UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF LOUISIANA
LAFAYETTE DIVISION

UNITED STATES OF AMERICA, and THE LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY, and THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT, Plaintiffs, v. COLUMBIAN CHEMICALS COMPANY, Defendant.	Civil Action No. 17-1661

CONSENT DECREE

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WHEREAS, Plaintiffs, the United States of America ("the United States"), on behalf of the United States Environmental Protection Agency ("EPA"), the State of Louisiana (through the Louisiana Department of Environmental Quality ("LDEQ")), and the State of Kansas (through the Kansas Department of Health and Environment ("KDHE")) ("Plaintiff-States"), are concurrently with this Consent Decree filing a complaint ("Complaint") against Columbian Chemicals Company ("Defendant") pursuant to Sections 113(b), 167, and 304 of the Clean Air Act ("Clean Air Act" or "the Act"), 42 U.S.C. §§ 7413(b), 7477 and 7604. The Complaint seeks injunctive relief and the assessment of civil penalties for violations of one or more of the following statutory and regulatory requirements of the Act at Defendant's North Bend and Hickok carbon black facilities: the Prevention of Significant Deterioration ("PSD") provisions of the Act, 42 U.S.C. §§ 7470-7492; the nonattainment New Source Review ("Nonattainment NSR") provisions of the Act, 42 U.S.C. §§ 7501-7515; the federally-approved and enforceable Louisiana and Kansas State Implementation Plans ("SIPs"), which incorporate and/or implement the above-listed federal PSD and/or Nonattainment NSR requirements; and Title V of the Act, 42 U.S.C. §§ 7661-7661f and/or Title V's implementing federal and state regulations;

WHEREAS, EPA contends that this settlement is part of EPA's national enforcement initiative to control air pollution from the largest sources of emissions, including carbon black manufacturing facilities;

WHEREAS, the Complaint allege, *inter alia*, that Defendant failed to obtain the necessary permits and install and Continuously Operate the controls necessary to reduce sulfur dioxide ("SO_2"), nitrogen oxides ("NO_x") and particulate matter ("PM"), including without limitation particulate matter with a diameter of ten microns or less ("PM10"), and comply with requirements for monitoring, record-keeping, and reporting, as specified in the Act;

WHEREAS, EPA provided Defendant, LDEQ, and KDHE, with actual notice of the alleged violations, in accordance with Sections 113(a)(1) and (b) of the Clean Air Act, 42 U.S.C. §§ 7413(a)(1) and (b);

WHEREAS, Defendant stipulates for purposes of this Consent Decree that it does not contest the adequacy of the notice provided;

WHEREAS, Defendant does not admit any liability to the United States or Plaintiff-States (collectively "Plaintiffs") arising out of the acts or omissions alleged in the Complaint and this Consent Decree resolves all allegations stated in the Complaint;

WHEREAS, Defendant conducted, and shared with EPA the results of, (1) Control Technology testing information, and (2) stack testing of SO_2 and NO_x emission rates for North Bend;

WHEREAS, the Plaintiffs and Defendant (collectively "the Parties") have agreed that settlement of this action is in the public interest and will result in air quality improvements, and that entry of this Consent Decree without further litigation is the most appropriate means of resolving this matter; and

WHEREAS, the Parties recognize, and the Court by entering this Consent Decree finds, that this Consent Decree has been negotiated by the Parties in good faith and will avoid litigation between the Parties and that this Consent Decree is fair, reasonable and in the public interest.

NOW, THEREFORE, before the taking of any testimony, without the adjudication or admission of any issue of fact or law except as provided in Section I (Jurisdiction and Venue), below, and with the consent of the Parties, IT IS HEREBY ADJUDGED, ORDERED AND DECREED as follows:

I. JURISDICTION AND VENUE

1. This Court has jurisdiction over this action, the subject matter herein, and over the Parties consenting hereto, pursuant to 28 U.S.C. §§ 1331, 1345, 1355, and 1367, and pursuant to Sections 113, 167, and 304 of the Act, 42 U.S.C. §§ 7413, 7477, and 7604.

2. Venue lies in this district pursuant to Section 113(b) of the Act, 42 U.S.C. § 7413(b), and 28 U.S.C. § 1391(b) and (c), because some of the violations alleged in the Complaint are alleged to have occurred in, and Defendant resides in and conducts business in, this district.

3. At least 30 Days prior to the Date of Lodging of this Consent Decree, EPA notified the States of Louisiana and Kansas, and Defendants of the violations alleged in the Complaint, as required by Section 113(a)(1) of the CAA, 42 U.S.C. § 7413(a)(1).

4. Solely for purposes of this Consent Decree and the underlying Complaint, and any action to enforce this Consent Decree, Defendant consents to this Court's jurisdiction over Defendant and any action to enforce this Consent Decree and to venue in this judicial district. Defendant consents to and shall not challenge entry of this Consent Decree or this Court's jurisdiction to enter and enforce this Consent Decree. Except as expressly provided for herein, this Consent Decree shall not create any rights in or obligations of any Party other than the Parties to this Consent Decree.

5. Except as provided in Section XXVI (Public Participation) of this Consent Decree, the Parties consent to entry of this Consent Decree without further notice.

II. APPLICABILITY

6. Upon the Effective Date, the obligations of this Consent Decree shall apply to, and be binding upon, the United States, the Plaintiff-States, and upon Defendant and any

successors, assigns, or other entities or persons otherwise bound by law.

7. Defendant shall provide a copy of this Consent Decree to all officers, employees, and agents whose duties include compliance with any provision of this Decree, as well as to any Contractor retained to provide services required to comply with the provisions of this Consent Decree. Defendant shall condition any agreement with such Contractor upon performance of the services in conformity with the provisions of this Consent Decree. In any action to enforce this Consent Decree, Defendant shall not raise as a defense the failure by any of its officers, directors, employees, agents, or Contractors to take any actions necessary to comply with the provisions of this Consent Decree. Notwithstanding any retention of any such entities to perform any work required under this Consent Decree, Defendant shall ensure that all work is performed in accordance with the requirements of this Consent Decree.

III. DEFINITIONS

8. Terms used in this Consent Decree that are defined in the Act or in regulations promulgated by EPA pursuant to the Act shall have the meanings assigned to them in the Act or such regulations, unless otherwise provided in this Decree. Whenever the terms set forth below are used in this Consent Decree, the following definitions shall apply:

a. "3-hour Average Emissions Limit" shall mean the limit on average hourly emissions specified in Paragraph 31, determined in accordance with Paragraph 32, of this Consent Decree (subject to Section XVI, below).

b. "7-day Rolling Average Emissions Limit" shall mean the limit on average daily emissions during the preceding seven Operating Days, specified in Paragraphs 17 and 26. For purposes of clarity, to calculate the average daily emissions to compare against the limit, the first complete 7-day

average compliance period is seven Operating Days after the Date of Continuous Operation (e.g., if the Date of Continuous Operation is January 1, the first Day in the averaging period is January 1 and the first complete 7-day average compliance period is January 1 – January 7, provided each Day qualifies as an Operating Day), and all emissions that occur during the specified period, including emissions during all periods of Malfunction (subject to Section XVI, below) within an Operating Day, shall be included in the calculation.

c. "30-day Rolling Average Sulfur Content Weight Percent" shall mean the arithmetic average of weighted daily average sulfur contents in feedstock to all reactors as a weight percent during the preceding 30 Operating Days, as specified in Paragraph 21. It shall equal S_{30} and shall be calculated as follows:

$$S_{30} = \sum_{j=1}^{30}[\ \sum_{i=1}^{n}\left(\frac{100 * M_{S,i,j}}{M_{F,T,j}}\right)\ ] / 30$$

Where:

$\sum_{j=1}^{30}$ = Sum from Day 1 through Day 30

n = Number of reactors at the Hickok plant

$\sum_{i=1}^{n}$ = Sum for reactors 1 through n

$M_{S,i,j}$ = Mass of sulfur in the feedstock delivered to reactor i in a Day j, in pounds, as measured by a continuous mass flow monitoring system

Where:

$$M_{S,i,j} = (S_{F,i,j} * M_{F,i,j})/100$$

$S_{F,i,j}$ = The average sulfur content of the feed to reactor i in Day j, in weight percent, as derived using the sulfur contents for each feedstock storage tank feeding the reactor by Paragraph 22.a or 22.b

Where:

$$S_{F,i,j} = 100 * \sum_{k=1}^{m}(S_{T,k,j} * M_{T,k,j}) / (100 * M_{F,i,j})$$

m = Number of feedstock storage tanks at the Hickok plant

$S_{T,k,j}$ = The sulfur content of the feed delivered from storage tank k to reactor i in Day j, in weight percent, as derived for each feedstock storage tank feeding the reactor by Paragraph 22.a or 22.b

$M_{T,k,j}$ = Total mass of feedstock delivered from storage tank k to reactor i in Day j, in pounds, as measured by a continuous mass flow monitoring system

$M_{F,i,j}$ = Total mass of feedstock pounds delivered to reactor i from all storage tanks in a calendar Day j, in pounds, as measured by a continuous mass flow monitoring system

$M_{F,T,j}$ = Total mass of feedstock delivered to all reactors in a calendar Day j, in pounds, as measured by a continuous mass flow monitoring system

Where:

$$M_{F,T,j} = \sum_{i=1}^{n} M_{F,i,j}$$

For purposes of clarity, the first complete 30-day average compliance period is 30 Operating Days after the Date of Continuous Operation (e.g., if the Date of Continuous Operation is January 1, the first Day in the averaging period is January 1 and the first complete 30-day average compliance period is January 1 - January 30, provided each Day qualifies as an Operating Day).

d. "365-day Rolling Average Emissions Limit" shall mean the limit on average daily emissions during the preceding 365 Operating Days, specified in Paragraphs 17 and 26. For purposes of clarity, to calculate the average daily emissions to compare against the limit, the first complete 365-day average compliance period is 365 Operating Days after the Date of Continuous Operation (e.g., if the Date of Continuous Operation is January 1, the first Day in the averaging period is January 1 and the first complete 365-day average compliance period is January 1 - December 31, provided each Day qualifies as an Operating Day), and all emissions that occur during the specified period, including emissions during all periods of Malfunction within an Operating Day, shall be included in the calculation.

e. "365-day Rolling Average Sulfur Content Weight Percent" shall mean the arithmetic average of weighted daily average sulfur contents in feedstock to all reactors as a weight percent during the preceding 365 Operating Days, specified in Paragraph 21. It shall equal S_{365} and shall be calculated as follows:

$$S_{365} = \sum_{j=1}^{365} [\, \sum_{i=1}^{n} \left(\frac{100 * M_{S,i,j}}{M_{F,T,j}} \right)] \,/\, 365$$

Where:

$\sum_{j=1}^{365}$ = Sum from Day 1 through Day 365

n = Number of reactors at the Hickok plant

$\sum_{i=1}^{n}$ = Sum for reactors 1 through n

$M_{S,i,j}$ = Mass of sulfur in the feedstock delivered to reactor i in a calendar Day j, in pounds, as measured by a continuous mass flow monitoring system

Where:

$$M_{S,i,j} = (S_{F,i,j} * M_{F,i,j})/100$$

$S_{F,i,j}$ = The average sulfur content of the feed to reactor i in Day j, in weight percent, as derived using the sulfur contents for each feedstock storage tank feeding the reactor by Paragraph 22.a or 22.b

Where:

$$S_{F,i,j} = 100 * \sum_{k=1}^{m}(S_{T,k,j} * M_{T,k,j}) / (100 * M_{F,i,j})$$

m = Number of feedstock storage tanks at the Hickok plant

$S_{T,k,j}$ = The sulfur content of the feed delivered from storage tank k to reactor i in Day j, in weight percent, as derived for each feedstock storage tank feeding the reactor by Paragraph 22

$M_{T,k,j}$ = Total mass of feedstock delivered from storage tank k to reactor i in Day j, in pounds, as measured by a continuous mass flow monitoring system

$M_{F,i,j}$ = Total mass of feedstock pounds delivered to reactor i from all storage tanks in a Day j, in pounds, as measured by a continuous mass flow monitoring system

$M_{F,T,j}$ = Total mass of feedstock delivered to all reactors in a calendar Day j, in pounds, as measured by a continuous mass flow monitoring system

Where:

$$M_{F,T,j} = \sum_{i=1}^{n} M_{F,i,j}$$

For purposes of clarity, the first complete 365-day average compliance period is 365 Operating Days after the Date of Continuous Operation (e.g., if the Date of Continuous Operation is January 1, the first Day in the

averaging period is January 1 and the first complete 365-day average compliance period is January 1 - December 31, provided each Day qualifies as an Operating Day).

f. "365-day Rolling Sum Emissions Limit" shall mean the limit on the sum of daily emissions during the preceding 365 Days, specified in Paragraph 23. For purposes of clarity, to calculate the sum of daily emissions to compare against the limit, the first complete 365-day compliance period is 365 Days after the Date of Continuous Operation (e.g., if the Date of Continuous Operation is January 1, the first Day in the period is January 1 and the first complete 365-day compliance period is January 1 - December 31, provided each Day qualifies as an Operating Day), and all emissions that occur during the specified period, including emissions during all periods of Malfunction within an Operating Day, shall be included in the calculation.

g. "Alternative Equivalent Pollution Control Technology" shall mean an alternative equivalent pollution control technology installed in accordance with the requirements of Paragraph 19 or 28.

h. "Boiler(s)" shall mean a new boiler(s) at Hickok, installed after the Date of Entry of this Consent Decree, and shall not mean the Hickok Existing Tail Gas Boiler. However, this definition shall not be construed as precluding Columbian from retrofitting the Hickok Existing Tail Gas Boiler into a Boiler to be used as part of the Low NOx Combustion System or Co-Generation System.

i. "Business Day" shall mean any Day, except for Saturday, Sunday, and federal, State of Louisiana, and State of Kansas holidays.

j. "Calendar Year" shall mean a 12-Month period.

k. "CD Emissions Reductions" shall mean any emissions reductions that result from any projects conducted or controls used to comply with this Consent Decree except for Surplus Emission Reductions.

l. "CEMS" or "Continuous Emission Monitoring System" shall mean, for obligations involving NO_x and SO_2 under this Consent Decree, the devices defined, installed, calibrated, maintained, and operated in accordance with 40 C.F.R. § 60.13 and 40 C.F.R. Part 60 Appendices A, B and F.

m. "Clean Air Act" or "Act" shall mean the federal Clean Air Act, 42 U.S.C. §§ 7401-7671q, and its implementing regulations.

n. "Co-Generation System" shall mean the combination of Low-NOx Burners, Over-Fire Air, one or more Boilers and turbines at Hickok, together used to control the flame temperature and mixing characteristics of fuel and oxygen, thus minimizing the formation of NOx during combustion of fuel, and which generates electricity from steam.

o. "Consent Decree" or "Decree" shall mean this Decree and the Appendices attached hereto, but in the event of any conflict between the text of this Decree and any Appendix, the text of this Decree shall control.

p. "Constituent Part" shall mean all Tail Gas generating and Tail Gas combustion equipment that is part of the North Bend Process System or the Hickok Process System, such as reactors, boilers, dryers, or

incinerators.

q. "Continuously Operate" or "Continuous Operation" shall mean that, unless otherwise specified, when a Control Technology or a PM Early Warning System is used pursuant to the terms of this Consent Decree, it shall be operated at all times of Process System Operation, consistent with good engineering and maintenance practices for such Control Technology, PM Early Warning System or the Process System, as applicable, and good air pollution control practices for minimizing emissions in accordance with 40 C.F.R. § 60.11(d).

r. "Contractor" shall mean any person or entity hired by Defendant to perform services on its behalf necessary to comply with the provisions of this Consent Decree.

s. "Control Technology" shall mean each Selective Catalytic Reduction System, Wet Gas Scrubber, Dry Gas Scrubber, Low NOx Combustion System, Co-Generation System, or Alternative Equivalent Pollution Control Technology, installed pursuant to the terms of this Consent Decree, or the PM control mechanisms identified in Appendix B of this Consent Decree.

t. "Date of Continuous Operation" shall mean the date by which Defendant shall Continuously Operate a Control Technology on a Process System.

u. "Date of Installation" shall mean the date by which Defendant shall complete installation of a Control Technology on a Process System.

v. "Date of Lodging of the Consent Decree" or "Date of Lodging" shall

mean the date the Consent Decree is filed for lodging with the Clerk of the Court for the United States District Court for the Western District of Louisiana.

w. "Day" shall mean a calendar day unless expressly stated to be a Business Day, and means a 24-hour period measured from midnight to midnight.

x. "Defendant" or "Columbian" shall mean Columbian Chemicals Company.

y. "Dry Gas Scrubber" or "Semi-Dry Gas Scrubber" (together, "DGS") shall mean a pollution control device that removes SO_2 from flue gas by injecting a reagent in one or more absorber vessels designed to provide intimate contact and to react with and remove SO_2 from the flue gas stream forming a dry particulate containing reaction products and unreacted reagent which is captured in a particulate control device.

z. "Effective Date" shall have the meaning set forth in Section XXII (Effective Date).

aa. "Emissions Limit" shall mean the maximum allowable emissions in units as specified in this Consent Decree, measured in accordance with this Consent Decree, met to the number of significant digits in which the limit is expressed. For example, an Emissions Limit of 0.100 is not met if the actual emission is 0.101. The fourth significant digit shall be rounded to the nearest third significant digit, or the third significant digit to the nearest second significant digit, depending upon whether the limit is expressed to three or two significant digits. For example, if an actual emission is 0.1004, that shall be reported as 0.100, and shall be in

compliance with an Emission Limit of 0.100, and if an actual Emission Limit is 0.1005, that shall be reported as 0.101, and shall not be in compliance with an Emission Limit of 0.100. The following Emissions Limits are specified in this Consent Decree: 3-hour Average Emissions Limit, 7-day Rolling Average Emissions Limit, 365-day Rolling Average Emissions Limit, 365-day Rolling Sum Emissions Limit, Final 7-day Rolling Average Emissions Limit, Final 365-day Rolling Average Emissions Limit, Interim 7-day Rolling Average Emissions Limit, Interim 365-day Rolling Average Emissions Limit.

bb. "EPA" shall mean the United States Environmental Protection Agency and any of its successor departments or agencies.

cc. "Environmental Mitigation Project" shall mean a project funded or implemented by Defendant as a remedial measure to mitigate alleged harm to human health or the environment claimed to have been caused by the alleged violations described in the Complaint.

dd. "Facilities" shall mean North Bend and Hickok, the Defendant's facilities used for the manufacture of carbon black, each of which may be referred to as a "Facility."

ee. "Final 7-day Rolling Average Emissions Limit" shall mean the applicable Final 7-day Rolling Average Emissions Limit set forth in the table in Paragraph 17 or Paragraph 26 and established pursuant to the protocol specified in Appendix E or Appendix F.

ff. "Final 365-day Rolling Average Emissions Limit" shall mean the

applicable Final 365-day Rolling Average Emissions Limit set forth in the table in Paragraph 17 or Paragraph 26 and established pursuant to the protocol specified in Appendix E or Appendix F.

gg. "Flare" shall mean a combustion device that uses an uncontrolled volume of ambient air to burn gases.

hh. "gr/dscf" shall mean grains per dry standard cubic foot.

ii. "Heat Load Operation" shall mean the operation of any carbon black reactor, boiler or dryer combustor/burner at a Facility under any of the following conditions: (1) at a reactor, when there is no oil feed but only natural gas and combustion air supplied to the reactor burner, and the reactor is not manufacturing carbon black and generating Tail Gas, including, but not limited to, during periods of Startup and Shutdown, (2) at a reactor, during the periods either prior to or at the conclusion of Process System Operation, each of which shall be as short as practicable and shall not exceed 10 minutes, when transitioning between (A) an operational mode in which oil, natural gas, and combustion air are all fed to the reactor burner and the reactor is manufacturing carbon black and generating Tail Gas, and (B) an operational mode, including, but not limited to, during periods of Startup and Shutdown, in which no oil but only natural gas and combustion air are supplied to the reactor, (3) for Hickok only, at a boiler, and for North Bend only, at an incinerator(s), when there is no oil feed to the reactors but only natural gas and combustion air (and not Tail Gas generated by a reactor during Process

System Operation) are fed to the boiler or incinerator(s), including, but not limited to, during periods of Startup and Shutdown, or (4) at a dryer combustor/burner, when only natural gas and combustion air (and not Tail Gas generated by a reactor during Process System Operations) are fed to the dryer combustor/burner, including, but not limited to, during periods of Startup and Shutdown.

jj. "Hickok" shall mean Defendant's carbon black facility located at

3500 South Road S
Ulysses, Kansas 67880

kk. "Hickok Existing Tail Gas Boiler" shall mean the tail gas boiler in operation at Hickok as of the Date of Lodging of this Consent Decree and described in the Kansas Air Emission Source Construction Permit with an effective date of December 22, 2011.

ll. "Hickok Non-Assisted Flare" shall mean the Non-Assisted Flare at Hickok.

mm. "Hickok NOx Cap" shall mean the cap on NOx emissions at Hickok specified in Paragraph 30.

nn. "Hickok Process System" shall mean, collectively, all Tail Gas generating and Tail Gas combustion equipment, including, all reactors and the future tail-gas boiler(s), and, any feedstock heaters and preheaters that are fueled by Tail Gas, necessary for the manufacture of carbon black, at that Facility. At the Date of Entry of this Consent Decree, Hickok's feedstock heaters and preheaters are steam-fed and excluded from the definition of

Hickok Process System.

oo. "Inspection at the Low NOx Combustion System" or "Inspection at the Co-Generation System" shall mean the outage at the Low NOx Combustion System or at the Co-Generation System at Hickok, to inspect and maintain the Low NOx Combustion System or the Co-Generation System, as applicable. For purposes of Section IX (Prohibition On Use Of Flares And Hickok Existing Tail Gas Boiler) of this Decree, the outage shall not exceed 168 hours in duration and may not be conducted more frequently than once every 12 Months as necessary to comply with American Society for Testing and Materials and insurance requirements.

pp. "Interim 7-day Rolling Average Emissions Limit" shall mean the applicable Interim 7-day Rolling Average Emissions Limit set forth in the table in Paragraph 17 or Paragraph 26.

qq. "Interim 365-day Rolling Average Emissions Limit" shall mean the applicable Interim 365-day Rolling Average Emissions Limit set forth in the table in Paragraph 17 or Paragraph 26.

rr. "KDHE" shall mean the Kansas Department of Health and Environment.

ss. "LDEQ" shall mean the Louisiana Department of Environmental Quality.

tt. "Limestone WGS" shall mean a caustic-assisted pollution control device that removes SO_2 and PM from flue gas through contact with a scrubbing liquid derived from a water source. A Limestone WGS is not a Seawater WGS.

uu. "Low NOx Combustion System" shall mean the combination of Low-NOx

Burners, Over-Fire Air, and a Boiler(s) at Hickok, together used to control the flame temperature and mixing characteristics of fuel and oxygen, thus minimizing the formation of NOx during combustion of fuel in the Boiler(s).

vv. "Main Bag Collector" shall mean a fabric filtration unit, equipped with bag filters or their equivalent, which, during periods of carbon black production, receives carbon black and Tail Gas from the reactor and separates the carbon black from the Tail Gas.

ww. "Malfunction" as used in this Consent Decree shall have the same meaning as defined at 40 C.F.R. § 60.2.

xx. "Method 9" shall mean the methodology in 40 C.F.R. Part 60, Appendix A.

yy. "Method 9 Trained Observer" shall mean a person who is trained in conducting visual assessments pursuant to Method 9.

zz. "Method 22" shall mean the methodology in 40 C.F.R. Part 60, Appendix A.

aaa. "Method for Managing PM Emissions" shall mean the method for managing PM emissions identified in the third column of Appendix B.

bbb. "Month" shall mean a calendar month.

ccc. "National Ambient Air Quality Standards" or "NAAQS" shall mean national ambient air quality standards that are promulgated pursuant to Section 109 of the Act, 42 U.S.C. § 7409.

ddd. "NO_x" shall mean oxides of nitrogen, measured in accordance with the

provisions of this Consent Decree.

eee. "Non-Assisted Flare" shall mean a Flare that is not assisted by steam or by air.

fff. "Nonattainment NSR" shall mean the nonattainment area New Source Review program within the meaning of Part D of Subchapter I of the Act, 42 U.S.C. §§ 7501-7515, 40 C.F.R. Part 51, and any applicable State Implementation Plan.

ggg. "North Bend" shall mean Defendant's carbon black facility located at

370 Columbian Chemicals Lane
Centerville, LA 70522

hhh. "North Bend Process System" shall mean, collectively, all Tail Gas generating and Tail Gas combustion equipment, including, all reactors, dryers, and incinerators necessary for the manufacture of carbon black, at that Facility.

iii. "Notices of Violation" shall mean the notices of violation issued by EPA to Columbian on August 14, 2012 and August 29, 2012.

jjj. "Operating Day" shall mean any Day of Process System Operation.

kkk. "Optimization and Demonstration Study" shall mean (a) a study to optimize and demonstrate the performance of a WGS, DGS, or Alternative Equivalent Pollution Control Technology to minimize SO_2 emissions from the North Bend Process System in accordance with the requirements of Paragraph 3 of Appendix E of this Consent Decree, or (b) a study to optimize and demonstrate the performance of a Low NOx Combustion

System or Co-Generation System to minimize NO_x emissions from the Hickok Process System in accordance with the requirements of Paragraph 3 of Appendix F of this Consent Decree.

lll. "Over-Fire Air" shall mean an in-boiler staged combustion control at Hickok which limits the amount of combustion air introduced into the burner zone theoretically required to burn all of the fuel. Additional combustion air is then introduced after the burner zone through over-fire air ports to complete the combustion of fuel. The staged combustion of over-fire air reduces the oxygen concentrations in the lower furnace, thereby limiting the oxidation of fuel bound nitrogen and the formation of fuel NOx.

mmm. "Paragraph" shall mean a portion of this Decree identified by an Arabic numeral.

nnn. "Particulate Emissions Best Management Practices Control Plan" shall mean the plan for identifying sources of particulate emissions and the measures to reduce such emissions that is reflected in Appendix C to this Consent Decree.

ooo. "Parties" shall mean the United States, Plaintiff-States, and Defendant.

ppp. "Party" shall mean one of the Parties.

qqq. "Plaintiff-States" shall mean the LDEQ and the KDHE.

rrr. "Plaintiffs" shall mean the United States and Plaintiff-States.

sss. "PM" shall mean filterable particulate matter, measured in accordance with Paragraph 32 of this Consent Decree.

ttt. "PM Early Warning System" shall mean a probe electrification-type technology (i.e., a system in which a probe is inserted into the emissions stream and measures the momentum of the PM flowing through the duct), or a monitoring system designed to achieve an equivalent level of performance to a probe electrification-type technology that has been approved in advance of use by EPA, that provides early warning detection of excess PM emissions from carbon black production operations by producing a signal that is transmitted to an alarm management system and converted into a numeric readout, over an averaging period of no longer than 15 minutes, as described in Appendix D to this Consent Decree.

uuu. "PM Emissions Equipment" shall mean the PM emissions equipment identified in the first column of Appendix B.

vvv. "PM Monitor Point" shall mean the point at which the PM Early Warning System is installed to measure the PM flowing through the duct of each of the Main Bag Collector and Vapor Bag Collector.

www. "PM Reduction Mechanism" shall mean the PM reduction mechanism identified in the middle column of Appendix B.

xxx. "ppmvd" means parts per million, volumetric dry.

yyy. "Process System Operation" shall mean the operation of any Process System or any of its constituent parts when there is oil feed to any reactor burners within such Process System, and the reactor is manufacturing carbon black. Process System Operation ends when oil feed to the reactor burners within such Process System ceases; provided however that any

period of operation meeting the definition of Heat Load Operation shall not constitute Process System Operation.

zzz. "Production Pulsaire" for North Bend and "Receiving Tank Pulsaire" for Hickok shall mean a filtration unit which separates carbon black from the air stream and routes the carbon black to grinders and beading systems. Carbon black is pneumatically conveyed from the Main Bag Collector to the Production Pulsaire for North Bend and Receiving Tank Pulsaire for Hickok.

aaaa. "Project Dollars" shall mean Defendant's expenditures and payments incurred or made in carrying out the Environmental Mitigation Projects identified in Section V (Environmental Mitigation) and Appendix A (Environmental Mitigation Projects) of this Consent Decree to the extent that such expenditures or payments both: (a) comply with the requirements set forth in Section V (Environmental Mitigation) and Appendix A of this Consent Decree, and (b) constitute Defendant's direct payments for such projects, or Defendant's external costs for Contractors, vendors, and equipment. Defendant shall not include its own personnel costs in overseeing the implementation of the Projects as Project Dollars.

bbbb. "PSD" shall mean the Prevention of Significant Deterioration program within the meaning of Part C of Subchapter I of the Clean Air Act, 42 U.S.C. §§ 7470-7492, 40 C.F.R. Part 52, and any applicable State Implementation Plan.

cccc. "Pulsaire" at North Bend and "Dust Collector" at Hickok shall mean a

filtration unit which separates carbon black from the air stream.

dddd. "Reactor Vent Scrubber" shall mean a multistage scrubber employing water as the scrubber medium.

eeee. "Seawater WGS" shall mean a pollution control device that removes SO_2 and PM from flue gas through contact with a scrubbing liquid derived from the Gulf Intracoastal Waterway, as that pollution control device was substantially described in reports submitted to EPA and LDEQ prior to the Date of Lodging.

ffff. "Section" shall mean a portion of this Decree identified by a capitalized Roman numeral.

gggg. "Selective Catalytic Reduction System" or "SCR" shall mean a pollution control system that employs anhydrous, aqueous ammonia or urea reagent injection and a catalyst to speed the reaction of the reagent with NO_x and to drive the reaction to greater completion, for the purpose of reducing NO_x emissions.

hhhh. "Shutdown" shall mean the period of ceasing of operation of the North Bend Process System, Hickok Process System, or any of their constituent parts for any purpose, and shall be limited to an operational mode in which no oil and only natural gas and combustion air are supplied to the constituent part.

iiii. "SO_2" shall mean the pollutant sulfur dioxide, measured in accordance with the provisions of this Consent Decree.

jjjj. "Startup" shall mean the period of setting in operation of the North Bend

Process System, Hickok Process System, or any of their constituent parts, for any purpose, and shall be limited to an operational mode in which no oil and only natural gas and combustion air are supplied to the constituent part.

kkkk. "Surplus Emission Reductions" shall mean reductions in an Emission Limit, 30-day Rolling Average Sulfur Content Weight Percent, and/or 365-day Rolling Average Sulfur Content Weight Percent over and above those required to comply with the requirements of this Consent Decree, to the extent that such reduced Emission Limit, 30-day Rolling Average Sulfur Content Weight Percent, and/or 365-day Rolling Average Sulfur Content Weight Percent is reflected in a federally enforceable emissions limit or requirement, which reductions may or may not take the form of credits that can be transferred to another entity, and is more stringent than the corresponding Emission Limit, 30-day Rolling Average Sulfur Content Weight Percent, and/or 365-day Rolling Average Sulfur Content Weight Percent imposed under this Consent Decree.

llll. "Tail Gas" shall mean the gaseous by-product of the carbon black process, which is generated during periods when there is oil feed to a reactor.

mmmm. "Title V permit" shall mean a permit required by and issued in accordance with the requirements of 42 U.S.C. §§ 7661 - 7661f;

nnnn. "United States" shall mean the United States of America, acting on behalf of EPA.

oooo. "Vapor Bag Collector" shall mean a fabric filtration unit which, during periods of carbon black production, receives water vapor, carbon black, and air at North Bend and combusted natural gas at Hickok, from the carbon black dryers and separates the carbon black from the water vapor and air. Carbon black collected by the Vapor Bag Collector is conveyed to the Production Pulsaire for North Bend via a pneumatic conveying system and to the Pulverizer and the receiving tank to be re-beaded for Hickok.

pppp. "Wet Gas Scrubber" and "WGS" shall mean a Seawater WGS or Limestone WGS.

IV. CIVIL PENALTY

9. Within 30 Days after the Effective Date of this Consent Decree, Defendant shall pay to the United States a civil penalty of $260,000. Failure to timely pay the civil penalty shall subject Defendant to interest accruing from the date payment is due until the date payment is made at the rate prescribed by 28 U.S.C. § 1961, and shall render Defendant liable for all charges, costs, fees, and penalties established by law for the benefit of a creditor or of the United States in securing payment. Defendant shall make the above referenced payment by FedWire Electronic Funds Transfer ("EFT" or wire transfer) to the United States Department of Justice account in accordance with current electronic funds transfer procedures, referencing DOJ Case No. 90-5-2-1-10943. Payment shall be made in accordance with instructions provided to Defendant by the Financial Litigation Unit of the United States Attorney's Office for the Western District of Louisiana. Any payments received by the Department of Justice after 4:00 P.M. (Central Time) will be credited on the next Business Day. At the time of payment,

Defendant shall send a copy of the EFT authorization form and the EFT transaction record, together with a transmittal letter, which shall state that the payment is for the civil penalty owed pursuant to the Consent Decree in *United States, et al. v. Defendant Columbian Chemicals Company*, and shall reference the civil action number and DOJ case number 90-5-2-1-10943, to the United States in accordance with Section XXI (Notices); by email to acctsreceivable.CINWD@epa.gov; and to:

EPA Cincinnati Finance Office
26 Martin Luther King Drive
Cincinnati, Ohio 45268

10. Within 30 Days after the Effective Date of this Consent Decree, Defendant shall pay to the LDEQ a civil penalty of $195,000. If any portion of the civil penalty due to the State is not paid when due, Defendant shall pay interest on the amount past due, accruing from the Effective Date through the date of payment at the rate identified in Paragraph 9 above, by certified check made payable to the Louisiana Department of Environmental Quality, Fiscal Director, Office of Management and Finance, LDEQ, P.O. Box 4303, Baton Rouge, Louisiana 70821-4303, or by EFT to the State of Louisiana in accordance with written instructions to be provided to Defendant upon request.

11. Within 30 Days after the Effective Date of this Consent Decree, Defendant shall pay to the KDHE a civil penalty of $195,000. If any portion of the civil penalty due to the State is not paid when due, Defendant shall pay interest on the amount past due, accruing from the Effective Date through the date of payment at the rate identified in Paragraph 9 above, by certified check made payable to the Kansas Department of Health and Environment, 1000 SW Jackson, Suite 560, Topeka, Kansas 66612-1371, or by EFT to the State of Kansas in accordance with written instructions to be provided to Defendant upon request.

12. Defendant shall not deduct any penalties paid under this Section or Section XIV (Stipulated Penalties) in calculating its federal or state or local income tax.

V. ENVIRONMENTAL MITIGATION

13. Defendant shall implement the Environmental Mitigation Projects described in Appendix A of this Consent Decree, in compliance with the schedules for such Environmental Mitigation Projects and the other terms of this Consent Decree. In implementing the Environmental Mitigation Projects, Defendant shall spend no less than a total of $375,000 in Project Dollars, in the aggregate, for all Environmental Mitigation Projects.

14. All reports prepared by Defendant pursuant to the requirements of this Section of the Consent Decree and required to be submitted to EPA and the applicable Plaintiff-State shall be publicly available (subject to the provisions of Paragraph 96 of this Consent Decree) from Defendant without charge.

15. Defendant shall certify within 30 Days before the start of any Environmental Mitigation Project that Defendant is not otherwise required by law to perform the Environmental Mitigation Project, that Defendant is unaware of any other person who is required by law to perform the Environmental Mitigation Project, and that Defendant will not use any Environmental Mitigation Project, or portion thereof, to satisfy any obligations that it may have under other applicable requirements of law.

16. Defendant shall maintain, and upon Plaintiffs' request, provide to Plaintiffs within 60 Days of such request, all documents that substantiate the work completed on the Environmental Mitigation Projects or the Project Dollars expended to implement the Environmental Mitigation Projects in accordance with Sections XXI (Notices) and XVIII (Information Collection and Retention).

VI. SO_2 CONTROL TECHNOLOGY, EMISSIONS LIMITS, AND MONITORING REQUIREMENTS

17. SO_2 Process System Operation Emissions Limits and Control Technology. No later than the dates set forth in the table below, Defendant shall install (by the Date of Installation), operate, and Continuously Operate (by the Date of Continuous Operation and continuing thereafter), a WGS or DGS on the North Bend Process System as specified in the table below. Defendant shall Continuously Operate the WGS or DGS on the North Bend Process System as specified in the table below so as to achieve and maintain during Process System Operation (by the Date of Continuous Operation) the Emissions Limits specified in the table below.

Process System	Control Technology	7-day Rolling Average Emissions Limit	365-day Rolling Average Emissions Limit	Date
North Bend Process System	Seawater WGS or Limestone WGS or DGS	Interim 7-day Rolling Average Emissions Limit: No greater than 158 ppmvd (at 0% oxygen)	Interim 365-day Rolling Average Emissions Limit: No greater than 130 ppmvd (at 0% oxygen)	Seawater WGS Date of Installation: 4/1/21 Date of Continuous Operation: 10/1/21 Limestone WGS or DGS Date of Continuous Operation: 4/1/21
		Final 7-day Rolling Average Emissions Limit: Option A: No greater than 120 ppmvd (at 0% oxygen) Option B: No less than 120 ppmvd (at 0% oxygen) and no greater than 158	Final 365-day Rolling Average Emissions Limit: Option A: No greater than 80 ppmvd (at 0% oxygen) Option B: No less than 80 ppmvd (at 0% oxygen) and no greater than 130	Applicable final Emissions Limit: Pursuant to the protocol specified in Appendix E

Process System	Control Technology	7-day Rolling Average Emissions Limit	365-day Rolling Average Emissions Limit	Date
		ppmvd (at 0% oxygen)	ppmvd (at 0% oxygen)	

18. WGS or DGS Design Specifications. Defendant shall submit to EPA the process design specifications for the WGS or DGS specified in the table above no later than 12 months prior to the start of installation of the WGS or DGS. Defendant shall design the WGS or DGS specified in Paragraph 17 to achieve a minimum of 95% removal of SO_2 emissions at all times at the applicable Process System based on inlet SO_2 concentration of 1200 ppmvd and a minimum of 95% removal of SO_2 emissions at all times at the applicable Process System based on inlet SO_2 concentration of 3800 ppmvd (at 0% oxygen). The process design specifications shall include this information. In addition, if Defendant elects to comply with the applicable Emissions Limit pursuant to Option B, the Parties shall follow the protocol specified in Appendix E.

19. SO_2 Alternative Equivalent Pollution Control Technology. Alternatively, notwithstanding any provision of this Consent Decree to the contrary, no later than the applicable dates set forth in Paragraph 17, Defendant may install and Continuously Operate an Alternative Equivalent Pollution Control Technology that is at least as effective as a WGS or DGS, so as to achieve and maintain the applicable Emissions Limits specified in Paragraph 17, provided there has been prior written request, no later than the applicable date set forth in Paragraph 18, and written approval of such Alternative Equivalent Pollution Control Technology pursuant to Section XII (Review and Approval of Submittals) of this Consent Decree.

20. SO_2 Monitoring Requirements. Beginning no later than the Dates of Continuous Operation specified in Paragraph 17, Defendant shall use a CEMS (in accordance with the terms of this Paragraph) to monitor SO_2 emissions during Process System Operation of each Process System specified therein and to report compliance with the terms and conditions of SO_2 Emission Limits in Paragraph 17 this Consent Decree. Defendant shall install, calibrate, certify, maintain and operate all CEMS in accordance with the equipment manufacturer's specifications and reference methods specified in 40 C.F.R. § 60.13 that are applicable to CEMS, and Part 60, Appendixes A and F, and the applicable performance specification test of 40 C.F.R. Part 60, Appendix B, to demonstrate compliance with the SO_2 Emissions Limits specified in Paragraph 17 of this Consent Decree.

21. Other SO_2 Requirements. No later than the dates set forth in the table below, and continuing thereafter, at all times of Process System Operation at Hickok, Defendant shall process carbon black feedstock with a sulfur content of no greater than the weight specified in the table below:

Process System	**30-day Rolling Average Sulfur Content Weight Percent**	**365-day Rolling Average Sulfur Content Weight Percent**	**Date**
Hickok Process System	2%	1.75%	1/1/19

22. Feedstock Sulfur Content Monitoring Requirements. Beginning no later than the dates specified in the table in Paragraph 21, Defendant shall demonstrate compliance with the 30-day Rolling Average Sulfur Content Weight Percent and the 365-day Rolling Average Sulfur Content Weight Percent in Paragraph 21 by either:

a. at least once per calendar week, analyzing the sulfur content of the feedstock in each storage tank on a weight % basis and the liquid density in pounds per gallon (lb/gallon), or

b. within one Business Day of each feedstock delivery, calculating the feedstock sulfur content of each storage tank, through the following equation:

$$S_T = \frac{VS\rho + V_1 S_1 \rho_1}{V\rho + V_1 \rho_1}$$

Where:

S_T = Tank-specific feedstock sulfur content, after the delivery of feedstock into the tank, weight %

V = Volume of the feedstock in the tank, prior to the delivery of feedstock into the tank, gallons

S = Sulfur content of the feedstock in the tank, prior to the delivery of feedstock into the tank, weight %

ρ = Liquid density of the feedstock in the tank, prior to the delivery of feedstock into the tank, lb/gallon

V_1 = Volume of feedstock delivered into the tank, gallons

S_1 = Sulfur content of the feedstock delivered into the tank as certified by the feedstock supplier, weight %

ρ_1 = Liquid density of the feedstock delivered into the tank as certified by the feedstock supplier, lb/gallon

VII. NO_x CONTROL TECHNOLOGY, EMISSIONS LIMITS, AND MONITORING REQUIREMENTS

23. NO_x Emissions Limits Applicable to Heat Load Operation, Startup, and Shutdown. No later than the dates set forth in the table below, and continuing thereafter, Defendant shall operate the reactors, dryers, boilers and incinerators at each Facility (as listed) to

collectively achieve and maintain the Emissions Limits specified in the table below, at all times, collectively, of Heat Load Operation, Startup, and Shutdown:

Facility	**365-day Rolling Sum Emissions Limit**	**Date of Continuous Operation**
North Bend	No greater than 72 tons (in total for all reactors, dryers, boilers, and incinerators) for the prior 365 Days	4/1/21(if installing and Continuously Operating a Limestone WGS or DGS) 10/1/21 (if installing and Continuously Operating a Seawater WGS)
Hickok	No greater than 8 tons (in total for all reactors and boilers) for the prior 365 Days	1/1/21 (if installing and Continuously Operating a Low NOx Combustion System) or 1/1/22 (if installing and Continuously Operating a Co-Generation System)

24. Heat Load Operation, Startup, and Shutdown Compliance Calculation. Beginning no later than the dates specified in the table in Paragraph 23, and continuing thereafter, to evaluate compliance with the applicable 365-day Rolling Sum Emissions Limit specified in Paragraph 23, Defendant shall perform the following calculation, for each Day, summing as described, to derive cumulative NO_x emissions in tons:

$$X = \left(\sum_{i=1}^{365}\left[\frac{\varphi * \text{consumption}_i}{2000\ lbs}\right]\right)$$

Where:

"X" = cumulative NO_x emissions (tons) during preceding 365 Days

"φ" = 0.48 lbs NO_x/MMBtu

"i" = each Day in the preceding 365 Days

consumption_i = the amount of energy input from natural gas and feedstock (in MMBtu) to the Process System per Day for each Day *i* of Heat Load

Operation, Startup, or Shutdown. For any Day in which no Heat Load Operation, Startup, or Shutdown occur, $consumption_i$ shall equal zero.

25. Alternative Heat Load Operation, Startup, and Shutdown Compliance Calculation. As an alternative to the calculation in Paragraph 24, beginning no later than the dates specified in the table in Paragraph 23, and continuing thereafter, to evaluate compliance with the applicable 365-day Rolling Sum Emissions Limit specified in Paragraph 23, Defendant may perform an alternative calculation, for each Day, to derive daily NO_x emissions in tons as a sum for the prior 365 Days, provided there has been prior written request, which specifies the basis for the derivation of such alternative calculation no later than 24 Months from the Effective Date of the Consent Decree, and written approval of such alternative calculation pursuant to Section XII (Review and Approval of Submittals) of this Consent Decree.

26. NO_x Process System Operation Emissions Limits and Control Technology. No later than the dates set forth in the table below, Defendant shall install (by the Date of Installation), operate, and Continuously Operate (by the Date of Continuous Operation and continuing thereafter), the designated Control Technology on each Process System specified in the table below. Defendant shall Continuously Operate the designated Control Technology on each Process System specified in the table below so as to achieve and maintain during Process System Operation (by the Date of Continuous Operation) the Emissions Limits specified in the table below.

Process System	Control Technology	7-day Rolling Average Emissions Limit	365-day Rolling Average Emissions Limit	Date
North Bend Process System	SCR	No greater than 54 ppmvd (at 0% oxygen)	No greater than 38 ppmvd (at 0% oxygen)	Date of Continuous Operation: 4/1/21 (if installing and Continuously Operating a Limestone WGS or DGS) Date of Installation: 4/1/21 (if installing and Continuously Operating a Seawater WGS) Date of Continuous Operation: 10/1/21 (if installing and Continuously Operating a Seawater WGS)
Hickok Process System	Low NO_x Combustion System or Co-Generation System[1]	Interim 7-day Rolling Average Emissions Limit: No greater than 375 ppmvd (at 0% oxygen)	Interim 365-day Rolling Average Emissions Limit: No greater than 300 ppmvd (at 0% oxygen)	If Low NOx Combustion System Date of Installation: 9/1/20 Date of Continuous Operation: 1/1/21 If Co-Generation System Date of Installation: 7/1/21 Date of Continuous Operation: 1/1/22

[1] No later than 365 Days after the Effective Date of the Consent Decree, Defendant shall notify EPA and KDHE whether it will be installing and Continuously Operating a Low NOx Combustion System or a Co-Generation System.

Process System	Control Technology	7-day Rolling Average Emissions Limit	365-day Rolling Average Emissions Limit	Date
		Final 7-day Rolling Average Emissions Limit: Option A: No greater than 120 ppmvd (at 0% oxygen) Option B: No less than 120 ppmvd (at 0% oxygen) and no greater than 375 ppmvd (at 0% oxygen)	Final 365-day Rolling Average Emissions Limit: Option A: No greater than 80 ppmvd (at 0% oxygen) Option B: No less than 80 ppmvd (at 0% oxygen) and no greater than 300 ppmvd (at 0% oxygen)	Applicable final Emissions Limit: Pursuant to the protocol specified in Appendix F

27. SCR and Low NO_x Combustion System or Co-Generation System Design Specifications. Defendant shall submit to EPA the process design specifications for each Control Technology specified in the table above no later than 12 Months prior to the start of installation of the pertinent Control Technology. If Defendant elects to comply with the applicable Emissions Limit for the Low NO_x Combustion System or Co-Generation System pursuant to Option B, the Parties shall follow the protocol specified in Appendix F.

28. NO_x Alternative Equivalent Pollution Control Technology. Alternatively, notwithstanding any provision of this Consent Decree to the contrary, no later than the applicable dates set forth in Paragraph 26, Defendant may install and Continuously Operate an Alternative Equivalent Pollution Control Technology that is at least as effective as a SCR (North Bend), so as to achieve and maintain the applicable Emissions Limits specified in Paragraph 26, provided there has been prior written request, no later than the applicable date set forth in Paragraph 27,

and written approval of such Alternative Equivalent Pollution Control Technology pursuant to Section XII (Review and Approval of Submittals) of this Consent Decree.

29. NO_x Monitoring Requirements. Beginning no later than the Dates of Continuous Operation specified in Paragraph 26, Defendant shall use a CEMS (in accordance with the terms of this Paragraph) to monitor NO_x emissions during Process System Operation of each Process System specified therein and to report compliance with the terms and conditions of the NO_x Emission Limits (Paragraph 26) of this Consent Decree. Defendant shall install, calibrate, certify, maintain, and operate all CEMS in accordance with the equipment manufacturer's specifications and reference methods specified in 40 C.F.R. § 60.13 that are applicable to CEMS, and Part 60, Appendixes A and F, and the applicable performance specification test of 40 C.F.R. Part 60, Appendix B, to demonstrate compliance with the NO_x Emissions Limits specified in Paragraph 26 of this Consent Decree.

30. Hickok NOx Cap. Defendant shall comply with a Hickok NO_x Cap of 395 tons per Calendar Year by 365 Days after the Date of Continuous Operation of the Low NOx Combustion System or Co-Generation System, as applicable pursuant to Paragraphs 26 - 29. For purposes of determining compliance with the Hickok NO_x Cap, NO_x emissions shall be determined for (a) the Low NO_x Combustion System or Co-Generation System, by measuring emissions using a CEMS in accordance with Paragraph 29 and (b) for the remainder of the Hickok facility, by calculating emissions using the following: (i) dryers (natural gas): NO_x emissions = (NO_x factor for dryers (natural gas)) x (MMscf of natural gas used), where the NO_x factor for the dryers (natural gas) = 230 lbs/MMscf; (ii) natural gas boiler(s): NO_x emissions = (NO_x factor for natural gas boiler(s)) x (MMscf of natural gas used), where the NO_x factor for the natural gas boiler = 230 lbs/MMscf; (iii) reciprocating internal combustion engines: NO_x

emissions = (NO_x factor for RICE engines) x (hours of operation), where the NO_x factor for RICE engines = 0.031 lbs/hour for engines under 1,000 bHP; (iv) natural gas-fired oil heater: NO_x emissions = (NO_x factor for natural gas-fired oil heater) x (MMscf of natural gas used), where the NO_x factor for the natural gas-fired oil heater = 230 lbs/MMscf; (v) Heat Load Operations: NO_x emissions = (NO_x factor for Heat Load Operations) x (MMscf of natural gas used), where the NO_x factor for Heat Load Operations = 230 lbs/MMscf; (vi) Hickok Non-Assisted Flare: NO_x emissions = (NO_x factor for Hickok Non-Assisted Flare) x (actual production lbs while Hickok Non-Assisted Flare is operating), where the NO_x factor for the Hickok Non-Assisted Flare = 15.01 lbs NO_x per ton of production. Defendant may seek to revise either the NO_x factors for (b)(i) – (b)(iv), based on additional stack test data, provided there has been a prior written request by Defendant, which specifies the basis for the derivation of such revised factor, and written approval by EPA of such revised factor pursuant to Section XII (Review and Approval of Submittals) of this Consent Decree.

VIII. PM CONTROL TECHNOLOGY, EMISSIONS LIMITS, BEST MANAGEMENT PRACTICES, AND EARLY WARNING SYSTEM REQUIREMENTS

31. PM Control Technology and Emissions Limits.

a. No later than the date set forth in the table below, Defendant shall install (by the Date of Installation), and Continuously Operate (by the Date of Continuous Operation), a WGS or DGS on each Process System specified in the table below. Defendant shall Continuously Operate the WGS or DGS on each Process System specified in the table below so as to achieve and maintain during Process System Operation (by the Date of Continuous Operation) the Emissions Limits specified in the table below.

Process System	Control Technology	3-hour Average Emissions Limit for PM	Date
North Bend Process System	Seawater WGS or Limestone WGS or DGS	No greater than 0.0069 gr/dscf	Seawater WGS Date of Installation: 4/1/21 Date of Continuous Operation: 10/1/21 Limestone WGS or DGS Date of Continuous Operation: 4/1/21

b. As an alternative to the Emissions Limit specified in the table in Paragraph 31(a) above, Defendant may elect to use the procedures in this Paragraph 31(b) to set an alternate 3-Hour Average Emissions Limit for the North Bend Process System.

i. If Defendant makes such an election, then, at least 30 Days prior to the Date of Continuous Operation specified for the North Bend Process System in Paragraph 31(a), Defendant shall submit to EPA and the LDEQ written notification in accordance with Section XXI (Notices) of Defendant's election to utilize the procedures in this Paragraph 31(b) to propose an alternate 3-Hour Average Emissions Limit for the North Bend Process System. Defendant shall include with any such notice the proposed alternate 3-Hour Average PM Emissions Limit for the North Bend Process System, as well as the technical basis for such proposal. The technical basis relied upon by Defendant in support of the proposed alternate 3-Hour Average

PM Emissions Limit for the North Bend Process System may include information furnished by the equipment vendor for the WGS or DGS for the North Bend Process System, any particulate matter distribution information developed by Defendant for the North Bend Process System, any PM stack test data collected for the North Bend Process System, as well as other available and relevant information.

ii. Any such alternate 3-Hour Average Emissions Limit proposed by Defendant shall be no lower than 0.0069 gr/dscf and no higher than 0.015 gr/dscf on a 3-hour average basis, and shall reflect a value which can be met with a reasonable certainty of compliance. After consultation with LDEQ, EPA will determine the adjusted 3-Hour Average Emissions Limit for the North Bend Process System within the range of 0.0069 gr/dscf to 0.015 gr/dscf based on: (i) the information submitted by Defendant pursuant to this Paragraph 31(b), including the level of performance during stack test(s); (ii) a reasonable certainty of compliance; and (iii) any other available and relevant information.

iii. EPA shall notify Defendant in writing of EPA's determination of the adjusted 3-Hour Average Emissions Limit. During the period from the Date of Continuous Operation specified in Paragraph 31(a) for the North Bend Process System until 60 Days after the date that EPA provides written notification to Defendant of EPA's

determination of the adjusted 3-Hour Average Emissions Limit, Defendant shall comply with the alternate 3-Hour Average PM Emissions Limit proposed by Defendant pursuant to this Paragraph 31(b) for the North Bend Process System.

iv. Beginning 60 Days after the date that EPA provides written notification to Defendant of EPA's determination of the adjusted 3-Hour Average Emissions Limit for the North Bend Process System, and continuing thereafter, Defendant shall Continuously Operate the WGS or DGS on the North Bend Process System so as to achieve and maintain compliance with the adjusted 3-Hour Average Emissions Limit identified by EPA for such Process Systems.

v. During any dispute under this Paragraph, Defendant shall continue to operate the WGS or DGS required under Paragraph 31(a) in compliance with the alternate 3-Hour Average PM Emissions Limit proposed by Defendant and in a manner consistent with good air pollution control practices in lieu of meeting the EPA-adjusted 3-Hour Average Emissions Limit under this Paragraph 31(b).

32. PM Stack Testing Requirements. Beginning no later than the Dates of Continuous Operation specified in Paragraph 31, and continuing annually thereafter, Defendant shall conduct a stack test for PM for each Process System specified therein to report compliance with the terms and conditions of this Consent Decree. No two annual tests shall be conducted less than 11 Months apart. The reference methods and procedures for performing PM stack tests

and for determining compliance with the applicable PM 3-hour Average Emissions Limit shall be those specified in 40 C.F.R. § 60.8(f) and 40 C.F.R. Part 60, Appendix A-3, Reference Method 5/5B. Each test shall consist of three separate runs performed under representative operating conditions, not including periods of Startup, Shutdown, or Malfunction. The sampling time for each run shall be at least sixty (60) minutes and the minimum sample volume of each run shall be 30 ft^3 (dry volume, standard temperature basis).

33. Other PM Control Requirements. For all PM Emissions Equipment identified in Appendix B to this Consent Decree, Defendant shall Continuously Operate the associated PM Reduction Mechanism in accordance with the Method for Managing PM Emissions identified therein. Starting no later than 60 Days after the Effective Date of this Consent Decree, once each Operating Day, Defendant shall conduct a Method 22 visual assessment of the emissions from each piece of PM Emissions Equipment identified in Appendix B to this Consent Decree to determine if there are any detectable visible emissions. This Method 22 visual assessment shall be three minutes in duration for each piece of PM Emissions Equipment. In the event that any visible emissions are observed from PM Emissions Equipment during the visual assessment described in this Paragraph, Defendant shall identify, address and resolve the source of visible emissions as expeditiously as practicable. If the visible emissions event occurs after the Date of Continuous Operation of the PM Early Warning System in accordance with Paragraph 35 of this Consent Decree, the event shall be considered resolved once the PM Early Warning System alarm is below the Action Level. If the visible emissions event is not resolved within 24 hours, once visibility conditions are sufficient for a Method 9 observation, Defendant shall conduct a six minute observation in accordance with Method 9 at least once every eight hours (during daylight hours), until visible emissions from the PM Emissions Equipment that triggered the

event are less than 5% over the six minute average. Defendant shall maintain a record of each visual assessment conducted pursuant to this Paragraph sufficient to meet the requirements in Section XIII (Recordkeeping and Reporting Requirements).

34. Particulate Emissions Best Management Practices Control Plan. Within 60 Days of the Effective Date of this Consent Decree, Defendant shall implement the Particulate Emissions Best Management Practices Control Plan reflected in Appendix C at each of its Facilities.

35. PM Early Warning System. No later than the dates set forth in the table below, Defendant shall install, and continuing thereafter, Defendant shall Continuously Operate, a PM Early Warning System in accordance with the protocol specified in Appendix D:

Process System	Date of Continuous Operation
Hickok Process System	1/1/19
North Bend Process System	1/1/19

IX. PROHIBITION ON USE OF FLARES AND HICKOK EXISTING TAIL GAS BOILER

36. Prohibition On Use Of Hickok Existing Tail Gas Boiler. No later than the Date of Continuous Operation of the Low NO_x Combustion System or Co-Generation System, as applicable, Defendant shall permanently cease operation of the Hickok Existing Tail Gas Boiler, except in the limited instance of (a) a Malfunction at Hickok that satisfies the requirements of Section XVI (Affirmative Defenses To Certain Stipulated Penalties), (b) Inspection at the Low NO_x Combustion System or Co-Generation System at Hickok, or (c) Force Majeure that satisfies the requirements of Section XV (Force Majeure). In response to any of these of instances, Defendant shall operate the Hickok Existing Tail Gas Boiler only as necessary to comply with

the carbon black MACT standard (40 C.F.R. § 63.1103(f)), minimize operation of the Hickok Existing Tail Gas Boiler to the extent possible, and operate the Hickok Existing Tail Gas Boiler in accordance with the requirements in Paragraph 38 of this Consent Decree. During operation of the Hickok Existing Tail Gas Boiler in accordance with this Section IX (Prohibition on Use of Flares and Hickok Existing Tail Gas Boiler), the emissions from the Hickok Existing Tail Gas Boiler shall not be included in the calculation of any Emission Limits, but shall be included in the calculation of the Hickok NOx Cap.

37. Prohibition On Use Of Flares at Hickok. No later than the Date of Continuous Operation of the Low NOx Combustion System or Co-Generation System, as applicable, Defendant shall permanently cease operation of the Hickok Non-Assisted Flare, except in the limited instance of (a) a Malfunction at Hickok that satisfies the requirements of Section XVI (Affirmative Defenses To Certain Stipulated Penalties), (b) Inspection at the Low NO_x Combustion System or Co-Generation System at Hickok, or (c) Force Majeure that satisfies the requirements of Section XV (Force Majeure). In response to any of these of instances, Defendant shall operate the Hickok Non-Assisted Flare only as necessary to comply with the carbon black MACT standard (40 C.F.R. § 63.1103(f)), minimize operation of the Hickok Non-Assisted Flare to the extent possible, and operate the Hickok Non-Assisted Flare in accordance with the requirements in Paragraph 38 of this Consent Decree. During operation of the Hickok Non-Assisted Flare in accordance with this Section IX (Prohibition on Use of Flares and Hickok Existing Tail Gas Boiler), the emissions from the Hickok Non-Assisted Flare shall not be included in the calculation of any Emission Limits, but shall be included in the calculation of the Hickok NOx Cap.

38. Limited Operation of the Hickok Non-Assisted Flare. Defendant shall comply with applicable law at all times the Hickok Non-Assisted Flare is in operation.

39. Prohibition on Use of Flares at North Bend. Prior to termination of this Consent Decree, Defendant shall not operate any Flares at North Bend.

X. PROHIBITION ON NETTING CREDITS OR OFFSETS

40. Defendant shall neither generate nor use any CD Emissions Reductions: as netting reductions; as emissions offsets; to apply for, obtain, trade, or sell any emission reduction credits; or in determining whether a project would result in a significant emissions increase or significant net emissions increase in any PSD, Non-Attainment NSR, and/or minor New Source Review permit or permit proceeding. Notwithstanding the preceding sentence, Defendant may use CD Emissions Reductions achieved by the prohibition on use of the Hickok Existing Tail Gas Boiler and/or the Hickok Non-Assisted Flare required in Paragraphs 36 and 37 of this Consent Decree for the limited purpose of permitting of the Low NO_x Combustion System or Co-Generation System at Hickok.

41. The limitations set forth in Paragraph 40 above do not prohibit Defendant from seeking to, nor prohibit an applicable state agency from denying Defendant's ability to, generate or use Surplus Emission Reductions.

42. Nothing in this Section is intended to prohibit Defendant from seeking to, nor to prohibit an applicable state agency from denying, Defendant's ability to use CD Emissions Reductions for compliance with any rules or regulations designed to address regional haze or the non-attainment status of any area (excluding PSD and Non-Attainment NSR rules, but including, for example, Reasonably Achievable Control Technology rules) that apply to the facility; provided, however, that Defendant shall not be allowed to trade or sell any CD Emissions

Reductions. Nothing in this Consent Decree is intended to preclude the CD Emissions Reductions from being considered by a State or EPA for the purpose of attainment demonstrations submitted pursuant to Section 110 of the Act, 42 U.S.C. § 7410, or in determining impacts on NAAQS, PSD increment, or air quality related values, including visibility, in a Class I area.

XI. PERMITS

43. Where any compliance obligation under this Consent Decree requires Defendant to obtain a federal, state, or local permit or approval, Defendant shall submit a timely and complete application for each such permit or approval and take all other actions necessary to obtain all such permits or approvals, allowing for all legally required processing and review, including requests for additional information by the permitting or approval authority necessary to process a permit application to satisfy the compliance obligations established by this Decree. Defendant may seek relief under the provisions of Section XV (Force Majeure) for any delay in the performance of any obligation under this Consent Decree resulting from a failure to obtain, or a delay in obtaining, any permit or approval required to fulfill such obligation, only if Defendant has (a) submitted timely and complete applications in a manner that provides the permitting authority sufficient and reasonable time to process the permit application, (b) responded to requests for additional information by the permitting authority necessary to process the application to satisfy the compliance obligations established by this Decree, (c) taken all other actions necessary to obtain such permits or approvals for the compliance obligations established by this Decree in a timely fashion, and (d) prosecuted appeals of any allegedly unlawful, invalid or otherwise objectionable terms and conditions, if any, imposed by the permitting authority in a timely fashion. Each Plaintiff-State agrees to work cooperatively with

Defendant in reviewing all applications for permits necessary to comply with the requirements of this Consent Decree.

44. In addition to having first obtained any required preconstruction permits or other approvals pursuant to Paragraph 43 above, Defendant, within 12 Months from commencement of operation of each Control Technology installed, upgraded, and/or operated under this Consent Decree, shall apply to permanently include the requirements and limitations enumerated in this Paragraph into (i) a federally-enforceable permit (other than a Title V operating permit) or request a site-specific amendment to the applicable SIP, such that the requirements and limitations enumerated in this Paragraph become and remain 'applicable requirements' as that term is defined in 40 C.F.R. Part 70.2 and these requirements shall survive the termination of this Consent Decree in accordance with Section XXVII (Termination) in the form of a federally-enforceable permit (other than a Title V operating permit) or a site-specific amendment to the applicable SIP or (ii) for the consolidated Title V construction and operating permit program in each of the states of Kansas (for Hickok) and Louisiana (for North Bend), into a consolidated permit, such that the requirements and limitations enumerated in this Paragraph become and remain 'applicable requirements' as that term is defined in 40 C.F.R. Part 70.2 and shall survive the termination of this Consent Decree in accordance with Section XXVII (Termination). The permit, approval or SIP amendment shall require compliance with the following requirements of this Consent Decree: any applicable (a) 7-day Rolling Average Emissions Limit for SO_2 or NO_x, (b) 365-day Rolling Average Emissions Limit for SO_2 or NO_x, (c) 365-day Rolling Sum Emissions Limit, (d) 30-day Rolling Average Sulfur Content Weight Percent, (e) 365-day Rolling Average Sulfur Content Weight Percent, (f) PM Control Technology, Emissions Limits, Best Management Practices, and Early Warning System Requirements required by Section VIII,

(g) Hickok NO_x Cap, and (h) requirements specified in Paragraphs 20 (SO_2 Monitoring Requirements), 22 (Feedstock Sulfur Content Monitoring Requirements), 29 (NO_x Monitoring Requirements), 36 (Prohibition of Use of Hickok Existing Tail Gas Boiler), and 37 (Prohibition On Use Of Flares at Hickok). Following submission of an application for any permit or approval, Defendant shall cooperate with the appropriate permitting authority by promptly submitting the information that such permitting authority seeks that is necessary for incorporating the preceding list of requirements into a permit following its receipt of the application for the permit. Defendant agrees not to contest the submittal to EPA of any such proposed SIP revision that incorporates the requirements listed in this Paragraph 44 of this Consent Decree, or EPA's approval of such submittal, or the incorporation of the requirements listed in this Paragraph 44 of this Consent Decree through these SIP requirements into Title V permits.

45. Unless Defendant has already complied with the requirement to include the provisions listed in Paragraph 44(ii) in a permit through its Title V permit, upon issuance of a permit, approval or SIP amendment pursuant to the terms of Paragraph 44 of this Section, or in conjunction with the issuance of such permit, approval or SIP amendment, Defendant shall file any applications necessary to incorporate the requirements of the permit into the Title V operating permit for the relevant Facility. Defendant shall not challenge the inclusion in any such permit of the following terms, to the extent expressly imposed by this Consent Decree: (a) 7-day Rolling Average Emissions Limit for SO_2 or NO_x, (b) 365-day Rolling Average Emissions Limit for SO_2 or NO_x, (c) 365-day Rolling Sum Emissions Limit, (d) 30-day Rolling Average Sulfur Content Weight Percent, (e) 365-day Rolling Average Sulfur Content Weight Percent, (f) PM Control Technology, Emissions Limits, Best Management Practices, and Early Warning

System Requirements required by Section VIII, (g) Hickok NOx Cap, and (h) requirements specified in Paragraphs 20 (SO_2 Monitoring Requirements), 22 (Feedstock Sulfur Content Monitoring Requirements), 29 (NO_x Monitoring Requirements), and 36 (Prohibition on Use of Hickok Existing Tail Gas Boiler). Notwithstanding the foregoing, nothing in this Consent Decree is intended nor shall it be construed to require the establishment of Emissions Limits or limits on the sulfur content of carbon black feedstock other than those Emissions Limits, 30-day Rolling Average Sulfur Content Weight Percent, and/or 365-day Rolling Average Sulfur Content Weight Percent, expressly prescribed in this Consent Decree nor to preclude Defendant from challenging any more stringent Emissions Limits, 30-day Rolling Average Sulfur Content Weight Percent, and/or 365-day Rolling Average Sulfur Content Weight Percent, should they be proposed for or included in a Title V operating permit or any other permit necessary to implement any compliance obligations under this Decree.

46. When permits or SIP amendments are required, Defendant shall complete and submit applications for such permits or SIP amendments to the appropriate authorities to allow sufficient time for all legally required processing and review of the permit application or application for a SIP amendment, including requests for additional information by the permitting authorities that are necessary to process an application for a permit to satisfy the compliance obligations established by this Decree. Any failure by Defendant to submit a timely and complete permit application or application for a SIP amendment shall bar any use by Defendant of Section XV (Force Majeure), where a Force Majeure claim is based on permitting delays or delays associated with issuance of a SIP amendment.

47. Defendant shall provide EPA with a copy of each application for a permit to address or comply with any provision of this Consent Decree, as well as a copy of any permit

proposed as a result of such application, to allow for timely participation in any public comment opportunity.

48. Notwithstanding the reference to Title V permits in this Consent Decree, the enforcement of such permits shall be in accordance with their own terms and the Act and its implementing regulations. Such Title V permits shall not be enforceable under this Consent Decree, although any term or limit established by or under this Consent Decree shall be enforceable under this Consent Decree regardless of whether such term or limit has or will become part of a Title V permit, subject to the terms of Section XXVII (Termination).

49. Prior to Termination pursuant to the terms of Section XXVII (Termination), Defendant shall ensure that any enforceable requirements established under the Consent Decree are included in the applicable Title V permit including, but not limited to, any applicable (a) 7-day Rolling Average Emissions Limit for SO_2 or NO_x, (b) 365-day Rolling Average Emissions Limit for SO_2 or NO_x, (c) 365-day Rolling Sum Emissions Limit, (d) 30-day Rolling Average Sulfur Content Weight Percent, (e) 365-day Rolling Average Sulfur Content Weight Percent, (f) PM Control Technology, Emissions Limits, Best Management Practices, and Early Warning System Requirements required by Section VIII, (g) Hickok NO_x Cap, and (h) requirements specified in Paragraphs 20 (SO_2 Monitoring Requirements), 22 (Feedstock Sulfur Content Monitoring Requirements), 29 (NO_x Monitoring Requirements), and 36 (Prohibition on Use of Hickok Existing Tail Gas Boiler). For avoidance of doubt, the provisions of this CD in sections XV (Force Majeure) and XVI (Affirmative Defenses to Certain Stipulated Penalties) are applicable to compliance with this Consent Decree only and shall not be incorporated into any permits or approvals obtained in compliance with this Consent Decree.

XII. REVIEW AND APPROVAL OF SUBMITTALS

50. Defendant shall submit each plan, report, or other submission required by this Consent Decree to EPA and, as applicable, to Plaintiff-State(s), whenever such a document is required to be submitted for review or approval pursuant to this Consent Decree. Whenever approval of such document is required pursuant to this Consent Decree, EPA, after consultation with Plaintiff-State(s), as applicable, shall in writing: a) approve the submission; b) approve the submission upon specified conditions; c) approve part of the submission and disapprove the remainder; or d) disapprove the submission, identifying the reasons for such disapproval.

51. If the submission is approved pursuant to Paragraph 50.a, Defendant shall take all actions required by the plan, report, or other document, in accordance with the schedules and requirements of the plan, report, or other document, as approved. If the submission is conditionally approved or approved only in part, pursuant to Paragraph 50.b or .c, Defendant shall, upon written direction from EPA after consultation with Plaintiff-States, take all actions required by the approved plan, report, or other item that EPA determines are technically severable from any disapproved portions, subject to Defendant's right to dispute only the specified conditions or the disapproved portions, under Section XVII of this Decree (Dispute Resolution)

52. If the submission is disapproved in whole or in part pursuant to Paragraph 50.c or .d, Defendant shall, within 45 Days or such other time as the Parties agree to in writing, correct all deficiencies and resubmit the plan, report, or other item, or disapproved portion thereof, for approval, in accordance with the preceding Paragraphs. If the resubmission is approved in whole or in part, Defendant shall proceed in accordance with the preceding Paragraph. Any stipulated penalties applicable to the original submission, as provided in Section XIV (Stipulated Penalties)

of this Decree, shall accrue during the 45 Day period or other specified period, but shall not be payable unless the resubmission is untimely or is disapproved in whole or in part; provided that, if the original submission was so deficient as to constitute a material breach of Defendant's obligations under this Decree, the stipulated penalties applicable to the original submission shall be due and payable notwithstanding any subsequent resubmission.

53. If a resubmitted plan, report, or other item, or portion thereof, is disapproved in whole or in part, EPA after consultation with Plaintiff-States may again require Defendant to correct any deficiencies, in accordance with the preceding Paragraphs, or may itself correct any deficiencies, subject to Defendant's right to invoke Dispute Resolution and the right of EPA and Plaintiff-States to seek stipulated penalties as provided in the preceding Paragraphs.

XIII. RECORDKEEPING AND REPORTING REQUIREMENTS

54. Within 30 Days after the end of each half calendar year (i.e., by January 30th and July 30th) after the Effective Date, until termination of this Decree pursuant to Section XXVII (Termination), Defendant shall submit a semi-annual report to EPA and Plaintiff-States for the immediately preceding half calendar year period that shall contain the information described in this Paragraph 54 (a)-(j) for such immediately preceding half calendar year period:

a. A description of the progress of the construction of the Control Technologies, CEMS, and PM Early Warning Systems required by this Consent Decree, including:

i. if construction is not underway, any available information concerning the construction schedule and the execution of major contracts;

ii. if construction is underway, the estimated percent of installation as of the end of the reporting period, the current estimated construction completion date, and a brief description of completion of significant milestones during the reporting period;

iii. any information indicating that installation and commencement of operation may be delayed, including the nature and cause of the delay, and any steps taken by Defendant to mitigate such delay;

iv. once construction is complete, the dates the equipment was placed in service and/or commenced Continuous Operation and the dates of any testing that was performed during the period;

b. All information necessary to demonstrate compliance with all applicable Emissions Limits, Hickok NO_x Cap, 30-day Rolling Average Sulfur Content Weight Percent, 365-day Rolling Average Sulfur Content Weight Percent, and other provisions in Sections VI (SO_2 Control Technology, Emissions Limits, and Monitoring Requirements), VII (NO_x Control Technology, Emissions Limits, and Monitoring Requirements), VIII (PM Control Technology, Emissions Limits, Best Management Practices, and Early Warning System Requirements), and Section IX (Prohibition on Use of Flares and Hickok Existing Tail Gas Boiler);

c. All data collected for each Hickok Process System, from the time any 30-day Rolling Average Sulfur Content Weight Percent and/or 365-day Rolling Average Sulfur Content Weight Percent is exceeded until

compliance is achieved, and an explanation of any periods of downtime of any relevant equipment that prohibited the collection of such data;

d. All CEMS data collected for each Process System, from the time any Emissions Limit and Hickok NO_x Cap in Sections VI (SO_2 Control Technology, Emissions Limits, and Monitoring Requirements) and VII (NO_x Control Technology, Emissions Limits, and Monitoring Requirements) is exceeded until compliance is achieved, and an explanation of any periods of downtime of such CEMS;

e. A copy of the protocol for any PM stack tests performed in accordance with the requirements of Paragraph 32;

f. All PM Early Warning System data collected, from the time a PM Early Warning System alarm is triggered until the PM Early Warning System data have returned to below the action levels triggering an alarm condition, and an explanation of any periods of PM Early Warning System downtime;

g. A description of any potential violation of the requirements of this Consent Decree, including any exceedance resulting from Malfunctions, any exceedance of an Emissions Limit, any exceedance of the Hickok NO_x Cap, any exceedance of a 30-day Rolling Average Sulfur Content Weight Percent or 365-day Rolling Average Sulfur Content Weight Percent, or any failure to install, commence operation or Continuously Operate any Control Technology or any PM Early Warning System, which includes:

i. the date and duration of, and the quantity of any emissions related

to, the potential violation;

ii. a full explanation of the primary cause and any other significant contributing cause(s) of the potential violation;

iii. an analysis of all reasonable interim and long-term remedial steps or corrective actions, including all design, operation, and maintenance changes consistent with good engineering practices, if any, that could be taken to reduce or eliminate the probability of recurrence of such potential violation, and, if not already completed, a schedule for its (their) implementation, or, if Defendant concludes that remedial steps or corrective actions should not be conducted, the basis for that conclusion;

h. If no violations occurred during a reporting period, a statement that no violations occurred;

i. A description of the status of any permit applications and any proposed SIP revisions required under this Consent Decree; and

j. A summary of all actions undertaken and Project Dollars expended during the reporting period, as well as any cumulative Project Dollars expended, and the estimated environmental benefits achieved to date in satisfaction of the requirements of Section V (Environmental Mitigation) and Appendix A.

55. In any periodic report submitted pursuant to this Section, Defendant may incorporate by reference information submitted under its Title V permitting requirements, provided that Defendant attaches the Title V Permit report (or the pertinent portions of such

report) and provides a specific reference to the provisions of the Title V permit report that are responsive to the information required in the period report.

56. If Defendant violates, or has reason to believe that it may violate, any requirement of this Consent Decree, including any exceedance resulting from Malfunctions, any exceedance of an Emissions Limit, any exceedance of the Hickok NO_x Cap, any exceedance of a 30-day Rolling Average Sulfur Content Weight Percent or 365-day Rolling Average Sulfur Content Weight Percent, any failure to install, commence operation or Continuously Operate any Control Technology or any PM Early Warning System, or any event that triggers a PM Early Warning System alarm, Defendant shall notify EPA and Plaintiff-States of such event, and its likely duration, in writing, within 30 Business Days of the Day Defendant first becomes aware that it has violated or may violate the Decree, with an explanation of the likely cause of the event, remedial steps or corrective action taken, or to be taken, including all design, operation, and maintenance changes consistent with good engineering practices, if any, to reduce or eliminate the probability of recurrence of such violation. If, at any time, the provisions of this Consent Decree are included in Title V Permits, consistent with the requirements for such inclusion in this Consent Decree, then the deviation reports required under applicable Title V regulations shall be deemed to satisfy all the requirements of this Paragraph. Nothing in this Paragraph or the following Paragraph relieves Defendant of its obligation to provide the notice required by Section XV (Force Majeure) if Defendant contends a Force Majeure event occurred.

57. Whenever any violation of this Consent Decree, or of any applicable permits required under this Consent Decree, or any other event affecting Defendant's performance under this Decree may pose an immediate threat to the public health or welfare or the environment, Defendant shall notify EPA and the applicable Plaintiff-State, orally or by electronic or facsimile

transmission as soon as possible, but no later than seven Days after Defendant first knew, or should have known, of the violation or event. This procedure is in addition to the requirements set forth in the preceding Paragraph.

58. Within 60 Days following the completion of each Environmental Mitigation Project required under this Consent Decree, Defendant shall submit to EPA and the applicable Plaintiff-State a report that documents the date that the Environmental Mitigation Project was completed, the results from implementing the Environmental Mitigation Project, including the emission reductions or other environmental benefits achieved, and the Project Dollars expended by Defendant in implementing the Environmental Mitigation Project.

59. All reports shall be submitted as set forth in Section XXI (Notices). All data shall be reported using the number of significant digits in which the pertinent standard or limit is expressed.

60. Each report submitted by Defendant under this Section shall be signed by an official of the submitting party and include the following certification:

> I certify under penalty of law that this document and all attachments were 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 inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

This certification requirement does not apply to emergency or similar notifications where compliance would be impractical.

61. The reporting requirements of this Consent Decree do not relieve Defendant of any reporting obligations required by the Clean Air Act or implementing regulations, or by any other federal, state, or local law, regulation, permit, or other requirement.

62. Any information provided pursuant to this Consent Decree may be used by the Plaintiffs in any proceeding to enforce the provisions of this Consent Decree and as otherwise permitted by law.

63. Defendant may also assert that information required to be provided under this Section is protected as "Confidential Business Information" ("CBI") under 40 C.F.R. Part 2 or any applicable state laws. If the Defendant elects to do so, it shall designate any such information as CBI subject to 40 C.F.R. Part 2 or the applicable state law, and follow the requirements of 40 C.F.R. Part 2 or the applicable state law for the protection of such information, including by segregating the CBI material from the rest of the report, and substantiating each element of each CBI claim in the report. Any information to be provided to LDEQ that Defendant wishes to protect as CBI shall follow the law and procedures set forth in the applicable provisions of La. R.S. 30:2030, La. R.S. 30:2074.D, and LA ADMIN. CODE tit. 33, Pt. I, Chapter 5. No monitoring data or other data evidencing the amount or content of emissions from any Facility shall be considered as CBI or subject to any privilege, provided, however, that nothing within this provision prohibits Defendant from invoking Paragraph 96 and the confidential business determination process specified therein, including over feedstock information. Plaintiffs reserve all rights to dispute such a claim.

XIV. STIPULATED PENALTIES

64. Defendant shall be liable for stipulated penalties to the United States for violations of this Consent Decree, and to the United States and the applicable Plaintiff-States for

violations of this Consent Decree with respect to North Bend and Hickok, as specified in the table below, unless excused under Section XV (Force Majeure) or Defendant establishes a defense under Section XVI (Affirmative Defense to Certain Stipulated Penalties). Violation of any Emissions Limit, 30-day Rolling Average Sulfur Content Weight Percent, or 365-day Rolling Average Sulfur Content Weight Percent is a violation on every Day on which the average or sum is based and each subsequent Day of violation of such Emissions Limit, 30-day Rolling Average Sulfur Content Weight Percent, or 365-day Rolling Average Sulfur Content Weight Percent is subject to the corresponding penalty per Day as specified in the table below, provided that, when a violation of an Emissions Limit (for the same pollutant and from the same source), 30-day Rolling Average Sulfur Content Weight Percent, or 365-day Rolling Average Sulfur Content Weight Percent recurs within periods of less than seven Days, Defendant shall not pay a second or multiple daily stipulated penalty for any Day of recurrence for which a stipulated penalty is already payable. Stipulated penalties may only be assessed once for a given Day within any averaging or summation period for violation of any particular Emissions Limit, Hickok NO_x Cap, 30-day Rolling Average Sulfur Content Weight Percent, or 365-day Rolling Average Sulfur Content Weight Percent.

Consent Decree Violation	**Stipulated Penalty**
a. Failure to pay the civil penalty as specified in Section IV (Civil Penalty)	$5,000 per Day
b. Failure to comply with any applicable Emissions Limit, Hickok NO_x Cap, 30-day Rolling Average Sulfur Content Weight Percent, or 365-day Rolling Average Sulfur Content Weight Percent, where the violation is less than 5% in excess of the limits set forth in this Consent Decree	$1,000 per Day per violation

Consent Decree Violation	Stipulated Penalty
c. Failure to comply with any applicable Emissions Limit, Hickok NO_x Cap, 30-day Rolling Average Sulfur Content Weight Percent, or 365-day Rolling Average Sulfur Content Weight Percent, where the violation is equal to or greater than 5% but less than 10% in excess of the limits set forth in this Consent Decree	$2,000 per Day per violation
d. Failure to comply with any applicable Emissions Limit, Hickok NO_x Cap, 30-day Rolling Average Sulfur Content Weight Percent, or 365-day Rolling Average Sulfur Content Weight Percent, where the violation is greater than 10% in excess of the limits set forth in this Consent Decree	$3,000 per Day per violation
e. Failure to install, commence operation, or Continuously Operate a Control Technology required under this Consent Decree	$5,000 per Day per violation during the first 30 Days, $10,000 per Day per violation for the next 30 Days, and $37,500 per Day per violation thereafter
f. Failure to install, commence operation, or Continuously Operate a PM Early Warning System as required under this Consent Decree	$1,000 per Day per violation
g. Failure to install or operate a CEMS as required in this Consent Decree	$1,000 per Day per violation
h. Failure to apply for any permit required by Section XI (Permits)	$1,000 per Day per violation
i. Failure to timely submit, modify, or implement, as approved, the reports, plans, studies, analyses, protocols, or other submittals required in this Consent Decree	$750 per Day per violation during the first ten Days, $1,000 per Day per violation thereafter
j. Failure to timely submit, modify, or implement, as approved, a report, plan, study, analysis, protocol, or other submittal required with respect to Environmental Mitigation Projects prescribed in Section V (Environmental Mitigation) or Appendix A	$750 per Day per violation during the first ten Days, $1,000 per Day per violation thereafter

Consent Decree Violation	Stipulated Penalty
k. Any other violation of this Consent Decree	$1,000 per Day per violation

65. Subject to the provisions of Paragraph 64 above, stipulated penalties under this Section shall begin to accrue on the Day after performance is due or on the Day a violation occurs, whichever is applicable, and shall continue to accrue until performance is satisfactorily completed or until the violation ceases. Nothing in this Consent Decree shall prevent the simultaneous accrual of separate stipulated penalties for separate violations of this Consent Decree. The United States or Plaintiff-States, or any of the foregoing, may seek stipulated penalties under this Section with respect to violations involving North Bend (LDEQ only) and Hickok (KDHE only). Where the United States and a Plaintiff-State seek stipulated penalties for the same violation of this Consent Decree, Defendant shall pay 50% to the United States and 50% to the Plaintiff-State. The Plaintiff making a demand for payment of a stipulated penalty shall simultaneously send a copy of the demand to the other Plaintiffs.

66. Defendant shall pay any stipulated penalty within 30 Days of receiving the United States' and/or Plaintiff-States' written demand, unless Defendant elects within 20 Days of receipt of written demand to dispute the imposition or accrual of stipulated penalties in accordance with the provisions in Section XVII (Dispute Resolution) of this Consent Decree.

67. EPA and Plaintiff-States may, in the unreviewable exercise of their collective or individual discretion, reduce or waive their portion of stipulated penalties otherwise due to either the United States or Plaintiff-States under this Consent Decree.

68. Stipulated penalties shall continue to accrue as provided in this Section during any dispute, with interest on accrued stipulated penalties payable and calculated at the rate

established by the Secretary of the Treasury, pursuant to 28 U.S.C. § 1961, but need not be paid until the following:

a. If the dispute is resolved by agreement between the Parties or by a decision of the United States and/or Plaintiff-States that is not appealed to the Court, Defendant shall pay accrued penalties determined to be owing, together with interest accruing from the 31st Day after the written demand in Paragraph 66, within 30 Days of the effective date of the agreement or the receipt of EPA's and/or Plaintiff-States' decision or order.

b. If the dispute is appealed to the Court and the United States and/or Plaintiff-States are the prevailing party, in whole or in part, as may be determined by the Court, Defendant shall pay all accrued penalties determined by the Court to be owing, together with interest accruing from the 31st Day after the written demand in Paragraph 66, within 60 Days of receiving the Court's decision or order, except as provided in subparagraph c, below.

c. If any Party appeals the District Court's decision, Defendant shall pay all accrued penalties determined to be owing, together with interest accruing from the 31st Day after the written demand in Paragraph 66, within 15 Days of receiving the final appellate court decision.

69. Defendant shall pay stipulated penalties owing to the United States and/or Plaintiff-States in the manner set forth and with the confirmation notices to the persons specified in Section IV (Civil Penalty), except that the transmittal letter shall state that the payment is for stipulated penalties and shall state for which violation(s) the penalties are being paid.

70. If Defendant fails to pay stipulated penalties according to the terms of this Consent Decree, Defendant shall be liable for interest on such penalties, as provided for in 28 U.S.C. § 1961, accruing as of the date payment became due. Nothing in this Paragraph shall be construed to limit the United States and/or Plaintiff-States from securing any remedy otherwise provided by law for Defendant's failure to pay any stipulated penalties.

71. The stipulated penalties provided for in this Consent Decree shall be in addition to any other rights, remedies, or sanctions available to the United States and/or Plaintiff-States for Defendant's violation of this Consent Decree or applicable law, except that for any violation of this Consent Decree that is also a violation of any applicable statute or regulation, Defendant shall be allowed a credit, dollar for dollar, for any stipulated penalties paid, against any statutory penalties imposed for such violation, including penalties resulting from enforcement pursuant to Paragraphs 64 and 70.

XV. FORCE MAJEURE

72. "Force Majeure," for purposes of this Consent Decree, is defined as any event arising from causes beyond the control of Defendant, its Contractors, or an entity controlled by Defendant that causes a delay or impediment to performance in complying with any obligation under this Consent Decree despite Defendant's best efforts to fulfill the obligation. The requirement that Defendant exercises best efforts to fulfill the obligation includes using best efforts to anticipate any potential Force Majeure event and best efforts to address the effects of any such event (a) as it is occurring and (b) after it has occurred to prevent or minimize any resulting delay and/or violation and/or emissions during such event to the greatest extent possible. Force Majeure does not include Defendant's financial inability to perform any obligation under this Consent Decree. Unanticipated or increased costs or expenses associated

with the performance of Defendant's obligations under this Consent Decree shall not constitute circumstances beyond Defendant's control, nor serve as the basis for an extension of time under this Section, and shall not constitute an event of Force Majeure.

73. If any event occurs or has occurred that may delay or prevent compliance with the performance of any obligation under this Consent Decree, as to which Defendant intends to assert a claim as an event of Force Majeure, Defendant shall provide notice orally or by electronic or facsimile transmission to the representatives of EPA and Plaintiff-States designated to receive notice pursuant to Section XXI (Notices) as soon as practicable but no later than seven Business Days following the date Defendant first knew that the claimed Force Majeure event may cause such delay and give rise to a claim of Force Majeure. Defendant shall provide written notice of the event as soon as practicable, but in no event later than 21 Business Days following the date when Defendant first knew that the event might cause such delay. The written notice shall reference this Paragraph of the Consent Decree and explain and describe the reasons for the delay, the anticipated duration of the delay, all actions taken or to be taken to prevent or minimize the delay, a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay, and Defendant's rationale for attributing such delay to a Force Majeure event if it intends to assert such a claim. Defendant shall include with any written notice all available documentation supporting the claim that the delay was attributable to a Force Majeure event. Defendant shall be deemed to know of any circumstance of which Defendant's Contractors, or any entity controlled by it, knew or should have known.

74. Failure by Defendant to comply with the notice requirements of Paragraph 73 renders this Section voidable by EPA, as to the specific event for which Defendant has failed to

comply with such notice requirement. If so voided, it shall be of no effect as to the particular event involved.

75. If EPA, after consultation with Plaintiff-States, agrees that the delay or anticipated delay is attributable to a Force Majeure event, the Parties may reach agreement and stipulate in writing to an extension of the required deadline(s) for all requirement(s) affected by the Force Majeure event for a period equivalent to the delay actually caused by the Force Majeure event, or such other period as may be appropriate in light of the circumstances. If such stipulation results in a material change to the terms of the Consent Decree, the stipulation shall be filed as a modification to the Consent Decree pursuant to Section XXIV (Modification). An extension of the time for performance of the obligations affected by the Force Majeure event shall not, of itself, extend the time for performance of any other obligation. If the Parties do not reach agreement on the appropriate extension of any deadlines affected by a Force Majeure event, EPA will notify Defendant in writing of the length of the extension, if any, for performance of the obligations affected by the Force Majeure event. Defendant shall comply with the extended deadlines specified in the notice from EPA, subject to the provisions of Section XVII (Dispute Resolution).

76. If EPA, after consultation with Plaintiff-States, does not agree that the delay or anticipated delay has been or will be caused by a Force Majeure event, EPA will notify Defendant in writing of its decision.

77. If Defendant elects to invoke the formal dispute resolution procedures set forth in Section XVII (Dispute Resolution), it shall do so no later than 45 Days after receipt of EPA's notice pursuant to Paragraph 75 or Paragraph 76, whichever applies, and shall first comply with the provisions for informal dispute resolution contained in Section XVII before proceeding to

formal dispute resolution. In any such proceeding in accordance with formal dispute resolution procedures, Defendant shall have the burden of demonstrating that the delay or anticipated delay has been or will be caused by a Force Majeure event, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Defendant complied with the requirements of Paragraphs 72-73, above. If Defendant carries this burden, the delay at issue shall be deemed not to be a violation by Defendant of the affected obligation of this Consent Decree identified to EPA and the Court.

78. This Court shall not draw any inferences nor establish any presumptions adverse to any Party as a result of Defendant delivering a notice of Force Majeure or the Parties' inability to reach agreement.

XVI. AFFIRMATIVE DEFENSES TO CERTAIN STIPULATED PENALTIES

79. If any of Defendant's Process Systems exceeds a 3-hour Average Emissions Limit, or a 7-day Rolling Average Emissions Limit due to a Malfunction, Defendant, bearing the burden of proof by a preponderance of the evidence, has an affirmative defense to a claim for stipulated penalties under this Consent Decree, if Defendant complies with the notice and reporting requirements of Paragraph 80 of this Section, and demonstrates all of the following:

a. The excess emissions were caused by a sudden, unavoidable breakdown of technology, beyond Defendant's control;

b. The excess emissions did not stem from any activity or event that was foreseeable and avoidable, nor could have been avoided by operation and maintenance practices in accordance with manufacturers' specifications and good engineering and maintenance practices;

c. The air pollution control equipment and processes were maintained and operated in a manner consistent with good practice for minimizing emissions;

d. Repairs were made as expeditiously as practical when Defendant knew or should have known that the applicable 3-hour Average Emissions Limit, or a 7-day Rolling Average Emissions Limit was being or would be exceeded;

e. Defendant took measures to limit the amount and duration of the excess emissions (including any bypass) in a manner consistent with good practice for minimizing emissions;

f. All practical steps were taken to minimize the impact of the excess emissions on ambient air quality;

g. Relevant emission monitoring systems were kept in operation to the extent practical;

h. Defendant's actions in response to the excess emissions were documented by properly signed or otherwise validated contemporaneous operating logs, if applicable, or other relevant evidence;

i. The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance; and

j. Defendant properly and promptly notified Plaintiffs as required by this Consent Decree.

80. To assert an affirmative defense for Malfunction under Paragraph 79, Defendant shall provide notice to the Plaintiffs in writing of Defendant's intent to assert an affirmative

defense in Defendant's semi-annual progress reports required by Paragraph 54. The notice shall contain:

a. The identity of each stack or other emission point where the excess emissions occurred;

b. The magnitude of the excess emissions expressed in the units of the applicable Emissions Limits and the operating data and calculations used in determining the magnitude of the excess emissions;

c. The time and duration or expected duration of the excess emissions;

d. The identity of the equipment from which the excess emissions emanated;

e. The nature and cause of the emissions;

f. The steps taken to remedy the Malfunction and the steps taken or planned to prevent the recurrence of the Malfunctions;

g. The steps that were or are being taken to limit the excess emissions; and

h. If Defendant's permit contains procedures governing source operation during periods of Malfunction and the excess emissions resulted from Malfunction, a list of the steps taken to comply with the permit procedures.

81. The affirmative defense provided herein is only an affirmative defense to stipulated penalties for violations of this Consent Decree, and not a defense to any civil or administrative action for injunctive relief. A Malfunction shall not constitute a Force Majeure Event unless the Malfunction also meets the definition of a Force Majeure Event, as provided in Section XV (Force Majeure).

XVII. DISPUTE RESOLUTION

82. The dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes arising under or with respect to this Consent Decree, including, but not limited to, Section XIV (Stipulated Penalties) and Section XV (Force Majeure). Defendant's failure to seek resolution of a dispute under this Section shall preclude Defendant from raising any such issue as a defense to an action to enforce any obligation of Defendant arising under this Decree.

83. Any dispute subject to Dispute Resolution under this Consent Decree shall first be the subject of informal negotiations. The dispute shall be considered to have arisen when Defendant sends the United States, and the applicable Plaintiff-State, a written notice of Dispute. Such notice of dispute shall clearly describe the nature of the dispute and shall state Defendant's position with regard to such dispute. The Parties shall expeditiously schedule a meeting to discuss the dispute informally not later than 10 days after the receipt of such notice. The period of informal negotiations shall not exceed 20 Days from the date of sending the notice of dispute, unless that period is modified by written agreement. If the Parties cannot resolve a dispute by informal negotiations, then the position advanced by the United States, after consultation with the applicable Plaintiff-State, shall be considered binding unless, within 20 Days after the conclusion of the informal negotiation period, Defendant invokes formal dispute resolution procedures as set forth below.

84. Defendant may invoke formal dispute resolution procedures, within the time period provided in the preceding Paragraph, by serving on the United States and the applicable Plaintiff-State, in accordance with Section XXI (Notices), a written statement of position regarding the matter in dispute. The statement of position shall include, but may not necessarily

be limited to, any factual data, analysis, or opinion supporting Defendant's position and any supporting documentation relied upon by Defendant.

85. The United States, after consultation with the applicable Plaintiff-State, shall serve its statement of position within 45 Days of receipt of Defendant's statement of position. The United States' statement of position shall include, but may not necessarily be limited to, any factual data, analysis, or opinion supporting that position and any supporting documentation relied upon by the United States. The statement of position of the United States shall be binding on Defendant, unless Defendant files a motion for judicial review of the dispute in accordance with the following Paragraph.

86. Defendant may seek judicial review of the dispute by filing with the Court, and serving on the United States and the applicable Plaintiff-State, in accordance with Section XXI (Notices), a motion requesting judicial resolution of the dispute. The motion shall contain a written statement of Defendant's position on the matter in dispute, including any supporting factual data, analysis, opinion, or documentation, and shall set forth the relief requested and any schedule within which the dispute must be resolved for orderly implementation of the Consent Decree. The United States, after consultation with the applicable Plaintiff-State, shall file its response to Defendant's motion within 21 Days of the date of service of the motion, which shall be served on Defendant in accordance with Section XXI (Notices) and the electronic case filing (ECF) requirements of the Court. Defendant may file a reply within 7 Days of the date of service of the response in accordance with Section XXI (Notices) and the ECF filing requirements of the Court.

87. Except as otherwise provided in this Consent Decree, the Court shall decide all disputes pursuant to applicable principles of law. The disputing Parties shall state their

respective positions as to the applicable standard of law for resolving the particular dispute in the Parties' initial filings with the Court under Paragraphs 85 and 86. Except as otherwise provided in this Consent Decree, in any dispute brought under this Section XVII (Dispute Resolution), Defendant shall bear the burden of demonstrating that its position complies with this Consent Decree.

88. The time periods set out in this Section may be shortened or lengthened by a joint motion among the Parties or upon motion to the Court by one of the Parties to the dispute, explaining the basis for seeking such a scheduling modification.

89. The invocation of dispute resolution procedures under this Section shall not, by itself, extend, postpone, or affect in any way any obligation of Defendant under this Consent Decree, unless and until final resolution of the dispute so provides. Stipulated penalties with respect to the disputed matter shall continue to accrue from the first Day of noncompliance, but payment shall be stayed pending resolution of the dispute and in accordance with any extension or modification of the schedule for completion of work as provided in Paragraph 75. If Defendant does not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section XIV (Stipulated Penalties).

90. As part of the resolution of any dispute under this Section, in appropriate circumstances the disputing Parties may agree, in writing, or this Court may order, an extension or modification of the schedule for the completion of the work required under this Consent Decree. Defendant shall be liable for stipulated penalties pursuant to Section XIV (Stipulated Penalties) for its failure thereafter to complete the work in accordance with the extended or modified schedule, provided that Defendant shall not be precluded from asserting that an event

of Force Majeure has caused or may cause a delay in complying with the extended or modified schedule.

91. Issuance, renewal, modification, denial or revocation of a permit and issuance of orders or other actions by state agencies are not themselves subject to dispute resolution under this Consent Decree. However, subject to Section XI (Permits) and XV (Force Majeure), this Paragraph in no way limits Defendant's right to assert in a dispute under this Decree that a State's action or inaction (on a permit application or any other request by Defendant) prevented Defendant from complying with an obligation under this Decree.

XVIII. INFORMATION COLLECTION AND RETENTION

92. The United States, and its authorized representatives, including attorneys, contractors, and consultants, shall have the right of entry into any Facility covered by this Consent Decree, and LDEQ (as to North Bend only) and KDHE (as to Hickok only) and its representatives, including attorneys, contractors, and consultants, shall have the right of entry, at all reasonable times, upon presentation of credentials, to:

a. monitor the progress of activities required under this Consent Decree;

b. verify any data or information submitted to the United States or LDEQ or KDHE in accordance with the terms of this Consent Decree;

c. obtain samples and, upon request, splits of any samples taken by Defendant or its representatives, Contractors, or consultants;

d. obtain copies of documents, including photographs and similar data, relating to activities required under this Consent Decree; and

e. assess Defendant's compliance with this Consent Decree.

93. Until five years after the complete termination of this Consent Decree, Defendant shall retain in electronic form, and shall instruct its Contractors and agents to preserve in electronic form, all non-identical copies of all documents and records in their or their Contractors' or agents' possession or control, or that come into their or their Contractors' or agents' possession or control, and that relate to Defendant's performance of its obligations under this Consent Decree. This information-retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures. At any time during this information-retention period, upon request by the United States or the applicable Plaintiff-State, Defendant shall provide copies of any documents, records, or other information required to be maintained under this Paragraph.

94. At the conclusion of the information-retention period provided in Paragraph 93 above, Defendant shall notify the United States and the applicable Plaintiff-State at least 90 Days prior to the destruction of any documents, records, or other information subject to the requirements of Paragraph 93 and, upon request by the United States or the applicable Plaintiff-State, Defendant shall deliver any such documents, records, or other information to EPA or the applicable Plaintiff-State.

95. Defendant may assert that documents, records, or other information requested by the United States or Plaintiff-States under this Decree are privileged under the attorney-client privilege or any other privilege recognized by federal law. If Defendant asserts such a privilege, it shall provide the following: (1) the title of the document, record, or information; (2) the date of the document, record, or information; (3) the name and title of each author of the document, record, or information; (4) the name and title of each addressee and recipient; (5) a description of the subject of the document, record, or information; and (6) the basis of the privilege asserted by

Defendant. However, no documents, records, or other information created or generated pursuant to the requirements of this Consent Decree shall be withheld on grounds of privilege.

96. All information and documents submitted by Defendant pursuant to this Consent Decree shall be subject to any requests under applicable law providing public disclosure of documents unless (a) the information and documents are subject to legal privileges or protection or (b) Defendant claims and substantiates in accordance with 40 C.F.R. Part 2 and any applicable State law that the information and documents contain confidential business information.

97. This Consent Decree in no way limits or affects any right of entry and inspection, or any right to obtain information, held by the United States or the applicable Plaintiff-State pursuant to applicable federal or state laws, regulations, or permits, nor does it limit or affect any duty or obligation of Defendant to maintain documents, records, or other information imposed by applicable federal or state laws, regulations, or permits.

XIX. EFFECT OF SETTLEMENT / RESERVATION OF RIGHTS

98. Entry of this Consent Decree shall resolve all civil claims of the United States and Plaintiff-States arising under Parts C or D of Subchapter I of the Clean Air Act, 42 U.S.C. §§ 7470 to 7492, the regulations promulgated thereunder at 40 C.F.R. §§ 52.21, 51.165 and 51.166, the portions of applicable SIPs and related rules adopted pursuant to 40 C.F.R. §§ 51.165 and 51.166, and under Subchapter V of the Clean Air Act, §§ 7661 to 7661f and the regulations promulgated thereunder, with respect to SO_2, NO_x and PM and any permit condition that incorporates one or more of the foregoing regulatory provisions, that arose from modifications of the Process Systems covered by this Consent Decree that commenced prior to the Date of Lodging of this Consent Decree, including without limitation the allegations of noncompliance set forth in the Complaint and in the Notices of Violation issued by EPA to Defendant.

99. Notwithstanding the resolution of liability in Paragraph 98, nothing in this Consent Decree precludes the United States and/or Plaintiff-States from seeking from Defendant injunctive relief, penalties, or other appropriate relief for violations by Defendant of the regulatory requirements identified in Paragraph 98 resulting from (1) construction or modification that commenced prior to the Date of Lodging of the Consent Decree, if the resulting violations do not relate to the Process Systems covered by this Consent Decree or do not relate to NO_x, SO_2 or PM or (2) any construction or modification that commences after the Date of Lodging of the Consent Decree. Nothing in this Consent Decree limits or restricts any defenses otherwise available to Defendant in responding to any enforcement action addressed by this Paragraph.

100. The United States and Plaintiff-States reserve all legal and equitable remedies available to enforce the provisions of this Consent Decree. This Consent Decree shall not be construed to limit the rights of the United States or Plaintiff-States to obtain penalties or injunctive relief under the Act or implementing regulations, or under other federal or state laws, regulations, or permit conditions, except as expressly specified in Paragraph 98. The United States and Plaintiff-States further reserve all legal and equitable remedies to address any imminent and substantial endangerment to the public health or welfare or the environment arising at, or posed by, one or more of Defendant's Facilities, whether related to the violations addressed in this Consent Decree or otherwise.

101. In any subsequent administrative or judicial proceeding initiated by the United States or Plaintiff-States for injunctive relief, civil penalties, or other appropriate relief relating to the Facilities or to Defendant's violations, Defendant shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue

preclusion, claim preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States or Plaintiff-States in the subsequent proceeding were or should have been brought in the instant case, except with respect to claims that have been specifically resolved pursuant to Paragraph 98 of this Section.

102. This Consent Decree is not a permit, or a modification of any permit, under any federal, state, or local laws or regulations. Defendant is responsible for achieving and maintaining compliance with all applicable federal, state, and local laws, regulations, and permits; and Defendant's compliance with this Consent Decree shall be no defense to any action commenced pursuant to any such laws, regulations, or permits, except as set forth herein. The United States and Plaintiff-States do not, by their consent to the entry of this Consent Decree, warrant or aver in any manner that Defendant's compliance with any aspect of this Consent Decree will result in compliance with provisions of the Act, 42 U.S.C. § 7401 et seq., or with any other provisions of federal, state, or local laws, regulations, or permits.

103. This Consent Decree does not limit or affect the rights of Defendant or of the United States or Plaintiff-States against any third parties not party to this Consent Decree, nor does it limit the rights of third parties not party to this Consent Decree, against Defendant, except as otherwise provided by law.

104. This Consent Decree shall not be construed to create rights in, or grant any cause of action to, any third party not party to this Consent Decree.

XX. COSTS

105. The Parties shall bear their own costs of this action, including attorneys' fees, except that the United States and Plaintiff-States shall be entitled to collect the costs (including

attorneys' fees) incurred in any action necessary to collect any portion of the civil penalty or any stipulated penalties due but not paid by Defendant.

XXI. NOTICES

106. Unless otherwise provided herein, whenever notifications, submissions, or communications are required by the Consent Decree, they shall be made in writing and addressed as follows:

To EPA:

If by US Mail
Director, Air Enforcement Division
U.S. Environmental Protection Agency
MC 2242A
1200 Pennsylvania Ave. NW
Washington, D.C. 20460

If by Overnight Mail
Director, Air Enforcement Division
U.S. Environmental Protection Agency
MC 2242A, Room 1117 WJCS
1200 Pennsylvania Ave. NW
Washington, D.C. 20004

And

Stacey B. Dwyer, P.E.
Acting Director
Compliance Assurance and
Enforcement Division
U.S. EPA, Region 6
1445 Ross Ave.
Dallas, TX 75202-2733

And

Lisa Gotto
U.S. Environmental Protection Agency, Region 7
Air Permitting and Compliance Branch
Mail Code: AWMD/APCO
11201 Renner Blvd.

Lenexa, Kansas 66219
Gotto.Lisa@epa.gov

Chief
U.S. Environmental Protection Agency, Region 7
Air Permitting and Compliance Branch
Mail Code: AWMD/APCO
11201 Renner Blvd.
Lenexa, Kansas 66219

Alex Chen, Esq.
U.S. Environmental Protection Agency, Region 7
Office of Regional Counsel
11201 Renner Blvd.
Lenexa, Kansas 66219
Chen.Alex@epa.gov

To the United States (in addition to the EPA addresses above):

If by US Mail
Chief, Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
Box 7611 Ben Franklin Station
Washington, D.C. 20044-7611
Re: DOJ No. 90-5-2-1-10943

If by Overnight Mail
Chief, Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
ENRD Mailroom, Room 2121
601 D Street, NW, Washington, DC 20004
Re: DOJ No. 90-5-2-1-10943

For all submissions referring to the North Bend Facility, to LDEQ:

Brandon B. Williams, LA BAR Roll# 27139
Attorney
Office of the Secretary, Legal Division
Louisiana Department of Environmental Quality
P.O. Box 4302
Baton Rouge, Louisiana 70821-4302

For overnight mail: 602 N. Fifth Street Baton Rouge, Louisiana 70802.

And

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

For overnight mail: 602 N. Fifth Street Baton Rouge, Louisiana 70802.

For all submissions referring to the Hickok Facility, to KDHE:

Javier Ahumada
Section Chief
Compliance and Enforcement
Kansas Department of Health and Environment
1000 SW Jackson, Suite 310
Topeka, Kansas 66612-1366
Javier.ahumada@ks.gov

And

Kate Gleeson
Attorney
Kansas Department of Health and Environment
1000 SW Jackson, Suite 560
Topeka, Kansas 66612-1266
Kate.gleeson@ks.gov

To Defendant:

Columbian Chemicals Company
1800 West Oak Commons Court
Marietta, Georgia 30062-2253
Attn: General Counsel

David Buente
Sidley Austin LLP
1501 K Street, NW
Washington, DC 20005
dbuente@sidley.com

Ben Tannen

Sidley Austin LLP
787 Seventh Avenue
New York, NY 10019
btannen@sidley.com

107. Any Party may, by written notice to the other Parties, change its designated notice recipient or notice address or means of transmittal provided in this Section XXI.

108. All notifications, communications, or submissions made pursuant to this Section shall be sent as follows: (a) by overnight mail or overnight delivery service to EPA, and by overnight mail to the United States (in addition to EPA, as set forth in Paragraph 106), with a copy by electronic mail if practicable; (b) by electronic mail to all Plaintiffs, if practicable, but if not practicable, then by overnight mail or overnight delivery service to Plaintiff-States; and (c) if to Defendant, by overnight mail or overnight delivery service, with a copy by electronic mail if practicable.

109. Notices submitted pursuant to this Section shall be deemed submitted upon delivery to the overnight delivery service, unless otherwise provided in this Consent Decree or by mutual agreement of the Parties in writing.

XXII. EFFECTIVE DATE

110. The Effective Date of this Consent Decree shall be the date upon which this Consent Decree is entered by the Court or a motion to enter the Consent Decree is granted, whichever occurs first, as recorded on the Court's Docket.

XXIII. RETENTION OF JURISDICTION

111. The Court shall retain jurisdiction over this case until termination of this Consent Decree, for the purpose of resolving disputes arising under this Decree or entering orders

modifying this Decree, pursuant to Sections XVII (Dispute Resolution) and XXIV (Modification), or effectuating or enforcing compliance with the terms of this Decree.

XXIV. MODIFICATION

112. The terms of this Consent Decree, including the Appendices, may be modified only by a subsequent written agreement signed by the Plaintiffs and Defendant. Where the modification constitutes a material change to any term of this Consent Decree, it shall be effective only upon approval by the Court.

113. Any disputes concerning modification of this Decree or the issue of the materiality of any modification of this Decree shall be resolved pursuant to Section XVII (Dispute Resolution) of this Decree, provided however, that, instead of the burden of proof provided by Paragraph 87, the Party seeking the modification bears the burden of demonstrating that it is entitled to the requested modification in accordance with Federal Rule of Civil Procedure 60(b).

XXV. SALES OR TRANSFER OF OPERATIONAL OR OWNERSHIP INTERESTS

114. At least 60 Days prior to any transfer of ownership or operation of any Facility, Defendant shall provide a copy of this Consent Decree to the proposed transferee and shall simultaneously provide written notice of the prospective transfer, to EPA, the United States, and Plaintiff-States in accordance with Section XXI (Notices) of this Consent Decree, and subject to the provisions of Paragraph 95 of this Consent Decree. No transfer of ownership or operation of a Facility, whether in compliance with the procedures of this Paragraph or otherwise, shall relieve Defendant of its obligation to ensure that the terms of the Consent Decree are implemented, unless and until:

a. the transferee agrees, in writing, to undertake the obligations required by Sections V (Environmental Mitigation), VI (SO_2 Control Technology, Emissions Limits, And Monitoring Requirements), VII (NO_x Control Technology, Emissions Limits, And Monitoring Requirements), VIII (PM Control Technology, Emissions Limits, Best Management Practices, and Early Warning System Requirements), IX (Prohibition on Use of Flares and Hickok Existing Tail Gas Boiler), X (Prohibition on Netting Credits or Offsets), XI (Permits), XII (Review and Approval of Submittals), XIII (Reporting and Recordkeeping Requirements), XIV (Stipulated Penalties), XV (Force Majeure), XVII (Dispute Resolution), and XVIII (Information Collection and Retention) applicable to such Facility, and to be substituted for Defendant as a Party under the Decree with respect to such Facility and thus to become bound by the terms thereof;

b. the United States and Plaintiff-States consent, in writing, to relieve Defendant of its Consent Decree obligations applicable to such Facility, and

c. the transferee becomes a party to this Consent Decree with respect to the transferred Facility, pursuant to Section XXIV (Modification).

115. Any attempt to transfer ownership or operation of any of the Facilities or any portion thereof, without complying with Paragraph 114(a)-(c) above constitutes a violation of this Consent Decree.

XXVI. PUBLIC PARTICIPATION

116. The Parties agree and acknowledge that final approval by the United States and entry of this Consent Decree are subject to the procedures of 28 C.F.R. § 50.7, which provides for notice of the lodging of this Consent Decree in the Federal Register, an opportunity for public comment, and the right of the United States to withdraw or withhold consent if the comments disclose facts or considerations which indicate that the Consent Decree is inappropriate, improper, or inadequate. The Defendant shall not oppose entry of this Consent Decree by this Court or challenge any provision of this Consent Decree unless the United States has notified the Defendant, in writing, that the United States no longer supports entry of the Consent Decree. Further, the parties agree and acknowledge that final approval by LDEQ, and entry of this Consent Decree is subject to the requirements of La. R.S. 30:2050.7, which provides for public notice of this Consent Decree in newspapers of general circulation and the official journals of parishes in which the Defendant's facilities are located, an opportunity for public comment, consideration of any comments, and concurrence by the State Attorney General. LDEQ reserves the right to withdraw or withhold consent if the comments regarding this Consent Decree disclose facts or considerations which indicate that this Consent Decree is inappropriate, improper or inadequate.

XXVII. TERMINATION

117. Termination as to an Individual Facility. After Defendant has paid the Section IV civil penalty and any stipulated penalties due under this Consent Decree, and satisfied the requirements of Sections VI (SO_2 Control Technology, Emissions Limits, and Monitoring Requirements), VII (NO_x Control Technology, Emissions Limits, and Monitoring Requirements), VIII (PM Control Technology, Emissions Limits, Best Management Practices, and Early

Warning System Requirements), IX (Prohibition on Use of Flares and Hickok Existing Tail Gas Boiler), X (Prohibition on Netting Credits or Offsets), and XI (Permits) of this Decree and has maintained operation of any Control Technology as required by this Consent Decree for a period of 24 consecutive Months at an individual Facility, Defendant may serve upon the United States and Plaintiff-States a request for termination pursuant to the requirements of Paragraph 120. With respect to the SO_2 Emissions Limits at North Bend, Defendant shall maintain operation of any Control Technology as required by this Consent Decree and achieve and maintain the Final 7-day Rolling Average Emissions Limit for SO_2 and Final 365-day Rolling Average Emissions Limit SO_2, and with respect to the NO_x Emissions Limits at Hickok, Defendant shall maintain operation of the Low NOx Combustion System or Co-Generation System as required by this Consent Decree and achieve and maintain the Final 7-day Rolling Average Emissions Limit for NO_x and Final 365-day Rolling Average Emissions Limit NO_x, for a period of 12 consecutive Months at an individual Facility, prior to serving upon the United States and Plaintiff-States a request for termination pursuant to the requirements of Paragraph 120. If the United States and Plaintiff-States agree that the Decree as it relates to an individual Facility may be terminated, the Parties shall submit, for the Court's approval, a joint stipulation terminating those provisions of the Decree.

118. Termination as to Environmental Mitigation. After Defendant has paid the Section IV civil penalty and any stipulated penalties with respect to Environmental Mitigation due under this Consent Decree, and satisfied the requirements of Section V (Environmental Mitigation), Defendant may serve upon the United States and Plaintiff-States a Request for Termination pursuant to the requirements of Paragraph 120. If the United States and Plaintiff-States agree that the Decree as it relates to the requirements of Section V (Environmental

Mitigation) may be terminated, the Parties shall submit, for the Court's approval, a joint stipulation terminating those provisions of the Decree.

119. Complete Termination. After Defendant has satisfied the requirements of Sections IV (Civil Penalty), V (Environmental Mitigation), VI (SO_2 Control Technology, Emissions Limits, and Monitoring Requirements), VII (NO_x Control Technology, Emissions Limits, and Monitoring Requirements), VIII (PM Control Technology, Emissions Limits, Best Management Practices, and Early Warning System Requirements), IX (Prohibition on Use of Flares and Hickok Existing Tail Gas Boiler), X (Prohibition on Netting Credits or Offsets), and XI (Permits) of this Decree and has maintained satisfactory compliance with the obligation to operate the Control Technology as required by this Consent Decree for a period of 24 consecutive Months at all Facilities, has complied with all other requirements of this Consent Decree, and has paid the civil penalty and any accrued stipulated penalties as required by this Consent Decree, Defendant may serve upon the United States and the relevant Plaintiff-State a request for termination pursuant to the requirements of Paragraph 120. With respect to the SO_2 Emissions Limits at North Bend, Defendant shall maintain operation of any Control Technology as required by this Consent Decree and achieve and maintain the Final 7-day Rolling Average Emissions Limit for SO_2 and Final 365-day Rolling Average Emissions Limit SO_2, and with respect to the NO_x Emissions Limits at Hickok, Defendant shall maintain operation of the Low NOx Combustion System or Co-Generation System as required by this Consent Decree and achieve and maintain the Final 7-day Rolling Average Emissions Limit for NO_x and Final 365-day Rolling Average Emissions Limit NO_x, for a period of 12 consecutive Months at an individual Facility, prior to serving upon the United States and Plaintiff-States a request for termination pursuant to the requirements of Paragraph 120. If the United States and the Plaintiff-

State agree that the Decree may be terminated, the Parties shall submit, for the Court's approval, a joint stipulation terminating the Decree.

120. Request for Termination. If Defendant elects to terminate this Consent Decree in whole or part, Defendant shall submit a written report to EPA and Plaintiff-States, as set forth in Section XXI (Notices), that (a) describes the activities undertaken, (b) attaches any applicable permits or SIP amendments obtained pursuant to the requirements of Section XI (Permits) that incorporate the requirements that will survive termination of this Consent Decree that are listed in Paragraph 44, and (c) certifies that each of the applicable Sections listed in Paragraphs 117 – 119 have been completed in full satisfaction of the requirements of this Consent Decree and that Defendant is in full compliance with those Sections of the Consent Decree. The report will contain the following certification, signed by an official of Defendant:

> "I certify under penalty of law that this document and all attachments were 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 inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

121. If the United States and Plaintiff-States do not agree that the Consent Decree as a whole or as it relates to an individual Facility may be terminated, Defendant may invoke dispute resolution under Section XVII (Dispute Resolution) of this Decree. However, Defendant shall not seek resolution of any dispute regarding termination under Section XVII (Dispute Resolution) until 60 Days after service of its Request for Termination.

XXVIII. SIGNATORIES/SERVICE

122. Each undersigned representative of Defendant and Plaintiff-States, and the Assistant Attorney General for the Environment and Natural Resources Division of the United States Department of Justice, certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind the Party he or she represents to this document.

123. This Consent Decree may be signed in counterparts, and its validity shall not be challenged on that basis. Defendant agrees to accept service of process by mail with respect to all matters arising under or relating to this Consent Decree and to waive the formal service requirements set forth in Rules 4 and 5 of the Federal Rules of Civil Procedure and any applicable Local Rules of this Court including, but not limited to, service of a summons. All Parties agree that Defendant need not file an answer or otherwise respond to the Complaint in this action unless or until the Court expressly declines to enter this Consent Decree.

XXIX. INTEGRATION

124. This Consent Decree constitutes the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in the Decree and supersedes all prior agreements and understandings, whether oral or written, concerning the settlement embodied herein. No other document, nor any representation, inducement, agreement, understanding or promise constitutes any part of this Decree or the settlement it represents, nor shall it be used in construing the terms of this Decree.

XXX. FINAL JUDGMENT

125. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment of the Court as to the Plaintiffs and Defendant.

XXXI. APPENDICES

126. The following Appendices are attached to and incorporated as part of this Consent Decree:

"Appendix A" contains the requirements of the Environmental Mitigation Projects.

"Appendix B" contains the Other PM Control Requirements.

"Appendix C" contains the Particulate Emissions Best Management Practices Control Plan.

"Appendix D" contains the PM Early Warning System requirements.

"Appendix E" contains the Protocol For Setting Final SO_2 Emission Limits at North Bend.

"Appendix F" contains the Protocol For Setting Final NOx Emission Limits at Hickok.

All terms in the Appendices shall be construed in a manner consistent with this Decree.

XXXII. 26 U.S.C. SECTION 162(f)(2)(A)(ii) IDENTIFICATION

127. For purposes of the identification requirement of Section 162(f)(2)(A)(ii) of the Internal Revenue Code, 26 U.S.C. § 162(f)(2)(A)(ii), performance of Section II (Applicability), Paragraph 7; Section V (Environmental Mitigation), Paragraphs 13–16; Section VI (SO2 Control Technology, Emission Limits, and Monitoring Requirements), Paragraphs 17–22; Section VII (NO_X Control Technology, Emission Limits, and Monitoring Requirements), Paragraphs 23–30; Section VIII (PM Control Technology, Emission Limits, Best Management Practices, and Early Warning System Requirements), Paragraphs 31 - 35; Section XI (Permits), Paragraphs 43–47, and 49; Section XII (Review and Approval of Submittals), Paragraphs 50–51; Section XIII (Recordkeeping and Reporting Requirements), Paragraphs 54–56 and 58–60; Section XVIII

(Information Collection and Retention), Paragraphs 92–94; and related Appendices A, B, C, D, E, and F is restitution or required to come into compliance with law.

Dated and entered this 1st Day of June, 2018.

United States Magistrate Judge

Signature Page for *United States of America* et al *v. Columbian Chemicals Company,* Consent Decree

FOR PLAINTIFF UNITED STATES OF AMERICA:

[redacted] Date: 4/20/18

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Acting Assistant Attorney General
Environment and Natural Resources Division
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[redacted] Date: 5/5/18

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FOR PLAINTIFF UNITED STATES OF AMERICA:

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Date: May 5, 2018

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Date: May 5, 2018

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Date: 4/2/18

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Assistant Administrator
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Date: 4/2/18

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Date: 4/2/18

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FOR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY:

[redacted]

Date: 4/3/2018

CHERYL T. SEAGER
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FOR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY:

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Date: 4/3/18

DAVID COZAD
Regional Counsel
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FOR THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT

[redacted]

Date 4-6-18

JEFF ANDERSEN
Secretary
Kansas Department of Health and Environment
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Topeka, Kansas 66612-1366

Signature Page for *United States of America* et al. *v. Columbian Chemicals Company*, Consent Decree, subject to the public notice and comment requirements of La.R.S. 30:2050.7

FOR LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

[redacted]

Date: 4-9-18

LOURDES ITURRALDE
Assistant Secretary
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Date: 4/10/18

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FOR DEFENDANT, COLUMBIAN CHEMICALS COMPANY

[redacted]

President
Columbian Chemicals Company

Date: 4/4/18

APPENDIX A: ENVIRONMENTAL MITIGATION PROJECTS

A. Defendant shall spend at least $375,000, and shall comply with the requirements of this Appendix and with Section V (Environmental Mitigation) of the Consent Decree, to implement and secure the environmental benefits of the Environmental Mitigation Projects described below. Nothing in the Consent Decree or this Appendix shall require Defendant to spend any more than a total of $375,000 on Environmental Mitigation Projects.

B. Defendant shall spend at least $375,000 in Project Dollars for the purchase, installation, and use of continuous-duty, cartridge dust collector technology ("Dust Collectors") to minimize PM emissions from the carbon black product storage tanks at North Bend and Hickok. The Dust Collectors shall replace existing bag filters and shall include cartridge filters utilizing nanofiber technology to provide high removal efficiency of PM.

C. Each Environmental Mitigation Project shall be completed by no later than four years from the Date of Entry of the Consent Decree. Any funds designated for a specific Environmental Mitigation Project that are left unspent, or are projected to be left unspent, after three years from the Date of Entry of the Consent Decree may be redirected by Defendant to one or more projects approved by EPA and the applicable Plaintiff-State. Any such redirected funds shall be spent by no later than five years from the Date of Entry of the Consent Decree.

D. The Parties recognize that implementation of the Environmental Mitigation Projects in this Appendix may require action by third parties, such as non-government entities and state or local government entities. If Defendant is unable to complete an approved Environmental Mitigation Project in accordance with this Appendix due to such third-party's failure to fulfill its obligations, and that failure is not caused by, and is beyond the control of, Defendant, despite Defendant's best efforts to fulfill its obligations regarding the Environmental Mitigation Project as set out in the Consent Decree, then EPA and Defendant may agree to (1) allow Defendant to amend the Environmental Mitigation Project description in this Appendix as appropriate to successfully complete the Environmental Mitigation Project, or (2) cancel the Environmental Mitigation Project and redirect any unspent funds for the Environmental Mitigation Project to one or more projects approved by EPA and the applicable Plaintiff-State.

APPENDIX B: OTHER PM CONTROL REQUIREMENTS

PM Emissions Equipment	PM Reduction Mechanism	Method for Managing PM Emissions
Carbon Black Product Storage Tank, Silo or Bin	PM emissions shall be directed to either (a) a fabric filtration device that is equipped with filters specified by their supplier to achieve a PM collection efficiency of at least 99%, (b) a cartridge device that achieves a PM collection efficiency of at least 99%, or (c) a vacuum collection system that routes back to a Production Pulsaire at North Bend and a Receiving Tank Pulsaire at Hickok.	Provisions in Paragraphs 33 (Other PM Control Requirements) of this Consent Decree
Carbon Black Dryer	All PM emissions shall be directed to the Vapor Bag Collector (for recovery of product).	Provisions in Paragraphs 33 (Other PM Control Requirements) and 35 (PM Early Warning System) of this Consent Decree
Reactor	All carbon black product and PM emissions generated by the reactor shall be vented to a Main Bag Collector. Direct venting to the atmosphere of any carbon black product or PM emissions generated by the reactor is prohibited at all times.	Provisions in Paragraphs 33 (Other PM Control Requirements) of this Consent Decree, 35 (PM Early Warning System) of this Consent Decree, and distributed control system interlocks to verify that the flow of water to the Reactor Vent Scrubber has been initiated.
Main Bag Collectors	During periods other than Heat Load Operation, reactor Startup and Shutdown and Malfunctions, the Main Bag Collector Heat Load Vents shall be closed.	Provisions in Paragraphs 33 (Other PM Control Requirements) and 35 (PM Early Warning System) of this Consent Decree
Pulsaire at North Bend and Dust Collector at Hickok; Production Pulsaire for North Bend and Receiving Tank Pulsaire for Hickok; and Vapor Bag Collector	All PM emissions shall be handled as part of the inherent process unit operations that employ fabric filtration to separate carbon black product, in accordance with the Compliance Assurance Monitoring Regulations under 40 C.F.R. Part 64.	Provisions in Paragraphs 33 (Other PM Control Requirements) and 35 (PM Early Warning System) of this Consent Decree

APPENDIX C: PARTICULATE EMISSIONS BEST MANAGEMENT PRACTICES CONTROL PLAN

The best management practices for minimizing particulate emissions described in this plan shall be followed at each of the Facilities at all times.

1. All operations and maintenance personnel shall be trained to both recognize leaks and spills of carbon black, and to report them to the proper plant personnel for response. Visual observation of the physical condition of plant process equipment that conveys, stores, loads, unloads, and packages carbon black, including at connection points between equipment and/or sections of piping, and of the physical condition of containers and bags used to package carbon black, shall be part of the daily responsibilities of the operations and maintenance personnel to help ensure that potential leaks are addressed before they occur.

2. All carbon black product shall be stored in tanks, silos, or closed bags. No carbon black product shall be stored in open piles.

3. All product and off-quality carbon black shall be shipped off-site and to the on-site landfill in closed bags, sealed cardboard boxes (for landfill), or sealed rail cars, hoppers, or bulk transport trucks, as relevant.

4. All process equipment at the Facilities shall be designed, operated, and maintained in a manner intended to minimize leaks and spills of carbon black and fugitive particulate emissions. In addition, the Facilities shall develop and implement practices to collect carbon black dust otherwise emitted from product conveyance, packaging, and storage operations, and either recycle it back into the manufacturing process or convey it to a packaging system. Where practicable, the operation of such equipment, including carbon black product conveyors, elevators, and packing units, shall be served by vacuum systems that collect carbon black.

5. All process equipment shall be located either indoors or in outdoor areas that have paved or rock/gravel ground surfaces.

6. Events that trigger the PM Early Warning System shall be handled pursuant to the protocol in Appendix D (PM Early Warning System) of this Consent Decree. Leaks and spills of all carbon black that are otherwise identified shall be investigated and addressed (cleaned up and repaired) either immediately upon discovery or as quickly as practicable. When immediate repair or isolation is not feasible, the actions taken to complete the repair shall be documented. Incident reports for spills or leaks of carbon black shall be created to document cause and corrective actions.

7. Special precautions shall be taken during maintenance actions to minimize particulate emissions from the equipment on which maintenance is being performed. Prior to conducting maintenance or baghouse bag replacement on equipment that is prone to accumulation of carbon black on its interior surfaces, including, but not limited to, on the

Main Bag Collectors, Production Pulsaire for North Bend and Receiving Tank Pulsaire for Hickok, Vapor Bag Collectors, elevators and conveyors, and storage tanks and silos, the responsible maintenance personnel shall identify and take steps necessary to minimize the generation of particulate emissions at the equipment being maintained during the maintenance or bag replacement activity. The specific approaches taken to minimize particulate emissions during maintenance or bag replacement shall be developed on a case-specific basis based on the judgment of the maintenance personnel and shall include, as relevant, but need not be limited to, activities such as the following:

- vacuuming carbon black from the equipment prior to beginning the maintenance,
- vacuuming or washing down the equipment when an appropriate stage in the maintenance activity has been reached,
- if units are equipped with vents, closing vents during maintenance to prevent drafting of PM, except when Defendant conducts a safety or hazard analysis and concludes in writing that closing the vent would create an unsafe or unhealthy work atmosphere, and
- sealing filter bags removed from Main Bag Collectors inside plastic bags.

8. Accessible floor and/or ground surfaces in the carbon black production areas shall be swept or washed as needed in order to minimize particulate emissions attributable to leaks or spills of carbon black that are not otherwise identified and/or addressed during the daily Visual Assessments conducted pursuant to Paragraph 33 of this Consent Decree. All material collected through these actions shall either be incorporated into the production process/used as product for commercial distribution or properly disposed of in accordance with applicable regulatory standards.

APPENDIX D: PM EARLY WARNING SYSTEM

1. Defendant shall install a PM Early Warning System at each of its Facilities to monitor the PM emitted from each PM Monitor Point. Each PM Monitor Point shall be set to a specific alarm action level, such that an alarm is triggered when the PM at a PM Monitor Point exceeds the normal range of PM according to the manufacturer's recommendations during operation of the Process System.

2. By the dates in the table below, Defendant shall submit for Plaintiffs' approval, alarm action levels for each PM Monitor Point, in accordance with Paragraph 1 of this Appendix D, and Defendant shall set each PM Early Warning System to such alarm action levels:

Process System	Action Level Approval Date	Action Level Set Date
North Bend Process System	12/1/18	1/1/19
Hickok Process System	12/1/18	1/1/19

3. Beginning on the Date of Continuous Operation in Paragraph 35, Defendant shall operate each PM Early Warning System at all times of Heat Load Operation and Process System Operation, except for during system breakdowns, repairs, maintenance, calibration checks, and zero and span adjustments of the applicable PM Early Warning System. For purposes of demonstrating compliance with the requirements in Paragraph 2 of this Appendix D, the minimum degree of data availability shall be at least 90% for the first three years following the Effective Date of the Consent Decree, and 95% thereafter, based on a quarterly average of the operating time of the emission unit or activity being monitored.

4. In the event that an alarm is triggered for any PM Early Warning System, Defendant shall investigate the cause of the alarm as expeditiously as practicable by performing each of the following tasks:

   a. Reviewing the data output for the relevant PM Early Warning System to determine whether the alarm corresponds to an actual exceedance of the alarm action level;

   b. If review of the data confirms an exceedance of the alarm action level, Defendant shall conduct a visual assessment (Method 22) of the equipment monitored by the

pertinent PM Early Warning System for three minutes to determine if there are any detectable visual emissions. Defendant shall also conduct an appropriate equipment inspection to seek to identify the source of the alarm.

c. If the visual assessment or other observations identify a process, equipment or other condition(s) causing an increase in PM emissions that may be responsible for triggering the relevant alarm, determining whether the relevant equipment can be isolated to reduce the excess PM emissions below alarm levels, without requiring a Process System Shutdown;

d. If the relevant equipment can be isolated without requiring Process System Shutdown, isolating and repairing such equipment prior to returning it to service;

e. If the relevant equipment cannot be isolated without requiring Process System Shutdown, such as if there is a leak from a dryer, a broken bag in a baghouse, or a Malfunction of any other component that cannot be isolated to the extent necessary to prevent continued excess PM emissions, shutting down the relevant equipment and only returning it to service after it has been repaired;

f. If the triggering event has not been identified and resolved within 24 hours, having a Method 9 Trained Observer (i) conduct a visual assessment of the equipment monitored by the pertinent PM Early Warning System to determine if there are any detectable visual emissions, and, (ii) in the event that any such visible emissions are observed, conduct a six minute observation in accordance with Method 9 to determine if opacity levels are greater than 20%, and (iii) if opacity levels are greater than 20%, conduct a six minute observation in accordance with Method 9 once every 8 hours (during daylight hours) until visible emissions are less than 20% of opacity levels;

g. If, after investigation, the source of any elevated PM emissions cannot be identified, shutting down the subject equipment as soon as practicable to prevent further alarms and to minimize emissions and ensure the safety of employees and the community and only returning the equipment to service after the source of the excess emissions has been identified and repaired.

5. Notwithstanding the foregoing, to the extent that recorded information for the relevant PM Early Warning System indicates that operations have returned to normal operating ranges, below levels triggering an alarm condition, Defendant is not otherwise obligated to continue with implementation of the steps listed above, and may continue operation of the relevant equipment.

6. Defendant shall maintain a record of any event that triggers the alarm for any PM Early Warning System sufficient to meet the requirements in Section XIII (Recordkeeping and Reporting Requirements) of this Consent Decree.

7. Defendant shall perform routine maintenance of each PM Early Warning System installed pursuant to this Appendix D and Paragraph 35 of this Consent Decree in accordance with any manufacturer recommendations and the following requirements:

   a. On at least a semiannual basis, Defendant shall visually inspect and clean each sensor within the PM Early Warning System, in accordance with manufacturer recommendations, to ensure continued effective operation of the PM Early Warning System.

   b. On at least an annual basis, Defendant shall comprehensively inspect the PM Early Warning System and make any necessary repairs.

8. The PM Early Warning System shall not be required to quantitatively measure PM emissions.

APPENDIX E: PROTOCOL FOR SETTING FINAL SO_2 EMISSION LIMITS AT NORTH BEND

1. If Defendant elects to comply with the applicable Final 7-day Rolling Average Emissions Limits and Final 365-day Rolling Average Emissions Limits for SO_2 set forth in Section VI (SO_2 Control Technology, Emissions Limits, and Monitoring Requirements) of this Consent Decree, pursuant to Option B, the Parties shall follow the protocol specified in this Appendix E.

2. Design Considerations. Defendant's proposed process design specifications submitted pursuant to the requirements of paragraph 18 of this Consent Decree for each WGS or DGS shall evaluate, at a minimum, the following parameters:

   a. Absorber Vessel

      i. Volume
      ii. Dimensions
      iii. Pressure Drop
      iv. Internal Configuration
      v. Location in Process Train

   b. Scrubbing Liquor (for WGS only)

      i. Scrubbing Liquor Blowdown/Makeup
      ii. Scrubbing Liquor Circulation Rate
      iii. Scrubbing Liquor pH

   c. Sorbent Injection (for DGS only)

      i. Type and chemical composition of sorbent
      ii. Sorbent injection rate

   d. Flue Gas Characteristics

      i. Inlet/Outlet SO_2/SO_3 Concentrations
      ii. Flue Gas Volumetric Flow
      iii. Inlet/Outlet Temperature Range
      iv. Inlet/Outlet Particulate Loading and Characteristics

   e. Designed to Removal Efficiency

   f. Safety Considerations

   If Defendant elects to pursue installation of an Alternative Equivalent Pollution Control Technology, Defendant shall propose a list of design considerations and operating

parameters with supporting rationale for use in lieu of those listed in Paragraphs 2 and 3 of this Appendix E for the Alternative Equivalent Pollution Control Technology that includes design considerations and operating parameters that have a significant effect on percent removal of SO_2. Defendant shall submit this information when Defendant submits the proposal for approval of the Alternative Equivalent Pollution Control Technology in accordance with Paragraph 19 of this Consent Decree.

3. Optimization and Demonstration Study. Defendant shall conduct an 18 Month Optimization and Demonstration Study, which shall begin no later than the applicable Date of Continuous Operation set forth in Paragraph 17 of this Consent Decree. Defendant shall submit a protocol consistent with the applicable design considerations for each Optimization and Demonstration Study to EPA no later than 3 Months prior to commencement of the Optimization and Demonstration Study, which shall identify, at a minimum, the operating parameters set forth in 3.a. and 3.b. below. During the first 3 Months of each Optimization and Demonstration Study, Defendant shall operate the applicable WGS or DGS or Alternative Equivalent Pollution Control Technology consistent with the protocol submitted by Defendant, with the objective of establishing optimum operating levels to minimize SO_2 emissions for, at a minimum, the following parameters:

a. Scrubbing Liquor (for WGS only)

   i. Scrubbing Liquor/ Blowdown/Makeup
   ii. Scrubbing Liquor Circulation Rate
   iii. Scrubbing Liquor pH

b. Sorbent Injection (for DGS only)
   i. Type and chemical composition of sorbent
   ii. Sorbent injection rate

c. Pressure drop

d. Emission Rates

   i. Outlet SO_2 Concentration
   ii. Actual Removal Efficiency

Within 30 Days of completion of the first 3 Months of each Optimization and Demonstration Study, Defendant shall submit to EPA a written report that documents any conclusions that it reached in its analysis of the data from that period, and provides any relevant data supporting those conclusions.

During the last 15 Months of each Optimization and Demonstration Study, Defendant shall operate the applicable WGS or DGS or Alternative Equivalent Pollution Control Technology in a manner consistent with the conclusions reflected in the written report of

the Optimization and Demonstration Study, with the objective of minimizing SO_2 emissions to the extent practicable based on the design criteria.

4. Optimization and Demonstration Study Report. Defendant shall submit the results of the complete Optimization and Demonstration Study to EPA in a written report no later than 60 Days after the completion of the Optimization and Demonstration Study. The report shall include the following information:

   a. Each hourly average SO_2 and O_2 concentration at the point of emission to the atmosphere and at the inlet to the WGS or DGS or Alternative Equivalent Pollution Control Technology, as measured by a CEMS during the Optimization and Demonstration Study, and each hourly average value for each of the operating parameters listed in Paragraph 3 of this Appendix E.

   b. An evaluation of the effect, and identification of the optimum operating level, of each operating parameter listed in Paragraph 3 of this Appendix E, on the minimization of SO_2 emissions from the relevant Process System.

   c. A proposed final 7-day Rolling Average Emissions Limit (in ppmvd, at 0% oxygen), and a proposed final 365-day Rolling Average Emissions Limit for SO_2 (in ppmvd, at 0% oxygen), within the range set forth for Option B in the applicable cell in the table in Paragraph 17, to optimize operation of the WGS, DGS, or Alternative Equivalent Pollution Control Technology and minimize SO_2 emissions to the extent practicable.

   Defendant shall supplement the report with any other information that EPA identifies as relevant to its evaluation of the Optimization and Demonstration Study.

5. Compliance with Proposed Final Emissions Limits. Defendant shall immediately upon submission of the Optimization and Demonstration Study to EPA, and, continuing thereafter, until such time as Defendant is required to comply with the applicable Final 7-day Rolling Average Emissions Limit and Final 365-day Rolling Average Emissions Limit established pursuant to Paragraphs 6 and 7 of this Appendix E, Continuously Operate, a WGS or DGS or Alternative Equivalent Pollution Control Technology on each Process System specified in the table in Paragraph 17 to this Consent Decree, so as to achieve and maintain the applicable proposed final 7-day Rolling Average Emissions Limit and proposed final 365-day Rolling Average Emissions Limit.

6. EPA Establishment of Final Emission Limits. EPA, after consultation with Plaintiff-States, shall establish Final 7-day Rolling Average Emissions Limits and Final 365-day Rolling Average Emissions Limits for SO_2 within the range set forth for Option B in the applicable cell in the table in Paragraph 17 to this Consent Decree. EPA shall base its determination on: (i) the level of performance of the applicable WGS or DGS or Alternative Equivalent Pollution Control Technology during the Optimization and

Demonstration Study; (ii) a reasonable certainty of compliance; and (iii) any other available and relevant information.

7. Compliance with Final Emission Limits. Defendant shall immediately, or, if the EPA-established Final 7-day Rolling Average Emissions Limit or Final 365-day Rolling Average Emissions Limit for SO_2 for the applicable Process System is different from Defendant's proposed final Emissions Limits, no later than 30 Days after receipt of written notice from EPA, and, continuing thereafter, Continuously Operate, a WGS or DGS or Alternative Equivalent Pollution Control Technology on each Process System specified in the table in Paragraph 17 to this Consent Decree, so as to achieve and maintain the applicable Final 7-day Rolling Average Emissions Limit and Final 365-day Rolling Average Emissions Limit.

8. Emissions Limits Option. At any time, Defendant may notify EPA and Plaintiff-States in writing in accordance with the notice provisions of Section XXI (Notices) of this Consent Decree that it will accept and agree to immediately, and continuing thereafter Continuously Operate, a WGS or DGS or Alternative Equivalent Pollution Control Technology on each Process System specified in the table in Paragraph 17 of this Consent Decree, so as to achieve and maintain the Final 7-day Rolling Average Emissions Limits and Final 365-day Rolling Average Emissions Limits for SO_2 set forth for Option A in the applicable cell in the table in Paragraph 17.

APPENDIX F: PROTOCOL FOR SETTING FINAL NO_x EMISSION LIMITS AT HICKOK

1. If Defendant elects to comply with the applicable Final 7-day Rolling Average Emissions Limits and Final 365-day Rolling Average Emissions Limits for NO_2 at Hickok set forth in Section VII (NOx Control Technology, Emissions Limits, and Monitoring Requirements) of this Consent Decree, pursuant to Option B, the Parties shall follow the protocol specified in this Appendix F.

2. Design Considerations. Defendant's proposed process design specifications submitted pursuant to the requirements of Paragraph 27 of this Consent Decree for the Low NOx Combustion System or Co-Generation System shall evaluate, at a minimum, the following parameters:

   a. Burner Outlet Flue Gas Characteristics

      i. Outlet NO_x Concentrations
      ii. Flue Gas Volumetric Flow
      iii. Outlet Temperature Range

   b. Over-Fire Air Criteria

      i. Combustion air rate
      ii. Over-Fire Air Rate

   c. Low-NOx Burner Criteria

      i. Manufacturer and model of Low-NOx Burner
      ii. Expected NOx concentration for burning natural gas in ppmvd at 0% O_2
      iii. Size of burners in mmbtu/hour and number of burners

   d. Designed to O_2 level

   e. Safety Considerations

3. Optimization and Demonstration Study. Defendant shall conduct an 18 Month Optimization and Demonstration Study, which shall begin no later than the applicable Date of Continuous Operation set forth in Paragraph 26 of this Consent Decree. Defendant shall submit a protocol consistent with the applicable design considerations for each Optimization and Demonstration Study to EPA no later than 3 Months prior to commencement of the Optimization and Demonstration Study, which shall identify, at a minimum, the operating parameters set forth in 3.a. and 3.b. below. During the first 3 Months of each Optimization and Demonstration Study, Defendant shall operate the applicable Low NOx Combustion System or Co-Generation System consistent with the

protocol submitted by Defendant, with the objective of establishing optimum operating levels to minimize NOx emissions for, at a minimum, the following parameters:

a. Over-Fire Air: maximizing the effectiveness of the Over-Fire Air

b. O_2 (minimizing O_2 should minimize NO_x and a specific O_2 level shall be established during the Optimization and Demonstration Study)

c. Emission Rates: Outlet NO_x Concentration

Within 30 Days of completion of the first 3 Months of each Optimization and Demonstration Study, Defendant shall submit to EPA a written report that documents any conclusions that it reached in its analysis of the data from that period, and provides any relevant data supporting those conclusions.

During the last 15 Months of each Optimization and Demonstration Study, Defendant shall operate the applicable Low NOx Combustion System or Co-Generation System in a manner consistent with the conclusions reflected in the written report of the Optimization and Demonstration Study, with the objective of minimizing NO_x emissions to the extent practicable based on the design criteria.

4. Optimization and Demonstration Study Report. Defendant shall submit the results of the complete Optimization and Demonstration Study to EPA in a written report no later than 60 Days after the completion of the Optimization and Demonstration Study. The report shall include the following information:

a. Each hourly average NO_x and O_2 concentration at the point of emission to the atmosphere, as measured by a CEMS during the Optimization and Demonstration Study, and each hourly average value for each of the operating parameters listed in Paragraph 3 of this Appendix F.

b. An evaluation of the effect, and identification of the optimum operating level, of each operating parameter listed in Paragraph 3 of this Appendix F, on the minimization of NO_x emissions from the relevant Process System.

c. A proposed final 7-day Rolling Average Emissions Limit (in ppmvd, at 0% oxygen), and a proposed final 365-day Rolling Average Emissions Limit for NOx (in ppmvd, at 0% oxygen), within the range set forth for Option B in the applicable cell in the table in Paragraph 26 to this Consent Decree, to optimize operation of the Low NOx Combustion System or Co-Generation System and minimize NOx emissions to the extent practicable.

Defendant shall supplement the report with any other information that EPA identifies as relevant to its evaluation of the Optimization and Demonstration Study.

5. Compliance with Proposed Final Emissions Limits. Defendant shall immediately upon submission of the Optimization and Demonstration Study to EPA, and, continuing thereafter, until such time as Defendant is required to comply with the applicable Final 7-day Rolling Average Emissions Limit and Final 365-day Rolling Average Emissions Limit established pursuant to Paragraphs 6 and 7 of this Appendix F, Continuously Operate, a Low NOx Combustion System or Co-Generation System on each Process System specified in the table in Paragraph 26 to this Consent Decree, so as to achieve and maintain the applicable proposed final 7-day Rolling Average Emissions Limit and proposed final 365-day Rolling Average Emissions Limit.

6. EPA Establishment of Final Emission Limits. EPA, after consultation with Plaintiff-States, shall establish Final 7-day Rolling Average Emissions Limits and Final 365-day Rolling Average Emissions Limits for NO_x within the range set forth for Option B in the applicable cell in the table in Paragraph 26. EPA shall base its determination on: (i) the level of performance of the applicable Low NOx Combustion System or Co-Generation System during the Optimization and Demonstration Study; (ii) a reasonable certainty of compliance; and (iii) any other available and relevant information.

7. Compliance with Final Emission Limits. Defendant shall immediately, or, if the EPA-established Final 7-day Rolling Average Emissions Limit or Final 365-day Rolling Average Emissions Limit for NO_x for the applicable Process System is different from Defendant's proposed final Emissions Limits, no later than 30 Days after receipt of written notice from EPA, and, continuing thereafter, Continuously Operate, a Low NOx Combustion System or Co-Generation System on each Process System specified in the table in Paragraph 26 to this Consent Decree, so as to achieve and maintain the applicable Final 7-day Rolling Average Emissions Limit and Final 365-day Rolling Average Emissions Limit.

8. Emissions Limits Option. At any time, Defendant may notify EPA and Plaintiff-States in writing in accordance with the notice provisions of Section XXI (Notices) of this Consent Decree that it will accept and agree to immediately, and continuing thereafter Continuously Operate, a Low NOx Combustion System or Co-Generation System on each Process System specified in the table in Paragraph 26 of this Consent Decree, so as to achieve and maintain the Final 7-day Rolling Average Emissions Limits and Final 365-day Rolling Average Emissions Limits for NO_x set forth for Option A in the applicable cell in the table in Paragraph 26.