

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MONTANA  
BILLINGS DIVISION

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UNITED STATES OF AMERICA,

Plaintiff, and

STATE OF MONTANA,

Plaintiff-Intervenor,

v.

CHS INC.,

Defendant.

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Cause No. CV 03-153-BLG-RWA

**CONSENT DECREE**

90-5-2-1-07726

## **TABLE OF CONTENTS**

I.	Jurisdiction and Venue .....	<u>5</u>
II.	Applicability and Binding Effect .....	<u>6</u>
III.	Objectives .....	<u>7</u>
IV.	Definitions .....	<u>8</u>
V.	Affirmative Relief/Environmental Projects .....	<u>14</u>
	A. NO <sub>x</sub> Emissions Reductions from the FCCU .....	<u>14</u>
	B. SO <sub>2</sub> Emissions Reductions from the FCCU .....	<u>24</u>
	C. PM Emissions Reductions from the FCCU .....	<u>26</u>
	D. CO Emissions Reductions from the FCCU .....	<u>27</u>
	E. NO <sub>x</sub> Emissions Reductions from Heaters, Boilers and Compressors .....	<u>28</u>
	F. NSPS Applicability of FCCU Regenerators .....	<u>33</u>
	G. SO <sub>2</sub> Emissions Reductions from and NSPS Applicability for Combustion Devices .....	<u>33</u>
	H. NSPS Applicability of and Compliance for Sulfur Recovery Plant .....	<u>35</u>
	I. NSPS Applicability of and Compliance for Flaring Devices .....	<u>40</u>
	J. Control of Acid Gas Flaring Incidents and Tail Gas Incidents .....	<u>41</u>
	K. Control of Hydrocarbon Flaring Incidents .....	<u>51</u>
	L. Benzene Waste Operations NESHAP Program Enhancements .....	<u>51</u>
	M. Leak Detection and Repair Program Enhancements .....	<u>69</u>
VI.	Permitting .....	<u>82</u>
	A. Incorporation of Consent Decree Requirements into Federally-Enforceable Permits .....	<u>82</u>

B. Obtaining Construction Permits .....	<u>83</u>
VII. Emission Credit Generation .....	<u>84</u>
VIII. Modifications to Implementation Schedules .....	<u>86</u>
IX. Environmentally Beneficial Projects .....	<u>89</u>
X. Reporting and Recordkeeping .....	<u>91</u>
XI. Civil Penalty .....	<u>92</u>
XII. Stipulated Penalties .....	<u>94</u>
General Provisions .....	<u>94</u>
A. Non-compliance with NO <sub>x</sub> Emissions Reductions from FCCUs .....	<u>94</u>
B. Non-compliance with SO <sub>2</sub> Emissions Reductions from FCCUs .....	<u>95</u>
C. Non-compliance with PM Emissions Reductions from FCCUs .....	<u>97</u>
D. Non-compliance with CO Emissions Reductions from FCCUs .....	<u>98</u>
E. Non-compliance with NO <sub>x</sub> Emissions Reductions from Heaters, Boilers and Compressors .....	<u>98</u>
F. Non-compliance with SO <sub>2</sub> Emissions Reductions from Combustion Devices .....	<u>100</u>
G. Non-compliance with NSPS Applicability of Sulfur Recovery Plants .....	<u>101</u>
H. Non-compliance with NSPS Applicability of Flaring Devices .....	<u>102</u>
I. Non-compliance with Control of Acid Gas Flaring and Tail Gas Incidents .....	<u>103</u>
J. Non-compliance with Control of HC Flaring Incidents .....	<u>106</u>
K. Non-compliance with Benzene Waste Operations NESHAP Enhancements .....	<u>106</u>
L. Non-compliance with Leak Detection and Repair Enhancements .....	<u>109</u>
M. Non-compliance with Incorporation of CD Requirements into Permits .....	<u>112</u>

N. Non-compliance with Environmentally Beneficial Projects Requirements .....	<u>112</u>
O. Non-compliance with Reporting and Recordkeeping .....	<u>112</u>
P. Non-compliance with Payment of Civil Penalties .....	<u>113</u>
Q. Non-compliance with Payment of Stipulated Penalties .....	<u>113</u>
R. Payment of Stipulated Penalties .....	<u>113</u>
S. Stipulated Penalties Dispute .....	<u>114</u>
XIII. Interest .....	<u>114</u>
XIV. Right of Entry .....	<u>115</u>
XV. Force Majeure .....	<u>115</u>
XVI. Retention of Jurisdiction/Dispute Resolution .....	<u>118</u>
XVII. Effect of Settlement .....	<u>120</u>
XVIII. General Provisions .....	<u>128</u>
A. Other Laws .....	<u>128</u>
B. Post-Permit Violations .....	<u>129</u>
C. Failure of Compliance .....	<u>129</u>
D. Service of Process .....	<u>129</u>
E. Post-Lodging/Pre-Entry Obligations .....	<u>130</u>
F. Costs .....	<u>130</u>
G. Public Documents .....	<u>130</u>
H. Public Notice and Comment .....	<u>131</u>
I. Notice .....	<u>131</u>
J. Approvals .....	<u>133</u>

K. Paperwork Reduction Act .....	<u>134</u>
L. Modification .....	<u>134</u>
XIX. Termination .....	<u>134</u>
XX. Signatories .....	<u>136</u>

## **TABLE OF APPENDICES**

Appendix A -	Refinery Heaters, Boilers and Compressors Included in Baseline
Appendix B -	Determining the Optimized Addition Rates of Low NOx Combustion Promoters and NOx Reducing Catalyst Additives at the Cenex FCCU
Appendix C -	Logic Diagram for Section V, Subsection J (§§ 78 - 93)
Appendix D -	Summary of Reports, Plans and Certifications for the Benzene Waste Operations NESHAP Enhanced Program Provisions of the Consent Decree
Appendix E -	Summary of Reports, Plans and Certifications for the LDAR Enhanced Program Provisions of Section V, Subsection M (§§ 139 - 171) of the Consent Decree
Appendix F -	List of Heaters, Boilers, and other Combustion Devices Firing Refinery Fuel Gas with Dates for Compliance with NSPS Subparts A & J other than Date of Lodging
Appendix G -	Methodology for Determining Compliance with the Fuel Oil Burning Limit from the Combustion of Alkylation Unit Polymer
Appendix H -	Predictive Emissions Monitoring Systems for Heaters and Boilers with Capacities Between 150 and 100 mmBTU/hr

## CONSENT DECREE

WHEREAS, plaintiff the United States of America ("Plaintiff" or "the United States"), by the authority of the Attorney General of the United States and through its undersigned counsel, acting at the request and on behalf of the United States Environmental Protection Agency ("EPA"), and plaintiff-intervenor, the State of Montana ("Plaintiff-Intervenor" or "Montana"), allege upon information and belief that defendant CHS Inc. ("Defendant" or "Cenex") has violated and/or continues to violate the requirements of the federal Clean Air Act ("Clean Air Act"), the Clean Air Act of Montana ("Montana Clean Air Act"), and the regulations and permits promulgated thereunder at Cenex's petroleum refinery near Laurel, Montana ("Laurel Refinery");

WHEREAS, Cenex approached federal and state authorities in an effort to resolve cooperatively the allegations and concerns raised;

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

- 1) Prevention of Significant Deterioration ("PSD") requirements found at Part C of Subchapter I of the federal Clean Air Act (the "Act" or "Clean Air Act"), 42 U.S.C. § 7475, and the regulations promulgated thereunder at 40 C.F.R. § 52.21 (the "PSD Rules"); and "Plan Requirements for Non-Attainment Areas" at Part D of Subchapter I of the Act, 42 U.S.C. §§ 7502 - 7503, and the regulations promulgated thereunder at 40 C.F.R. § 51.165(a) and (b) and at Title 40, Part 51, Appendix S, and at 40 C.F.R. § 52.24 ("PSD/NSR Regulations"), for heaters and boilers and fluid catalytic cracking unit catalyst regenerators for NO<sub>x</sub>, SO<sub>2</sub>, CO and PM;
- 2) New Source Performance Standards ("NSPS") found at 40 C.F.R. Part 60, Subparts A and J, under Section 111 of the Act, 42 U.S.C. § 7411 ("Refinery NSPS Regulations"),

for sulfur recovery plants, fuel gas combustion devices, and fluid catalytic cracking unit catalyst regenerators;

3) Leak Detection and Repair (“LDAR”) requirements promulgated pursuant to Sections 111 and 112 of the Act, 42 U.S.C. §§ 7411, 7412, and found at 40 C.F.R. Part 60, Subparts VV and GGG; 40 C.F.R. Part 61, Subparts J and V; and 40 C.F.R. Part 63, Subparts F, H, and CC (“LDAR Regulations”); and

4) National Emission Standards for Hazardous Air Pollutants (“NESHAP”) for Benzene Waste Operations promulgated pursuant to Section 112(e) of the Act, 42 U.S.C. § 7412(e), and found at 40 C.F.R. Part 61, Subpart FF (“Benzene Waste Operations NESHAP Regulations”);

WHEREAS, the United States also specifically alleges with respect to the Laurel Refinery that, upon information and belief, Cenex has been and/or continues to be in violation of the state implementation plan (“SIP”) and other state rules adopted by the State of Montana, in which the Laurel Refinery is located, to the extent that such plans or rules implement, adopt or incorporate the above-described federal requirements;

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

WHEREAS, the United States, the State of Montana and Cenex agree that the affirmative relief and environmental projects identified in Section V and Section IX of this Consent Decree will reduce annual emissions from the Laurel Refinery by the following amounts: 1) nitrogen oxide by approximately 330 tons; 2) sulfur dioxide by approximately 2,100 tons; and



3) particulate matter ("PM") by approximately 50 tons;

WHEREAS, with respect to the provisions of Section V, Subsection J ("Control of Acid Gas Flaring Incidents and Tail Gas Incidents") of this Consent Decree, EPA maintains that "[i]t is the intent of the proposed standard [40 C.F.R. § 60.104] that hydrogen-sulfide-rich gases exiting the amine regenerator [or sour water stripper gases] be directed to an appropriate recovery facility, such as a Claus sulfur plant," see Information for Proposed New Source Performance Standards: Asphalt Concrete Plants, Petroleum Refineries, Storage Vessels, Secondary Lead Smelters and Refineries, Brass or Bronze Ingot Production Plants, Iron and Steel Plants, Sewage Treatment Plants, Vol. 1, Main Text at 28 (June 1973);

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

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

WHEREAS, by entering into this Consent Decree Cenex is committed to pro-actively resolving environmental concerns related to its operations;

WHEREAS, discussions between the Parties have resulted in the settlement embodied in

the Consent Decree;

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

WHEREAS, Cenex has denied and continues to deny the violations alleged in the Complaint, and maintain that they have been and remain in compliance with all applicable statutes, regulations and permits and are not liable for civil penalties and injunctive relief. However, in the interest of settlement and to accomplish their objectives of cooperatively reconciling the goals of the United States, the State of Montana and Cenex under the federal Clean Air Act and the corollary state statutes, Cenex has agreed to undertake the installation of air pollution control equipment and enhancements to their air pollution management practices at the Laurel Refinery to reduce air emissions;

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

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

WHEREAS, EPA expects that Cenex will design, operate and maintain the controls identified in the preceding Paragraph in a manner consistent with standard and reasonable air

pollution control practices, and that collateral emissions increases will be adequately addressed by Cenex;

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

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

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

#### **I. JURISDICTION AND VENUE**

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

2. Venue is proper in the District of Montana pursuant to Section 113(b) of the Clean Air Act, 42 U.S.C. § 7413(b), and 28 U.S.C. §§ 1391(b) and (c), and 1395(a). Cenex consents to the personal jurisdiction of this Court, and waives any objections to venue in this District, and does not object to the intervention of the State of Montana in this action.

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

## **II. APPLICABILITY AND BINDING EFFECT**

4. The provisions of the Consent Decree shall apply to the Laurel Refinery, the petroleum refinery owned by Cenex near Laurel, Montana. The provisions of the Consent Decree shall be binding upon the United States, the Plaintiff-Intervenor, and Cenex and its officers, successors and assigns.

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

6. Effective from the Date of Entry of the Consent Decree until its termination, Cenex agrees that its refinery near Laurel, Montana is covered by this Consent Decree. Effective from the Date of Lodging of the Consent Decree, Cenex, as applicable, shall give written notice of the Consent Decree to any successors in interest prior to the transfer of ownership or operation of any portion of the Laurel Refinery and shall provide a copy of the Consent Decree to any successor in interest. Cenex, as applicable, shall notify the United States and the State of Montana in accordance with the notice provisions set forth in Paragraph 315 (Notice) of any successor in interest at least thirty (30) days prior to any such transfer.

7. Cenex, as applicable, shall condition any transfer, in whole or in part, of ownership of, operation of, or other interest (exclusive of any non-controlling non-operational shareholder interest) in, the Laurel Refinery upon the execution by the transferee of a modification to the Consent Decree, which makes the terms and conditions of the Consent Decree that apply to the Laurel Refinery applicable to the transferee. The Parties shall file that modification with the Court promptly upon such transfer. In the event of any such transfer of ownership or other interest in the Laurel Refinery, Cenex, as applicable, shall be released from the obligations and liabilities of this Consent Decree provided that, at the time of such transfer, the transferee has the financial and technical ability to assume and has contractually agreed with Cenex, as applicable, to assume these obligations and liabilities.

8. Cenex shall provide a copy of the applicable provisions of this Consent Decree to each contractor supplying a pollution control device or system required by or necessary to comply with this Consent Decree, upon execution of any contract relating to such work. No later than thirty (30) days after the Date of Lodging of the Consent Decree, Cenex also shall provide a copy of the applicable provisions of this Consent Decree to each contractor supplying a pollution control device or system required by or necessary to comply with this Consent Decree that Cenex already has retained to perform the work required under this Consent Decree. Copies of the Consent Decree do not need to be supplied to firms who are retained to supply materials or equipment which are not pollution control devices or systems.

### **III. OBJECTIVES**

9. It is the purpose of the Parties in this Consent Decree to further the objectives of the federal Clean Air Act, and the Montana Clean Air Act.

#### **IV. DEFINITIONS**

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

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

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

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

D. "Acid Gas Flaring Incident" or "AG Flaring Incident" shall mean the continuous or intermittent combustion of Acid Gas and/or Sour Water Stripper Gas that results in the emission of sulfur dioxide equal to, or in excess of, five-hundred (500) pounds in any twenty-four (24) hour period; provided, however, that if five-hundred (500) pounds or more of sulfur dioxide have

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

E. "Applicable Federal and State Agencies" shall mean EPA's Office of Regulatory Enforcement, EPA's Region 8, and the Montana DEQ;

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

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

H. "Cenex" shall mean CHS Inc., its successors and assigns, and its officers, directors, and employees in their capacities as such.

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

J. "Controlled Heaters, Boilers and Compressors" shall mean the heaters, boilers and compressors that are used to meet the requirements of Paragraph 44, and are controlled through either permanent shut down or the installation of Qualifying Control Technology as set forth in Paragraph 43.

K. "CO" shall mean carbon monoxide.

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

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

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

O. "End of Line" or "EOL" shall mean the collection of sample locations which can be used to collectively construct a reliable estimate of the Total Annual Benzene quantity.

Generally, but not always, the sample locations are situated downstream of the point of waste generation and typically are comprised of multiple individual sources.

P. "FCCU" as used herein shall mean a fluidized catalytic cracking unit and its regenerator.

Q. "Flaring Device" shall mean either an Acid Gas and/or an HC Flaring Device.

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

S. "Hydrocarbon Flaring" or "HC Flaring" shall mean the combustion of refinery-generated gases, except for Acid Gas and/or Sour Water Stripper Gas and/or Tail Gas, in a Hydrocarbon Flaring Device.

T. "Hydrocarbon Flaring Device" or "HC Flaring Device" shall mean, a flare device used to safely control (through combustion) any excess volume of a refinery-generated gas other than Acid Gas and/or Sour Water Stripper Off Gas and/or Tail Gas. The HC Flaring Device currently in service at the Laurel Refinery is identified as the "Refinery Flare" in this Consent Decree. To the extent that, during the duration of the Consent Decree, the Laurel Refinery utilizes HC Flaring Devices other than the Refinery Flare for the purpose of combusting any excess of a refinery-generated gas other than Acid Gas and/or Sour Water Stripper Gas, those HC Flaring



Devices shall be covered under this Consent Decree.

U. "Hydrocarbon Flaring Incident" or "HC Flaring Incident" shall mean the continuous or intermittent flaring of refinery-generated gases, except for Acid Gas or Sour Water Stripper Gas or Tail Gas, at a Hydrocarbon Flaring Device that results in the emission of sulfur dioxide equal to, or greater than five hundred (500) pounds in a 24-hour period; provided, however, that if five-hundred (500) pounds or more of sulfur dioxide have been emitted in a twenty-four (24) hour period and Flaring continues into subsequent, contiguous, non-overlapping twenty-four (24) hour period(s), each period of which results in emissions equal to, or in excess of five-hundred (500) pounds of sulfur dioxide, then only one HC Flaring Incident shall have occurred. Subsequent, contiguous, non-overlapping periods are measured from the initial commencement of Flaring within the HC Flaring Incident.

V. "Laurel Refinery" shall mean the refinery subject to the requirements of this Consent Decree which is the refinery owned and operated by Cenex near Laurel, Montana.

W. "Low NOx Combustion Promoter" shall mean a catalyst that is added to a FCCU that minimizes NOx emissions while maintaining its effectiveness as a combustion promoter.

X. "Malfunction" shall mean, as specified in 40 C.F.R. Part 60.2, "any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions."

Y. "Montana DEQ" shall mean the Montana Department of Environmental Quality and any successor departments or agencies of the State of Montana.

Z. "Next Generation Ultra-Low NOx Burners" or "Next Generation ULNBs" shall mean

those burners new to the market that are designed to achieve a NOx emission rate of 0.012 to 0.020 lb/mmBTU HHV when firing natural gas at 3% stack oxygen at full design load without air preheat.

AA. "NOx" shall mean nitrogen oxides.

BB. "NOx Additives" shall mean Low NOx Combustion Promoters and NOx Reducing Catalyst Additives.

CC. "NOx Reducing Catalyst Additive" shall mean a catalyst additive that is introduced to an FCCU to reduce NOx emissions.

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

EE. "PM" shall mean particulate matter.

FF. "PM-10" shall mean particles with an aerodynamic diameter less than or equal to a nominal 10 micrometers.

GG. "Parties" shall mean the United States, the Plaintiff-Intervenor, and Cenex.

HH. "Plaintiff-Intervenor" shall mean the State of Montana.

II. "Pollutant Reducing Catalyst Additive" shall mean either a NOx Reducing Catalyst Additive or a SO<sub>2</sub> Reducing Catalyst Additive.

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

KK. "Scheduled Maintenance" shall mean any shutdown of any emission unit or control equipment that Cenex schedules at least fourteen (14) days in advance of the shutdown for the

purpose of undertaking maintenance of such unit or control equipment.

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

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

NN. "SO<sub>2</sub> Reducing Catalyst Additive" shall mean a catalyst additive that is introduced to an FCCU to reduce SO<sub>2</sub> emissions.

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

PP. "SO<sub>2</sub>" shall mean sulfur dioxide.

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

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

SS. "Tail Gas Incident" shall mean, for the purpose of this Consent Decree, combustion of Tail Gas that either is:

- i. Combusted in a flare and results in 500 pounds or more of SO<sub>2</sub> emissions in any 24-hour period; or
- ii. Combusted in a thermal incinerator and results in excess emissions of 500 pounds or more of SO<sub>2</sub> emissions over the applicable emissions limit (either the interim emissions limit established pursuant to Paragraph 72 or the NSPS emissions limit after the date set forth in Paragraph 66), in any 24-hour period. Only those time periods which are in excess of a SO<sub>2</sub> concentration of 250 ppm (rolling twelve-hour average) shall be used to determine the amount of excess SO<sub>2</sub> emissions

from the incinerator.

Cenex shall use engineering judgment and/or other monitoring data during periods in which the SO<sub>2</sub> continuous emission analyzer has exceeded the range of the instrument or is out of service.

TT. "Total Catalyst" shall mean all forms of catalyst added to the FCCU, including but not limited to base catalyst and equilibrium catalyst, but excluding Pollutant Reducing Catalyst Additive.

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

VV. "Upstream Process Units" shall mean all amine contactors, amine scrubbers, and sour water strippers at the Laurel Refinery, as well as all process units at the refinery that produce gaseous or aqueous waste streams that are processed at amine contactors, amine scrubbers, or sour water strippers.

WW. "Weight % Pollutant Reducing Catalyst Additive Rate" shall mean:

$$\frac{\text{Amount of Pollutant Reducing Catalyst Additive in Pounds per Day}}{\text{Amount of Total Catalyst added in Pounds per Day}} \times 100\%$$

## **V. AFFIRMATIVE RELIEF/ENVIRONMENTAL PROJECTS**

### **A. NOx Emissions Reductions from the FCCU.**

11. **Summary.** Cenex shall implement a program to reduce NOx emissions from the Fluid Catalytic Cracking Unit ("FCCU") at the Laurel Refinery by the use of NOx Reducing Catalyst Additives and Low NOx Combustion Promoters, and through increased hydrotreatment of FCCU feed. Cenex shall incorporate lower NOx emission limits into permits and shall

demonstrate future compliance with the lower emission limits through the use of CEMS. In order to establish lower FCCU NOx emission limits at the Laurel Refinery FCCU, there shall be a optimization period to establish an optimized Low NOx Combustion Promoter addition rate ("Low NOx Combustion Promoter Optimization Period"), a series of short-term trials on at least two commercially-available NOx Reducing Catalyst Additives, up to a maximum of four ("Trial Period"), the selection of, with EPA approval, an EPA-Approved NOx Reducing Catalyst Additive to be used during the Demonstration Period, an optimization period to establish an Optimized Addition Rate for the EPA-Approved NOx Reducing Catalyst Additive ("NOx Reducing Catalyst Additive Optimization Period"), and a Demonstration Period ("Demonstration Period"). The Low NOx Combustion Promoter Optimization Period, Trial Period, and NOx Reducing Catalyst Additive Optimization Period shall be collectively referred to as the "Trial and Optimization Periods". Alternatively, Cenex may forego any outstanding trials or deliverables under the above Periods and Trials, if it chooses to comply with NOx emissions limits of 20 ppmvd @ 0% O<sub>2</sub> on a 365-day rolling average basis and 40 ppmvd @ 0% O<sub>2</sub> on a 7-day rolling average basis from the Laurel refinery FCCU.

**12. Baseline Data and NOx Model.** By no later than December 31, 2004, Cenex shall submit to EPA and Montana DEQ baseline data, which shall be collected over a minimum of six months, and a report describing a model to predict uncontrolled NOx concentration and mass emission rate for the Laurel Refinery FCCU that shall include, at a minimum, the following data on a daily average basis:

- a. Regenerator flue gas temperature;
- b. Coke burn rate;

- c. FCCU feed rate;
- d. FCCU feed API gravity;
- e. FCCU feed sulfur and nitrogen content in weight %;
- f. Percentage of each type of FCCU feed component (i.e. atmospheric gas oil, vacuum gas oil, atmospheric tower bottoms, vacuum tower bottoms, etc.);
- g. Percentage by volume of the FCCU feed that is hydrotreated;
- h. Total Catalyst addition rate;
- i. NOx Reducing Catalyst Additive, conventional combustion promoter addition rates, and/or Low NOx Combustion Promoter addition rates; and
- j. Hourly and daily SO<sub>2</sub>, NOx, CO and O<sub>2</sub> concentrations.

**i. Trial and Optimization Periods**

**13. Protocol for the Trial and Optimization Periods.** By no later than May 1, 2004, Cenex shall submit to EPA and the Montana DEQ a protocol for the Trial and Optimization Periods that describes, at a minimum, the methods that Cenex will use to determine adequate control of afterburn, assess relative performance of NOx reducing additives during the Trial Period, calculate control effectiveness (pounds NOx reduced per pound of additive), cost effectiveness (dollars per ton of NOx reduced), baseline emissions, and percent additive added.

**14. Selection of Low NOx Combustion Promoter.** By no later than May 1, 2004, Cenex shall notify EPA and the Montana DEQ in writing of the Low NOx Combustion Promoters it is considering using in the Low NOx Combustion Promoter Optimization Period. At least sixty (60) days prior to the commencement of the Low NOx Combustion Promoter Optimization Period, but no later than November 1, 2004, Cenex shall notify EPA and the

Montana DEQ in writing of which Low NOx Combustion Promoter it intends to use in the Low NOx Combustion Promoter Optimization Period.

**15. Determining the Optimized Low NOx Combustion Promoter Addition Rate.**

Cenex shall comply with Section II of Appendix B in order to establish an Optimized Low NOx Combustion Promoter Addition Rate. During the 30 days prior to the commencement of the Low NOx Combustion Promoter Optimization Period, Cenex shall undertake the first step in the process of determining an Optimized Addition Rate for the Low NOx Combustion Promoter by reducing historical usage of conventional combustion promoter to the point that the addition rate of the conventional combustion promoter is the minimum necessary to retain effectiveness. Thereafter, at the commencement of the Low NOx Combustion Promoter Optimization Period, Cenex shall replace its conventional combustion promoter with Low NOx Combustion Promoter in accordance with the protocol set forth in Section II of Appendix B, and shall comply with the terms of Section II of Appendix B until the Optimized Low NOx Combustion Promoter Addition Rate is established.

**16. Selecting the NOx Reducing Catalyst Additives to be Used During the Trial Period.** The objective of this Paragraph 16 is to select the best-performing, commercially-available NOx Reducing Catalyst Additive for the Laurel Refinery FCCU. By no later than May 1, 2004, Cenex shall notify EPA in writing of all of the NOx Reducing Catalyst Additives that are commercially-available for use. With this notification, Cenex shall submit to EPA for approval the identity of all commercially-available NOx Reducing Catalyst Additives that Cenex proposes to use for the short-term trials ("Trial Period") set forth in Paragraph 17. A copy of this notification shall be submitted to the Montana DEQ. The NOx Reducing Catalyst

Additives selected by EPA for the trial runs shall be called the "EPA-Approved, Potential NOx Reducing Catalyst Additives."

**17. Trial Period: Short-Term Trials of EPA-Approved, Potential NOx Reducing Catalyst Additives.** Cenex shall commence short-term trial runs of two EPA-Approved, Potential NOx Reducing Catalyst Additives immediately after establishing, pursuant to Paragraph 15, the Optimized Low NOx Combustion Promoter Addition Rate. Cenex shall add two EPA-Approved, Potential NOx Reducing Catalyst Additives to the Laurel Refinery FCCU, in accordance with Appendix B.

**18. Selection of the EPA-Approved NOx Reducing Catalyst Additive.** After completion of the Trial Period set forth in Paragraph 17, but no later than February 1, 2005, Cenex shall submit to EPA for approval a report that sets forth the NOx Reducing Catalyst Additive that Cenex proposes to use during the NOx Reducing Catalyst Additive Optimization Period and Demonstration Period based on performance capabilities. Cenex shall propose to use the best performing additive as measured by percentage of NOx emissions reduced and the concentration to which NOx emissions were reduced during the Trial Period. This report also shall set forth the reasons for this selection, and must include a summary of the data obtained from each short term trial of each catalyst additive. A copy of this report shall be submitted to the Montana DEQ. EPA may approve the NOx Reducing Catalyst Additive that Cenex proposes to use or may require Cenex to use a different product from among those used in the Trial Period. The NOx Reducing Catalyst Additive selected after the trials occur and after EPA approves the final selection shall be called the "EPA-Approved NOx Reducing Catalyst Additive."

**19. Set Emission Limit Option.** By February 1, 2005, Cenex shall choose to either



comply with a NOx emission limit of 20 ppmvd @ 0% O<sub>2</sub> on a 365-day rolling average basis and 40 ppmvd @ 0% O<sub>2</sub> on a 7-day rolling average basis from the Laurel refinery FCCU, or conduct the NOx Reducing Catalyst Additive Optimization Period and Demonstration Period set forth in Paragraphs 20 - 29. If Cenex chooses to comply with the NOx emission limit of 20 ppmvd @ 0% O<sub>2</sub> on a 365-day rolling average basis and 40 ppmvd @ 0% O<sub>2</sub> on a 7-day rolling average basis from the Laurel refinery FCCU, then Cenex shall not be required to comply with Paragraphs 20 - 29. If, prior to February 1, 2005, Cenex chooses to comply and complies with NOx emissions limits of 20 ppmvd @ 0% O<sub>2</sub> on a 365-day rolling average basis and 40 ppmvd @ 0% O<sub>2</sub> on a 7-day rolling average basis from the Laurel refinery FCCU, Cenex shall not be required to perform or submit any outstanding trials or deliverables due under Paragraphs 12 - 29.

**20. NOx Reducing Catalyst Additive Optimization Period.** After selection of an EPA-Approved NOx Reducing Catalyst Additive, Cenex shall commence the NOx Reducing Catalyst Additive Optimization Period. Cenex shall comply with Section III of Appendix B in order to establish an Optimized Addition Rate for the EPA-Approved NOx Reducing Catalyst Additive for use during the Demonstration Period. Cenex shall complete the NOx Reducing Catalyst Additive Optimization Period before the next turnaround. However, if the selection and approval by EPA required in Paragraph 16 of the EPA-Approved, Potential NOx Reducing Catalyst Additives is not received by Cenex within 90 days from submission, or if the selection and approval by EPA required in Paragraph 18 of the EPA-Approved NOx Reducing Catalyst Additive is not received by Cenex by February 22, 2005, Cenex shall conduct the NOx Reducing Catalyst Additive Optimization Period after the turnaround and, if necessary validate and modify

the model. If circumstances arise which make the completion of the NOx Reducing Catalyst Additive Optimization Period before the next turnaround a technical impossibility, Cenex shall conduct the NOx Reducing Catalyst Additive Optimization Period after the turnaround and, if necessary validate and modify the model. If, in accordance with this Paragraph, Cenex will be conducting the NOx Reducing Catalyst Additive Optimization Period after the turnaround, then Cenex shall propose a modified schedule for the NOx Reducing Catalyst Additive Optimization Period and Demonstration Period for EPA approval.

**21. Use of Conventional Promoter.** Cenex may use conventional Pt-based combustion promoter on an intermittent basis during the NOx Reducing Catalyst Additive Optimization Period, as needed to avoid unsafe operation of the FCCU regenerator and to comply with CO emission limits. Cenex shall undertake appropriate measures and/or adjust operating parameters with a goal of eliminating such use. Notwithstanding the foregoing, Cenex shall not be required to adjust operating parameters in a way that would limit conversion or processing rates.

**22. Notification of Optimized NOx Additive Addition Rate and Compliance with Appendix B.** By no later than 30 days prior to beginning the Demonstration Period: (i) Cenex shall notify EPA and the Montana DEQ of the Optimized NOx Additive Addition Rates for the Low NOx Combustion Promoter and the EPA-Approved NOx Reducing Catalyst Additive for the Laurel Refinery FCCU with an explanation and supporting data that demonstrates that the requirements of Appendix B have been met in establishing the Optimized NOx Additive Addition Rates.

**ii. Demonstration Period.**

**23. Commencement of NOx Additive Performance Demonstration.** Cenex shall

commence the Demonstration Period by no later than October 31, 2005. Cenex shall demonstrate the performance of the EPA-Approved NOx Reducing Catalyst Additive and Low NOx Combustion Promoter (collectively, "NOx Additives") over an eighteen-month period and operate the FCCU in a way to yield the lowest NOx concentration feasible from the FCCU at the Optimized NOx Reducing Catalyst Additive Addition Rate and the Optimized Low NOx Combustion Promoter Addition Rate (collectively "Optimized NOx Additive Addition Rates"). During the Demonstration Period, Cenex shall add NOx Additives at the Optimized NOx Additive Addition Rates using an automatic catalyst loader that measures and records addition rates and adds the additive evenly over time and in a manner that minimizes NOx emissions. The commencement of the Demonstration Period may be delayed if Cenex seeks an extension in writing, and EPA approves the extension in writing.

**24. Use of Conventional Promoter.** Cenex may use conventional Pt-based combustion promoter on an intermittent basis during the Demonstration Period, as needed to avoid unsafe operation of the FCCU regenerator and to comply with CO emission limits. Cenex shall undertake appropriate measures and/or adjust operating parameters with a goal of eliminating such use. Notwithstanding the foregoing, Cenex shall not be required to adjust operating parameters in a way that would limit conversion or processing rates.

**25.** Cenex may, upon EPA approval, discontinue use of Low NOx combustion promoter if Cenex demonstrates that it has adjusted other parameters and that such promoter does not adequately control afterburn and/or causes CO emissions to approach or exceed applicable limits. Notwithstanding the foregoing, Cenex shall not be required to adjust operating parameters in a way that would limit conversion or processing rates.

26. **Measuring NO<sub>x</sub> and O<sub>2</sub>**. During the Demonstration Period, Cenex shall determine the NO<sub>x</sub> and O<sub>2</sub> concentrations prior to the combination of the regenerator flue gas with the CO Boiler gas by CEMS.

27. **NO<sub>x</sub> Additive Performance Demonstration Report (“NO<sub>x</sub> Additive Demonstration Report”)**. No later than 60 days after the completion of the Demonstration Period, Cenex shall report the results to the Applicable Federal and State Agencies (“NO<sub>x</sub> Additive Demonstration Report”). The NO<sub>x</sub> Additive Demonstration Report shall include, at a minimum, the NO<sub>x</sub> and O<sub>2</sub> CEMS data recorded during the eighteen month Demonstration Period and each of the parameters required to be reported in Paragraph 12, except for the daily FCCU feed nitrogen content, on a daily average basis for the eighteen month Demonstration Period, and each parameter used in the model.

**iii. Establishing FCCU NO<sub>x</sub> Emission Limits.**

28. **NO<sub>x</sub> Emission Limits Proposals.** In the NO<sub>x</sub> Additive Demonstration Report, Cenex shall propose a short term (7-day rolling average) and a long term (365-day rolling average) concentration-based (ppmvd) NO<sub>x</sub> emission limit corrected to 0% oxygen. Cenex may also propose an alternate operating scenario limit for the short term rolling average during periods of hydrotreater outages. Cenex shall comply with the emission limits it proposes beginning immediately upon submission of the NO<sub>x</sub> Additive Demonstration Report. Cenex shall continue to comply with these limits unless and until they are required to comply with the emissions limits set by EPA pursuant to Paragraph 29.

29. **EPA’s NO<sub>x</sub> Emission Limits.** EPA shall use the data collected about the FCCU during the baseline period, the Trial and Optimization Periods, and the Demonstration Period, as

well as all other available and relevant information, to establish a limit for NO<sub>x</sub> emissions from the Laurel Refinery FCCU. EPA shall establish short term (7-day rolling average) and long term (i.e. 365-day rolling average) concentration-based (ppmvd) NO<sub>x</sub> emission limits corrected to 0% oxygen. EPA may also establish an alternate operating scenario for the short term rolling average during periods of hydrotreater outages. EPA shall determine the limits based on: (i) the level of performance during the baseline period, Trial and Optimization Periods, and Demonstration Period; (ii) a reasonable certainty of compliance; and (iii) any other available and relevant information. EPA shall notify Cenex of its determination of the concentration-based NO<sub>x</sub> emissions limit and averaging times for the FCCU. Cenex shall immediately (or within thirty (30) days, if EPA's limit is more stringent than the limit proposed by Cenex) operate the FCCU so as to comply with the EPA-established emission limits. Disputes regarding the appropriate emission limits shall be resolved in accordance with the dispute resolution provisions of this Decree; provided however, that during the period of dispute resolution, Cenex shall comply with the EPA-established limits.

**iv. Demonstrating Compliance with EPA-Established FCCU NO<sub>x</sub> Emission Limits.**

30. By no later than January 1, 2004, Cenex shall install and use a NO<sub>x</sub> and O<sub>2</sub> CEMS to monitor performance of the Laurel Refinery FCCU during the baseline period, Trial and Optimization Periods, and Demonstration Period, if applicable, and to report compliance with the terms and conditions of this Consent Decree. Cenex shall make CEMS and process data available to the Applicable Federal and State Agencies upon demand as soon as practicable. Cenex shall install, certify, calibrate, maintain, and operate all CEMS required by this Consent Decree in accordance with the requirements of 40 C.F.R. §§ 60.11, 60.13 and Part 60 Appendix

A, and the applicable performance specification test of 40 C.F.R. Part 60 Appendices B and F.

These CEMS shall be used to demonstrate compliance with emission limits.

**31. Hydrotreater Outages.** The short term FCCU NO<sub>x</sub> emission limit as established herein shall not apply during periods of hydrotreater outages at the Laurel Refinery, provided that Cenex is maintaining and operating its FCCU (including associated air pollution control equipment) in a manner consistent with good air pollution control practices for minimizing emissions in accordance with an EPA-approved good air pollution control practices plan. By December 31, 2003, Cenex shall submit to EPA for approval a plan to minimize NO<sub>x</sub> emissions from its FCCU (including associated air pollution control equipment) during hydrotreater outages. Copies of this plan shall be provided to the Montana DEQ. Cenex shall comply with the plan at all times, including periods of startup, shutdown, and malfunction of the hydrotreater.

**B. SO<sub>2</sub> Emissions Reductions from the FCCU.**

**32. Program Summary:** Cenex shall implement a program to reduce SO<sub>2</sub> emissions from the Laurel refinery FCCU to 25 ppmvd @ 0% O<sub>2</sub> on a 365-day rolling average basis and 50 ppmvd @ 0% O<sub>2</sub> on a 7-day rolling average basis. Cenex shall incorporate these lower SO<sub>2</sub> emission limits into operating permits and will demonstrate future compliance with the lower emission limits through the use of CEMS.

**33. SO<sub>2</sub> Emission Limits.** By March 31, 2007, Cenex shall notify EPA whether it will comply with Paragraph 33(a) or 33(b). Cenex shall either:

a. By December 31, 2007, comply with a SO<sub>2</sub> concentration limit of 25 ppmvd @ 0% O<sub>2</sub> on a 365-day rolling average basis and 50 ppmvd @ 0% O<sub>2</sub> on a 7-day rolling average basis without a wet gas scrubber ("WGS"); or

b. By December 31, 2009, complete installation and begin operation of a WGS, and comply with a SO<sub>2</sub> concentration limit of 25 ppmvd @ 0% O<sub>2</sub> on a 365-day rolling average basis and 50 ppmvd @ 0% O<sub>2</sub> on a 7-day rolling average basis.

34. **Hydrotreater Outages.** The 7-day FCCU SO<sub>2</sub> emission limit shall not apply during periods of hydrotreater outages at the Laurel Refinery, provided that Cenex is maintaining and operating its FCCU (including associated air pollution control equipment) in a manner consistent with good air pollution control practices for minimizing emissions in accordance with an EPA-approved good air pollution control practices plan. By December 31, 2003, Cenex shall submit to EPA for approval a plan to minimize SO<sub>2</sub> emissions from its FCCU (including associated air pollution control equipment) during hydrotreater outages. Copies of this plan shall be provided to the Montana DEQ. Cenex shall comply with the plan at all times, including periods of startup, shutdown, and malfunction of the hydrotreater.

35. **Demonstrating Compliance with FCCU SO<sub>2</sub> Emission Limits.** Cenex shall have the following obligations:

a. By June 30, 2004, Cenex shall install and use a SO<sub>2</sub> and O<sub>2</sub> CEMS to report compliance with the terms and conditions of this Consent Decree.

b. Cenex shall make CEMS and process data available to EPA upon demand as soon as practicable.

c. Cenex shall install, certify, calibrate, maintain, and operate all CEMS required by this Consent Decree in accordance with the requirements of 40 C.F.R. §§ 60.11, 60.13 and Part 60 Appendix A, and the applicable performance specification test of 40 C.F.R. Part 60 Appendices B and F. These CEMS shall be used to demonstrate compliance with

emission limits.

**C. PM Emissions Reductions from the FCCU.**

36. **General.** Cenex shall implement a program to reduce particulate matter (PM) emissions from the FCCU by the installation and use of control equipment designed to achieve a PM emission limit of 0.50 pound PM per 1000 pounds of coke burned on a 3-hour average basis (PM Control Equipment).

37. **Installation and Operation of PM Control Equipment on FCCU.** By December 31, 2009, Cenex shall complete installation and shall begin operation of PM Control Equipment on emissions from its FCCU. Cenex shall design the PM Control Equipment to achieve an emission limit of 0.50 pound PM per 1000 pounds of coke burned on a 3-hour average basis. If Cenex chooses to use PM Control Equipment other than an Electrostatic Precipitator (ESP) or a Wet Gas Scrubber (WGS), then Cenex shall submit the design report for the PM Control Equipment to EPA and Montana DEQ for review and EPA approval. By September 30, 2010, Cenex shall, based on the first annual stack test, a reasonable certainty of compliance, and other relevant information, propose to EPA an emission limit between 0.50 and 1.00 pound PM per 1000 pounds of coke burned on a 3-hour average basis. EPA shall, based on the first annual stack test, a reasonable certainty of compliance, and other relevant information, establish an emission limit between 0.50 and 1.00 pound PM per 1000 pounds of coke burned on a 3-hour average basis. Cenex shall comply with the emissions limit once it is established by EPA. Cenex shall incorporate this emission limit into applicable permits pursuant to Section VI (Permitting).

38. **PM Testing for FCCU.** Cenex shall follow the stack test protocol specified in 40



C.F.R. § 60.106(b)(2) to measure PM emissions on the FCCU at the Laurel Refinery. Cenex shall propose and submit the stack test protocol for approval to EPA and Montana DEQ no later than December 31, 2008. During the first two (2) years of operations following installation of the PM Control Equipment, Cenex shall conduct annual stack tests at the FCCU with the first test conducted by June 30, 2010. Tests may be conducted less frequently than annually upon a showing from at least three (3) consecutive annual tests that limits are not being exceeded.

**39. Opacity Monitoring – FCCU.** If PM Control Equipment other than a WGS is installed on the FCCU at the Laurel Refinery, Cenex shall install a Continuous Opacity Monitoring System (COMS) by December 31, 2009. If a WGS is installed, Cenex shall submit for approval an alternative monitoring plan (“AMP”) for opacity by June 30, 2009. If EPA requests additional information or a modification(s) to the AMP, Cenex will respond to such request within 30 days of the date of the request, or such other time as Cenex and EPA may agree. If EPA disapproves Cenex’s application for an AMP, EPA shall designate an AMP or COMS which Cenex shall adopt and implement or install and operate. If EPA disapproves the AMP and requires a COMS, Cenex shall install the COMs within 12 months of receiving EPA’s request for a COMs. Cenex shall install, certify, calibrate, maintain, and operate all COMS required by this Part in accordance with the applicable requirements of 40 C.F.R. §§ 60.11, 60.13 and 40 C.F.R. Part 60, App. A & B.

**D. CO Emissions Reductions from the FCCU.**

**40. Summary.** Cenex shall implement a program to reduce CO emissions from the Laurel Refinery FCCU by the use of full combustion.

**41. Emissions Limits.** Beginning on the Date of Lodging, Cenex shall comply with an

emission limit of 500 ppmvd CO corrected to 0% O<sub>2</sub> on a 1-hour average basis. By no later than December 31, 2006, Cenex shall comply with an emission limit of 150 ppmvd CO corrected to 0% O<sub>2</sub> on a 365-day rolling average basis. If during the life of this Consent Decree, Cenex replaces the air grid or reconstructs the air grid, as defined by NSPS at 40 C.F.R. § 60.15(b), Cenex shall comply with an emission limit of 100 ppmvd CO corrected to 0% O<sub>2</sub> on a 365-day rolling average basis.

**42. Demonstrating Compliance with Emission Limits.** By January 1, 2004, Cenex shall install and use a CO and O<sub>2</sub> CEMS to monitor compliance of the FCCU with the terms and conditions of this Consent Decree. Cenex shall make CEMS and process data available to the Applicable Federal and State Agencies upon demand as soon as practicable. Cenex shall install, certify, calibrate, maintain, and operate all CEMS required by this Consent Decree in accordance with the requirements of 40 C.F.R. §§ 60.11, 60.13 and Part 60 Appendix A and the applicable performance specification test of 40 C.F.R. Part 60 Appendices B and F. These CEMS shall be used to demonstrate compliance with emission limits.

**E. NO<sub>x</sub> Emissions Reductions from Heaters, Boilers, and Compressors.**

**43. Program Summary.** By December 31, 2011, Cenex shall complete a program to reduce the overall NO<sub>x</sub> emissions from the Controlled Heaters, Boilers and Compressors at its Laurel Refinery in an amount greater than or equal to 265 tons per year as demonstrated by the inequality in Paragraph 44. To achieve this reduction, Cenex shall control NO<sub>x</sub> emissions from the Controlled Heaters, Boilers and Compressors through the use of one or any combination of the following NO<sub>x</sub> control technologies: the permanent shut down of certain units with the revocation of their operating permits, installation of Selective Catalytic Reduction ("SCR"),

installation of Selective Non-Catalytic Reduction (“SNCR”), installation of current or next generation ultra-low NOx burners, and/or installation of technologies that Cenex demonstrates to EPA’s satisfaction will reduce NOx emissions to 0.040 lbs per mmBTU or lower (“Qualifying NOx Control Technologies”).

44. By December 31, 2011, Cenex’s selection and use of Qualifying NOx Control Technologies and/or the permanent shut down of certain heaters, boilers, or compressors must at a minimum reduce overall NOx emissions from the Controlled Heaters, Boilers, and Compressors by at least 265 tons per year from a prior actual to future allowable basis so as to satisfy the following inequality:

$$\sum_{i=1}^n [(E_{\text{Actual}})_i - (E_{\text{Allowable}})_i] \geq 265 \text{ tons of NOx per year}$$

Where:

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

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

$n =$  The number of controlled heaters, boilers and compressors at the Laurel Refinery applied towards satisfying the requirements of the equation set forth in this Paragraph of this Consent Decree.

45. Appendix A to this Consent Decree provides the following information for each of the heaters, boilers and compressors greater than 40 mmBTU per hour, and any heaters, boilers

and compressors under 40 mmBTU per hour if such units are included in the baseline, at the Laurel Refinery:

- (a) the maximum heat input capacities in mmBTU/hr;
- (b) the baseline emission rate for both calendar years 2000 and 2001 in lbs/mmBTU and tons per year; and
- (c) the type of data used to derive the emission estimate (i.e. emission factor, stack test, or CEMS data) and the averaging period for the emissions data.

46. By no later than December 31, 2006, Cenex shall physically derate the #2 N.U. Heater to a maximum heat input rate capability of less than 40 mmBTU/hour at HHV and shall apply for a modification to the applicable permit for this unit to reflect the new rate limit.

47. Cenex shall achieve two-thirds of the combined NOx emissions reductions from the Controlled Heaters, Boilers, and Compressors through the permanent shut down of certain heaters, boilers, or compressors and/or the use of Qualifying NOx Control Technology as defined in Paragraph 43, by December 31, 2007. Cenex shall demonstrate compliance with this requirement by demonstrating in their March 31, 2008 annual report that they have installed NOx controls and applied for enforceable limits that will achieve the required reductions, pursuant to Section VI (Permitting). For purposes of this Consent Decree, "applied for" shall mean that Cenex has submitted a complete and timely application for the appropriate permit, permit modification, and/or permit waiver.

48. By December 31, 2011, Cenex shall have installed NOx controls on at least 30% of the heater and boiler capacity greater than 40 mmBTU per hour located at the Laurel Refinery. The heater and boiler capacity shall be based on the maximum Heat Input Capacity as listed in

Appendix A.

49. Cenex may include in the 30% capacity demonstration those heaters, boilers, and compressors which have been either shut down, or for which the refinery has installed one of the following NOx control technologies: SCR, SNCR, current or next generation ultra-low NOx burners, or technologies that Cenex demonstrates to EPA's satisfaction will reduce NOx emissions to 0.040 lbs per mmBTU or lower.

50. Cenex shall submit a detailed NOx Control Plan ("Control Plan") to EPA by no later than March 31, 2004, with annual updates ("Updates") no later than March 31 of each year for the life of the Consent Decree or until Cenex has submitted a report that demonstrates that it has satisfied all of the requirements of Paragraphs 43 - 51. The Control Plan and its updates shall describe the progress of the NOx emissions reductions program for compressors, and for heaters and boilers greater than or equal to 40 mmBTU per hour towards meeting the requirements of this Subsection E (¶¶ 43 - 54) and shall contain the following for each such heater, boiler, and compressor at the refinery:

- (a) All of the information required as identified in Appendix A;
- (b) The baseline utilization rate in average mmBTU/hr for calendar years 2000 and 2001;
- (c) Identification of all heaters, boilers, and compressors that Cenex has controlled to reduce NOx emissions and plans to control in accordance with Subsection E (¶¶ 43 - 54);
- (d) Identification of the type of controls installed with date installed, or planned with date planned;
- (e) The allowable NOx emissions (in lbs/mmBTU) and allowable heat input rate (in mmBTU/hr) obtained or planned, dates obtained or planned, and identification of the permits in which the limits were obtained;

- (f) The results of emissions tests and annual average CEMS data (in ppmvd at 3% O<sub>2</sub>, lb/mmBTU, and tons per year) conducted pursuant to Subsection E (§§ 43 - 54);
- (g) The amount in tons per year applied or to be applied toward satisfying Paragraph 43; and
- (h) A description of the achieved and anticipated annual progress toward satisfying Subsection E (§§ 43 - 54).

51. The Control Plan and Updates required under Subsection E (§§ 43 - 54) shall be certified as provided in Section X (Reporting and Recordkeeping).

52. Cenex shall monitor the Controlled Heaters, Boilers, and Compressors to meet the requirements of Subsection E (§§ 43- 54) as follows:

- a. For heaters, boilers, and compressors with a heat input capacity greater than 150 mmBTU/hr (HHV), Cenex shall install or continue to operate CEMS to measure NO<sub>x</sub>, CO and O<sub>2</sub> by no later than the date of the installation of the applicable NO<sub>x</sub> Control Technology on the heater, boiler, or compressor. Cenex shall install, certify, calibrate, maintain, and operate all CEMS required by this Subsection E (§§ 43- 54) in accordance with the requirements of 40 C.F.R. §§ 60.11, 60.13 and Part 60 Appendix A and the applicable performance specification test of 40 C.F.R. Part 60 Appendices B and F. These CEMS shall be used to demonstrate compliance with emission limits. Cenex shall make CEMS and process data available to the EPA and Plaintiff Intervenor upon demand as soon as practicable;
- b. For heaters, boilers, and compressors with a heat input capacity of equal to or less than 150 mmBTU/hr (HHV) but greater than 100 mmBTU/hr (HHV), Cenex shall (a) install or continue to operate CEMS to measure NO<sub>x</sub> and O<sub>2</sub> by no later than the date of the installation of the applicable NO<sub>x</sub> Control Technology on the heater, boiler, or compressor; or (b) submit for EPA approval, by no later than 60 days after the date of installation of the applicable NO<sub>x</sub> Control Technology on the heater, boiler, or compressor, a proposal for a Predictive Emission Monitoring System ("PEMS") based on operating parameters, including but not limited to, firebox temperature, air preheat temperature, heat input rate, and combustion O<sub>2</sub> pursuant to Appendix H; and
- c. For heaters, boilers, and compressors with a heat input capacity of equal to or less than 100 mmBTU/hr (HHV), Cenex shall, by no later than 60 days after the date of installation of the applicable NO<sub>x</sub> Control Technology, conduct an initial

performance test. The results of this test shall be reported based upon the average of three (3) one-hour testing periods and shall be used to develop representative operating parameters for each unit, which will be used as indicators of compliance.

- d. Notwithstanding subparagraph (c) above, Cenex shall conduct an initial performance test of the Alkylation Hot Oil Heater by no later than 180 days from the Date of Lodging.

53. The requirements of this Part do not exempt Cenex from complying with any and all federal, state or local requirements that may require technology upgrades based on actions or activities occurring after the Date of Entry of this Consent Decree.

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

**F. NSPS Applicability to the FCCU Regenerator.**

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

SO <sub>2</sub>	June 30, 2004
PM	The date the final PM emission limit is established pursuant to Paragraph 37.
CO	January 1, 2004
Opacity	December 31, 2009

**G. SO<sub>2</sub> Emissions Reductions from and NSPS Applicability for Combustion Devices.**

- 56. **General.** Cenex shall undertake measures to reduce SO<sub>2</sub> emissions from refinery

fuel gas combustion devices by restricting H<sub>2</sub>S in refinery fuel gas and by agreeing not to continue and/or commence the burning of fuel oil in combustion devices except under the provisions set forth herein.

**57. NSPS Applicability for Fuel Gas Combustion Devices.** Beginning upon the Date of Lodging of the Consent Decree for Cenex, all fuel gas combustion devices at the Laurel Refinery shall be affected facilities, as that term is used in 40 C.F.R. Part 60, Subparts A and J, and shall be subject to and comply with the requirements of NSPS Subparts A and J, by the Date of Lodging except for the units listed in Appendix F which shall comply by the dates specified in Appendix F.

**58. AMP Submittal for Fuel Gas Combustion Devices.**

a. By June 30, 2004, Cenex shall submit alternative monitoring plans ("AMPs") for the units listed in Appendix F which require AMPs. If EPA requests additional information or modification(s) to the AMP, Cenex will respond to such a request within 30 days of the date of the request. If EPA disapproves Cenex's application for an AMP, Cenex shall install and operate monitoring systems consistent with the requirements of 40 C.F.R. § 60.105, and all other applicable regulatory requirements other than 40 C.F.R. § 60.13 (i), within 120 days of the date of notice of EPA's disapproval of the AMP. However, if Cenex submits and EPA approves a revised AMP application within 120 days after the date of EPA's disapproval of the prior AMP application, then Cenex shall comply with the revised AMP. The deadlines in this paragraph may be delayed if Cenex seeks an extension in writing, and EPA approves the extension in writing.

b. To the extent that Cenex chooses to use an alternative monitoring method at



the flare to demonstrate compliance with the emissions limits under 40 C.F.R. § 60.104, Cenex may begin using the method immediately upon submitting the application for approval to use the method provided that the alternative method for which approval is being sought is the same or is substantially similar to the method identified as the "Alternative Monitoring Plan for NSPS Subpart J Refinery Fuel Gas" attached to EPA's December 2, 1999, letter to Koch Refining Company LP.

**59. Elimination/Reduction of Fuel Oil Burning.** No later than the Date of Lodging, except in instances of natural gas curtailment where Cenex can demonstrate that fuel oil is required, Cenex agrees to limit SO<sub>2</sub> emissions from combustion of alkylation unit polymer and fuel oil in all combustion devices at the Laurel Refinery to 300 tons per year of SO<sub>2</sub> on a 365-day rolling average. Cenex shall determine compliance with the fuel oil burning limit from the combustion of alkylation unit polymer using the methodology in Appendix G, Part I, and from all other combustion devices using the SO<sub>2</sub> fuel oil monitoring method approved in the Montana State Implementation Plan as referenced in Appendix G, Part II. During documented periods of natural gas curtailment, SO<sub>2</sub> emissions from the burning of any liquid fuel in heaters and boilers at the Laurel Refinery shall not be included in the 365-day average.

**H. NSPS Applicability of and Compliance for Sulfur Recovery Plant.**

**i. NSPS Applicability of Sulfur Recovery Plant.**

**60. Description of Sulfur Recovery Plants.** Cenex owns and operates two Sulfur Recovery Plants located at the Laurel Refinery: the Zone A Sulfur Recovery Plant ("Zone A SRP") and the Zone D Sulfur Recovery Plant ("Zone D SRP"). The Zone A Sulfur Recovery Plant consists of two units: Sulfur Recovery Unit #1 (Zone A SRU #1) and Sulfur Recovery Unit

#2 (Zone A SRU #2).

61. Sulfur Recovery Plant NSPS Applicability. The Zone A SRP is subject to the applicable provisions of 40 C.F.R. Part 60, Subparts A and J, and Cenex shall come into compliance with the applicable provisions of 40 C.F.R. Part 60, Subparts A and J by September 30, 2005, as required by Paragraph 64. The Zone D SRP is subject to, and shall continue to comply with, the applicable provisions of 40 C.F.R. Part 60, Subparts A and J.

62. Acid Gas from Zones A & D may be treated in any sulfur plant, during emergencies, major turnarounds, or consistent with the PMO Plan as set forth in 69, as long as the sulfur plant is meeting the tail gas limit.

**ii. Sulfur Pit Emissions.**

63. By June 30, 2005, Cenex shall reroute all sulfur pit emissions from the Zone A SRP so that vents to the atmosphere either are eliminated, controlled, or are included and monitored as part of the Zone A tail gas emissions that meet the NSPS Subpart J limit of 250 ppmvd SO<sub>2</sub> corrected to 0% oxygen, on a 12-hour rolling average basis, as required by 40 C.F.R. § 60.104(a)(2).

**iii. Sulfur Recovery Plant Emissions Compliance.**

64. Installation of Tail Gas Unit. Cenex shall install a tail gas treating unit ("TGTU") on the Zone A SRP by June 30, 2005, in order to bring the Zone A SRP into compliance with NSPS Subpart J.

65. From the Date of Lodging until September 30, 2005, Cenex shall comply with an interim emission limit or recovery efficiency at the Zone A SRP as provided in Paragraph 72.

66. By no later than September 30, 2005, Cenex shall, for all periods of operation of the Zone A SRP, comply with 40 C.F.R. § 60.104(a)(2), except during periods of startup,

shutdown or Malfunction of the Zone A SRP, or during a Malfunction of the TGTU. By no later than Date of Lodging of the Consent Decree, Cenex shall, for all periods of operation of the Zone D SRP, comply with 40 C.F.R. § 60.104(a)(2), except during periods of startup, shutdown or Malfunction of the Zone D SRP, or during a Malfunction of the TGTU. For the purpose of determining compliance with the Sulfur Recovery Plant emission limits of 40 C.F.R.

§ 60.104(a)(2), the “start-up/shutdown” provisions set forth in NSPS Subpart A shall apply to the Zone A and Zone D SRPs and not to the independent start-up or shutdown of the TGTU.

However, the Malfunction exemption set forth in NSPS Subpart A (and as defined in the Consent Decree at Paragraph 10) shall apply to both the SRPs and the TGTU.

67. As of the Date of Lodging of this Consent Decree, Cenex shall monitor all emission points (stacks) to the atmosphere for tail gas emissions from the Zone D SRP, and shall report excess emissions, as required by 40 C.F.R. §§ 60.7(c), 60.13, and 60.105(a)(5). Cenex shall install an O<sub>2</sub> CEMS on the Zone A SRP for O<sub>2</sub> correction by June 30, 2005. During the life of this Consent Decree, Cenex shall continue to conduct emissions monitoring from the Laurel Refinery SRPs with CEMS at all of the emission points, unless an SO<sub>2</sub> alternative monitoring procedure has been approved by EPA, per 40 C.F.R. § 60.13(i), for any of the emission points.

**iv. Preventative Maintenance and Operation Plan.**

68. At all times, including periods of startup, shutdown, and Malfunction, Cenex shall, to the extent practicable, operate and maintain the SRPs and the TGTUs in accordance with Cenex’s obligation to minimize Sulfur Recovery Plant emissions through implementation of good air pollution control practices as required in 40 C.F.R. § 60.11(d).

69. By December 31, 2003, Cenex shall submit to EPA and the Montana DEQ, a plan,

implemented or to be implemented, for enhanced maintenance and operation of the Zone A and Zone D SRPs, each operating TGTU, and the appropriate Upstream Process Units. This plan shall be termed a Preventative Maintenance and Operation Plan ("PMO Plan"). The PMO Plan shall be a compilation of Cenex's approaches for exercising good air pollution control practices for minimizing SO<sub>2</sub> emissions at the Laurel Refinery. The PMO Plan shall provide for continuous operation of the Zone A and D SRPs between scheduled maintenance turnarounds with minimization of emissions from the Zone A and D SRPs. The PMO Plan shall include, but not be limited to, sulfur shedding procedures, optimization of the Zone A SRP, new startup and shutdown procedures, emergency procedures and schedules to coordinate maintenance turnarounds of the Zone A and D SRP Claus trains and the TGTU to coincide with scheduled turnarounds of major Upstream Process Units. The PMO Plan shall have as a goal the elimination of Acid Gas Flaring and the minimization of SO<sub>2</sub> emissions from the SRPs and TGTUs. Cenex shall follow the PMO Plan at all times, including periods of start up, shut down, and Malfunction of the Laurel Refinery SRPs. Modifications related to minimizing Acid Gas Flaring and/or SO<sub>2</sub> emissions made by Cenex to the PMO Plan shall be summarized in an annual submission to EPA and the Montana DEQ.

70. EPA and the Montana DEQ do not, by their review of the PMO Plan and/or by their failure to comment on the PMO Plan, warrant or aver in any manner that any of the actions that Cenex may take pursuant to the PMO Plan will result in compliance with the provisions of the federal Clean Air Act, Montana Clean Air Act, or their implementing regulations. Notwithstanding EPA's or Montana DEQ's review of the PMO Plan, Cenex shall remain solely responsible for compliance with the federal Clean Air Act, the Montana Clean Air Act, and their

implementing regulations.

**v. Interim Emission Limit for the Zone A SRP.**

71. The Parties agree that Cenex may, on or after the Date of Lodging of the Consent Decree, remove the capacity restrictions on the Zone A SRU #2 existing as of the Date of Lodging. Cenex shall, upon the Date of Lodging, optimize the use of the Zone A SRU #2 until the installation of the TGTU as required by Paragraph 64. Cenex shall include a detailed plan for the optimization of the Zone A SRP in the PMO Plan as required by Paragraph 69.

72. By December 31, 2003, Cenex shall propose an interim emission limit or recovery efficiency for the Zone A SRP. Cenex shall comply with the emission limit or recovery efficiency it proposes beginning immediately upon submission of the proposal. Cenex shall continue to comply with this limit unless and until they are required to comply with an interim emission limit or recovery efficiency set by EPA, or until September 30, 2005 as provided in Paragraph 65. Based on the proposed interim emission limit or recovery efficiency and other relevant data, EPA shall establish an interim emission limit or recovery efficiency for the Zone A SRP, and EPA shall notify Cenex of its determination. Cenex shall immediately (or within thirty (30) days, if EPA's limit is more stringent than the limit proposed by Cenex) operate the Zone A SRP so as to comply with the EPA-established interim emission limit or recovery efficiency. Disputes regarding the appropriate interim emission limit or recovery efficiency shall be resolved in accordance with the dispute resolution provisions of this Decree; provided however, that during the period of dispute resolution, Cenex shall comply with the EPA-established limit or recovery efficiency.

73. On or before the installation date of the TGTU, Cenex shall replace the hot gas

bypass reheat system by installing reheaters with automated temperature controls on the Zone A SRU#1 and SRU#2.

**I. NSPS Applicability to and Compliance for Flaring Devices.**

**i. Identification of and NSPS Applicability for Flaring Devices.**

74. Cenex owns and operates the Refinery Flare. Consistent with the terms of this Subsection I (§§ 74 - 77) and the date set forth in Appendix F, the Refinery Flare shall be deemed an affected facility, as that term is used in NSPS, 40 C.F.R. Part 60, and shall be subject to and comply with the requirements of 40 C.F.R. Part 60, Subparts A and J for fuel gas combustion devices.

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

75. Continuous or Intermittent, Routinely-Generated Refinery Fuel Gases. For continuous or intermittent, routinely-generated refinery fuel gases that are combusted in the Refinery Flare, Cenex shall comply with the emission limit at 40 C.F.R. § 60.104(a)(1) by the date set forth in Appendix F.

**iii. Good Air Pollution Control Practices.**

76. For the Refinery Flare, Cenex shall comply with the NSPS obligation to implement good air pollution control practices as required by 40 C.F.R. § 60.11(d) to minimize HC and Acid Gas Flaring Incidents by the Date of Lodging.

**iv. Monitoring the Streams to the Flare Header and Reporting.**

77. All continuous or intermittent, routinely-generated refinery fuel gas streams that are routed to the flare header at Cenex shall be equipped with a CEMS as required by 40 C.F.R. § 60.105(a)(4) or with a parametric monitoring system approved by EPA as an alternative

monitoring plan ("AMP") under 40 C.F.R. § 60.13(i), at the combined juncture prior to the flare. Cenex shall comply with the reporting requirements of 40 C.F.R. Part 60, Subpart J, for the Refinery Flare.

**J. Control of Acid Gas Flaring Incidents and Tail Gas Incidents.**

78. Cenex has identified the causes of Acid Gas Flaring Incidents that occurred between January, 1997 and October, 2001 at the Laurel Refinery. Cenex has implemented (or is in the process of identifying and implementing) corrective actions to minimize the number and duration of Acid Gas Flaring Incidents. The combustion of old SWS gas in any combustion unit shall be subject to all of the requirements set forth in this Consent Decree for Acid Gas Flaring Incidents. Cenex also agrees to implement a program to investigate the cause of future Acid Gas Flaring Incidents, to take reasonable steps to correct the conditions that have caused or contributed to such Acid Gas Flaring Incidents, and to minimize Acid Gas Flaring Incidents. Cenex shall follow the procedures in this Subsection J (§§ 78 - 93) to evaluate whether future Acid Gas Flaring Incidents are due to Malfunctions or are subject to stipulated penalties. Cenex also agrees to undertake the investigative and evaluative procedures in Subsection J for assessing whether Tail Gas Incidents, as described in Subsection J (v) (§§ 92 - 93), are due to Malfunctions or are subject to stipulated penalties. The procedures, as set forth below, require a root cause analysis and corrective action for all types of Acid Gas Flaring and Tail Gas Incidents and require stipulated penalties for Acid Gas Flaring and Tail Gas Incidents if the root causes were not due to Malfunctions.

**i. Acid Gas Flaring Incidents Investigation and Reporting.**

79. No later than forty-five (45) days following the end of an Acid Gas Flaring Incident,

Cenex shall submit to EPA and the Montana DEQ, a report that sets forth the following:

- a. The date and time that the Acid Gas Flaring Incident started and ended. To the extent that the Acid Gas Flaring Incident involved multiple releases either within a twenty-four (24) hour period or within subsequent, contiguous, non-overlapping twenty-four (24) hour periods, Cenex shall set forth the starting and ending dates and times of each release;
- b. An estimate of the quantity of sulfur dioxide that was emitted and the calculations that were used to determine that quantity;
- c. The steps, if any, that Cenex took to limit the duration and/or quantity of sulfur dioxide emissions associated with the Acid Gas Flaring Incident;
- d. A detailed analysis that sets forth the Root Cause and all contributing causes of that Acid Gas Flaring Incident, to the extent determinable;
- e. An analysis of the measures, if any, that are available to reduce the likelihood of a recurrence of an Acid Gas Flaring Incident resulting from the same Root Cause or contributing causes in the future. The analysis shall discuss the alternatives, if any, that are available, the probable effectiveness and cost of the alternatives, and whether or not an outside consultant should be retained to assist in the analysis. Possible design, operation and maintenance changes shall be evaluated. If Cenex concludes that corrective action(s) is (are) required under Subsection J (ii) (¶¶ 80 - 83), the report shall include a description of the action(s) and, if not already completed, a schedule for its (their) implementation, including proposed commencement and completion dates. If Cenex concludes that corrective action is not required under Subsection J (ii) (¶¶ 80 - 83), the report shall explain the basis for that conclusion;
- f. A statement that: (a) specifically identifies each of the grounds for stipulated penalties in Paragraphs 85 and 86 of this Decree and describes whether or not the Acid Gas Flaring Incident falls under any of those grounds; (b) if an Acid Gas Flaring Incident falls under Paragraph 87 of this Decree, describes which Paragraph (87(a) or 87(b)) applies and why; and (c) if an Acid Gas Flaring Incident falls under either Paragraph 86 or Paragraph 87(b), states whether or not Cenex asserts a defense to the Flaring Incident, and if so, a description of the defense; and
- g. To the extent that investigations of the causes and/or possible corrective actions still are underway on the due date of the report, a statement of the anticipated date by which a follow-up report fully conforming to the requirements of this Paragraph 79(d) and 79(e) shall be submitted; provided, however, that if Cenex



has not submitted a report or a series of reports containing the information required to be submitted under Subsection J within the 45-day time period set forth in this Paragraph 79 (or such additional time as EPA may allow) after the due date for the initial report for the Acid Gas Flaring Incident, the stipulated penalty provisions of Section XII, Subsection I (§§ 228 - 231) shall apply. Nothing in Subsection J shall be deemed to excuse Cenex from its investigation, reporting, and corrective action obligations under this Section for any Acid Gas Flaring Incident which occurs after an Acid Gas Flaring Incident for which Cenex has requested an extension of time under Subsection J (ii) (§§ 80-83).

- h. To the extent that completion of the implementation of corrective action(s), if any, is not finalized at the time of the submission of the report required under this Subsection J, then, by no later than thirty (30) days after completion of the implementation of corrective action(s), Cenex shall submit a report identifying the corrective action(s) taken and the dates of commencement and completion of implementation.
- i. In the event Cenex modifies a corrective action deadline, Cenex shall submit such modification in the next quarterly report submitted pursuant to Paragraph 193.

**ii. Corrective Action.**

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

**81.** If EPA and/or Montana DEQ do not notify Cenex in writing within forty-five (45) days of receipt of the report(s) required by Paragraph 79 that they object to one or more aspects of the proposed corrective action(s), if any, and schedule(s) of implementation, if any, then that (those) action(s) and schedule(s) shall be deemed acceptable for purposes of compliance with Paragraph 80 of this Decree. EPA and Montana DEQ do not, however, by their consent to the entry of this Consent Decree or by their failure to object to any corrective action that Cenex may take in the future, warrant or aver in any manner that any corrective actions in the future shall

result in compliance with the provisions of the federal Clean Air Act, Montana Clean Air Act or their implementing regulations. Notwithstanding EPA's review of any plans, reports, corrective measures or procedures under this Subsection J (§§ 78 - 93), Cenex shall remain solely responsible for non-compliance with the federal Clean Air Act, Montana Clean Air Act and their implementing regulations. Nothing in this Subsection J (§§ 78 - 93) shall be construed as a waiver of EPA's rights under the Clean Air Act and its regulations for future violations of the Act or its regulations.

82. If EPA does object, in whole or in part, to the proposed corrective action(s) and/or the schedule(s) of implementation, or, where applicable, to the absence of such proposal(s) and/or schedule(s), it shall notify Cenex of that fact within thirty (30) days following receipt of the report(s) required by Paragraph 79 above.

83. Nothing in Subsection J (§§ 78 - 93) shall be construed to limit the right of Cenex to take such corrective actions as it deems necessary and appropriate immediately following an Acid Gas Flaring Incident or in the period during preparation and review of any reports required under this Section.

### **iii. Stipulated Penalties.**

84. The provisions of this Subsection J (iii) (§§ 84 - 88) shall apply to the Laurel Refinery. The provisions of Subsection J (iii) (§§ 84 - 88) are intended to implement the process outlined in the logic diagram attached hereto as Appendix C to this Consent Decree. These provisions shall be interpreted and construed, to the maximum extent feasible, to be consistent with that Attachment. However, in the event of a conflict between the language of Subsection J (§§ 78 - 93) and Appendix C, the language of Subsection J shall control.

85. The stipulated penalty provisions of Section XII, Subsection I (§§ 228 - 231) shall apply to any Acid Gas Flaring Incident for which the Root Cause was one or more of the following acts, omissions, or events:

- a. Error resulting from careless operation by the personnel charged with the responsibility for the Zone A and/or Zone D Sulfur Recovery Plants, TGTU, or Upstream Process Units;
- b. Failure to follow written procedures;
- c. A failure of equipment that is due to a failure by Cenex to operate and maintain that equipment in a manner consistent with good engineering practice; or
- d. Root Causes that were identified prior to the Lodging of this Consent Decree: Specifically, the following Root Cause shall not provide a basis for asserting a Malfunction defense, unless Cenex can demonstrate to EPA that such root cause substantially differs from this same Root Cause that was identified prior to the Lodging of this Consent Decree:
  - (1) Any event where the failure of both the main and backup primary absorber bottoms pumps in the FCC gas concentration unit leads to overpressuring of tank 601 (sour water tank).

Except for a force majeure event, Cenex shall have no defenses to a demand for stipulated penalties for an Acid Gas Flaring Incident falling under this Paragraph 85.

86. The stipulated penalty provisions of Section XII, Subsection I (§§ 228 - 231) shall apply to any Acid Gas Flaring Incident that either:

- a. Results in emissions of sulfur dioxide at a rate greater than twenty (20.0) pounds per hour continuously for three (3) consecutive hours or more and Cenex did not follow the PMO Plan and took no steps to limit the duration and/or quantity of sulfur dioxide emissions associated with the Acid Gas Flaring incident; or
- b. Causes the total number of Acid Gas Flaring Incidents in a rolling twelve (12) month period to exceed five (5).

In response to a demand by the United States for stipulated penalties, the United States and

Cenex agree that Cenex shall be entitled to assert a Malfunction and/or force majeure defense with respect to any Acid Gas Flaring Incident falling under this Paragraph 86. In the event that a dispute arising under this Subsection J is brought to the Court pursuant to the dispute resolution provisions of this Consent Decree, nothing in this Subsection J is intended or shall be construed to stop Cenex from asserting that, in addition to the Malfunction and/or force majeure defense, the defenses of startup, shutdown, and upset are available for Acid Gas Flaring Incidents under 40 C.F.R. § 60.104(a)(1), nor to stop the United States from asserting its view that such defenses are not available. In the event that an Acid Gas Flaring Incident falls under both Paragraph 85 and Paragraph 86, then Paragraph 85 shall apply.

87. With respect to any Acid Gas Flaring Incident other than those identified in Paragraphs 85 and 86, the following provisions shall apply:

- a. First Time: If the Root Cause of the Acid Gas Flaring Incident was not a recurrence of the same Root Cause that resulted in a previous Acid Gas Flaring Incident at the Laurel Refinery that occurred since the effective date of this Decree, then:
  - (1) If the Root Cause of the Acid Gas Flaring Incident was sudden, infrequent, and not reasonably preventable through the exercise of good engineering practice, then that cause shall be designated as an agreed-upon malfunction for purposes of reviewing subsequent Acid Gas Flaring Incidents;
  - (2) If the Root Cause of the Acid Gas Flaring Incident was sudden and infrequent, and was reasonably preventable through the exercise of good engineering practice, then Cenex shall implement corrective action(s) pursuant to Paragraph 80.
- b. Recurrence: If the Root Cause is a recurrence of the same Root Cause that resulted in a previous Acid Gas Flaring Incident that occurred since the Effective Date of this Consent Decree, then Cenex shall be liable for stipulated penalties under Section XII, Subsection I (§§ 228 - 231) of the Consent Decree unless:
  - (1) the Acid Gas Flaring Incident resulted from a Malfunction; or

- (2) the Root Cause previously was designated as an agreed-upon malfunction under Paragraph 87(b)(1); provided however, that in the event that a dispute arising under this Subsection J is brought to the Court pursuant to the dispute resolution provisions of this Consent Decree, nothing in this Subsection J is intended or shall be construed to stop Cenex from asserting its view that, in addition to a Malfunction and/or force majeure defense, the defenses of startup, shutdown, and upset are available for Acid Gas Flaring Incidents under 40 C.F.R. § 60.104(a)(1), nor to stop the United States from asserting its view that such defenses are not available; or
- (3) the Acid Gas Flaring Incident had as its Root Cause the recurrence of a Root Cause for which Cenex had previously developed, or was in the process of developing, a corrective action plan for and for which Cenex had not yet completed implementation.

88. Other than for a Malfunction or force majeure, if no Acid Gas Flaring Incident and no violation of the emission limit under Section V, Subsection H (§§ 60 - 73) occurs at the Laurel Refinery for a rolling 36 month period, then the stipulated penalty provisions of Section XII, Subsection I (§§ 228 - 231) no longer apply. EPA may elect to reinstate the stipulated penalty provision if Cenex has an Acid Gas Flaring Incident which would otherwise be subject to stipulated penalties. EPA's decision shall not be subject to dispute resolution. Once reinstated, the stipulated penalty provision shall continue for the remaining life of this Consent Decree for the Laurel Refinery.

#### iv. Miscellaneous.

89. Calculation of the Quantity of Sulfur Dioxide Emissions resulting from Acid Gas Flaring. For purposes of this Consent Decree, the quantity of SO<sub>2</sub> emissions resulting from Acid Gas Flaring shall be calculated by the following formula:

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

The quantity of SO<sub>2</sub> emitted shall be rounded to one decimal point. (Thus, for example,

for a calculation that results in a number equal to 10.050 tons, the quantity of SO<sub>2</sub> emitted shall be rounded to 10.1 tons.) For purposes of determining the occurrence of, or the total quantity of SO<sub>2</sub> emissions resulting from, an Acid Gas Flaring Incident that is comprised of intermittent Acid Gas Flaring, the quantity of SO<sub>2</sub> emitted shall be equal to the sum of the quantities of SO<sub>2</sub> flared during each such period of intermittent Acid Gas Flaring.

**90. Calculation of the Rate of SO<sub>2</sub> Emissions During Acid Gas Flaring.** For purposes of this Consent Decree, the rate of SO<sub>2</sub> emissions resulting from Acid Gas Flaring shall be expressed in terms of pounds per hour, and shall be calculated by the following formula:

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

The emission rate shall be rounded to one decimal point. (Thus, for example, for a calculation that results in an emission rate of 19.95 pounds of SO<sub>2</sub> per hour, the emission rate shall be rounded to 20.0 pounds of SO<sub>2</sub> per hour; for a calculation that results in an emission rate of 20.05 pounds of SO<sub>2</sub> per hour, the emission rate shall be rounded to 20.1.)

**91. Meaning of Variables and Derivation of Multipliers used in the Equations in Paragraphs 89 - 90:**

ER =	Emission Rate in pounds of SO <sub>2</sub> per hour
FR =	Average Flow Rate to Flaring Device(s) during Flaring, in standard cubic feet per hour
TD =	Total Duration of Flaring in hours
ConcH <sub>2</sub> S =	Average Concentration of Hydrogen Sulfide in gas during Flaring (or immediately prior to Flaring if all gas is being flared) expressed as a volume fraction (scf H <sub>2</sub> S/scf gas)
$8.31 \times 10^{-5}$ =	$[lb \text{ mole } H_2S/385 \text{ scf } H_2S][64 \text{ lbs } SO_2/lb \text{ mole } H_2S][Ton/2000 \text{ lbs}]$

$$0.166 = \frac{[\text{lb mole H}_2\text{S} / 385 \text{ scf H}_2\text{S}][1.0 \text{ lb mole SO}_2 / 1 \text{ lb mole H}_2\text{S}][64 \text{ lb SO}_2 / 1.0 \text{ lb mole SO}_2]}{1}$$

The flow of gas to the Acid Gas Flaring Device(s) ("FR") shall be measured by the relevant flow meter or reliable flow estimation parameters. Hydrogen sulfide concentration ("ConcH<sub>2</sub>S") shall be determined from the Sulfur Recovery Plant feed gas analyzer, from knowledge of the sulfur content of the process gas being flared, by direct measurement by tutwiler or draeger tube analysis or by any other method approved by EPA or the Montana DEQ. In the event that any of these data points is unavailable or inaccurate, the missing data point(s) shall be estimated according to best engineering judgment. The report required under Paragraph 79(a) shall include the data used in the calculation and an explanation of the basis for any estimates of missing data points.

#### **v. Tail Gas Incidents.**

**92. Investigation, Reporting, Corrective Action and Stipulated Penalties.** For Tail Gas Incidents, Cenex shall follow the same investigative, reporting, corrective action and assessment of stipulated penalty procedures as those outlined in Section V, Subsection J (i) - (iii) (~~¶¶~~ 79 - 88) for Acid Gas Flaring Incidents. Those procedures shall be applied to TGTU shutdowns, bypasses of a TGTU, unscheduled shutdowns of a Sulfur Recovery Plant, or other miscellaneous unscheduled Sulfur Recovery Plant events which result in a Tail Gas Incident.

**93. Calculation of the Quantity of SO<sub>2</sub> Emissions resulting from a Tail Gas Incident:** For the purposes of this Consent Decree, the quantity of SO<sub>2</sub> emissions resulting from a Tail Gas Incident shall be calculated by one of the following methods, based on the type of event:

- a. If the Tail Gas Incident is combusted in a flare the SO<sub>2</sub> emissions are calculated using the methods outlined in Section V, Subsection J (iv) (§§ 89 - 91); or
- b. If the Tail Gas Incident is an event exceeding the 250 ppmvd (NSPS J limit), from a monitored Sulfur Recovery Plant incinerator, then the following formula applies:

$$ER_{TGI} = \sum_{i=1}^{H_{TGI}} [FR_{inc.}]_i [Conc. SO_2 - 250]_i [0.166 \times 10^{-6}] \left[ \frac{20.9 - \% O_2}{20.9} \right]_i$$

Where:

$ER_{TGI}$  = Excess Emissions from Tail Gas at the Sulfur Recovery Plant incinerator, SO<sub>2</sub> lbs. over a 24 hour period

$H_{TGI}$  = Hours when the incinerator CEMS was exceeding 250 ppmvd SO<sub>2</sub> adjusted to 0% O<sub>2</sub> in each 24 hour period of the Incident (as described above)

$i$  = Each hourly average

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

$Conc. SO_2$  = Actual SO<sub>2</sub> concentration (CEMS data) in the incinerator exhaust gas, ppmvd adjusted to 0% O<sub>2</sub> for each hour of the incident

$\% O_2$  = O<sub>2</sub> concentration (CEMS data) in % in the incinerator exhaust gas in ppm on dry basis for each hour of the Incident

$0.166 \times 10^{-6}$  =  $[lb \text{ mole of } SO_2 / 385 SO_2] [64 \text{ lbs } SO_2 / lb \text{ mole } SO_2] [1 \times 10^{-6}]$

Standard conditions = 68 degree F; 14.7 lb<sub>force</sub>/sq. in. absolute

In the event the SO<sub>2</sub> and/or the O<sub>2</sub> CEM hourly concentration data are inaccurate or not available or a flow meter for  $FR_{inc.}$  does not exist or is inoperable, then estimates will be used based on best engineering judgment.



**K. Control of Hydrocarbon Flaring Incidents.**

94. Cenex has implemented (or is in the process of identifying and implementing) corrective actions to minimize the number and duration of HC Flaring Incidents. For future Hydrocarbon Flaring Incidents, Cenex shall follow the same investigative and corrective action procedures as those outlined in Section V, Subsection J (i)-(ii) (§§ 79 - 83) for Acid Gas Flaring Incidents; provided, however, that, in lieu of analyzing possible corrective actions under Paragraph 79(e) and taking interim and/or long-term corrective action under Paragraph 80 for a Hydrocarbon Flaring Incident attributable to the start up or shut down of a unit that Cenex has previously analyzed under this Subsection K, Cenex may identify such prior analysis when submitting the report required under this Subsection K. For future Hydrocarbon Flaring Incidents, Cenex shall follow the same reporting procedures as those outlined in Section V, Subsection J (i)-(ii) (§§ 79 - 83) for Acid Gas Flaring Incidents, except that Cenex shall only be required to submit such information to EPA and Montana DEQ in the Quarterly Reports required under Paragraph 193. Stipulated penalties under either Subsection J (iii) (§§ 84 - 88) or Section XII, Subsection I (§§ 228 - 231) shall not apply to Hydrocarbon Flaring Incident(s). The formulas at Section V, Subsection J (iv) (§§ 89 - 91), used for calculating the quantity and rate of sulfur dioxide emissions during Acid Gas Flaring Incidents, shall be used to calculate the quantity and rate of sulfur dioxide emissions during HC Flaring Incidents.

**L. Benzene Waste Operations NESHAP Program Enhancements.**

95. In addition to continuing to comply with all applicable requirements of 40 C.F.R. Part 61, Subpart FF ("Benzene Waste Operations NESHAP" or "Subpart FF"), Cenex agrees to undertake, at the Laurel Refinery, the measures set forth in Paragraphs 97 through 138 to ensure

continuing compliance with Subpart FF and to minimize or eliminate fugitive benzene waste emissions.

**i. Current Compliance Status.**

96. As of the Date of Lodging of this Consent Decree, Cenex believes that the Laurel Refinery has a Total Annual Benzene ("TAB") of less than 10 Mg/yr. Cenex shall review and verify the TABs at the Laurel Refinery consistent with the requirements of Paragraphs 98 - 99.

**ii. Refinery Compliance Status Changes.**

97. If at any time from the Date of Lodging of the Consent Decree, the Laurel Refinery is determined to have a TAB equal to or greater than 10 Mg/yr, Cenex shall comply with the compliance option set forth at 40 C.F.R. § 61.342(e) (hereinafter referred to as the "6 BQ compliance option").

**iii. One-Time Review and Verification of the Laurel Refinery's TAB.**

98. Phase One of the Review and Verification Process. By no later than six (6) months from the Date of Lodging, Cenex shall complete a review and verification of the TAB of the Laurel Refinery. For the Laurel Refinery, the review and verification process shall include, but not be limited to: (i) an identification of each waste stream that is required to be included in the Laurel Refinery's TAB (e.g., slop oil, spent caustic, caustic hydrocarbon, desalter vessel process sampling points, desalter hydrocarbon undercarry, tank water draws, other sample wastes, materials transported via vacuum truck, maintenance wastes, and turnaround wastes); (ii) a review and identification of the calculations and/or measurements used to determine the flows of each waste stream for the purpose of ensuring the accuracy of the annual waste quantity for each waste stream; (iii) an identification of the benzene concentration in each 40 C.F.R. Part 61,

Subpart FF waste stream, including sampling for benzene concentration at no less than 10 waste streams consistent with the requirements of 40 C.F.R. § 61.355(c)(1) and (3); provided, however, that previous analytical data or documented knowledge of waste streams may be used, pursuant to 40 C.F.R. § 61.355(c)(2), for streams not sampled; and (iv) an identification of whether or not the stream is controlled consistent with the requirements of Subpart FF. By no later than thirty (30) days following the completion of Phase One of the review and verification process, Cenex shall submit a Benzene Waste Operations NESHAP Compliance Review and Verification report (“BWON Compliance Review and Verification Report”) to EPA and Montana DEQ that sets forth the results of Phase One, including but not limited to the items identified in (i) through (iv) of this Paragraph 98.

**99. Phase Two of the Review and Verification Process.** Based on EPA’s review of the BWON Compliance Review and Verification Report, EPA may select up to 20 additional waste streams at the Laurel Refinery for sampling for benzene concentration to assess the waste streams’ flow weighted annual average benzene concentration. Cenex shall conduct the required sampling and submit the sample results to EPA within three (3) months of receipt of EPA’s request. Cenex shall use the results of this additional sampling to recalculate the TAB and to amend the BWON Compliance Review and Verification Report, as needed. To the extent that EPA requires Cenex to re-sample a waste stream that was sampled by Cenex under Phase One, Cenex may average the results of the two sampling events. Cenex shall submit to EPA and Montana DEQ an amended BWON Compliance Review and Verification Report (“Amended BWON Compliance Review and Verification Report”) within ninety (90) days following the date of the completion of the required Phase Two sampling, if Phase Two sampling is required by

EPA.

**iv. Implementation of Actions Necessary to Correct Non-Compliance.**

**100. Amended TAB Reports.** If the results of the BWON Compliance Review and Verification Report or Amended BWON Compliance Review and Verification Report indicate that the Laurel Refinery has failed to file the reports required by 40 C.F.R. § 61.357(c), or that the Laurel Refinery's most recently-filed report is inaccurate and/or otherwise does not satisfy the requirements of Subpart FF, Cenex shall submit, by no later than sixty (60) days after completion of the BWON Compliance Review and Verification Report or Amended BWON Compliance Review and Verification Report, an amended TAB report ("Amended TAB Report") to EPA and Montana DEQ. Cenex's BWON Compliance Review and Verification Report or Amended BWON Compliance Review and Verification Report shall be deemed an amended TAB report for purposes of Subpart FF reporting to EPA.

**101.** If the results of the BWON Compliance Review and Verification Report or Amended BWON Compliance Review and Verification Report indicate that the Laurel Refinery has a TAB of over 10 Mg/yr, Cenex shall submit to the Applicable Federal and State Agencies by no later than six (6) months after completion of the BWON Compliance Review and Verification Report or Amended BWON Compliance Review and Verification Report, a plan that identifies with specificity the compliance strategy and schedule that Cenex shall implement to ensure that the Laurel Refinery complies with the 6 BQ compliance option as soon as practicable.

**102. Review and Approval of Plans Submitted Pursuant to Paragraph 101.** Any plan submitted pursuant to Paragraph 101 shall be subject to the approval of, disapproval of, or modification by EPA, which shall act after an opportunity for consultation with the Montana

DEQ. Within sixty (60) days after receiving any notification of disapproval or request for modification from EPA, Cenex shall submit to the Applicable Federal and State Agencies a revised plan that responds to all deficiencies identified by EPA. Upon receipt of approval or approval with conditions, Cenex shall implement the plan.

**103. Certification of Compliance with the 6 BQ Compliance Option.** By no later than thirty (30) days after completion of the implementation of all actions, if any, required pursuant to Paragraph 101 or pursuant to Paragraph 128 to come into compliance with the 6 BQ Compliance Option, Cenex shall submit a report to the Applicable Federal and State Agencies that the Laurel Refinery complies with the Benzene Waste Operations NESHA.

**v. Annual Program.**

**104.** Cenex shall establish, maintain, and conduct an annual program for reviewing process information for the Laurel Refinery, including but not limited to construction projects, to ensure that all new benzene waste streams are included in the Laurel Refinery's waste stream inventory and TAB.

**vi. Benzene Spills.**

**105.** For each spill at the Laurel Refinery from the Date of Lodging, Cenex shall review such spills to determine if benzene waste was generated. Cenex shall include benzene generated by such spills in the TAB for the Laurel Refinery.

**vii. Training.**

**106.** By no later than ninety (90) days from the Date of Lodging of the Consent Decree, Cenex shall develop and begin implementation of annual (i.e., once each calendar year) training for all employees asked to draw benzene waste samples.

107. If the Laurel Refinery's TAB reaches 10 Mg/yr or more, Cenex shall develop and maintain standard operating procedures for all control equipment used to comply with the Benzene Waste Operations NESHAP. Cenex shall complete an initial training program regarding these procedures for all operators assigned to this equipment. Comparable training shall be provided to any persons who subsequently become operators, prior to their assumption of this duty. "Refresher" training shall be performed on a periodic basis. Cenex shall propose a schedule for the initial and refresher training at the same time that Cenex proposes a plan, pursuant to either Paragraph 101, or Paragraph 128, that identifies the compliance strategy and schedule that Cenex shall implement to come into compliance with the 6 BQ compliance option.

108. As part of Cenex's training program, it must ensure that the employees of any contractors hired to perform the requirements of this Subsection are properly trained to implement all provisions of this Subsection at the Laurel Refinery.

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

109. By no later than six (6) months from the Date of Lodging, Cenex shall prepare for the Laurel Refinery, schematics that: (a) depict the waste management units (including sewers) that handle, store, and transfer waste/slop/off-spec oil streams; (b) identify the control status of each waste management unit; and (c) show how such oil is transferred within the Refinery. The schematics shall be submitted as part of the EOL Sampling Plan pursuant Paragraph 115. Representatives from Cenex and EPA thereafter may confer about the appropriate characterization of the Laurel Refinery's waste/slop/off-spec oil streams for the waste management units handling such oil streams and shall confer about whether such streams should be included in the Laurel Refinery's TAB calculation. At a mutually-agreed upon time, Cenex

shall submit, if necessary, revised schematics that reflect the agreements between EPA and Cenex regarding the characterization of these oil streams and the appropriate control standards.

110. Organic Benzene Waste Streams. If and when the Laurel Refinery's TAB reaches 10 Mg/yr, or greater, and a compliance strategy is approved, all waste management units handling "organic" benzene wastes, as defined in Subpart FF, shall meet the applicable control standards of Subpart FF. If, as a result of the discussions between the EPA and Cenex pursuant to Paragraph 109, EPA and Cenex agree that controls not already in place are necessary on any waste management unit handling organic benzene wastes, the Parties shall agree, in writing, to a schedule for the completion of the installation of the necessary controls.

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

112. Plan to Quantify Uncontrolled Waste/Slop/Off-Spec Oil Streams. Cenex shall prepare a plan to quantify waste/slop/off-spec oil movements at the Laurel Refinery for all benzene waste streams which are not controlled. This plan shall be submitted as part of the EOL Sampling Plan pursuant to Paragraph 115.

**ix. Periodic Sampling (TAB is equal to or greater than 1 Mg/yr but less than 10 Mg/yr).**

113. The provisions of this Section V, Subsection L (ix) (§§ 113 - 119) shall apply from the date that the final BWON Compliance Review and Verification Report or Amended BWON Compliance Review and Verification Report submitted for the Laurel Refinery pursuant to Paragraphs 98-99 shows that the Laurel Refinery's TAB is equal to or greater than 1 Mg/yr but less than 10 Mg/yr, through the earlier of: (1) the time that the Laurel Refinery reaches a TAB of 10 Mg/yr or more (in which case, the provisions of Section V, Subsection L (x) (§§ 120 - 128) shall begin to apply); or (2) termination of the Consent Decree.

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

115. By no later than ninety (90) days after the date of submitting the final BWON Compliance Review and Verification Report or Amended BWON Compliance Review and Verification Report, representatives from EPA and the Montana DEQ shall meet, either in person or via teleconference, with representatives from Cenex for the purpose of identifying an appropriate procedure for conducting EOL sampling and measuring EOL benzene quantities at the Laurel Refinery. EPA, the Montana DEQ, and Cenex shall confer about potential EOL sample locations and shall review process and flow information and oil movement transfers. By no later than 300 days from the Date of Lodging, Cenex shall submit a plan (EOL Sampling Plan) to EPA for approval that contains proposed sampling locations and methods for flow



calculations to be used in the EOL determination of benzene quantity. A copy of this plan shall be submitted to the Montana DEQ. If, during the life of this Consent Decree, changes in processes, operations, or other factors lead Cenex to conclude that either the approved sampling locations and/or the approved methods for determining flow calculations no longer provide an accurate measure of the Laurel Refinery's EOL benzene quantity, Cenex shall submit a revised plan to EPA for approval. A copy of this revised plan also shall be submitted to the Montana DEQ.

116. On a quarterly basis, Cenex shall conduct an EOL determination of benzene quantity, commencing in the first full calendar quarter after Cenex receives written approval from EPA of the sampling plan for the Laurel Refinery. Cenex shall take, and have analyzed, at least three representative samples (spaced at least one month apart) per quarter from each approved sampling location. Cenex shall use the average of these three samples as the benzene concentration for the stream at the approved location. Based on the EOL quarterly sampling results and the approved flow calculations, Cenex shall calculate the quarterly EOL benzene quantity.

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

118. On a quarterly basis, Cenex shall also calculate a projected calendar year TAB, utilizing all EOL results for that calendar year and any other information (such as process turnarounds) to undertake the projection. If the projected calendar year calculation of the TAB at

the Laurel Refinery equals or exceeds 10 Mg, Cenex shall submit to the Applicable Federal and State Agencies a plan that identifies with specificity the actions that Cenex shall take, and the schedule for such actions, to ensure that the TAB for the Laurel Refinery does not exceed 10 Mg in the calendar year. Cenex shall submit this plan within thirty (30) days after the end of the quarter which resulted in a projection of greater than 10 Mg.

119. If, based on the plan required under either Paragraph 117 or 118, it appears that appropriate actions cannot be taken to ensure that the Laurel Refinery maintains a TAB of under 10 Mg/yr, then Cenex shall retain a third party contractor to undertake a comprehensive TAB study and compliance review ("Third-Party TAB Study and Compliance Review"). At a mutually agreed upon date, Cenex shall submit a proposal to the Applicable Federal and State Agencies that identifies the contractor, the contractor's scope of work, and the contractor's schedule for the Third-Party TAB Study and Compliance Review. Unless, within thirty (30) days after EPA receives this proposal, EPA disapproves or seeks modifications, Cenex shall authorize the contractor to commence work. By no later than thirty (30) days after Cenex receives the results of the Third-Party TAB Study and Compliance Review, Cenex shall submit the results to the Applicable Federal and State Agencies. EPA, the Montana DEQ, and Cenex subsequently shall discuss informally the results of the Third-Party TAB Study and Compliance Review. By no later than 120 days after Cenex receives the results of the Third-Party TAB Study and Compliance Review, or such other time as Cenex and EPA may agree, Cenex shall submit to EPA for approval a plan that identifies with specificity the compliance strategy and schedule that Cenex shall implement to ensure that the Laurel Refinery complies with the 6 BQ compliance option as soon as practicable. A copy of this Plan shall be submitted to the Montana DEQ. The

review and approval of this Plan shall be done in accordance with Paragraph 102 of this Decree.

Certification of Compliance shall be done in accordance with Paragraph 103.

**x. Periodic Sampling (If the Laurel Refinery is Found to Have a TAB of 10 Mg/yr or More).**

**120.** If the Laurel Refinery's TAB reaches or exceeds 10 Mg/yr prior to termination of this Consent Decree ("Applicability Date for Section V, Subsection L (x)"), the provisions of this Section V, Subsection L (x) (¶¶ 120 - 128) shall apply through termination.

**121.** By no later than two (2) months after the certification required by Paragraph 103, Cenex shall submit to EPA for approval a plan(s) for an "end of the line" ("EOL") determination of the benzene quantity in uncontrolled waste streams. A copy of this plan shall be submitted to the Montana DEQ. The proposed plan of Cenex shall include, but not be limited to, sampling locations, methods for flow calculations, and the assumed volatilization rate(s) to be used in calculating the uncontrolled benzene quantity.

**122.** If, during the Applicability Dates for Section V, Subsection L (x) (¶¶ 120 - 128), changes in processes, operations, or other factors lead Cenex to conclude that the approved sampling locations, approved methods for determining flow calculations, and/or assumed volatilization rates no longer provide an accurate measure of the Laurel Refinery's EOL benzene quantity, Cenex shall submit a revised plan to EPA for approval. Thereafter, a copy of this revised plan also shall be provided to Montana DEQ.

**123.** On a monthly basis, Cenex shall conduct EOL sampling, commencing during the first month of the first full calendar quarter after Cenex receives written approval from EPA of the sampling plan for the Laurel Refinery. Cenex shall take, and have analyzed, three

representative samples from each approved sampling location. Cenex shall use the average of these three samples as the benzene concentration for the stream at the approved location. Based on the EOL monthly sampling results, the approved flow calculations, and the volatilization assumptions, Cenex shall calculate the sum of the EOL benzene quantity for the three months contained within the respective quarter. Nothing in this Section V, Subsection L (x) (§§ 120 - 128) shall preclude Cenex from taking representative samples more frequently within any calendar month, provided that Cenex identifies the basis for the additional samples. Such samples shall be included in calculating the average monthly EOL benzene quantity.

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

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

126. If the sum of the EOL benzene quantity for two consecutive quarters indicates that the EOL benzene quantity, prorated on a yearly basis, will exceed 4.8 Mg/yr, and Cenex has not discovered and corrected the cause of the potentially elevated benzene through the process of Sampling of >0.05 Streams, Cenex shall take and have analyzed three representative samples, drawn on separate days during the third calendar quarter, of each uncontrolled stream containing benzene over 0.03 Mg/yr, as identified in the later of (i) the final BWON Compliance Review and Verification Report; or (ii) the most recently submitted TAB report (hereinafter "Sampling of > 0.03 Streams"). Cenex shall undertake Sampling of >0.03 Streams for the purpose of continuing to try to identify the cause or source of the potentially elevated benzene quantities.

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

of greater than 6 Mg/yr of uncontrolled benzene. Sampling of >0.05 and/or >0.03 Streams shall not excuse Cenex from continuing to take monthly EOL samples.

128. If in three consecutive quarters (a) the sum of the benzene quantity indicates that the EOL benzene quantity, prorated on a yearly basis, will exceed 4.8 Mg; or (b) the Sampling of >0.05 and/or >0.03 streams indicates that projected uncontrolled benzene for the calendar year will exceed 6 Megagrams, and Cenex has not discovered and corrected, with EPA's concurrence, the cause of the potentially elevated benzene through the process of Sampling of >0.05 and >0.03 Streams, then, in the fourth quarter, Cenex shall retain a third party contractor to undertake a comprehensive TAB study and compliance review ("Third-Party TAB Study and Compliance Review"). By no later than the last day of the fourth quarter, Cenex shall submit a proposal to the Applicable Federal and State Agencies that identifies the contractor, the contractor's scope of work, and the contractor's schedule for the Third-Party TAB Study and Compliance Review. Unless, within thirty (30) days after EPA receives this proposal, EPA disapproves or seeks modifications, Cenex shall authorize the contractor to commence work. By no later than thirty (30) days after Cenex receives the results of the Third-Party TAB Study and Compliance Review, Cenex shall submit the results to the Applicable Federal and State Agencies. Subsequently, EPA, the Montana DEQ, and Cenex shall discuss informally the results of the Third-Party TAB Study and Compliance Review. By no later than one-hundred twenty (120) days after Cenex receives the results of the Third-Party TAB Study and Compliance Review, or such other time as Cenex and EPA may agree, Cenex shall submit to EPA for approval a plan that addresses any deficiencies identified in the Third-Party TAB Study and Compliance Review and any deficiencies that EPA brought to the attention of Cenex as a result of the Third-Party TAB Study

and Compliance Review. A copy of this plan shall be submitted to the Montana DEQ. The review and approval of this Plan shall be done in accordance with Paragraph 102 of this Decree. Certification of Compliance shall be done in accordance with Paragraph 103.

**xi. Miscellaneous Measures.**

**129.** If the Laurel Refinery's TAB reaches or exceeds 10Mg/yr prior to termination of this Consent Decree, then the provisions of this Paragraph 129 shall apply through termination.

Cenex shall:

- a. Conduct monthly visual inspections of all water traps within the Laurel Refinery's individual drain systems;
- b. On a weekly basis, visually inspect all conservation vents or indicators on process sewers for detectable leaks; reset any vents where leaks are detected; and record the results of the inspections. After two (2) years of weekly inspections, and based upon an evaluation of the recorded results, Cenex may submit a request to the applicable EPA Region to modify the frequency of the inspections. EPA shall not unreasonably withhold its consent. Nothing in this Paragraph 129(b) shall require Cenex to monitor conservation vents on fixed roof tanks;
- c. On a quarterly basis, monitor oil water separators, used to comply with Subpart FF;
- d. Operate carbon canisters in series as a dual system, if the carbon canisters are used used to comply with Subpart FF. Monitoring for hydrocarbon breakthrough shall be measured between the primary and secondary canister. Upon detecting 50 ppm VOC, the primary canister shall be replaced within 24 hours.

**130.** From the date that the final BWON Compliance Review and Verification Report submitted for the Laurel Refinery pursuant to Paragraphs 98-99 shows that the Laurel Refinery's TAB is equal to or greater than 1 Mg/yr but less than 10 Mg/yr, through termination of this Consent Decree, Cenex shall identify and mark all area drains that are segregated stormwater drains.

**xii. Recordkeeping and Reporting Requirements for this Subsection L**

**A. Outside of the Reports Required under 40 C.F.R. § 61.357 and under the Quarterly Progress Report Procedures of Section X (Recordkeeping and Reporting).**

131. At the times specified in the applicable provisions of this Subsection, Cenex shall submit, as and to the extent required, the following reports to the Applicable Federal and State Agencies:

- a. BWON Compliance Review and Verification Report (§ 98), as amended, if necessary (§99);
- b. Amended TAB Report, if necessary (§ 100);
- c. Plan for the Laurel Refinery to come into compliance with the 6 BQ compliance option upon discovering that its TAB equals or exceeds 10 Mg/yr through the BWON Compliance Review and Verification Report (§ 101), or the Third-Party TAB Study and Compliance Review that may result from EOL sampling (§ 119, 128);
- d. Compliance certification, if necessary (§ 103);
- e. Schedule to complete implementation of controls on waste management units handling organic benzene waste, if necessary (§ 110);
- f. EOL Sampling Plans (§§ 115, 121 ), and revised EOL Sampling Plans, if necessary (§§ 115, 122);
- g. Plan, if necessary, to ensure that uncontrolled benzene does not equal or exceed, as applicable, 6 or 10 Mg/yr -- or is minimized -- based on projected calendar year uncontrolled benzene quantities as determined through EOL sampling (§§ 117 - 118, 127)
- h. Proposal for a Third-Party TAB Study and Compliance Review, if necessary (§§ 119, 128);
- i. Third-Party TAB Study and Compliance Review, if necessary (§§ 119, 128); and
- j. Plan to implement the results of the Third-Party TAB Study and Compliance Review, if necessary (§§ 119, 128).



**B. As part of the Reports Required under the Quarterly Progress Report Procedures of Section X (Recordkeeping and Reporting).**

132. **TAB is equal to or greater than 1 Mg/yr but less than 10 Mg/yr.** From the date that the final BWON Compliance Review and Verification Report submitted for the Laurel Refinery pursuant to Paragraphs 98-99 shows that the Laurel Refinery's TAB is equal to or greater than 1 Mg/yr but less than 10 Mg/yr through termination (unless, the Laurel Refinery reaches a TAB of 10 Mg/yr or more (in which case, the provisions of Paragraph 133 shall begin to apply); Cenex shall submit the following information in Quarterly Progress Reports pursuant to the requirements of Paragraph 193, Section X of this Consent Decree:

- (a) A description of the measures that it took to comply with the training provisions of Section V, Subsection L;
- (b) The annual, non-EOL sampling required at the Laurel Refinery pursuant to the requirements of Paragraph 114 (this information shall be submitted in the first quarterly progress report for the first calendar quarter of each year);
- (c) The results of the quarterly EOL sampling undertaken pursuant to Paragraph 116 for the calendar quarter. The report shall include a list of all waste streams sampled, the results of the benzene analysis for each sample, and the computation of the EOL benzene quantity for the respective quarter. The Laurel Refinery shall identify whether the quarterly benzene quantity equals or exceeds 2.5 Mg and whether the projected calendar year benzene quantity equals or exceeds 10 Mg. If either condition is met, the Laurel Refinery shall include in the quarterly report the plan required pursuant to Paragraph 117 and/or 118, and shall specifically seek EPA's concurrence in the plan.

133. **TAB is 10 Mg/yr or More.** The provisions of this Paragraph 133 shall apply if the Laurel Refinery's TAB reaches or exceeds 10 Mg/yr prior to termination. Cenex shall submit the following information in Quarterly Progress Reports pursuant to the requirements of Paragraph 193, Section X of this Consent Decree:

- (a) A description of the measures that it took to comply with the training provisions of Section V, Subsection L;
- (b) The results of the three months of monthly EOL sampling undertaken pursuant to Paragraph 123 for the calendar quarter. The report shall include a list of all waste streams sampled, the results of the benzene analysis for each sample, and the computation of the EOL benzene quantity for the three months contained within the respective quarter;
- (c) If the quarter is one in which Cenex is required to undertake Sampling of >0.05 Streams or Sampling of >0.03 Streams at the Laurel Refinery, Cenex also shall: (1) submit the results of those sampling events; (2) describe the actions that Cenex is taking to identify and correct the source of the potentially elevated benzene quantities; and (3) to the extent that Cenex identifies actions to correct the potentially elevated benzene quantities, specifically seek EPA's concurrence with the proposal of Cenex.

134. A summary of the reports, plans, and certifications due under the provisions of Section V, Subsection L is attached as Appendix D to this Consent Decree.

**xiii. Agencies to Receive Reports, Plans and Certifications Required in the Subsection.**

135. Cenex shall submit to the Applicable Federal and State Agencies all reports, plans and certifications required to be submitted under this Subsection.

**x. Laboratory Audits**

136. Cenex shall conduct audits of all laboratories that perform analyses of Cenex's benzene waste operations NESHAP samples to ensure that proper analytical and quality assurance/quality control procedures are followed. These audits may be conducted either by Cenex personnel or third parties. Cenex may retain third parties to conduct these audits or use audits conducted by others as its own, but Cenex has the sole responsibility and obligation to ensure compliance with this Consent Decree and Subpart FF.

137. By no later than six (6) months from the Date of Lodging, Cenex shall start conducting initial audits of the laboratories used by the Laurel Refinery. Cenex shall complete initial audits of the laboratories by no later than twelve (12) months from the Date of Lodging. In addition, Cenex shall audit any new laboratory used for analyses of benzene samples prior to use of the new laboratory.

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

**M. Leak Detection and Repair ("LDAR") Program Enhancements.**

139. In order to minimize or eliminate fugitive emissions of volatile organic compounds ("VOCs"), benzene, volatile hazardous air pollutants ("VHAPs"), and organic hazardous air pollutants ("HAPs") from equipment in light liquid and/or in gas/vapor service, Cenex shall implement at the Laurel Refinery the enhancements at Paragraph 141 through Paragraph 171 to the Laurel Refinery's LDAR program ("Basic LDAR Program") under Title 40 of the Code of Federal Regulations, Part 60, Subpart GGG; Part 61, Subparts J and V; Part 63, Subparts F, H, and CC. The "Basic LDAR Program," as that term is used in this Consent Decree, includes all of the components that Cenex identifies through the initial audit set forth in Paragraph 144, subsequent audits set forth in Paragraphs 145 and 146, or under Paragraph 162 as subject to the LDAR regulations under Title 40 of the Code of Federal Regulations, Part 60, Subpart GGG; Part 61, Subparts J and V; Part 63, Subparts F, H, and CC. The terms "equipment," "in light liquid service" and "in gas/vapor service" shall have the definitions set forth in the applicable provisions of Title 40 of the Code of Federal Regulations, Part 60, Subparts VV and GGG; Part 61, Subparts J and V; Part 63, Subparts F, H and CC.

**i. Valves Not Included in the Monitoring Program as of the Date of Lodging.**

140. Within 300 days of the Date of Lodging, Cenex shall choose the option presented in Paragraph 140(a) or the option presented in Paragraph 140(b).

a. Cenex shall monitor valves in light-liquid and/or gaseous service which are not included in the Basic LDAR Program at least annually, shall repair leaks identified under this subparagraph in accordance with the requirements for other, regulated valves in this Consent Decree, and shall maintain all records for valves monitored and repaired under this subparagraph in accordance with the requirements for other, regulated valves in this Consent Decree. The first annual monitoring for such valves shall occur no later than 30 days after the date Cenex certifies LDAR compliance as required under Paragraph 144. If Cenex chooses to comply with this Paragraph 140(a), then Cenex shall receive the release set forth in Paragraph 301.

b. Cenex shall replace, repack, or perform similarly effective repairs on all chronically leaking valves within the Basic LDAR Program at the next process unit turnaround. A chronically leaking valve shall be defined as any valve subject to regulatory LDAR requirements which leaks above 10,000 ppm twice in any consecutive four (4) quarters. If a component has not leaked for a period of 12 consecutive quarters or more prior to a turnaround, it is exempt from the requirements in this Paragraph 140(b). If Cenex chooses to comply with this Paragraph 140(b), then Cenex shall not receive the release set forth in Paragraph 301.

**ii. Written Refinery-Wide LDAR Program.**

141. By no later than 120 days from the Date of Lodging, Cenex shall develop and maintain, for the Laurel Refinery, a written, Refinery-wide program for compliance with all applicable federal LDAR regulations, and, in addition, for compliance with permit #1821-06 and

#OP1821-00 (including any future modifications to this permit occurring during the life of this Consent Decree). Cenex shall implement this program on a Refinery-wide basis, and Cenex shall update the program as necessary to ensure continuing compliance. The Refinery-wide program shall include at a minimum:

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

**iii. Training.**

**142.** By no later than one year from the Date of Lodging, Cenex shall implement the following training programs at the Laurel Refinery:

- a. For personnel newly-assigned to LDAR responsibilities, Cenex shall require LDAR training prior to each employee beginning such work;
- b. For all personnel assigned LDAR responsibilities, including but not limited to,

monitoring technicians, database users, QA/QC personnel and the LDAR Coordinator, Cenex shall provide and require completion of annual LDAR training; and

c. For all other Refinery operations and maintenance personnel including, but not limited to, operators and mechanics performing valve packing and designated unit supervisors reviewing for delay of repair work, Cenex shall provide and require completion of an initial training program that includes instruction on aspects of LDAR that are relevant to the person's duties. "Refresher" training in LDAR for these personnel shall be performed at a minimum on a three (3) year cycle.

d. If contract employees are performing LDAR work, Cenex's contractor shall comply with the training requirements in subparagraphs (a), (b) and (c) for all such contractor employees and shall provide its training information and records to Cenex.

#### **iv. LDAR Audits.**

**143.** Commencing upon the Date of Lodging of the Consent Decree, Cenex shall implement at the Laurel Refinery the Refinery-wide audits set forth in Paragraphs 144 and 145 to ensure the Refinery's compliance with all applicable LDAR requirements. The LDAR audits shall include but not be limited to, comparative monitoring, records review to ensure monitoring and repairs were completed in the required periods, component identification procedures, tagging procedures, data management procedures and observation of the LDAR technicians' calibration and monitoring techniques. During the LDAR audits, leak rates shall be calculated for each process unit where comparative monitoring was performed.

**144. Initial Compliance Audit.** By no later than 270 days from the Date of Lodging, Cenex shall complete a refinery-wide audit of its compliance with the LDAR regulations, to

include, at a minimum, each of the audit requirements set forth in Section V, Subsection M (iv) (¶¶ 143 - 148). By no later than 270 days from the Date of Lodging, Cenex shall report to EPA and Montana DEQ any areas of non-compliance identified as a result of its refinery-wide audit and submit in writing a proposed compliance schedule for correcting the non-compliance. Within 60 days of completing the audit, Cenex shall certify to EPA that the audit and related corrective action have been completed and that the refinery is in compliance or on an EPA-approved compliance schedule ("Cenex's Certification"). EPA and Montana DEQ shall review Cenex's Certification and shall respond with written concurrence, if these requirements have been met. Cenex's release from liability as specified in Paragraph 300 (Effect of Settlement) shall take effect upon the United States' concurrence with Cenex's audit and compliance certification.

**145. Third-Party Audits.** Cenex shall retain an independent contractor(s) with expertise in LDAR program requirements to perform a third-party audit of the Laurel Refinery's Basic LDAR Program at least once every four years. The first third-party audit for the Laurel Refinery shall be completed no later than 270 days after the Date of Lodging. Subsequent third party audits shall be held every four years thereafter. Cenex's use of a third-party contractor to perform the initial audit required by Paragraph 144 at the Laurel Refinery shall satisfy the provision of this Paragraph 145 which requires a third-party audit no later than 270 days after the Date of Lodging.

**146. Internal Audits.** Cenex shall conduct internal audits of the Laurel Refinery's Basic LDAR Program itself or by using personnel associated with Cenex's LDAR contractor(s) who are familiar with the LDAR program and its requirements but are not routinely assigned to

the Laurel Refinery. Cenex shall complete the first round of these internal LDAR audits by the earlier of two years following completion of the first third party audit required under Paragraph 145 or December 31, 2006. Internal audits of the Laurel Refinery shall be held every four years thereafter.

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

148. Alternative. As an alternative to the internal audits required by Paragraph 146, Cenex may elect to retain third-parties to undertake these audits, provided that an audit of the Laurel Refinery occurs at least every two (2) years.

**v. Implementation of Actions Necessary to Correct Non-Compliance.**

149. If the results of any of the audits conducted pursuant to Section V, Subsection M (iv) (~~¶¶~~ 143 - 148) at the Laurel Refinery identify any areas of non-compliance, Cenex shall implement, as soon as practicable, all steps necessary to correct the area(s) of non-compliance, and to prevent, to the extent practicable, a recurrence of the cause of the non-compliance. Cenex shall retain the audit reports generated pursuant to Paragraphs 144, 145 and 146 and shall maintain a written record of the corrective actions that Cenex takes at the Laurel Refinery in response to any deficiencies identified in any audits. In the Quarterly Report submitted pursuant to the provisions of Paragraph 193, Section X of this Consent Decree (Recordkeeping and Reporting) for the first calendar quarter of each year, Cenex shall submit the audit reports and corrective action records for audits performed and actions taken during the previous year.

**vi. Internal Leak Definition for Valves and Pumps.**

150. Cenex shall utilize the following internal leak definitions for valves and pumps in



light liquid and/or gas/vapor service, unless other permit(s), regulations, or laws require the use of lower leak definitions.

151. Leak Definition for Valves. By no later than two years from the Date of Lodging, Cenex shall utilize an internal leak definition of 500 ppm VOCs for all of the Laurel Refinery's valves, excluding pressure relief devices.

152. Leak Definition for Pumps. By no later than two years from the Date of Lodging, Cenex shall utilize an internal leak definition of 2,000 ppm VOCs for all of the Laurel Refinery's pumps.

**vii. Reporting, Recording, Tracking, Repairing and Re-monitoring Leaks of Valves and Pumps Based on the Internal Leak Definitions.**

153. Reporting. For regulatory reporting purposes, Cenex may continue to report leak rates in valves and pumps against the applicable regulatory leak definition, or may use the lower, internal leak definitions specified in Section V, Subsection M (vi) (§§ 150 -152). Cenex shall identify in the report which definition is being used.

154. Recording, Tracking, Repairing and Re-monitoring Leaks. Cenex shall record, track, repair and re-monitor all leaks in excess of the internal leak definitions of Paragraphs 151 and 152 at such time and after those definitions become applicable, except that Cenex shall have 5 days to make an initial attempt to repair and re-monitor the component, and have thirty (30) days to make repairs and re-monitor leaks that are greater than the internal leak definitions but less than the applicable regulatory leak definitions, or to place the component on the delay of repair list according to Section V, Subsection M (xv) (§ 165).

**viii. First Attempt at Repairs on Valves.**

155. Beginning no later than 90 days after the Date of Lodging, Cenex shall make a “first attempt” at repair on any valve that has a reading greater than 200 ppm of VOCs, excluding valves that LDAR personnel are not authorized to repair. Cenex, or its designated contractor, however, shall re-monitor within five (5) business days, all valves that LDAR personnel attempted to repair. If the data from the re-monitoring shows that the leak is greater than 500 ppm, Cenex must repair the valve. Unless the re-monitored leak rate is greater than the applicable leak definition, no further action will be necessary. If, after two years from the commencement of the “first attempt at repair” program set forth in this Paragraph 155, Cenex can demonstrate with sufficient monitoring data that the “first attempt” repair at 200 ppm will worsen or not improve the Refinery’s leak rates, Cenex may request that EPA reconsider or amend this requirement.

**ix. LDAR Monitoring Frequency.**

156. Pumps. When the lower leak definition for pumps becomes applicable pursuant to Paragraph 152, Cenex shall monitor pumps at the lower leak definition on a monthly basis.

157. Valves. Unless more frequent monitoring is required, Cenex shall implement a program at the Laurel Refinery, on and after the Date of Lodging of the Consent Decree, to monitor valves more frequently than is required by applicable regulations by monitoring valves -- other than difficult to monitor or unsafe to monitor valves -- on a quarterly basis, with no ability to skip periods on a process-unit-by-process-unit basis. If, however, a process unit is subject to the Hazardous Organic NESHAP (“HON”) or the modified-HON option in the Refinery MACT, and more frequent monitoring than quarterly monitoring is required, Cenex must comply with the

monitoring requirements in the applicable regulation.

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

**158. Electronic Storing and Reporting of LDAR Data.** Within six (6) months of the Date of Lodging of this Consent Decree, Cenex shall maintain an electronic database for storing and reporting LDAR data from the Laurel Refinery.

**159. Electronic Data Collection During LDAR Monitoring and Transfer Thereafter.** Within six (6) months of the Date of Lodging of this Consent Decree, Cenex shall use dataloggers and/or electronic data collection devices during LDAR monitoring. Cenex, or its designated contractor, shall use its/their best efforts to transfer, on a daily basis, electronic data from electronic datalogging devices to the electronic database of Paragraph 158. For all monitoring events in which an electronic data collection device is used, the collected monitoring data shall include a time and date stamp, and instrument and operator identification. Cenex may use paper logs where necessary or more feasible (e.g., small rounds, re-monitoring, or when dataloggers are not available or broken), and shall record, at a minimum, the identification of the technician undertaking the monitoring, the date, the daily start and end time for monitoring, and the identification of the monitoring equipment. Cenex shall transfer any manually recorded monitoring data to the electronic database of Paragraph 158 within seven days of monitoring.

**xi. QA/QC of LDAR Data.**

**160.** By no later than three (3) months after the Date of Lodging of this Consent Decree, Cenex, or a third party contractor retained by Cenex, shall develop and implement a procedure to ensure a quality assurance/quality control ("QA/QC") review of all data generated by LDAR monitoring technicians. Cenex shall ensure that monitoring data provided to Cenex by its

contractors is reviewed for QA/QC by the contractor before the contractor submits the data to Cenex. At least once per calendar quarter, Cenex shall perform QA/QC of the contractor's monitoring data which shall include, but not be limited to: number of components monitored per technician, time between monitoring events, and abnormal data patterns.

**xii. LDAR Personnel.**

161. By no later than the Date of Lodging of the Consent Decree, Cenex shall establish a program that will hold LDAR personnel accountable for LDAR performance. Cenex shall maintain a position within the Laurel Refinery responsible for LDAR management, with the authority to implement improvements ("LDAR Coordinator").

**xiii. Adding New Valves and Pumps.**

162. By no later than three (3) months from the Date of Lodging of this Consent Decree, Cenex shall establish a tracking program for maintenance records (e.g., a Management of Change program) to ensure that valves and pumps added to the Laurel Refinery during maintenance and construction are integrated into the Basic LDAR Program.

**xiv. Calibration/Calibration Drift Assessment.**

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

164. Calibration Drift Assessment. Beginning no later than the Date of Lodging of the Consent Decree, Cenex shall conduct calibration drift assessments of LDAR monitoring equipment at the end of each monitoring shift, at a minimum. Cenex shall conduct the calibration drift assessment using, at a minimum, a 500 ppm calibration gas. If any calibration

drift assessment after the initial calibration shows a negative drift of more than 10% from the previous calibration, Cenex shall re-monitor all valves that were monitored since the last calibration that had a reading greater than 100 ppm and shall re-monitor all pumps that were monitored since the last calibration that had a reading greater than 500 ppm.

**xv. Delay of Repair.**

**165.** Beginning no later than the Date of Lodging of the Consent Decree, for any equipment for which Cenex is allowed, under 40 C.F.R. § 60.482-9(a), to place on the “delay of repair” list for repair, Cenex shall:

a. For all equipment:

(1). Require sign-off by the unit supervisor that the piece of equipment is technically infeasible to repair without a process unit shutdown, before the component is eligible for inclusion on the "delay of repair" list; and

(2). Include equipment that is placed on the “delay of repair” list in Cenex’s regular LDAR monitoring. For leaks above the internal leak definition rate and below the regulatory rate, Cenex shall have thirty (30) days after identifying the leak to put the equipment on the delay of repair list.

b. For valves:

(1). For valves, other than control valves, leaking at a rate of 10,000 ppm or greater and which cannot be repaired using traditional techniques, Cenex shall use the "drill and tap" or equivalent repair method for fixing such leaking valves, rather than placing the valve on the "delay of repair" list, unless Cenex can demonstrate that there is a safety, mechanical, or major environmental concern posed by repairing the leak in that manner. Cenex shall make the first

repair attempt using the “drill and tap” or equivalent repair method within 15 days of identification of the leak, and shall have 45 days from when the leak was identified to complete the repair attempts.

(2). For valves, other than control valves or pressure relief valves, leaking at a rate of 50,000 ppm or greater, Cenex shall use the “drill and tap” or equivalent repair method to fix the leaking valve, rather than placing the valve on the “delay of repair” list, unless Cenex can demonstrate that there is a safety, mechanical, or major environmental concern posed by repairing the leak in that manner. Cenex shall make the first repair attempt using the “drill and tap” or equivalent repair method within 15 days of identification of the leak, and shall have 21 days from when the leak was identified to complete the repair attempts.

(3). After two unsuccessful attempts to repair a leaking valve through the “drill and tap” or equivalent repair method, Cenex may place the leaking valve on its "delay of repair" list. Cenex shall advise EPA prior to implementing repair methods equivalent to “drill and tap” if such method develops for repairing valves.

**xvi. Recordkeeping and Reporting Requirements for this Subsection M.**

166. Consistent with the requirements of Section X (Recordkeeping and Reporting), Cenex shall include the following information, at the following times, in their quarterly progress reports:

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

a. A certification of the implementation of the “first attempt at repair” program of

Paragraph 155;

- b. A certification of the implementation of QA/QC procedures for review of data generated by LDAR technicians as required by Paragraph 160;
- c. An identification of the individual at the Laurel Refinery responsible for LDAR performance as required by Paragraph 161;
- d. A certification of the development of a tracking program for new valves and pumps added during maintenance and construction as required by Paragraph 162;
- e. A certification of the implementation of the calibration and the calibration drift assessment procedures of Paragraphs 163 - 164; and
- f. A certification of the implementation of the "delay of repair" procedures of Paragraph 165.
- g. Copies of the written Refinery-wide LDAR Program required by Paragraph 141 (to be completed no later than 120 days from the Date of Lodging).
- h. Specifications for electronic data collection during LDAR monitoring required under Paragraph 159 (to be completed no later than 6 months from the Date of Lodging).

**168. Quarterly Progress Report for the First Calendar Quarter of Each Year.** In the quarterly progress report that Cenex submits pursuant to Section X for the first calendar quarter of each year, Cenex shall include an identification of each audit that was conducted pursuant to the requirements of Section V, Subsection M (iv) (¶¶ 143 - 148) in the previous calendar year including an identification of the auditors, a summary of the audit results, and a summary of the actions that Cenex took or intends to take to correct all deficiencies identified in the audits.

**169. Report due under 40 C.F.R. § 63.654.** In each report due under 40 C.F.R.

§ 63.654, Cenex shall include:

- a. Training. Information identifying the measures that Cenex took to comply with the provisions of Section V, Subsection M (iii) (¶ 142); and

- b. Monitoring. The following information on LDAR monitoring: (1) a list of the process units monitored during the quarter; (2) the number of valves and pumps monitored in each process unit; (3) the number of valves and pumps found leaking; (4) the number of components not fixed within 30 days or placed on the "delay of repair" list; (5) the number of first repair attempts not completed within 5 days; (6) the number of "difficult to monitor" pieces of equipment monitored; (7) the projected month of the next monitoring event for that unit; and (8) a list of all equipment currently on the "delay of repair" list and the date each component was placed on the list.

170. A summary of the reports, plans, and certifications due under the provisions of Section V, Subsection M (§§139 - 171) is attached as Appendix E to this Consent Decree.

**xvii. Agencies to Receive Reports, Plans and Certifications Required in this Subsection; Number of Copies.**

171. Cenex shall submit to the Applicable Federal and State Agencies all reports, plans and certifications required to be submitted under this Subsection.

**SECTION VI. PERMITTING**

**A. Incorporation of Consent Decree Requirements into Federally-Enforceable Permits.**

172. As soon as practicable following the Date of Entry of the Consent Decree, but in no event later than March 31, 2004, Cenex shall submit applications to the Montana DEQ to incorporate the emission limits, standards, and schedules required by the Consent Decree that are effective as of the Date of Entry of the Consent Decree into minor or major new source review permits or other permits (other than Title V permits) which are federally enforceable. Following submission of the permit application, Cenex shall cooperate with the Montana DEQ by promptly submitting to the Montana DEQ all information that the Montana DEQ seeks following its receipt of the permit application. Upon issuance of such permits, Cenex shall file any applications necessary to incorporate the requirements of those permits into the Title V permits



of the Laurel Refinery.

**173. At Variable Times.** As soon as practicable, but in no event later than thirty (30) days after the effective date or establishment of any emission limits, standards and schedules under Section V of this Consent Decree, Cenex shall submit applications to the Montana DEQ to incorporate those emission limitations, standards, and/or schedules into minor or major new source review permits or other permits (other than Title V permits) which are federally enforceable. Following submission of the permit application, Cenex shall cooperate with the Montana DEQ by promptly submitting to the Montana DEQ all information that the Montana DEQ seeks following its receipt of the permit application. Upon issuance of such permits, Cenex shall file any applications necessary to incorporate the requirements of those permits into the Title V permits of the Laurel Refinery.

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

**B. Obtaining Construction Permits.**

**175.** Cenex agrees to use best efforts to obtain all required, federally enforceable permits for the construction of the pollution control technology and/or the installation of equipment necessary to implement the affirmative relief and environmental projects set forth in Section V and in Section IX. To the extent that Cenex must submit permit applications for this construction or installation to the Montana DEQ, Cenex shall cooperate with the Montana DEQ by promptly submitting to the Montana DEQ all information that the Montana DEQ seeks following its receipt of the permit application. This Paragraph 175 is not intended to prevent

Cenex from applying to the Montana DEQ for a pollution control project exemption.

## **VII. EMISSION CREDIT GENERATION**

### **A. Emission Credit Generation.**

#### **i. Summary.**

176. The intent of this Section generally is to prohibit Cenex from using the emissions reductions that will result from the installation and operation of the controls required by this Consent Decree (“CD Emissions Reductions”) for the purpose of emissions netting or emissions offsets, while still allowing Cenex to use a fraction of the CD Emissions Reductions if: (1) the emissions units for which Cenex seeks to use the CD Emissions Reductions are modified or constructed for purposes of compliance with low sulfur diesel requirements; and (2) the emissions from those modified or newly-constructed units are below the levels outlined in Paragraph 179 prior to the commencement of operation of the emissions units for which Cenex seeks to use the CD Emissions Reductions.

#### **ii. General Prohibition.**

177. Cenex shall not generate or use any NO<sub>x</sub>, SO<sub>2</sub>, PM, VOC, or CO emissions reductions that result from any projects conducted or controls required pursuant to this Consent Decree as netting reductions or emissions offsets in any PSD, major non-attainment and/or minor New Source Review (“NSR”) permit or permit proceeding.

#### **iii. Exception to General Prohibition.**

178. Conditions Precedent to Utilization of the Exception to the General Prohibition against the Use or Generation of CD Emissions Reductions. Utilization of the exception set forth in Paragraph 179 to the general prohibition against the generation or utilization of CD Emissions

Reductions set forth in Paragraph 177 is subject to the following conditions:

- a. Under no circumstances may Cenex use CD Emissions Reductions for netting and/or offsets prior to the time that actual CD Emissions Reductions have occurred;
- b. CD Emissions Reductions generated at the Laurel Refinery may be used only at the Laurel Refinery;
- c. The CD Emissions Reductions provisions of this Consent Decree are for purposes of this Consent Decree only and neither Cenex nor any other entity may use CD Emissions Reductions for any purpose, including in any subsequent permitting or enforcement proceeding, except as provided herein; and
- d. Cenex still shall be subject to all federal and state regulations applicable to the PSD, major non-attainment and/or minor NSR permitting process.

179. Exception to General Prohibition. Notwithstanding the general prohibition set forth in Paragraph 177, Cenex may use 35.5 tons per year of NO<sub>x</sub> from the CD Emissions Reductions as credits or offsets in any PSD, major non-attainment and/or minor NSR permit or permit proceeding occurring after the Date of Lodging of the Consent Decree, provided that the new or modified emissions unit: (1) is being constructed or modified for purposes of compliance with low sulfur diesel requirements; and (2) has a federally enforceable, non-Title V Permit that reflects:

- a. For heaters and boilers, a limit of 0.020 lbs NO<sub>x</sub> per million BTU or less on a 3-hour rolling average basis;
- b. For heaters and boilers, a limit of 0.10 grains of hydrogen sulfide per dry standard cubic foot of fuel gas or 20 ppmvd SO<sub>2</sub> corrected to 0% O<sub>2</sub> both on a 3-hour rolling average basis;
- c. For heaters and boilers, no liquid or solid fuel firing authorization;
- d. For the FCCU, a limit of 20 ppmvd NO<sub>x</sub> corrected to 0% O<sub>2</sub> or less on a 365-day rolling average basis;
- e. For the FCCU, a limit of 25 ppmvd SO<sub>2</sub> corrected to 0% O<sub>2</sub> or less on a 365-day

rolling average basis; and

f. For SRPs, NSPS Subpart J emission limits.

**iv. Outside the Scope of the General Prohibition.**

180. Nothing in this Section VII is intended to prohibit Cenex from seeking to: (1) utilize or generate emissions credits or reductions from refinery units that are covered by this Consent Decree to the extent that the proposed credits or reductions represent the difference between the emissions limitations set forth in this Consent Decree for these refinery units and the more stringent emissions limitations that Cenex may elect to accept for these refinery units in a permitting process; or (2) utilize or generate emissions credits or reductions on refinery units that are not covered by this Consent Decree.

**VIII. MODIFICATIONS TO IMPLEMENTATION SCHEDULES**

**A. Securing Permits.**

181. For any work under Section V or Section IX of this Consent Decree that requires a federal, state and/or local permit, Cenex shall be responsible for submitting in a timely fashion applications for federal, state and local permits for work and activities required so that permit decisions can be made in a timely fashion. Cenex shall use its best efforts to: (i) submit permit applications (i.e., applications for permits to construct, operate, or their equivalent) that comply with all applicable requirements; and (ii) secure approval of permits after filing the applications, including timely supplying of additional information, if requested. If it appears that the failure of a governmental entity to act upon a timely-submitted permit application may delay Cenex's performance of work according to an applicable implementation schedule, Cenex shall notify the

Applicable Federal and State Agencies of any such delays as soon as Cenex reasonably concludes that the delay could affect its ability to comply with the implementation schedule set forth in this Consent Decree, and Cenex shall propose for approval by EPA a modification to the applicable schedule of implementation. EPA, in consultation with the Montana DEQ, shall not unreasonably withhold its consent to requests for modifications of schedules of implementation if the requirements of this Subsection are met. All modifications to any dates initially set forth in this Decree or in any approved schedule of implementation shall be signed in writing by EPA and Cenex and neither the United States nor Cenex shall be required to file such modifications with the Court in order for the modifications to be effective. Stipulated penalties shall not accrue nor be due and owing during any period between an originally-scheduled implementation date and an approved modification to such date; provided however, that Applicable Federal and State Agencies shall retain the right to seek stipulated penalties if EPA does not approve a modification to a date or dates. The failure of a governmental entity to act upon a timely-submitted permit application shall not constitute a force majeure event triggering the requirements of Section XV; this Subsection shall apply.

**B. Commercial Unavailability of Control Equipment and/or Additives.**

182. Cenex shall be solely responsible for compliance with any deadline or the performance of any work described in Section V and in Section IX of this Consent Decree that requires the acquisition and installation of control equipment and/or catalyst additives. If it appears that the commercial unavailability of any control equipment and/or catalyst additive may delay Cenex's performance of work according to an applicable implementation schedule, Cenex shall notify the Applicable Federal and State Agencies of any such delays as soon as Cenex

reasonably concludes that the delay could affect its ability to comply with the implementation schedule set forth in this Consent Decree, and Cenex shall propose for approval by EPA a modification to the applicable schedule of implementation. Prior to the notice required by this Paragraph 182, Cenex must have contacted a reasonable number of vendors of such equipment or additive and obtained a written representation (or equivalent communication to EPA) from the vendor that the equipment or additive is commercially unavailable. In the notice, Cenex shall reference this Paragraph 182 of this Consent Decree, identify the milestone date(s) it contends it will not be able to meet, provide the Applicable Federal and State Agencies with written correspondence to the vendor identifying efforts made to secure the control equipment or catalyst additive, and describe the specific efforts Cenex has taken and will continue to take to find such equipment or additive. Cenex may propose a modified schedule or modification of other requirements of this Consent Decree to address such commercial unavailability. EPA, in consultation with the Montana DEQ, shall not unreasonably withhold its consent to requests for modifications of schedules of implementation if the requirements of this Subsection are met. All modifications to any dates initially set forth in this Consent Decree or in any approved schedule of implementation shall be signed in writing by EPA and Cenex and neither the United States nor Cenex shall be required to file such modifications with the Court in order for the modifications to be effective. Stipulated penalties shall not accrue nor be due and owing during any period between an originally-scheduled implementation date and an approved modification to such date; provided however, that the Applicable Federal and State Agencies shall retain the right to seek stipulated penalties if EPA does not approve a modification to a date or dates. The failure by Cenex to secure control equipment and/or catalyst additive shall not constitute a force majeure

event triggering the requirements of Section XV; this Subsection shall apply.

## **IX. ENVIRONMENTALLY BENEFICIAL PROJECTS**

### **A. Joint Federal-State SEP: Flare Knock Out Drum**

**183.** By no later than December 31, 2008, Cenex shall complete installation and begin and continue operation of a flare knock out drum designed to separate liquid from vapor that is sent to the Refinery Flare. Liquids separated from the flared stream will be recovered and reprocessed within the refinery. The total amount Cenex shall spend on the Supplemental Environmental Project (SEP) shall equal or exceed \$440,000.

**184.** If Cenex does not expend at least 90% of the total amount of the SEP identified in Paragraph 183, Cenex shall pay a stipulated penalty equal to the difference between the amount expended and \$440,000 to the United States and to the State of Montana (split 70% to the United States and 30% to the State of Montana) in the manner provided in Section XI (Payment of Civil Penalty).

**185.** Notwithstanding Paragraphs 183 and 184, if Cenex completes the installation of the flare knockout drum by December 31, 2005, then the total amount Cenex shall spend on the Supplemental Environmental Project (SEP) shall equal or exceed \$370,000. If Cenex completes the installation of the flare knock out drum by December 31, 2005, but does not expend at least 90% of \$370,000, then Cenex shall pay a stipulated penalty equal to the difference between the amount expended and \$370,000 to the United States and to the State of Montana (split 70% to the United States and 30% to the State of Montana) in the manner provided in Section XI (Payment of Civil Penalty).

**186.** By no later than December 31, 2004, Cenex shall submit a schedule and work

plan for the flare knock out drum SEP to EPA and Montana DEQ for approval.

187. Within three (3) months of the Date of Lodging of the Consent Decree, Cenex may choose to pay a penalty of \$290,000 plus interest from the Date of Entry (\$220,000 to the United States plus interest from the Date of Entry, and \$70,000 to Montana plus interest from the Date of Entry) in the manner provided in Section XI (Payment of Civil Penalty), in lieu of implementing the flare knock out drum SEP under Paragraph 183.

B. State SEP: City of Laurel's Emergency Generator

188. By no later than December 31, 2003, Cenex shall pay \$150,000 to the City of Laurel, Montana to assist in funding the purchase of an approximately \$300,000 diesel-fueled electric generator which will be used to supply back-up electrical power to the City's water plant.

189. If Cenex does not expend at least 90% of the total amount of the SEP identified in Paragraph 188, Cenex shall pay a stipulated penalty equal to the difference between the amount expended and \$150,000 to the State of Montana in the manner provided in Section XI (Payment of Civil Penalty).

C. General Provisions

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



reduction program.

191. Upon completion of installation of the projects set forth in this Section, and with the next required report pursuant to Paragraph 193, Cenex shall include the following information:

- a. Itemized costs for the SEPs, documented by copies of purchase orders and receipts or canceled checks;
- b. A detailed description of the SEPs as implemented;
- c. A brief description of any significant problems encountered, including any that had an impact on the environment, and the solutions for each problem;
- d. A description of the environmental and public health benefits resulting from implementation of the SEPs, including quantification of the benefits and pollutant reductions, if feasible; and
- e. Certification that each project has been fully implemented pursuant to the provisions of this Consent Decree.

192. Cenex agrees that in any public statements regarding the SEPs, Cenex shall clearly indicate that these projects are being undertaken as part of the settlement of an enforcement action for alleged violations of the federal Clean Air Act and the Montana Clean Air Act.

## **X. REPORTING AND RECORDKEEPING**

193. Beginning with the first full calendar quarter after the Date of Entry of the Consent Decree, Cenex shall submit to the Applicable Federal and State Agencies within thirty (30) days after the end of each calendar quarter a calendar quarterly progress report ("Calendar Quarterly

Report”) for the Laurel Refinery. This Calendar Quarterly Report shall contain the following: progress report on the implementation of the requirements of Section V (Affirmative Relief/Environmental Projects); a summary of the emissions data as required by Section V of this Consent Decree for the calendar quarter; a description of any problems anticipated with respect to meeting the requirements of Section V of this Consent Decree; a description of all environmentally beneficial projects and implementation activity conducted in accordance with Section IX of the Consent Decree; and any such additional matters that Cenex believes should be brought to the attention of the Applicable Federal and State Agencies. Each portion of the calendar quarterly report shall be certified by either the person responsible for environmental management and compliance for the Laurel Refinery, or by a person responsible for overseeing implementation of this Decree for Cenex, as follows:

I certify under penalty of law that this information was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my directions and my inquiry of the person(s) who manage the system, or the person(s) directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

#### **XI. CIVIL PENALTY**

**194.** In satisfaction of the civil claims asserted by the United States and the Plaintiff-Intervenor in the complaint filed in this matter, within thirty (30) days of the Date of Entry of the Consent Decree, Cenex shall pay a civil penalty of \$171,875 as follows: (1) \$85,937.50 to the United States; and (2) \$85,937.50 to the State of Montana.

**195.** Payment of monies to the United States shall be made by Electronic Funds Transfer (“EFT”) to the United States Department of Justice, in accordance with current EFT procedures,

referencing USAO File Number 2003V00239, DOJ Case Number 90-5-2-1-07726, and the civil action case name and case number of this action in the District of Montana. The costs of such EFT shall be the responsibility of Cenex. Payment shall be made in accordance with instructions provided to Cenex by the Financial Litigation Unit of the U.S. Attorney's Office for the District of Montana. Any funds received after 11:00 a.m. (EST) shall be credited on the next business day. Cenex shall provide notice of payment, referencing USAO File Number 2003V00239, DOJ Case Number 90-5-2-1-07726, and the civil action case name and case number to the Department of Justice and to EPA, as provided in Paragraph 315 (Notice).

196. Payment of the civil penalty owed to the State of Montana under this Subsection shall be made by certified or corporate check made payable to the State of Montana and sent to the following address:

John L. Arrigo  
Administrator  
Enforcement Division  
Montana Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620-0901

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

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

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

## **XII. STIPULATED PENALTIES**

199. Cenex shall pay stipulated penalties for each failure by Cenex to comply with the terms of this Consent Decree as provided herein. Stipulated penalties shall be calculated in the amounts specified in Paragraphs 200 through 267. For purposes of seeking stipulated penalties under Paragraphs 201, 204, and 212, stipulated penalties shall not start to accrue until there is noncompliance with the concentration-based, rolling average emission limit identified in the applicable Paragraph for 5% or more of the applicable unit's operating time during any calendar quarter. For those provisions where a stipulated penalty of either a fixed amount or 1.2 times the economic benefit of delayed compliance is available, the decision of which alternative to seek shall rest exclusively within the discretion of the Applicable Federal and State Agencies.

### **A. Noncompliance with NO<sub>x</sub> Emissions Reductions from the FCCU Required under Section V, Subsection A (§§ 11 - 31).**

200. For failure to select and/or use NO<sub>x</sub> Reducing Catalyst Additives or Low NO<sub>x</sub> Combustion Promoters or increased hydrotreatment of FCCU feed as required by Section V, Subsection A (§§ 11 - 31), and Appendix B of the Consent Decree, per day:

<u>Period of Delay</u>	<u>Penalty per day</u>
1 <sup>st</sup> through 30 <sup>th</sup> day after deadline	\$1000
31 <sup>st</sup> through 60 <sup>th</sup> day after deadline	\$1500
Beyond 60 <sup>th</sup> day after deadline	\$2000, or an amount equal to 1.2 times the economic benefit of delayed compliance, whichever is greater

**201.** For failure to meet any emissions limit proposed by Cenex or established by EPA (final or interim) for NO<sub>x</sub> pursuant to Section V, Subsection A (§§ 11 - 31), per day, per unit: \$750 for each calendar day in a calendar quarter on which the specified 7-day rolling average exceeds the applicable limit; and \$2500 for each calendar day in a calendar quarter on which the specified 365-day rolling average exceeds the applicable limit.

**202.** For failure to prepare and/or submit written deliverables required by Section V, Subsection A (§§ 11 - 31), per day:

<u>Period of Delay</u>	<u>Penalty per day</u>
1 <sup>st</sup> through 30 <sup>th</sup> day after deadline	\$200
31 <sup>st</sup> through 60 <sup>th</sup> day after deadline	\$500
Beyond 60 <sup>th</sup> day after deadline	\$1000

**203.** For failure to install and/or certify a NO<sub>x</sub> CEMS, as required by Paragraph 30, per unit, per day:

<u>Period of Delay</u>	<u>Penalty per day</u>
1 <sup>st</sup> through 30 <sup>th</sup> day after deadline	\$500
31 <sup>st</sup> through 60 <sup>th</sup> day after deadline	\$1000
Beyond 60 <sup>th</sup> day after deadline	\$2000, or an amount equal to 1.2 times the economic benefit of delayed compliance, whichever is greater.

**B. Noncompliance with SO<sub>2</sub> Emissions Reductions from the FCCU Required under Section V, Subsection B (§§ 32 - 35).**

**204.** For failure to reduce SO<sub>2</sub> emissions from the Laurel Refinery FCCU to 25 ppmvd @ 0% O<sub>2</sub> on a 365-day rolling average basis and 50 ppmvd @ 0% O<sub>2</sub> on a 7-day rolling average

basis as required by Paragraph 33 of the Consent Decree, per day: \$1,500 for each calendar day in a calendar quarter on which the specified 7-day rolling average exceeds the applicable limit; \$3,000 for each calendar day in a calendar quarter on which the specified 365-day rolling average exceeds the applicable limit.

**205.** If Cenex chooses to comply with Paragraph 33(b), for failure to install and operate a wet gas scrubber as required by Paragraph 33(b) per day:

<u>Period of Delay</u>	<u>Penalty per day</u>
1 <sup>st</sup> through 30 <sup>th</sup> day after deadline	\$1250
31 <sup>st</sup> through 60 <sup>th</sup> day after deadline	\$3000
Beyond 60 <sup>th</sup> day after deadline	\$5000, or an amount equal to 1.2 times the economic benefit of the delayed compliance whichever is greater

**206.** For failure to prepare and/or submit written deliverables required by Section V, Subsection B (¶¶ 32 - 35), per day:

<u>Period of Delay</u>	<u>Penalty per day</u>
1 <sup>st</sup> through 30 <sup>th</sup> day after deadline	\$200
31 <sup>st</sup> through 60 <sup>th</sup> day after deadline	\$500
Beyond 60 <sup>th</sup> day after deadline	\$1000

**207.** For failure to install and/or certify a SO<sub>2</sub> CEMS as required by Paragraph 35, per unit, per day:

<u>Period of Delay</u>	<u>Penalty per day</u>
1 <sup>st</sup> through 30 <sup>th</sup> day after deadline	\$500
31 <sup>st</sup> through 60 <sup>th</sup> day after deadline	\$1000

Beyond 60 <sup>th</sup> day after deadline	\$2000, or an amount equal to 1.2 times the economic benefit of delayed compliance, whichever is greater.
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**C. Noncompliance with PM Emissions Reductions from the FCCU Required under Section V, Subsection C (¶¶ 36 - 39).**

**208.** For failure to install and/or use PM Control Equipment or a Wet Gas Scrubber (WGS) on the Laurel Refinery's FCCU as required by Paragraph 37 of the Consent Decree, per day:

<u>Period of Delay</u>	<u>Penalty per day</u>
1 <sup>st</sup> through 30 <sup>th</sup> day after deadline	\$1250
31 <sup>st</sup> through 60 <sup>th</sup> day after deadline	\$3000
Beyond 60 <sup>th</sup> day after deadline	\$5000, or an amount equal to 1.2 times the economic benefit of the delayed compliance whichever is greater

**209.** For each failure to meet PM emission limits established for the FCCU in Paragraph 37, per day, per unit: \$1500 for each calendar day in a calendar quarter on which the Refinery exceeds the emission limit.

**210.** For each failure to conduct the stack tests as required by Paragraph 38:  
\$2,500 per month.

**211.** For failure to install and/or certify a Continuous Opacity Monitoring System (COMS), if PM Control Equipment is installed on the FCCU at the Laurel Refinery, or for failure to obtain an alternative monitoring plan for opacity, if a Wet Gas Scrubber (WGS) is installed, as required by Paragraph 39 of this Consent Decree, per unit, per day:

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

31 <sup>st</sup> through 60 <sup>th</sup> day after deadline	\$1000
Beyond 60 <sup>th</sup> day after deadline	\$2000 or an amount equal to 1.2 times the economic benefit of delayed compliance, whichever is greater.

**D. Noncompliance with CO Emissions Reductions from the FCCU Required under Section V, Subsection D (¶¶ 40 - 42).**

212. For each failure to meet the CO emission limits established for the Laurel Refinery FCCU in Paragraph 41: \$500 for each calendar day in a calendar quarter on which the specified 1-hour average basis exceeds the applicable limit; and \$2500 for each calendar day in a calendar quarter on which the specified 365-day rolling average exceeds the applicable limit.

213. For failure to install and/or certify a CO and O<sub>2</sub> CEMS, per unit, per day as required by Paragraph 42:

<u>Period of Delay</u>	<u>Penalty per day</u>
1 <sup>st</sup> through 30 <sup>th</sup> day after deadline	\$500
31 <sup>st</sup> through 60 <sup>th</sup> day after deadline	\$1000
Beyond 60 <sup>th</sup> day after deadline	\$2000 or an amount equal to 1.2 times the economic benefit of delayed compliance, whichever is greater.

**E. Noncompliance with NOx Emissions Reductions from Heaters, Boilers and Compressors Required under Section V, Subsection E (¶¶ 43 - 54).**

214. For failure to achieve the required NOx emission reductions from the refinery's heaters, boilers and compressors, through the permanent shut down of certain units and/or the use of Qualifying NOx Control Technology, by the dates specified in Paragraphs 43, 47 and 48, per unit, per day:



<u>Period of Delay</u>	<u>Penalty per day</u>
1 <sup>st</sup> through 30 <sup>th</sup> day after deadline	\$500
31 <sup>st</sup> through 60 <sup>th</sup> day after deadline	\$1200
Beyond 60 <sup>th</sup> day after deadline	\$2,000, or an amount equal to 1.2 times the economic benefit of delayed compliance, whichever is greater.

215. For failure to install and/or certify a CEMS on a Controlled Heater, Boiler or Compressor by the required deadline, and/or submit a PEMs proposal, and/or for failure to conduct an initial performance test by the required deadline as required by Paragraph 52, per unit, per day:

<u>Period of Delay</u>	<u>Penalty per day</u>
1 <sup>st</sup> through 30 <sup>th</sup> day after deadline	\$ 450
31 <sup>st</sup> through 60 <sup>th</sup> day after deadline	\$1000
Beyond 60 <sup>th</sup> day after deadline	\$2000, or an amount equal to 1.2 times the economic benefit of delayed compliance, whichever is greater.

216. For failure to submit the written deliverables required by Section V, Subsection E (¶¶ 43 - 54), per day:

<u>Period of Delay</u>	<u>Penalty per day</u>
1 <sup>st</sup> through 30 <sup>th</sup> day after deadline	\$200
31 <sup>st</sup> through 60 <sup>th</sup> day after deadline	\$500
Beyond 60 <sup>th</sup> day after deadline	\$1000

217. For each failure to meet NOx emission limits proposed by Cenex pursuant to Paragraph 47, per day, per unit: \$500 for each calendar day in a calendar quarter on which the

emissions exceed the applicable limit.

**F. Noncompliance with SO<sub>2</sub> Emissions Reductions from Combustion Devices Required under Section V, Subsection G (§§ 56 - 59).**

218. After the date set forth in Paragraph 57 of this Decree for NSPS applicability of any fuel gas combustion device, for burning any refinery fuel gas that contains hydrogen sulfide in excess of 0.1 grains per dry standard cubic foot on a 3-hour rolling average at any fuel gas combustion device at the Laurel Refinery, per day in a calendar quarter:

<u>Period of Non-Compliance</u>	<u>Penalty per day</u>
1 <sup>st</sup> through 5 <sup>th</sup> day	\$1000
6 <sup>th</sup> through 15 <sup>th</sup> day	\$2000
Beyond 15 <sup>th</sup> day	\$3000, or an amount equal to 1.2 times the economic benefit of delayed compliance, whichever is greater.

219. For burning Fuel Oil in a manner inconsistent with the requirements of Paragraph 59 per day:

<u>Period of Non-Compliance</u>	<u>Penalty per day</u>
1 <sup>st</sup> through 30 <sup>th</sup> day	\$1750
Beyond 31 <sup>st</sup> day	\$5000

220. For failure to submit AMPs by the date set forth in Paragraph 58, or for failure to meet any other deadline set forth in Paragraph 58 :

<u>Period of Delay</u>	<u>Penalty per day</u>
1 <sup>st</sup> through 30 <sup>th</sup> day after deadline	\$200
31 <sup>st</sup> through 60 <sup>th</sup> day after deadline	\$500

Beyond 60<sup>th</sup> day after deadline \$1000

**G. Noncompliance with NSPS Applicability of Sulfur Recovery Plant Required under Section V, Subsection H (§§ 60 - 73).**

**221.** For failure to route all sulfur pit emissions in accordance with the requirements of Paragraph 63, per day:

<u>Period of Non-Compliance</u>	<u>Penalty per day</u>
1 <sup>st</sup> through 30 <sup>th</sup> day	\$1000
31 <sup>st</sup> through 60 <sup>th</sup> day	\$1750
Beyond 60 <sup>th</sup> day	\$4000 or an amount equal to 1.2 times the amount of delayed compliance whichever is greater.

**222.** For failure to install a tail gas treatment unit ("TGTU") as by the deadline required by Paragraph 64, per day:

<u>Period of Non-Compliance</u>	<u>Penalty per day</u>
1 <sup>st</sup> through 30 <sup>th</sup> day after deadline	\$2000
31 <sup>st</sup> through 60 <sup>th</sup> day after deadline	\$3000
Beyond 60 <sup>th</sup> day after deadline	\$5000 or 1.2 times the economic benefit of delayed compliance, whichever is greater;

**223.** For failure to comply with the NSPS Subpart J emission limits on the Zone A or Zone D SRP by and after the deadline in Paragraph 61, per day in a calendar quarter:

<u>Period of Non-Compliance</u>	<u>Penalty per day</u>
1 <sup>st</sup> through 5 <sup>th</sup> day	\$1000
6 <sup>th</sup> through 15 <sup>th</sup> day	\$2000

Beyond 15 <sup>th</sup> day	\$3000 or an amount equal to 1.2 times the economic benefit of delayed compliance, whichever is greater.
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224. For failure to develop and comply with the Preventative Maintenance and Operation Plan as specified in Paragraphs 68 - 70, per day:

<u>Period of Delay or Non-Compliance</u>	<u>Penalty per day</u>
1 <sup>st</sup> through 30 <sup>th</sup> day after deadline	\$500
31 <sup>st</sup> through 60 <sup>th</sup> day after deadline	\$1500
Beyond 60 <sup>th</sup> day after deadline	\$2000

225. For failure to propose and/or comply with the interim emission limit as specified in Paragraph 72 per day:

<u>Period of Delay</u>	<u>Penalty per day</u>
1 <sup>st</sup> through 30 <sup>th</sup> day after deadline	\$500
31 <sup>st</sup> through 60 <sup>th</sup> day after deadline	\$1500
Beyond 60 <sup>th</sup> day after deadline	\$2000

**H. Noncompliance with NSPS Applicability of Flaring Devices Required under Section V, Subsection I (§§ 74 - 77).**

226. For failure to comply with NSPS Subpart J at the Laurel Refinery Flare as required by Paragraphs 74 and 75:

<u>Period of Delay</u>	<u>Penalty per day</u>
1st through 30th day after deadline	\$ 500 per day
31st through 60th day after deadline	\$1500 per day
Beyond 60th day after deadline	\$2000 per day

227. For failure to install and/or certify a CEMS or submit and comply with an AMP at the Refinery Flare as set forth in Paragraph 77, per unit, per day:

<u>Period of Delay</u>	<u>Penalty per day</u>
1 <sup>st</sup> through 30 <sup>th</sup> day after deadline	\$500
31 <sup>st</sup> through 60 <sup>th</sup> day after deadline	\$1000
Beyond 60 <sup>th</sup> day after deadline	\$2000, or an amount equal to 1.2 times the economic benefit of delayed compliance, whichever is greater.

**I. Noncompliance with Control of Acid Gas Flaring Incidents and Tail Gas Incidents Required under Section V, Subsection J (¶¶ 78 - 93).**

228. For Acid Gas Flaring Incidents and/or Tail Gas Incidents for which Cenex is liable for stipulated penalties under Paragraphs 84 - 88 and/or 92:

Tons Emitted in Acid Gas Flaring Incident or Tail Gas Incident	Length of Time from Commencement of Flaring within the Acid Gas Flaring Incident to Termination of Flaring within the Acid Gas Flaring Incident is 3 hours or less; Length of Time of the Tail Gas Incident is 3 hours or less	Length of Time from Commencement of Flaring within the Acid Gas Flaring Incident to Termination of Flaring within the Acid Gas Flaring Incident is greater than 3 hours but less than or equal to 24 hours; Length of Time of the Tail Gas Incident is greater than 3 hours but less than or equal to 24 hours	Length of Time of Flaring within the Acid Gas Flaring Incident is greater than 24 hours; Length of Time of the Tail Gas Incident is greater than 24 hours
5 Tons or less	\$500 per Ton	\$750 per Ton	\$1,000 per Ton

Greater than 5 Tons, but less than or equal to 15 Tons	\$1,200 per Ton	\$1,800 per Ton	\$2,300 per Ton, up to, but not exceeding, \$27,500 in any one calendar day
Greater than 15 Tons	\$1,800 per Ton, up to, but not exceeding, \$27,500 in any one calendar day	\$2,300 per Ton, up to, but not exceeding, \$27,500 in any one calendar day	\$27,500 per calendar day for each calendar day over which the Acid Gas Flaring Incident or Tail Gas Incident lasts

For purposes of calculating stipulated penalties pursuant to this Paragraph 228, only one cell within the matrix shall apply. Thus, for example, for an Acid Gas Flaring Incident in which the Flaring starts at 1:00 p.m. and ends at 3:00 p.m., and for which 14.5 tons of sulfur dioxide are emitted, the penalty would be \$17,400 ( $14.5 \times \$1,200$ ); the penalty would not be \$13,900 [ $(5 \times \$500) + (9.5 \times \$1200)$ ]. For purposes of determining which column in the table set forth in this Paragraph applies under circumstances in which Flaring occurs intermittently during an Acid Gas Flaring Incident, the Flaring shall be deemed to commence at the time that the Flaring that triggers the initiation of an Acid Gas Flaring Incident commences, and shall be deemed to terminate at the time of the termination of the last episode of Flaring within the Acid Gas Flaring Incident. Thus, for example, for Flaring within an Acid Gas Flaring Incident that (i) starts at 1:00 p.m. on Day 1 and ends at 1:30 p.m. on Day 1; (ii) recommences at 4:00 p.m. on Day 1 and ends at 4:30 p.m. on Day 1; (iii) recommences at 1:00 a.m. on Day 2 and ends at 1:30 a.m. on Day 2; and (iv) no further Flaring occurs within the Acid Gas Flaring Incident, the Flaring within the Acid Gas Flaring Incident shall be deemed to last 12.5 hours -- not 1.5 hours -- and the column for Flaring of "greater than 3 hours but less than or equal to 24 hours" shall apply. The same method of calculation shall apply to Tail Gas Incidents.

229. For failure to timely submit any report required by Section V, Subsection J (§§ 78 - 93), or for submitting any report that does not conform to the requirements of Section V, Subsection J (§§ 78 - 93):

<u>Period of Delay</u>	<u>Penalty per day</u>
1 <sup>st</sup> through 30 <sup>th</sup> day after deadline	\$800
31 <sup>st</sup> through 60 <sup>th</sup> day after deadline	\$1,600
Beyond 60 <sup>th</sup> day after deadline	\$3,000

230. For those corrective action(s) which Cenex: (i) agrees to undertake following receipt of an objection by EPA pursuant to Paragraphs 82 and 92; or (ii) is required to undertake following dispute resolution, then, from the date of EPA's receipt of Cenex's report under Paragraphs 79 or 92 of this Consent Decree until the date that either: (i) a final agreement is reached between EPA and Cenex regarding the corrective action; or (ii) a court order regarding the corrective action is entered, Cenex shall be liable for stipulated penalties as follows:

i.	<u>Period of Delay</u>	<u>Penalty per day</u>
	1 <sup>st</sup> through 120 <sup>th</sup> day after deadline	\$50
	121 <sup>st</sup> through 180 <sup>th</sup> day after deadline	\$100
	181 <sup>st</sup> through 365 <sup>th</sup> day after deadline	\$300
	Beyond 365 <sup>th</sup> day after deadline	\$3,000

or

- ii. 1.2 times the economic benefit resulting from Cenex's failure to implement the corrective action(s).

231. For failure to complete any corrective action under Section V, Subsection J (§§ 78 -

93) of this Decree in accordance with the schedule for such corrective action agreed to by Cenex or imposed on Cenex pursuant to the dispute resolution provisions of this Decree (with any such extensions thereto as to which EPA and Cenex may agree in writing):

<u>Period of Delay</u>	<u>Penalty per day</u>
1 <sup>st</sup> through 30 <sup>th</sup> day after deadline	\$ 1,000
31 <sup>st</sup> through 60 <sup>th</sup> day after deadline	\$ 2,000
Beyond 60 <sup>th</sup> day after deadline	\$ 5,000

**J. Noncompliance with Control of Hydrocarbon Flaring Incidents Required under Section V, Subsection K (§ 94).**

232. For each failure to perform a root cause analysis or submit a written report or perform corrective actions for a Hydrocarbon Flaring Incident as required by Paragraph 94:

<u>Period of Delay or Non-Compliance</u>	<u>Penalty per day per Incident</u>
1 <sup>st</sup> through 30 <sup>th</sup> day after deadline	\$ 500
31 <sup>st</sup> through 60 <sup>th</sup> day after deadline	\$1500
Beyond 60 <sup>th</sup> day after deadline	\$2000

**K. Noncompliance with Benzene Waste Operations NESHAP Program Enhancements Required under Section V, Subsection L (§§ 95 - 138).**

233. For each violation in which a frequency is specified in Section V, Subsection L (§§ 95 -138), the amounts identified below shall apply on the first day of violation, shall be calculated for each incremental period of violation (or portion thereof), and shall be doubled beginning on the fourth consecutive, continuing period of violation. For requirements where no frequency is specified, penalties will not be doubled.



**234.** For failure to complete the BWON Compliance Review and Verification Reports as required by Paragraphs 98 - 99:

\$7,500 per month

**235.** For failure to implement the actions necessary to correct non-compliance as required by Paragraphs 100 - 103:

<u>Period of Delay</u>	<u>Penalty per day</u>
1 <sup>st</sup> through 30 <sup>th</sup> day after deadline	\$1250
31 <sup>st</sup> through 60 <sup>th</sup> day after deadline	\$3000
Beyond 60 <sup>th</sup> day after deadline	\$5000, or an amount equal to 1.2 times the economic benefit of delayed compliance, whichever is greater

**236.** For failure to implement the training requirements of Paragraphs 106 - 108:

\$10,000 per quarter

**237.** For failure to submit or maintain any records or materials required by Paragraphs 109 - 112 of this Consent Decree:

\$2,000 per record or submission

**238.** If TAB equals or exceeds 10 Mg/yr. For failure to install controls on waste management units handling organic wastes as required by Paragraph 110:

\$10,000 per month, per waste management unit

**239.** For failure to conduct sampling in accordance with the sampling plans required by Paragraphs 113 - 119 (1 Mg/yr or more) or 120 - 128 (10 Mg/yr or more), as applicable:

\$5,000 per week, per stream, or \$30,000 per quarter, per stream, whichever is greater, but not to exceed \$150,000 per quarter

240. Plan Submittals / Third Party contractors. For failure to submit the plan or retain the third-party contractor required by Paragraphs 115 - 128:

\$10,000 per month

241. If TAB equals or exceeds 10 Mg/yr. For failure to comply with the miscellaneous compliance measures set forth in Paragraph 129, as follows:

For 129(a), monthly visual inspections: \$500 per drain not inspected;

For 129(b), weekly monitoring of vents: \$500 per vent not monitored;

For 129(c), quarterly monitoring of oil water separators: \$500 per oil water separator not monitored

For 129(d), replacement of primary carbon canister: \$500 per primary canister not replaced within 24 hours of hydrocarbon breakthrough at 50 ppm VOC or greater.

242. If TAB equals or exceeds 1 Mg/yr. For failure to identify/mark segregated stormwater drains as required in Paragraph 130: \$1,000 per week per drain.

243. For failure to submit the written deliverables required by Paragraph 131 - 135:

\$1,000 per week, per report

244. For failure to timely complete audits as required by Paragraphs 137 and 138:

\$5,000 per month per review/audit

245. If it is determined through federal, state, or local investigation that the Laurel Refinery has failed to include all benzene containing waste streams or spills in its TAB calculation submitted pursuant to Paragraphs 98 - 99, Cenex shall pay the following, per waste stream or spill:

<u>Waste Stream or Spills</u>	<u>Penalty</u>
for waste streams or spills < 0.03 Mg/yr	\$250
for waste streams and/or spills between 0.03 and 0.1 Mg/yr	\$1000
for waste streams and/or spills between 0.1 and 0.5 Mg/yr	\$5,000
for waste streams and or spills > 0.5 Mg/yr	\$10,000

**L. Noncompliance with Leak Detection and Repair Program Enhancements Required under Section V, Subsection M (§§ 139 - 171).**

246. For each violation in which a frequency is specified in Section V, Subsection M (§§ 139 - 171), the amounts identified below shall apply on the first day of violation, shall be calculated for each incremental period of violation (or portion thereof), and shall be doubled beginning on the fourth consecutive, continuing period of violation. For requirements where no frequency is specified, penalties will not be doubled.

247. For failure to comply with Paragraph 140(a), if applicable:

\$100 per valve Cenex fails to monitor annually

248. For chronic leakers not replaced, repacked or repaired at the next process unit shutdown according to Paragraph 140(b), if applicable:

\$5,000 valve.

249. For failure to implement the training programs specified in Section V, Subsection M (iii) (§ 142):

\$10,000 per month, per program

250. For failure to conduct any of the audits described in Section V, Subsection M (iv)

(¶¶ 143 - 148):

\$5,000 per month, per audit

251. For failure to implement any actions necessary to correct non-compliance as required in Section V, Subsection M (v) (¶ 149):

<u>Period of Delay</u>	<u>Penalty per day</u>
1 <sup>st</sup> through 30 <sup>th</sup> day after deadline	\$1250
31 <sup>st</sup> through 60 <sup>th</sup> day after deadline	\$3000
Beyond 60 <sup>th</sup> day after deadline	\$5000, or an amount equal to 1.2 times the economic benefit of delayed compliance, whichever is greater

252. For failure to use an internal leak rate definition as specified in Section V, Subsection M (vi) (¶¶ 150 - 152):

\$10,000 per month per process unit

253. For failure to record, track, repair or re-monitor leaks as required by Paragraph 154:

\$1,000 per component

254. For failure to implement the first attempt repair program in Section V, Subsection M (viii) (¶ 155):

\$100 per valve, but no greater than \$10,000 per month

255. For failure to implement the QA/QC procedures described in Paragraph 160:

\$10,000 per month

256. For failure to implement the more frequent monitoring program required by Paragraphs 156 and 157:

\$100 per component, but not greater than \$10,000 per month, per unit

257. For failure to designate an individual as accountable for LDAR performance as required in Paragraph 161, for failure to implement the maintenance tracking program in Paragraph 162, or for failure to write a LDAR program that meets the requirements of Paragraph 141:

\$3,750 per week

258. For failure to use dataloggers or maintain electronic data as required by Section V, Subsection M (x) (§§158 - 159):

\$5,000 per month

259. For failure to conduct the calibration drift assessments or re-monitor valves and pumps based on calibration drift assessments in Section V, Subsection M (xvi) (§§163 - 164):

\$100 per missed event

260. For failure to comply with the requirements for repair set forth at Section V, Subsection M (xv) (§165):

\$5,000 per valve or pump

261. For failure to submit the written deliverables required by Section V, Subsection M (xvi) (§§166 - 171):

\$1,000 per week per report

262. If Cenex discovers that it has failed to include all valves and pumps in its Basic LDAR Program, Cenex shall pay \$175 per component that it failed to include. If it is determined through a federal, state, or local investigation that Cenex has failed to include all valves and pumps in its Basic LDAR Program, Cenex shall pay \$2,000 per component that it failed to include.

**M. Noncompliance with Requirements to Incorporate Consent Decree Requirements into Federally-Enforceable Permits under Section VI (§§ 172 - 175).**

263. For each failure to submit an application as required by Section VI (§§ 172 - 175):

<u>Period of Delay</u>	<u>Penalty per day</u>
1 <sup>st</sup> through 30 <sup>th</sup> day after deadline	\$800
31 <sup>st</sup> through 60 <sup>th</sup> day after deadline	\$1600
Beyond 60 <sup>th</sup> day after deadline	\$3000

**N. Noncompliance with Environmentally Beneficial Projects Required under Section IX (§§ 183 - 192)**

264. For Cenex's failure to perform any one of the SEPs identified in Paragraphs 183 and 188 in accordance with the EPA or Montana DEQ approved schedule, per day, per project:

<u>Period of Delay</u>	<u>Penalty per day</u>
1 <sup>st</sup> through 30 <sup>th</sup> day after deadline	\$500
31 <sup>st</sup> through 60 <sup>th</sup> day after deadline	\$2000
Beyond 60 <sup>th</sup> day after deadline	\$2500

**O. Noncompliance with Reporting and Recordkeeping Requirements under Section X (§ 193).**

265. For failure to submit reports as required by Section X (§ 193), per day:

<u>Period of Delay</u>	<u>Penalty per day</u>
1 <sup>st</sup> through 30 <sup>th</sup> day after deadline	\$300
31 <sup>st</sup> through 60 <sup>th</sup> day after deadline	\$1100
Beyond 60 <sup>th</sup> day after deadline	\$2000

**P. Noncompliance with Payment of Civil Penalties Required under Section XI (¶¶ 194 - 196).**

266. For Cenex's failure to pay the civil penalties as specified in Paragraph 194 - 196 of this Consent Decree, Cenex shall be liable for \$10,000 per day plus interest on the amount overdue at the rate specified in 28 U.S.C. § 1961(a).

**Q. Noncompliance with Requirement to Pay Stipulated Penalties under Paragraph 268.**

267. For failure to pay stipulated penalties as required by Paragraph 268 of this Consent Decree, Cenex shall be liable for \$2,500 per day, and shall be liable for interest on the amount overdue at the rate specified in 28 U.S.C. § 1961(a).

**R. Payment of Stipulated Penalties.**

268. Cenex shall pay stipulated penalties upon written demand by the United States or the Montana DEQ no later than sixty (60) days after Cenex receives such demand. Demand from either the United States or Montana DEQ shall be deemed a demand from both the United States and Montana DEQ, but the United States and Montana DEQ shall consult with each other prior to making a demand. Stipulated penalties owed by Cenex shall be paid 50% to the United States and 50% to the State of Montana. Stipulated penalties shall be paid to the United States and the State of Montana in the manner set forth in Section XI (Civil Penalty) of this Consent Decree. A demand for the payment of stipulated penalties shall identify the particular violation(s) to which the stipulated penalty relates, the stipulated penalty amount the Applicable Federal or State Agency is demanding for each violation (as can be best estimated), the calculation method underlying the demand, and the grounds upon which the demand is based. After consultation with each other, the United States and the State of Montana may, in their unreviewable

discretion, waive payment of any portion of stipulated penalties that may accrue under this Consent Decree.

**S. Stipulated Penalties Dispute.**

269. Should Cenex dispute its obligation to pay part or all of a stipulated penalty, it may avoid the imposition of a stipulated penalty for failure to pay a stipulated penalty under Paragraph 267 by placing the disputed amount demanded in a commercial escrow account pending resolution of the matter and by invoking the dispute resolution provisions of Section XVI within the time provided in Paragraph 268 for payment of stipulated penalties. If the dispute is thereafter resolved in Cenex's favor, the escrowed amount plus accrued interest shall be returned to it; otherwise, the Applicable Federal and State Agencies shall be entitled to the amount that was determined to be due by the Court, plus the interest that has accrued in the escrow account on such amount. The United States and the State of Montana reserve the right to pursue any other non-monetary remedies to which they are entitled, including but not limited to, additional injunctive relief for Cenex's violations of this Consent Decree.

**XIII. INTEREST**

270. Cenex shall be liable for interest on the unpaid balance of the civil penalty specified in Section XI, and for interest on any unpaid balance of stipulated penalties to be paid in accordance with Section XII. All such interest shall accrue at the rate established pursuant to 28 U.S.C. § 1961(a) -- i.e., a rate equal to the coupon issue yield equivalent (as determined by the Secretary of Treasury) of the average accepted auction price for the last auction of 52-week U.S. Treasury bills settled prior to the Date of Lodging of the Consent Decree. Interest shall be computed daily and compounded annually. Interest shall be calculated from the date payment is



due under the Consent Decree through the date of actual payment. For purposes of this Paragraph, interest pursuant to this Subsection will cease to accrue on the amount of any stipulated penalty payment made into an interest bearing escrow account as contemplated by Paragraph 269 of the Consent Decree. Monies timely paid into escrow shall not be considered to be an unpaid balance under this Section.

#### **XIV. RIGHT OF ENTRY**

**271.** Any authorized representative of EPA or the Montana DEQ, including independent contractors, upon presentation of credentials, shall have a right of entry upon the premises of the facilities of the Laurel Refinery, at any reasonable time for the purpose of monitoring compliance with the provisions of this Consent Decree, including inspecting plant equipment, and inspecting and copying all records maintained by Cenex required by this Consent Decree. Cenex shall retain such records for the period of the Consent Decree. Nothing in this Consent Decree shall limit the authority of EPA or the Montana DEQ to conduct tests, inspections, or other activities under any statutory or regulatory provision.

#### **XV. FORCE MAJEURE**

**272.** If any event occurs which causes or may cause a delay or impediment to performance in complying with any provision of this Consent Decree, Cenex shall notify the Applicable Federal and State Agencies in writing as soon as practicable, but in any event within ten (10) business days of the date when Cenex first knew of the event or should have known of the event by the exercise of due diligence. In this notice, Cenex shall specifically reference this Paragraph 272 of this Consent Decree and describe the anticipated length of time the delay may persist, the cause or causes of the delay, and the measures taken or to be taken by Cenex to

prevent or minimize the delay and the schedule by which those measures shall be implemented. Cenex shall take all reasonable steps to avoid or minimize such delays. The notice required by this Section shall be effective upon the mailing of the same by certified mail, return receipt requested, to the Applicable EPA Regional Office as specified in Paragraph 315 (Notice).

273. Failure by Cenex to substantially comply with the notice requirements of Paragraph 272 as specified above shall render this Section XV (Force Majeure) voidable by the United States, in consultation with the Montana DEQ, as to the specific event for which Cenex has failed to comply with such notice requirement, and, if voided, is of no effect as to the particular event involved.

274. The United States, after consultation with the Montana DEQ, shall notify Cenex in writing regarding its claim of a delay or impediment to performance within thirty (30) days of receipt of the force majeure notice provided under Paragraph 272.

275. If the United States, after consultation with the Montana DEQ, agrees that the delay or impediment to performance has been or will be caused by circumstances beyond the control of Cenex including any entity controlled by Cenex and that Cenex could not have prevented the delay by the exercise of due diligence, the Parties shall stipulate in writing to an extension of the required deadline(s) for all requirement(s) affected by the delay by a period equivalent to the delay actually caused by such circumstances. Such stipulation shall be filed as a modification to the Consent Decree pursuant to the modification procedures established in this Consent Decree. Cenex shall not be liable for stipulated penalties for the period of any such delay.

276. If the United States, after consultation with the Montana DEQ, does not accept Cenex's claim of a delay or impediment to performance, Cenex must submit the matter to the

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

277. Cenex shall bear the burden of proving that any delay of any requirement(s) of this Consent Decree was caused by or will be caused by circumstances beyond its control, including any entity controlled by it, and that it could not have prevented the delay by the exercise of due diligence. Cenex shall also bear the burden of proving the duration and extent of any delay(s) attributable to such circumstances. An extension of one compliance date based on a particular event may, but will not necessarily, result in an extension of a subsequent compliance date or dates.

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

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

280. As part of the resolution of any matter submitted to this Court under this

Section XV, the Parties by agreement, or the Court, by order, may in appropriate circumstances extend or modify the schedule for completion of work under the Consent Decree to account for the delay in the work that occurred as a result of any delay or impediment to performance agreed to by the United States or approved by this Court. Cenex shall be liable for stipulated penalties for their failure thereafter to complete the work in accordance with the extended or modified schedule.

#### **XVI. RETENTION OF JURISDICTION/DISPUTE RESOLUTION**

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

282. Except as otherwise provided, the dispute resolution procedure set forth in this Section XVI shall be available to resolve all disputes arising under this Consent Decree, including assertion of commercial unavailability under Paragraph 182 of this Consent Decree, provided that the Party making such application has made a good faith attempt to resolve the matter with the other Party.

283. The dispute resolution procedure required herein shall be invoked upon the giving of written notice by one of the Parties to this Consent Decree to another advising of a dispute pursuant to this Section XVI. The notice shall describe the nature of the dispute, and shall state the noticing Party's position with regard to such dispute.

284. Disputes submitted to dispute resolution shall, in the first instance, be the subject of informal negotiations between the Parties. Such period of informal negotiations shall not extend beyond ninety (90) calendar days from the date of the first meeting between representatives of the Parties, unless it is agreed that this period should be extended.

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

286. In the event that the United States and the Montana DEQ make differing determinations or take differing actions that affect Cenex's rights or obligations under this Consent Decree, the final decisions of the United States shall take precedence.

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

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

289. The invocation of dispute resolution procedures under this Section shall not extend,

postpone, or affect in any way any obligation of Cenex under this Consent Decree, not directly in dispute. 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 as provided in Paragraph 269, above. If Cenex does not prevail on the disputed issue, Stipulated Penalties shall be assessed and paid as provided in Section XII (Stipulated Penalties).

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

## **XVII. EFFECT OF SETTLEMENT**

291. The effect of settlement of this action is governed by this Section XVII (¶¶ 291 - 306).

### **A. Definitions.**

292. For purposes of this Section XVII (¶¶ 291 - 306), the following definitions apply:

#### **A. “Applicable NSR/PSD Requirements” shall mean:**

- (1) PSD requirements at Part C of Subchapter I of the Act, 42 U.S.C. § 7475, and the regulations promulgated thereunder at 40 C.F.R. § 52.21;
- (2) “Plan Requirements for Non-Attainment Areas” at Part D of Subchapter I of the Act, 42 U.S.C. §§ 7502-7503, and the regulations promulgated thereunder at 40 C.F.R. §§ 51.165 (a) and (b); Title 40, Part 51, Appendix S; and 40 C.F.R. § 52.24; and

- (3) Any applicable state, regional, or local statutes, ordinances or regulations that implement, adopt, or incorporate the specific federal regulatory requirements identified above.

B. "Applicable NSPS Subparts A and J Requirements" shall mean the standards, monitoring, testing, reporting and record keeping requirements found at 40 C.F.R. §§ 60.100 through 60.109 (Subpart J), relating to a particular pollutant and a particular affected facility, and the corollary general requirements found at 40 C.F.R. §§ 60.1 through 60.19 (Subpart A) that are applicable to any affected facility covered by Subpart J.

C. "Post-Lodging Compliance Dates" shall mean any dates in this Section XVII (Effect of Settlement) (§§ 291 - 306) after the Date of Lodging. Post-Lodging Compliance Dates include dates certain (e.g., "December 31, 2003"), dates after Lodging represented in terms of "months after Lodging" (e.g., "Twelve Months after the Date of Lodging"), and dates after Lodging represented by actions taken (e.g., "Date of Certification"). The Post-Lodging Compliance Dates represent the dates by which work is required to be completed or an emission limit is required to be met under the applicable provisions of this Consent Decree.

**B. New Source Review/Prevention of Significant Deterioration.**

**i. Liability Resolution Regarding the Applicable NSR/PSD Requirements.**

**293. Specific Pollutant and Units.** With respect to emissions of the following pollutants from the following units, entry of this Consent Decree shall resolve all civil liability of Cenex to the United States and the Plaintiff-Intervenor for violations of the Applicable NSR/PSD Requirements, resulting from pre-Lodging construction or modification, from the date of the pre-lodging construction or modification up to the following dates:

<u>Unit</u>	<u>Pollutant</u>	<u>Date</u>
Laurel Refinery FCCU	NOx	Either: 1). February 1, 2005, if Cenex chooses to comply with the NOx emissions limit set forth in Paragraph <u>19</u> ; or 2). the Date the final NOx emissions limit is established pursuant to Paragraph <u>29</u> .
	SO <sub>2</sub>	Either: 1). December 31, 2007, if Cenex chooses to comply with Paragraph <u>33(a)</u> ; or 2). December 31, 2009 if Cenex chooses to comply with Paragraph <u>33(b)</u>
	PM and PM <sub>10</sub>	The date the final PM emission limit is established pursuant to Paragraph <u>37</u> .
	CO	December 31, 2006
All Laurel Refinery heaters, boilers and compressors	NOx	For each unit, the earlier of the following: 1). the date Cenex shuts down or installs Qualified Control Technology on the unit as set forth in Paragraph <u>43</u> ; or 2). December 31, 2011.
All Laurel Refinery heaters and boilers other than those listed in Appendix F	SO <sub>2</sub>	Date of Lodging
Laurel Refinery heaters and boilers listed in Appendix F	SO <sub>2</sub>	Dates in Appendix F

**294. Reservation of Rights Regarding Applicable NSR/PSD Requirements:**

**Release for Violations Continuing After the Date of Lodging Can be Rendered Void.**

Notwithstanding the resolution of liability in Paragraph 293, the release of liability by the United States and the Plaintiff-Intervenor to Cenex for violations of the Applicable NSR/PSD



Requirements during the period between the Date of Lodging of the Consent Decree and the Post-Lodging Compliance Dates shall be rendered void if Cenex materially fails to comply with the obligations and requirements of Section V, Subsections A - E, and G; provided however, that the release in Paragraph 293 shall not be rendered void if Cenex remedies such material failure and pays any stipulated penalties due as a result of such material failure.

**295. Exclusions from Release Coverage Regarding Applicable NSR/PSD**

**Requirements: Construction and/or Modification Not Covered by Paragraph 293.**

Notwithstanding the resolution of liability in Paragraph 293, nothing in this Consent Decree precludes the United States and/or the Plaintiff-Intervenor from seeking from Cenex injunctive relief, penalties, or other appropriate relief for violations by Cenex of the Applicable NSR/PSD Requirements resulting from construction or modification that: (1) commenced prior to or after the Date of Lodging of the Consent Decree for pollutants or units not covered by the Consent Decree; or (2) commences after the Date of Lodging of the Consent Decree for pollutants or units covered by this Consent Decree.

**296. Evaluation of Applicable PSD/NSR Requirements Must Occur.** Increases in emissions from units covered by this Consent Decree, where the increases result from the Post-Lodging construction or modification of any units within the Laurel Refinery, are beyond the scope of the release in Paragraph 293, and Cenex must evaluate any such increases in accordance with the Applicable PSD/NSR Requirements.

**C. New Source Performance Standards Subparts A and J.**

**i. Resolution of Liability Regarding Applicable NSPS Subparts A and J Requirements.**

**297. Specific Pollutants and Units.** With respect to emissions of the following

pollutants from the following units, entry of this Consent Decree shall resolve all civil liability of Cenex to the United States and the Plaintiff-Intervenor for violations of the Applicable NSPS Subparts A and J Requirements from the date that the claims of the United States and the Plaintiff-Intervenor accrued up to the following dates:

<u>Unit</u>	<u>Pollutant</u>	<u>Date</u>
Laurel Refinery FCCU	SO <sub>2</sub>	June 30, 2004
	PM	The date the final PM emission limit is established pursuant to Paragraph 37.
	CO	January 1, 2004
	Opacity	December 31, 2009
All Laurel Refinery heaters and boilers other than those listed in Appendix F	SO <sub>2</sub>	Date of Lodging
Laurel Refinery heaters and boilers listed in Appendix F	SO <sub>2</sub>	Dates in Appendix F
Laurel Refinery SRPs		
Zone A SRP	SO <sub>2</sub>	September 30, 2005
Zone D SRP	SO <sub>2</sub>	Date of Lodging
Laurel Refinery Flaring Device	SO <sub>2</sub>	Date in Appendix F

**298. Reservation of Rights Regarding Applicable NSPS Subparts A and J**

**Requirements: Release for NSPS Violations Occurring After the Date of Lodging Can be Rendered Void.** Notwithstanding the resolution of liability in Paragraph 297, the release of liability by the United States and the Plaintiff-Intervenor to Cenex for violations of any

Applicable NSPS Subparts A and J Requirement that occurred between the Date of Lodging and the Post-Lodging Compliance Dates shall be rendered void if Cenex materially fails to comply with the obligations and requirements of Section V, Subsections F - K; provided however, that the release in Paragraph 297 shall not be rendered void if Cenex remedies such material failure and pays any stipulated penalties due as a result of such material failure.

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

**D. LDAR and Benzene Waste Operations NESHAP.**

**i. Resolution of Liability Regarding LDAR and Benzene Waste Operations NESHAP Requirements.**

**300. Basic LDAR Program.** Entry of this Consent Decree shall resolve all civil liability of Cenex to the United States and the Plaintiff-Intervenor for violations of the LDAR requirements promulgated pursuant to Sections 111 and 112 of the federal Clean Air Act, and codified at 40 C.F.R. Part 60, Subparts VV and GGG; 40 C.F.R. Part 61, Subparts J and V; and 40 C.F.R. Part 63, Subparts F, H, and CC that occurred prior to the date of Cenex's Certification of the initial audit set forth in Paragraph 144, at the Laurel Refinery, for all equipment in light liquid service and gas and/or vapor service which is included in the Basic LDAR Program through the initial audit and is identified in Cenex's Certification as set forth in Paragraph 144.

**301. Annual Monitoring Outside of the Basic LDAR Program.** If Cenex chooses to comply with 140(a) (Additional Annual Monitoring), then Cenex shall receive a release for all

civil liability of Cenex to the United States and the Plaintiff-Intervenor for violations of the LDAR requirements promulgated pursuant to Sections 111 and 112 of the federal Clean Air Act, and codified at 40 C.F.R. Part 60, Subparts VV and GGG; 40 C.F.R. Part 61, Subparts J and V; and 40 C.F.R. Part 63, Subparts F, H, and CC occurring prior to the Date of Entry of the Consent Decree at the Laurel Refinery for all equipment in light liquid service and gas and/or vapor service which is not included in the Basic LDAR Program through the initial audit and identified in Cenex's Certification as set forth in Paragraph 144.

**302. Benzene Waste Operations NESHAP.** Entry of this Consent Decree shall resolve all civil liability of Cenex to the United States and the Plaintiff-Intervenor for violations of the National Emission Standard for Benzene Waste Operations, 40 C.F.R. Part 61, Subpart FF, promulgated pursuant to Section 112(e) of the Act, 42 U.S.C. § 7412(e), that (1) commenced and ceased prior to the Date of Entry of the Consent Decree; and (2) commenced prior to the Date of Entry of the Consent Decree and continued past the Date of Entry, provided that the events giving rise to such violations are identified and addressed by Cenex as required under Paragraphs 98 - 103 (Benzene NESHAP requirements).

**303.** Entry of this Consent Decree shall resolve all civil liability of Cenex to the United States and the Plaintiff-Intervenor for violations of any applicable state regulations that implement, adopt, or incorporate the specific federal regulatory requirements identified in Paragraphs 300 - 302 that (1) commenced and ceased prior to the Date of Entry of the Consent Decree; and (2) commenced prior to the Date of Entry of the Consent Decree and continued past the Date of Entry, provided that the events giving rise to such violations are identified and addressed by Cenex as required under Section V(M) for LDAR requirements and under Section

V(L) for Benzene Waste Operations NESHAP requirements.

**ii. Reservation of Rights Regarding LDAR and Benzene Waste Operations NESHAP Requirements.**

304. Notwithstanding the resolution of liability in Paragraphs 300 - 303, nothing in this Consent Decree precludes the United States and/or Plaintiff-Intervenor from seeking from Cenex:

- (a) injunctive and/or other equitable relief for violations of Benzene Waste Operations NESHAP and/or LDAR requirements that (1) commenced prior to the Date of Entry of this Consent Decree and continued after the Date of Entry if Cenex fails to identify and address such violations as required by Sections V(L) and V(M) of this Consent Decree; or (2) commenced after the Date of Entry of the Consent Decree; or
- (b) civil penalties for violations of the Benzene Waste Operations NESHAP and/or LDAR requirements occurring on or after the Date of Entry of the Consent Decree.

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

305. **Claim/Issue Preclusion.** In any subsequent administrative or judicial proceeding initiated by the United States or the Plaintiff-Intervenor for injunctive relief, penalties, or other appropriate relief against Cenex for violations of the PSD/NSR, NSPS, NESHAP, and/or LDAR requirements, not identified in this Section XVII (Effect of Settlement) (¶¶ 291 - 306) of the Consent Decree and/or in the Complaint filed in this action:

a. Cenex shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, or claim-splitting. Nor may Cenex assert, or maintain, any other defenses based upon any contention that the claims

raised by the United States or the Plaintiff-Intervenor in the subsequent proceeding were or should have been brought in the instant case. Nothing in the preceding sentences is intended to affect the ability of Cenex to assert that the claims are deemed resolved by virtue of this Section XVII (Effect of Settlement) (§§ 291 - 306) of the Consent Decree.

b. Except as set forth in subparagraph (a) immediately above, the United States and Plaintiff-Intervenor may not assert or maintain that this Consent Decree constitutes a waiver or determination of, or otherwise obviates, any claim or defense whatsoever, or that this Consent Decree constitutes acceptance by Cenex of any interpretation or guidance issued by EPA related to the matters addressed in this Consent Decree.

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

## **XVIII. GENERAL PROVISIONS**

### **A. Other Laws.**

**307.** Except as specifically provided by this Consent Decree, nothing in this Consent Decree shall relieve Cenex of their obligations to comply with all applicable federal, state and local laws and regulations. Subject to Section XVII (Effect of Settlement) (§§ 291 - 306), nothing contained in this Consent Decree shall be construed to prevent or limit the rights of the United States or the State of Montana to seek or obtain other remedies or sanctions available under other federal, state or local statutes or regulations, by virtue of Cenex's violation of the Consent Decree or of the statutes and regulations upon which the Consent Decree is based, or for

Cenex's violations of any applicable provision of law, other than the specific matters resolved herein. This shall include the right of the United States or the State of Montana to invoke the authority of the Court to order Cenex's compliance with this Consent Decree in a subsequent contempt action.

**B. Post-Permit Violations.**

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

**C. Failure of Compliance.**

309. The United States and the State of Montana do not, by their consent to the entry of the Consent Decree, warrant or aver in any manner that Cenex's complete compliance with the Consent Decree will result in compliance with the provisions of the federal Clean Air Act or the Montana Clean Air Act. Notwithstanding the review or approval by EPA and/or the Montana DEQ of any plans, reports, policies or procedures formulated pursuant to the Consent Decree, Cenex shall remain solely responsible for compliance with the terms of the Consent Decree, all applicable permits, and all applicable federal, state and local laws and regulations.

**D. Service of Process.**

310. Cenex hereby agrees to accept service of process by mail with respect to all matters

arising under or relating to the Consent Decree and to waive the formal service requirements set forth in Rule 4 of the Federal Rules of Civil Procedure and any applicable local rules of this Court, including but not limited to, service of a summons. The persons identified by Cenex at Paragraph 315 (Notice) are authorized to accept service of process with respect to all matters arising under or relating to the Consent Decree.

**E. Post-Lodging/Pre-Entry Obligations.**

311. Obligations of Cenex under this Consent Decree to perform duties scheduled to occur after the Date of Lodging of the Consent Decree, but prior to the Date of Entry of the Consent Decree, shall be legally enforceable on and after the Date of Entry of the Consent Decree. Liability for stipulated penalties, if applicable, shall accrue for violation of such obligations and payment of such stipulated penalties may be demanded by the United States and/or the State of Montana as provided in this Consent Decree, provided that stipulated penalties that may have accrued between the Date of Lodging of the Consent Decree and the Date of Entry of the Consent Decree may not be collected unless and until this Consent Decree is entered by the Court.

**F. Costs.**

312. Each Party to this action shall bear its own costs and attorneys' fees, except that the United States and the State of Montana 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 Cenex.

**G. Public Documents.**

313. All information and documents submitted by Cenex to the Applicable Federal and



State Agencies pursuant to this Consent Decree shall be subject to public inspection in accordance with the respective statutes and regulations that are applicable to EPA and the Montana DEQ, unless subject to legal privileges or protection or identified and supported as business confidential in accordance with the respective state or federal statutes or regulations.

#### **H. Public Notice and Comment.**

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

#### **I. Notice.**

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

notifications, certifications, or other communications required or allowed under this Consent Decree to be submitted or delivered to the United States, EPA, Montana DEQ, or Cenex shall be addressed as follows:

**As to the United States:**

Chief  
Environmental Enforcement Section  
Environment and Natural Resources Division  
U.S. Department of Justice  
P.O. Box 7611, Ben Franklin Station  
Washington, DC 20044-7611  
Reference Case No. 90-5-2-1-07726

**As to EPA:**

U.S. Environmental Protection Agency  
Director, Air Enforcement Division  
Ariel Rios Building  
1200 Pennsylvania Avenue, N.W.  
Mail Code 2242-A  
Washington, DC 20460

**As to EPA Region 8:**

Air Program Coordinator  
U.S. EPA Region 8, Montana Office  
10 W. 15<sup>th</sup> St., Suite 3200  
Helena, MT 59262

and an electronic copy to:

Patrick Foley, Senior Environmental Engineer, EPA  
[foley.patrick@epa.gov](mailto:foley.patrick@epa.gov)

Mario Jorquera, Branch Chief, Stationary Source Branch, EPA  
[jorquera.mario@epa.gov](mailto:jorquera.mario@epa.gov)

Betsy Wahl, Environmental Protection Specialist, EPA  
[wahl.betsy@epa.gov](mailto:wahl.betsy@epa.gov)

Norma L. Eichlin, Vice President - Federal Programs,

MATRIX Environmental & Geotechnical Services, Inc.  
[neichlin@matrixengineering.com](mailto:neichlin@matrixengineering.com)

**As to the State of Montana:**

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

Bureau Chief  
Air and Waste Management Bureau  
Metcalf Building  
P.O. Box 200901  
Helena, MT 50620-0901

**As to Cenex:**

Patrick B. Kimmel  
CHS Inc.  
Refinery Manager  
803 Highway 212 South  
P.O. Box 909  
Laurel, Montana 59044

Any party may change either the notice recipient or the address for providing notices to it by serving all other parties with a notice setting forth such new notice recipient or address. In addition, the nature and frequency of reports required by the Consent Decree may be modified by mutual consent of the Parties. The consent of the United States to such modification must be in the form of a written notification from the Department of Justice, but need not be filed with the Court to be effective.

**J. Approvals.**

316. All EPA approvals or comments required under this Decree shall come from EPA, Office of Regulatory Enforcement, Air Enforcement Division, at the address listed in Paragraph 315 (Notice). All Plaintiff-Intervenor approvals shall be sent from the office(s) identified in

Paragraph 315.

**K. Paperwork Reduction Act.**

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

**L. Modification.**

318. The Consent Decree contains the entire agreement of the Parties and shall not be modified by any prior oral or written agreement, representation or understanding. Prior drafts of the Consent Decree shall not be used in any action involving the interpretation or enforcement of the Consent Decree. Non-material modifications to this Consent Decree shall be in writing, signed by the Parties, but need not be filed with the Court. For purposes of this Paragraph, modifications to schedules for the catalyst additive programs and to frequency of reporting obligations shall be considered non-material, provided that such changes are agreed upon in writing by EPA and Cenex. Material modifications to this Consent Decree shall be in writing, signed by the Parties, and shall be effective upon filing with the Court. Specific provisions in this Consent Decree that govern specific types of modifications shall be effective as set forth in the specific provision governing the modification.

**XIX. TERMINATION**

319. This Consent Decree shall be subject to termination upon motion by the United States or Cenex (under the conditions identified in Paragraph 320). In order for termination to occur, Cenex must have completed and satisfied all of the following requirements of this Consent Decree:

- i. installation of control technology systems as specified in this Consent Decree;

- ii. compliance with all provisions contained in this Consent Decree;
- iii. payment of all penalties and other monetary obligations due under the terms of the Consent Decree; no penalties or other monetary obligations due hereunder can be outstanding or owed to the United States or the State of Montana;
- iv. completion of the projects set forth in Paragraphs 183 and 188, or payment of the relevant penalty under Section IX (Environmentally Beneficial Projects);
- v. receipt of permits incorporating the surviving and/or final emission limits, standards, and schedules established under Section V;
- vi. operation for at least one year of each unit in compliance with the emission limits established herein, and certification of such compliance for each unit in the first calendar quarterly progress report following the conclusion of the compliance period.
- vi. EPA's receipt of a written certification by Cenex that it has completed or satisfied Paragraph 319(i)-(v), above, to the United States and the Montana DEQ.

**320.** Unless, within 120 days of receipt of the certification required by Paragraph 319(vi), either the United States or the Montana DEQ objects in writing with specific reasons, the Court may upon motion by Cenex order that this Consent Decree be terminated. If either the United States or the Montana DEQ objects to the certification required by Paragraph 319(vi) within 120 days of receipt of the certification, the matter shall be submitted to the Court for resolution under Section XVI (Retention of Jurisdiction/Dispute Resolution) of this Consent Decree. In such case, Cenex shall bear the burden of proving that this Consent Decree should be terminated.

**XX. SIGNATORIES**

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


Dated and entered this \_\_\_\_\_ day of \_\_\_\_\_, 2003.

\_\_\_\_\_  
UNITED STATES DISTRICT JUDGE  
United States District Court for the  
District of Montana

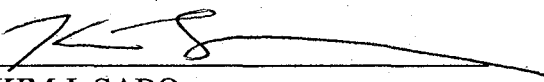
WE HEREBY CONSENT to the entry of the Consent Decree in United States, et al. v. CHS Inc., subject to the public notice and comment requirements of 28 C.F.R. § 50.7.

FOR PLAINTIFF THE UNITED STATES OF AMERICA:

Date: 9.25.03

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

Date: 9-29-03

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

Date: \_\_\_\_\_

\_\_\_\_\_  
WILLIAM MERCER  
United States Attorney  
District of Montana

Date: \_\_\_\_\_

\_\_\_\_\_  
LORRAINE D. GALLINGER  
First Assistant United States Attorney  
United States Attorney's Office  
2929 3<sup>rd</sup> Ave. North  
Suite 400  
Billings, MT 59101  
(406) 657-6101

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

FOR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY:

Date: 9/29/03



JOHN PETER SUAREZ

Assistant Administrator

Office of Enforcement and Compliance Assurance

United States Environmental Protection Agency

1200 Pennsylvania Avenue, N.W.

Mail Code 2201-A

Washington, DC 20460

Date: \_\_\_\_\_

SEE NEXT PAGE

CAROL RUSHIN

Assistant Regional Administrator

Office of Enforcement, Compliance and  
Environmental Justice

United States Environmental Protection Agency

Region 8

999 18<sup>th</sup> Street, Suite 300

Denver, CO 80202-2466

Date: \_\_\_\_\_

SEE NEXT PAGE

DAVID ROCHLIN

Senior Air Enforcement Attorney

United States Environmental Protection Agency

Region 8

999 18<sup>th</sup> Street, Suite 300

Denver, CO 80202-2466



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

FOR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY:

Date: \_\_\_\_\_

SEE PRIOR PAGE

JOHN PETER SUAREZ

Assistant Administrator

Office of Enforcement and Compliance Assurance


United States Environmental Protection Agency

1200 Pennsylvania Avenue, N.W.

Mail Code 2201-A

Washington, DC 20460

Date: 9/25/2003



CAROL RUSHIN

Assistant Regional Administrator

Office of Enforcement, Compliance and

Environmental Justice

United States Environmental Protection Agency

Region 8

999 18<sup>th</sup> Street, Suite 300

Denver, CO 80202-2466

Date: September 24, 2003



DAVID ROCHLIN

Senior Air Enforcement Attorney

United States Environmental Protection Agency

Region 8

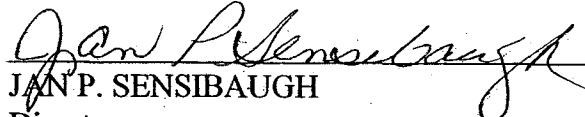
999 18<sup>th</sup> Street, Suite 300

Denver, CO 80202-2466


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

FOR PLAINTIFF-INTERVENOR STATE OF MONTANA

Date: 9/24/08

  
JAN P. SENSIBAUGH  
Director  
Montana Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620-0901

Date: 9/24/08

  
DAVID RUSOFF  
Special Assistant Attorney General  
Montana Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620-0901

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

CHS Inc.,

Patrick B. Kimmet

PATRICK B. KIMMET

Refinery Manager

CHS Inc.

803 Highway 212 South

P.O. Box 909

Laurel, Montana 59044

## APPENDIX A

### REFINERY HEATERS, BOILERS, AND COMPRESSORS IN BASELINE

STACK DESCRIPTION	HEATER/BLR HEAT INPUT CAPACITY	2000 NO <sub>x</sub> EMISS	2001 NO <sub>x</sub> EMISS	EMISSION FACTOR BASIS	2000 GAS FIRED/YR	2001 GAS FIRED/YR	2000 NO <sub>x</sub> EMISSIONS	2001 NO <sub>x</sub> EMISSIONS
	MM BTU/HR	lb/mmBTU	lb/mmBTU		MM BTU/HR	MM BTU/HR	TONS	TONS
PLATFORM HEATER	190.3	0.163	0.163	TEST 3/02	86.59	101.03	61.8	72.1
H-101 FUEL GAS (includes PSA)	123.2	0.044	0.044	S T 6/01&6/00	82.36	90.37	15.9	17.4
CO BOILER	112.6	0.267	0.267	TEST 3/02	56.00	68.47	65.5	80.1
MAIN CRUDE HEATER	129.0	0.175	0.175	TEST 3/02	63.95	68.28	49.0	52.3
MAIN CRUDE HEATER SWS OH **							15.8	12.4
#10 BOILER	99.9	0.026	0.026	S TEST 3/99	54.47	58.34	6.2	6.6
#9 BOILER (natural only)	98.0	0.108	0.107	AP-42	36.47	26.29	17.2	12.4
#3 BOILER	95.0	0.108	0.107	AP-42	41.93	38.46	19.7	18.0
#3 BOILER fuel oil		0.382	0.382	AP-42	16.55	11.95	27.9	20.0
#4 BOILER	95.0	0.108	0.107	AP-42	42.60	34.31	19.9	16.1
#4 BOILER fuel oil		0.382	0.382	AP-42	16.55	11.95	27.9	20.0
#5 BOILER	95.0	0.108	0.107	AP-42	14.01	21.06	6.5	9.9
#5 BOILER fuel oil		0.382	0.382	AP-42	16.55	11.95	28.0	20.0
FCC FEED PREHEATER	83.0	0.108	0.107	AP-42	22.80	16.69	10.8	7.8
ALKY OIL HEATER	60.5	0.108	0.107	AP-42	30.49	39.70	14.4	18.6
#2 CRUDE HEATER	52.6	0.108	0.107	AP-42	47.13	53.76	22.3	25.2
CRUDE PREHEATER	48.0	0.108	0.107	AP-42	45.22	46.34	21.3	21.7
#1 VACUUM HEATER	45.7	0.108	0.107	AP-42	24.24	27.36	11.4	12.8
#3 & 4 UNIF COMPS*	6.8	2.300	2.300	AP-42	6.80	6.80	68.5	68.5
MDU CHARGE HEATER *	43.0	0.108	0.107	AP-42	15.08	21.82	7.1	10.2
MDU STRIPPER HEATER *	27.0	0.108	0.107	AP-42	18.75	22.49	8.8	10.5
TOTALS					738.56	777.42	526.0	532.9

876.57

\* Although less than 40 mmBTU/hr, these sources are included in baseline for shut down / control consideration

\*\* Sour Water Stripper (SWS) over head included in baseline because it was combusted in baseline sources.

Monitoring & calculations of NO<sub>x</sub> emissions from SWS OH are based on Cenex Preconstruction permit #1821-01

## **APPENDIX B**

### **DETERMINING THE OPTIMIZED ADDITION RATES OF LOW NO<sub>x</sub> COMBUSTION PROMOTERS AND NO<sub>x</sub> REDUCING CATALYST ADDITIVES AT THE FCCU**

#### **I. PURPOSE**

This Appendix defines a process by which Cenex shall determine for the Laurel Refinery FCCU the Optimized Addition Rates for Low NO<sub>x</sub> Combustion Promoters and NO<sub>x</sub> Reducing Catalyst Additives during the Optimization Period.

#### **II. ESTABLISHING AN OPTIMIZED LOW NO<sub>x</sub> COMBUSTION PROMOTER ADDITION RATE**

A. **Overview.** Establishing an Optimized Low NO<sub>x</sub> Combustion Promoter Addition Rate for the Laurel Refinery FCCU is a three-step process: (1) establishing a minimum addition rate for the conventional combustion promoter that Cenex currently uses such that the effectiveness of the conventional combustion promoter is maintained (the “Minimum Conventional Combustion Promoter Addition Rate”); (2) replacing the conventional combustion promoter with Low NO<sub>x</sub> Combustion Promoter at an addition rate that is the functional equivalent of the Minimum Conventional Combustion Promoter Addition Rate (the “Initial Low NO<sub>x</sub> Combustion Promoter Addition Rate”); and (3) increasing the addition rate up to two times the Initial Low NO<sub>x</sub> Combustion Promoter Addition Rate if the Initial Low NO<sub>x</sub> Combustion Addition Rate is not effective (the “Optimized Low NO<sub>x</sub> Combustion Promoter Addition Rate”).

B. **“Effectiveness” Determinations.** The effectiveness of conventional combustion promoter shall be determined by the following criteria: (1) afterburn is controlled and regenerator temperature and combustion levels are adequately maintained; and (2) temperature excursions are brought under control adequately. The effectiveness of Low NO<sub>x</sub> Combustion

Promoter shall be determined by those two criteria and by whether a measurable reduction in NOx emissions occurs.

**C. Establishing the Minimum Conventional Combustion Promoter Addition Rate.**

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

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

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

### III. ESTABLISHING AN OPTIMIZED NO<sub>x</sub> REDUCING CATALYST ADDITIVE ADDITION RATE

A. Overview. The Optimized NO<sub>x</sub> Reducing Catalyst Additive Addition Rate shall be determined by evaluating NO<sub>x</sub> emissions reductions and annualized costs at three different addition rates.

B. The Increments. The three addition rates or “increments” shall be:

- 1.0 Weight % NO<sub>x</sub> Reducing Catalyst Additive
- 1.5 Weight % NO<sub>x</sub> Reducing Catalyst Additive
- 2.0 Weight % NO<sub>x</sub> Reducing Catalyst Additive

C. The Procedure. Cenex shall successively add NO<sub>x</sub> Reducing Catalyst Additive at each increment set forth above. Once a steady state has been achieved at each increment, Cenex shall evaluate the performance of the NO<sub>x</sub> Reducing Catalyst Additive in terms of NO<sub>x</sub> emissions reductions and projected annualized costs. The final Optimized NO<sub>x</sub> Reducing Catalyst Additive Addition Rate shall occur at the lowest addition rate where either:

- (1) the FCCU meets 20 ppmvd NO<sub>x</sub> (corrected to 0% O<sub>2</sub>) on a 365-day rolling average, in which case Cenex shall agree to accept limits of 20 ppmvd NO<sub>x</sub> (corrected to 0% O<sub>2</sub>) on a 365-day rolling average basis at the conclusion of the Demonstration Period;
- (2) the total annualized cost-effectiveness of the NO<sub>x</sub> Reducing Catalyst Additive used exceeds \$10,000 per ton of NO<sub>x</sub> removed as measured from an uncontrolled baseline (as estimated based on current operating parameters as compared to operating parameters during the baseline period); or
- (3) the Incremental NO<sub>x</sub> Reduction Factor is less than 1.8, where the Incremental NO<sub>x</sub> Reduction Factor is defined as:

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

$PR_i$  = Pollutant (NO<sub>x</sub>) reduction rate at increment i in pounds per day from the baseline

$PR_{i-1}$  = Pollutant (NO<sub>x</sub>) reduction rate at the increment prior to increment i in pounds per day from the baseline

$CAR_i$  = Total Catalyst Additive Rate at increment  $i$  in pounds per day from the baseline

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

If the conditions of either (1), (2), or (3) above are not met at any addition rate less than 2.0

Weight % NOx Reducing Catalyst Additive, then the Optimized Addition Rate shall be 2.0

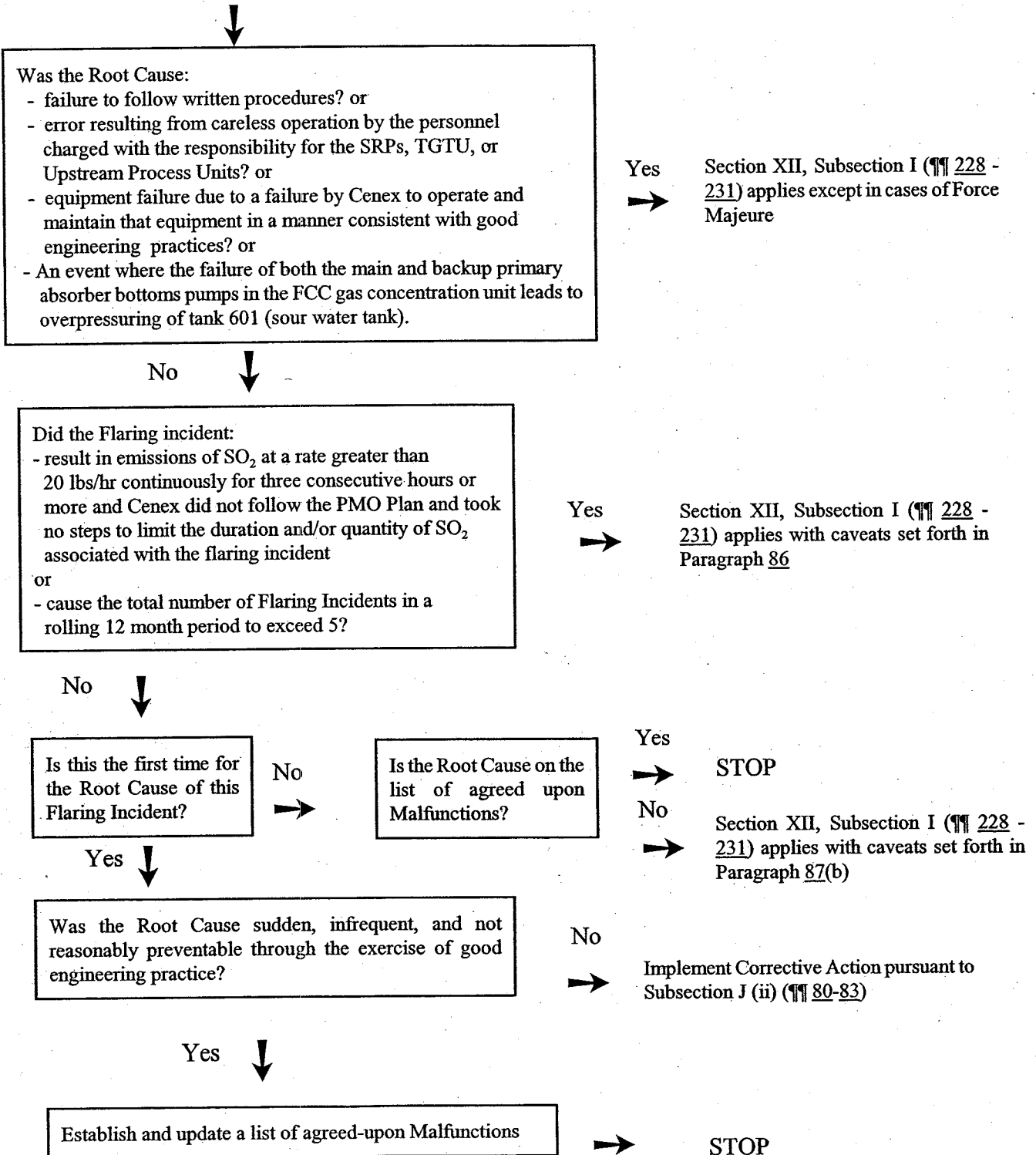
Weight % NOx Reducing Catalyst Additive.



## APPENDIX C

### LOGIC DIAGRAM FOR SECTION V, SUBSECTION J (¶¶ 78 - 93)

#### ALL FLARING INCIDENTS



**APPENDIX D**

**SUMMARY OF REPORTS, PLANS AND CERTIFICATIONS  
FOR THE BENZENE WASTE OPERATIONS NESHAPE  
ENHANCED PROGRAM PROVISIONS**

<b>Name or Summary of the Report, Plan, or Certification</b>	<b>CD Sub-Para No.</b>	<b>Required ("R") v. Contingent ("C")</b>	<b>One-Time ("1") v. Quarterly ("Q")</b>	<b>Due Date</b>
<b>BWON Compliance Review and Verification Report</b>	<b><u>98</u></b>	<b>R</b>	<b>1</b>	<b>7 months after Date of Lodging</b>
<b>Amended BWON Compliance Review and Verification Report</b>	<b><u>99</u></b>	<b>C</b>	<b>1</b>	<b>90 days after completing additional sampling requested by EPA</b>
<b>Amended TAB Report</b>	<b><u>100</u></b>	<b>C</b>	<b>1</b>	<b>60 days after completing BWON Compliance Review and Verification Report or Amended BWON Compliance Review and Verification Report</b>
<b>Plan to comply w/ 6 BQ if TAB equals or is greater than 10</b>	<b><u>101</u></b>	<b>C</b>	<b>1</b>	<b>6 months after completing BWON Compliance Review and Verification Report or Amended BWON Compliance Review and Verification Report</b>
<b>Revised Plan to comply w/ 6 BQ if TAB equals or is greater than 10</b>	<b><u>102</u></b>	<b>C</b>	<b>1</b>	<b>Within sixty (60) days after receiving any notification of disapproval or request for modification from EPA</b>
<b>6 BQ Compliance Certification</b>	<b><u>103</u></b>	<b>C</b>	<b>1</b>	<b>30 days after completing all actions necessary to come into compliance</b>
<b>Waste/Slop/Off-Spec Oil Schematics</b>	<b><u>109</u></b>	<b>R</b>	<b>1</b>	<b>Prepare within 6 months after Date of Lodging; Submit to EPA as part of EOL Sampling Plan</b>

<b>Name or Summary of the Report, Plan, or Certification</b>	<b>CD Sub-Para No.</b>	<b>Required ("R") v. Contingent ("C")</b>	<b>One-Time ("1") v. Quarterly ("Q")</b>	<b>Due Date</b>
<b>Revised Waste/Slop/Off-Spec Oil Schematics</b>	<b><u>109</u></b>	<b>C</b>	<b>1</b>	<b>Mutually-agreed upon date between Cenex and EPA</b>
<b>Schedule to complete installation of controls on waste management units handling organic benzene waste</b>	<b><u>110</u></b>	<b>C</b>	<b>1</b>	<b>Mutually-agreed upon date between Cenex and EPA</b>
<b>EOL Sampling Plan if TAB less than 10 Mg/yr</b>	<b><u>115</u></b>	<b>C</b>	<b>1</b>	<b>300 days from the Date of Lodging</b>
<b>EOL Revised Sampling Plan if TAB less than 10 Mg/yr</b>	<b><u>115</u></b>	<b>C</b>	<b>As needed</b>	<b>If and when Cenex becomes aware of factors indicating original plan no longer accurately reflects EOL benzene quantity</b>
<b>EOL Sampling Plan if TAB greater than 10 Mg/yr</b>	<b><u>121</u></b>	<b>C</b>	<b>1</b>	<b>2 months after the certification required under Paragraph <u>103</u></b>
<b>EOL Revised Sampling Plan if TAB greater than 10 Mg/yr</b>	<b><u>122</u></b>	<b>C</b>	<b>1</b>	<b>If and when Cenex becomes aware of factors indicating original plan no longer accurately reflects EOL benzene quantity</b>
<b>Plan to ensure that uncontrolled benzene does not exceed 10 Mg/yr in the calendar year</b>	<b><u>117</u>, <u>118</u></b>	<b>C</b>	<b>1</b>	<b>Either: (1) if and when the quarterly EOL benzene quantity exceeds 2.5 Mg; or (2) 30 days after the end of the Q in which the projected calendar year benzene quantity is equal to or greater than 10 Mg</b>

Name or Summary of the Report, Plan, or Certification	CD Sub-Para No.	Required ("R") v. Contingent ("C")	One-Time ("1") v. Quarterly ("Q")	Due Date
Proposal for Third-Party TAB Study and Compliance Review	<u>119</u> , <u>128</u>	C	1	<p>Pursuant to Paragraph <u>119</u>: Mutually-agreed upon date between Cenex and EPA</p> <p>Pursuant to Paragraph <u>128</u>: Last day of the Fourth Quarter, if in prior 3 consecutive quarters the projected EOL benzene quantity will exceed 4.8 Mg/yr; or if Sampling of &gt;0.05 and/or &gt;0.03 streams indicate that the projected uncontrolled benzene for the calendar year will exceed 6 Mg</p>
Third-Party TAB Study and Compliance Review Results	<u>119</u> , <u>128</u>	C	1	30 days after Cenex receives the results from the Third-Party Study and Compliance Review
Plan to implement the results of the Third-Party TAB Study and Compliance Review	<u>119</u> , <u>128</u>	C	1	120 days after Cenex receives the results from the Third-Party TAB Study and Compliance Review, or mutually agreed upon date between Cenex and EPA
Plan to ensure that uncontrolled benzene does not exceed 6 Mg/yr in the calendar year	<u>127</u>	C	1	30 days after the end of the Q in which the projected calendar year benzene quantity is equal to or greater than 6 Mg
Report on training done in that Quarter	<u>132</u> , <u>133</u>	R/C	Q	Each Qtrly Report due under the Decree
Results of annual Sampling of >0.05 Mg/yr benzene streams	<u>132</u>	R	Q	In the first Qtrly Report for the first calendar Q of each year

<b>Name or Summary of the Report, Plan, or Certification</b>	<b>CD Sub-Para No.</b>	<b>Required ("R") v. Contingent ("C")</b>	<b>One-Time ("1") v. Quarterly ("Q")</b>	<b>Due Date</b>
<b>Results of 3 Months of Monthly EOL Results</b>	<u>132</u> , <u>133</u>	R/C	Q	<b>Each Qtrly Report due under the Decree</b>
<b>Results of Sampling of &gt; 0.05 Streams</b>	<u>133</u>	C	Q	<b>Each Qtrly Report due under the Decree</b>
<b>Results of Sampling of &gt; 0.03 Streams</b>	<u>133</u>	C	Q	<b>Each Qtrly Report due under the Decree</b>

## APPENDIX E

### SUMMARY OF REPORTS, PLANS AND CERTIFICATIONS FOR THE LDAR ENHANCED PROGRAM PROVISIONS

Name or Summary of the Report, Plan, or Certification	CD Sub-Para No.	Required ("R") v. Contingent ("C")	One-Time ("1") v. Quarterly ("Q")	Due Date
Written Refinery-Wide LDAR Program	<u>141</u> , <u>167</u>	R	1	Complete 120 days after Date of Lodging; Submit to EPA in the first Qtrly report in which the rqmt. becomes due
Updated Refinery-Wide LDAR Program	<u>141</u>	C	1	As needed
Initial Compliance Audit Report	<u>144</u>	R	1	270 days after Date of Lodging
Certification of completion of initial audit and related corrective actions	<u>144</u>	R	1	60 days after completion of the initial audit
LDAR audit reports and records of corrective actions	<u>149</u> , <u>168</u>	R	>1	In the Qtrly Report for the 1 <sup>st</sup> calendar Q of each year
Certification of implementation of the first attempt at repair program	<u>167</u>	R	1	In the first Qtrly report due under the CD or the first Qtrly report in which the rqmt. becomes due
Certification of implementation of QA/QC procedures for review of data generated by LDAR monitoring technicians	<u>167</u>	R	1	In the first Qtrly report due under the CD or the first Qtrly report in which the rqmt. becomes due
Identification of the Refinery's LDAR Coordinator	<u>167</u>	R	1	In the first Qtrly report due under the CD or the first Qtrly report in which the rqmt. becomes due

<b>Name or Summary of the Report, Plan, or Certification</b>	<b>CD Sub-Para No.</b>	<b>Required ("R") v. Contingent ("C")</b>	<b>One-Time ("1") v. Quarterly ("Q")</b>	<b>Due Date</b>
<b>Certification of the development of a tracking program for new valves and pumps</b>	<u>167</u>	R	1	<b>In the first Qtrly report due under the CD or the first Qtrly report in which the rqmt. becomes due</b>
<b>Certification of implementation of calibration and calibration drift assessment procedures</b>	<u>167</u>	R	1	<b>In the first Qtrly report due under the CD or the first Qtrly report in which the rqmt. becomes due</b>
<b>Certification of implementation of the "delay of repair" procedures</b>	<u>167</u>	R	1	<b>In the first Qtrly report due under the CD or the first Qtrly report in which the rqmt. becomes due</b>
<b>Specifications for electronic data collection</b>	<u>167</u>	R	1	<b>In the first Qtrly report due under the CD or the first Qtrly report in which the rqmt. becomes due</b>
<b>Report on training for new LDAR personnel</b>	<u>169</u>	R	>1	<b>In each Section 63.654 Report</b>
<b>Report on annual training for LDAR personnel</b>	<u>169</u>	R	>1	<b>In each Section 63.654 Report</b>
<b>Report on LDAR training for refinery and operations personnel who hold positions relevant to LDAR</b>	<u>169</u>	R	>1	<b>In each Section 63.654 Report</b>
<b>Quarterly monitoring reports</b>	<u>169</u>	R	>1	<b>In each Section 63.654 Report</b>

## APPENDIX F

### List of Heaters, Boilers, and other Combustion Devices Firing Refinery Fuel Gas with Dates for Compliance with NSPS Subparts A & J other than Date of Lodging

Source	NSPS Applicability Deadline	AMP Stream
Naphtha Unifiner Splitter Heater		
- #1 and #2 Unifiner Comp. Dist. Piece	Date of AMP Approval Or 120 days after AMP Disapproval whichever is earlier	#1 and #2 Unifiner Comp. Dist. Piece
- #3 and #4 Unifiner Comp. Dist. Piece	July 1, 2005	#3 and #4 Unifiner Comp. Dist. Piece
H-101 Hydrogen Reformer Heater	Date of AMP Approval Or 120 days after AMP Disapproval whichever is earlier	PSA Tail Gas
Alkylation Hot Oil Belt Heater	Date of AMP Approval Or 120 days after AMP Disapproval whichever is earlier	Butamer Stabilizer Off Gas
Loading Rack Vapor Combustion Unit	Date of AMP Approval Or 120 days after AMP Disapproval whichever is earlier	Loading Rack Vapor Collection
Refinery Flare	Either: 1). December 31, 2005; or (2) if the last AMP Approval, out of the multiple AMPs submitted on June 30, 2004, occurs after December 31, 2005, then Date of the last AMP Approval; or (3) if the last AMP Disapproval, out of the multiple AMPs submitted on June 30, 2004, occurs after December 31, 2005, then 120 days after the last AMP Disapproval	



**APPENDIX G**  
**(METHODOLOGY FOR DETERMINING COMPLIANCE WITH THE FUEL OIL BURNING**  
**LIMIT FROM THE COMBUSTION OF ALKYLATION UNIT POLYMER OIL)**

**Part I**

Calculations Methodology used to estimate SO<sub>2</sub> emissions from combustion of Alky polymer oil in the Alky hot oil heater:

1. Polymer dump tower volume =  $\pi * \text{radius}^2 * \text{height} *$   
=  $3.14 * (0.96 \text{ ft} * 0.96 \text{ ft}) * 3 \text{ ft}$   
= 8.69 cft
2. Annual polymer fired = dump tower volume \* dumps/yr  
=  $8.69 \text{ cft} * 2 \text{ dumps/shift} * 3 \text{ shifts/day} * 365 \text{ days/yr} * 7.48 \text{ gal/cft}$   
= 142,353 gal/yr
3. SO<sub>2</sub> emissions from polymer combustion  
= Polymer fired (gal/yr) \* SpG \* 8.33 lb/gal \* S wt% \* 64 lb mol SO<sub>2</sub>/32 lb mol S \* 1 ton/2000 lb  
=  $142,353 \text{ gal/yr} * 0.7 * 8.33 * 1 \text{ wt\% S} * 64/32 * 1/2000 = 8.3 \text{ TPY SO}_2$

Cenex will analyze the polymer oil at least twice per year for sulfur content and specific gravity. Cenex will use the average of the previous four results in the above calculation.

**Part II**

Methodology used to estimate SO<sub>2</sub> emissions from combustion of fuel oil:

Montana SO<sub>2</sub> SIP - Billings/Laurel SO<sub>2</sub> Emission Control Plan

"Fuel Oil Flowmetering and Sulfur Analysis Specifications" means Method C-1 of Attachment 1 of Exhibit A of For The Matter Relating to Control of Sulfur Dioxide Emissions in the Billings and Laurel Area Before the Board of Environmental Review of the State of Montana, dated June 12, 1998. Cenex specific requirements are located in Exhibit A, Section 2(A)(9)(c) and Section 6(F).

## APPENDIX H

### **PREDICTIVE EMISSIONS MONITORING SYSTEMS FOR HEATERS AND BOILERS WITH CAPACITIES BETWEEN 150 AND 100 mmBTU/HR**

Cenex shall continuously monitor NOx emissions from heaters and boilers with capacities of less than 150 mmBTU/hr (HHV) but greater than 100 mmBTU/hr (HHV) in accordance with this Appendix to demonstrate compliance with the NOx requirements established for Controlled Heaters and Boilers pursuant to Section V, Subsection E (¶¶ 43- 54) of the Consent Decree. Cenex shall continuously monitor by either (1) installing and operating a NOx CEMS or (2) installing a Predictive Emission Monitoring System (PEMS) for NOx. A CEMS directly measures the gas concentration of NOx in a stack. A PEMS is a mathematical model that predicts the gas concentration of NOx in the stack based on a set of operating data. Consistent with the CEMS data frequency requirements of 40 C.F.R. Part 60, the PEMS shall calculate a pound per million BTU value at least once every 15 minutes, and all of the data produced in a calendar hour shall be averaged to produce a calendar hourly average value in pounds per million BTU.

The types of information needed for a PEMS are described below. The list of instruments and data sources shown below represent an ideal case. However at a minimum, each PEMS shall include continuous monitoring for at least items 3 - 5 below. Cenex shall identify and use existing instruments and refinery data sources to provide sufficient data for the development and implementation of the PEMS predictive software.

#### **Basis Instrumentation:**

1. Absolute Humidity reading (one instrument per refinery, if available);
2. Fuel Density, Composition and/or Specific Gravity-On line readings (it may be possible, if the fuel gas does not vary widely, that a grab sample and analysis may be substituted);
3. Fuel flow rate;

4. Firebox temperature;
5. Stack excess oxygen reading;
6. Airflow to the firebox (if known or possibly estimated);
7. Process variable data - steam flow rate, temperature and pressure - process stream flow rate, temperature & pressure, etc.

**Computers & Software:**

1. Windows NT computer or Honeywell Node - Windows NT is preferred so "PC Anywhere" software can be used to monitor the PEMs setup;
2. "Software CEM" to calculate the "predicted" NO<sub>x</sub> emissions;
3. Data management software to write the compliance monitoring reports.

**Calibration and Setup:**

1. Data shall be collected for a period of 3 to 7 days for all the data that is to be used to construct the mathematical model. The data shall be collected over an operating range that represents 80% to 100% of typical heater/boiler operation;
2. Collect data for "End of Run" and "Start of Run", if appropriate;
3. A "Sensor Validation" analysis shall be conducted to make sure the system is collecting data properly;
4. Stack Testing (by subcontractor) to develop the actual emissions data for comparison to the collected parameter data;
5. Development of the mathematical models and installation of the model into the computer.

**The elements of a protocol for a PEMS shall include:**

1. Applicability
  - a. Identify source name, location, and emission unit number(s);

- b. Identify the type of industry;
- c. Identify the process of interest;
- d. Identify the regulations or other authorities that apply (e.g.; NSPS, NESHAP, SIP, and/or Consent Decree);
- e. Identify the pollutant(s) subject to monitoring (information on major/area source determination);
- f. Provide expected dates of monitor compliance demonstration testing.

## 2. Source Description

- a. Provide a simplified block flow diagram with parameter monitoring points and emission sampling points identified (e.g.; sampling ports in the stack);
- b. Provide a discussion of process or equipment operations that are known to significantly affect emissions or monitoring procedures (e.g., batch operations, plant schedules, product changes).

## 3. Control Equipment Description

- a. Provide a simplified block flow diagram with parameter monitoring points and emission sampling points identified (e.g.; sampling ports in the stack);
- b. List monitored operating parameters and normal operating ranges;
- c. Provide a discussion of operating procedures that are known to significantly affect emissions (e.g., catalytic bed replacement schedules, ESP rapping cycles, fabric filter cleaning cycles).

## 4. Monitoring System Design

- a. Install, calibrate, operate, and maintain a continuous PEMS;
- b. Provide a general description of the software and hardware components of the PEMS

including manufacturer, type of computer, name(s) of software product(s), monitoring technique (e.g., method of emission correlation). Manufacturer literature and other similar information shall also be submitted, as appropriate;

- c. List all elements used in the PEMS to be measured (e.g., pollutant(s), other exhaust constituent(s) such as O<sub>2</sub> for correction purposes, process parameter(s), and/or emission control device parameter(s));
- d. List all measurement or sampling locations (e.g., vent or stack location, process parameter measurement location, fuel sampling location, work stations);
- e. Provide a simplified block flow diagram of the monitoring system overlaying process or control device diagram (may be included in Source Description and Control Equipment Description);
- f. Provide a description of sensors and analytical devices (e.g., thermocouple for temperature, pressure diaphragm for flow rate);
- g. Provide a description of the data acquisition and handling system operation including sample calculations (e.g., parameters to be recorded, frequency of measurement, data averaging time, reporting units, recording process);
- h. Provide checklists, data sheets, and report format as necessary for compliance determination (e.g., forms for record keeping).

5. Support Testing and Data for Protocol Design

- a. Provide a description of field and/or laboratory testing conducted in developing the correlation (e.g., measurement interference check, parameter/emission correlation test plan, instrument range calibrations);
- b. Provide graphs showing the correlation, and supporting data (e.g., correlation test

results, predicted versus measured plots, sensitivity plots, computer modeling development data).

## 6. Initial Verification Test Procedures

- a. Perform an initial relative accuracy test (RA test) to verify the performance of the PEMS over the permitted operating range. The PEMS must meet the relative accuracy requirement of the applicable Performance Specification in 40 C.F.R. Part 60, Appendix B. The test shall utilize the test methods of 40 C.F.R. Part 60, Appendix A;
- b. Identify the most significant independently modifiable parameter affecting the emissions. Within the limits of safe unit operation, and typical of the anticipated range of operation, test the selected parameter for three RA test data sets at the low operating range, three at the normal operating range and three at the high operating range of that parameter, for a total of nine RA test data sets. Each RA test data set should be between 21 and 60 minutes in duration;
- c. Maintain a log or sampling report for each required stack test listing the emission rate in accordance with the applicable emission limitations;
- d. Demonstrate the ability of the PEMS to detect excessive sensor failure modes that would adversely affect PEMS emission determination. These failure modes include gross sensor failure or sensor drift;
- e. The owner or operator shall demonstrate the ability to detect sensor failures that would cause the PEMS emissions determination to drift significantly from the original PEMS value;
- f. The owner or operator may use calculated sensor values based upon the mathematical relationships established with the other sensors used in the PEMS. The owner or

operator shall establish and demonstrate the number and combination of calculated sensor values which would cause PEMS emission determination to drift significantly from the original PEMS value.

## 7. Quality Assurance Plan

- a. Provide a list of the input parameters to the PEMS (e.g., transducers, sensors, gas chromatograph, periodic laboratory analysis), and a description of the sensor validation procedure (e.g., manual or automatic check);
- b. Provide a description of routine control checks to be performed during operating periods (e.g., preventative maintenance schedule, daily manual or automatic sensor drift determinations, periodic instrument calibrations);
- c. Provide minimum data availability requirements and procedures for supplying missing data (including specifications for equipment outages for QA/QC checks);
- d. List corrective action triggers [e.g., response time deterioration limit on pressure sensor, use of statistical process control (SPC) determinations of problems, sensor validation alarms];
- e. List trouble-shooting procedures and potential corrective actions;
- f. Provide an inventory of replacement and repair supplies for the sensors;
- g. Specify, for each input parameter to the PEMS, the drift criteria for excessive error (e.g.: the drift limit of each input sensor that would cause the PEMS to exceed relative accuracy requirements);
- h. Conduct a quarterly electronic data accuracy assessment tests of the PEMS;
- i. Conduct semiannual RA tests of the PEMS. Annual RA tests may be conducted if the most recent RA test result is less than or equal to 7.5%. Identify the most significant

independently modifiable parameter affecting the emissions. Within the limits of safe unit operation and typical of the anticipated range of operation, test the selected parameter for three RA test data pairs at the low operating range, three at the normal operating range, and three at the high operating range of that parameter for a total of nine RA test data sets. Each RA test data set should be 60 minutes in duration.

## 8. PEMS Tuning

- a. Perform tuning of the PEMS provided that the fundamental mathematical relationships in the PEMS model are not changed;
- b. Perform tuning of the PEMS in case of sensor recalibration or sensor replacement provided that the fundamental mathematical relationships in the PEMS model are not changed.