Effective Date and the Post Effective Date Compliance Dates shall be rendered void if Placid materially fails to comply with the obligations and requirements of Paragraphs 13, 15 - 19; provided however, that the release in Paragraph 67.C.i.a shall not be rendered void if Placid remedies such material failure and pays any stipulated penalties due as a result of such material failure.

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

D. LDAR and Benzene Waste NESHAP.

i. Resolution of Liability. This Settlement shall resolve all civil liability of Placid to the LDEQ for violations of the following statutory and regulatory requirements that occurred prior to the Effective Date of this Settlement:

a. LDAR. For all equipment in light liquid service and gas and/or vapor service, all State LDAR requirements, including those that are adopted as Louisiana regulations in LAC 33:III.3003, LAC 33:III.5116, and LAC 33:III.5122.

b. Benzene Waste NESHAP. The National Emission Standard for Benzene Waste Operations, 40 C.F.R. Part 61, Subpart FF, which language has been adopted as Louisiana regulation in LAC 33:III.5116.

ii. Reservation of Rights. Except as specifically provided in Paragraph 67.D.ii, and notwithstanding the resolution of liability in Paragraph 67.D.i, nothing in this Settlement precludes LDEQ from seeking from Placid:

(a) injunctive and/or other equitable relief for violations of Benzene Waste NESHAP and/or LDAR that (A) commenced prior to the Effective Date of this Settlement

and continued after the Effective Date; or (B) commenced after the Effective Date of the Settlement; or

(b) civil penalties for violations of the Benzene Waste NESHAP and/or LDAR occurring on or after the Effective Date of this Settlement.

E. NSPS Subpart QQQ. This Settlement shall resolve all civil liability of Placid to LDEQ for violations of 40 C.F.R. §§ 60.690-60.699 (Subpart QQQ) which language has been adopted as a Louisiana regulation in LAC 33:III.3003, from the date that the claims of LDEQ accrued through the date that Placid completes the approved compliance plan requirements in accordance with Paragraph 26; provided however, that the release of liability for the period between the Effective Date and the date that Placid completes the approved compliance plan requirements in accordance with Paragraph 26 shall be rendered void if Placid does not meet the NSPS requirements at 40 C.F.R. §§ 60.692-60.693, within 36 months of LDEQ's written approval of the compliance plan in accordance with Paragraph 26.

F. Other Matters. This Settlement shall resolve all of Placid's liability to LDEQ for violations noted in the following: (1) Consolidated Compliance Order & Notice of Potential Penalty dated June 11, 2004, Enforcement Tracking No. MM-CN-03-0114, as amended on January 10, 2006, by MM-CN-03-0114A; (2) Notice of Violation dated January 19, 2006, Enforcement Tracking No. AE-N-05-0225; (3) the alleged past violations specified in Appendix D; and (4) any potential violations or noncompliance disclosed to LDEQ in writing or otherwise known to LDEQ up to and through December 22, 2010.

G. Claim/Issue Preclusion. In any subsequent administrative or judicial proceeding initiated by LDEQ for injunctive relief, penalties, or other appropriate relief relating to Placid for violations of the PSD, NSPS, NESHAP, and/or LDAR requirements, not identified in Paragraph 67 of the Settlement and/or Appendix D:

a. Placid 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 Placid assert, or maintain, any other defenses based upon any contention that the claims raised by LDEQ 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 Placid to assert that the claims are deemed resolved by virtue of this Paragraph 67 of the Settlement.

b. LDEQ may not assert or maintain that this Settlement constitutes a waiver or determination of, or otherwise obviates, any claim or defense whatsoever, or that this Settlement constitutes acceptance by Placid of any interpretation or guidance issued by LDEQ related to the matters addressed in this Settlement.

H. Imminent and Substantial Endangerment. Nothing in this Settlement shall be construed to limit the authority of LDEQ to undertake any action against any person, including Placid, to abate or correct conditions which may present an imminent and substantial endangerment to the public health, welfare, or the environment.

XVII. GENERAL PROVISIONS

68. Other Laws. Except as specifically provided by this Settlement, nothing in this Settlement shall relieve Placid of its obligations to comply with all applicable federal, state and local laws and regulations. Subject to Paragraph 67, nothing contained in this Settlement shall be construed to prevent or limit the rights of LDEQ to seek or obtain other remedies or sanctions available under other state statutes or regulations, by virtue of Placid's violation of the Settlement or of the statutes and regulations upon which the Settlement is based, or for Placid's violations of any applicable provision of law, other than the specific matters resolved herein.

This shall include the right of LDEQ to invoke the authority of a court to order Placid's compliance with this Settlement in a subsequent contempt action.

69. Post-Permit Violations. Nothing in this Settlement shall be construed to prevent or limit the right of LDEQ to seek injunctive or monetary relief for violations of permits issued as a result of the procedure required under Paragraph 22 of this Settlement; provided however, that with respect to monetary relief, LDEQ must elect between filing a new action for such monetary relief or seeking stipulated penalties under this Settlement, if stipulated penalties also are available for the alleged violation(s).

70. Failure of Compliance. LDEQ does not, by its consent to this Settlement, warrant or aver in any manner that Placid's complete compliance with the Settlement will result in compliance with the provisions of the Louisiana Environmental Quality Act. Notwithstanding the review or approval by LDEQ of any plans, reports, policies or procedures formulated pursuant to the Settlement, Placid shall remain solely responsible for compliance with the terms of this Settlement, all applicable permits, and all applicable federal, state and local laws and regulations, except as provided in Section XIV (Force Majeure).

71. Service of Process. Placid hereby agrees to accept service of process by mail with respect to all matters arising under or relating to the Settlement and to waive the formal service requirements. The persons identified by Placid at Paragraph 75 (Notice) are authorized to accept service of process with respect to all matters arising under or relating to the Settlement.

72. Costs. Each Party to this Settlement shall bear its own costs and attorneys' fees.

73. Public Documents. All information and documents submitted by Placid to LDEQ pursuant to this Settlement shall be subject to public inspection in accordance with the statutes and regulations that are applicable to LDEQ, unless subject to legal privileges or protection or

identified and supported as business confidential in accordance with LDEQ statutes or regulations.

74. **Public Notice and Comment.** The Parties agree and acknowledge that final approval by LDEQ of this Settlement is subject to the requirements of La R.S. 30:2050.7, which provides for public notice of this Settlement in newspapers of general circulation and the official journals of parishes in which the facilities are located, an opportunity for public comment, consideration of any comments, and concurrence by the State Attorney General. The State of Louisiana reserves the right to withdraw or withhold consent if the comments regarding this Settlement disclose facts or considerations which indicate that this Settlement is inappropriate, improper or inadequate.

75. **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 (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 Placid shall be submitted as specified in this Settlement. Except as otherwise provided herein, all reports, notifications, certifications, or other communications required or allowed under this Settlement to be submitted or delivered to LDEQ or Placid, as applicable, shall be addressed as follows:

As to LDEQ:

Administrator, Enforcement Division
Office of Environmental Compliance
Louisiana Department of Environmental Quality
P.O. Box 4312
Baton Rouge, Louisiana 70821-4312

As to Placid :

General Manager
Placid Refining Company LLC
1940 Louisiana Hwy 1
Port Allen, Louisiana 70767

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 Settlement may be modified by mutual consent of the Parties. The consent of LDEQ to such modification must be in the form of a written notification from LDEQ.

76. Approvals. All LDEQ approvals or comments required under this Settlement shall come from LDEQ, Office of Environmental Compliance, Enforcement Division, at the address listed in Paragraph 75 (Notice).

77. Modification. The Settlement contains the entire agreement of the Parties and shall not be modified by any prior oral or written agreement, representation or understanding. Non-material modifications to this Settlement shall be in writing, signed by the Parties. Material modifications to this Settlement shall be in writing, signed by the Parties, and shall be effective upon finalizing of the modification. Specific provisions in this Settlement that govern specific types of modifications shall be effective as set forth in the specific provision governing the modification.

XVIII. TERMINATION

78. A. Provisions of this Settlement relating to Placid shall be subject to termination upon request by Placid (under the conditions identified in Paragraph 78.B). Placid must have satisfied all of the following requirements of this Settlement:

i. installation of control technology systems, or Qualifying Controls, as specified in this Settlement;

ii. achieving compliance with all provisions contained in this Settlement;

iii. paying all penalties and other monetary obligations due under the terms of the Settlement; no penalties or other monetary obligations due hereunder can be outstanding or owed to LDEQ;

iv. the completion of the projects set forth in Paragraphs 26 - 27;

v. the receipt of permits incorporating the emission limits established under Section V;

vi. LDEQ's receipt of the first Calendar Quarterly Report following the conclusion of the operation for at least one year of all units in compliance with the emission limits established herein; and

vii. Placid has certified compliance pursuant to Paragraph 78.A.i-vi, above, to LDEQ in writing.

B. Unless, within 120 days of receipt of the certification required by Paragraph 78.A.vii., LDEQ objects in writing with specific reasons, this Settlement shall be deemed terminated. If LDEQ objects to the certification by Placid, then the matter shall be subject to dispute resolution under Section XV (Dispute Resolution) of this Settlement. In such case, Placid shall bear the burden of proving that this Settlement should be terminated.

XIX. SIGNATORIES

79. Each of the undersigned representatives certifies that he/she fully authorized to enter into the Settlement on behalf of such Parties, and to execute and to bind such Parties to the Settlement.

(This space intentionally left blank.)

PLACID REFINING COMPANY LLC

BY: _____
(Signature)

_____
(Print)

TITLE: _____

THUS DONE AND SIGNED in duplicate original before me this _____ day of _____, 2011, at _____.

_____
NOTARY PUBLIC (ID #_____)

_____
(Stamped or Printed)

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
Peggy M. Hatch, Secretary

BY: _____
Cheryl Sonnier Nolan, Assistant Secretary
Office of Environmental Compliance

THUS DONE AND SIGNED in duplicate original before me this _____ day of _____, 2011, at Baton Rouge, Louisiana.

_____
NOTARY PUBLIC (ID # _____)

_____
(Stamped or Printed)

Approved: _____
Cheryl Sonnier Nolan, Assistant Secretary