

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF KANSAS

UNITED STATES OF
AMERICA and

THE STATE OF KANSAS, ex
rel.
KANSAS DEPARTMENT OF
HEALTH AND
ENVIRONMENT,

Plaintiffs,

v.

HOLLYFRONTIER
EL DORADO REFINING LLC,

Defendant.

CIVIL ACTION NO.:
2:20-cv-2270

CONSENT DECREE

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Plaintiff the United States of America, on behalf of the United States Environmental Protection Agency (“EPA”), and Plaintiff the State of Kansas (“State”), on behalf of the Kansas Department of Health and Environment (“KDHE”), have filed a Complaint in this action concurrently with this Consent Decree, against Defendant, HollyFrontier El Dorado Refining LLC, f/k/a Frontier El Dorado Refining LLC (“HFEDR” or “Defendant”), for alleged environmental violations at HFEDR’s petroleum refinery located in El Dorado, Kansas (“El Dorado Refinery” or “Refinery”).

The United States, the State, and HFEDR are among the parties to a consent decree entered by this Court in Civil Action No. 09-cv-1032 on March 26, 2009 (“2009 Consent Decree”), which has since been amended twice and which covers two refineries, including the El Dorado Refinery.

HFEDR has completed all obligations of the 2009 Consent Decree that pertain to the El Dorado Refinery. Simultaneously with the lodging of this Consent Decree, the United States, the State, and HFEDR have lodged a Third Amendment to the 2009 Consent Decree that will terminate all obligations under the 2009 Consent Decree that apply to the El Dorado Refinery, provided that this Consent Decree is entered.

On August 31, 2017, EPA issued a Notice of Violation and Finding of Violation to HFEDR asserting the El Dorado Refinery’s noncompliance with various requirements of the following: (i) the Clean Air Act (“CAA”), 42 U.S.C. § 7401 et seq., and corresponding federal regulations; and (ii) the federally enforceable Kansas State Implementation Plan (“Kansas SIP”) provisions that incorporate, adopt, and/or implement federal requirements.

The Complaint against HFEDR in this action alleges that HFEDR has violated and, in some instances, continues to violate, the following environmental statutes, regulations, and

permits applicable to the petroleum refining industry:

(a) the CAA and its implementing regulations, including Section 110 of the CAA, 42 U.S.C. § 7410, and the Kansas SIP issued thereunder; Section 111 of the CAA, 42 U.S.C. § 7411, and the New Source Performance Standards (“NSPS”), 40 C.F.R. Part 60; Section 112 of the CAA, 42 U.S.C. § 7412, and the National Emission Standards for Hazardous Air Pollutants (“NESHAPs”), 40 C.F.R. Part 63; Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1); and Section 112(r)(7) of the CAA, 42 U.S.C. § 7412(r)(7), and the Risk Management Program, 40 C.F.R. Part 68;

(b) the Kansas Air Quality Act (“KAQA”), Kan. Stat. Ann. § 65-3001 et seq., and Kan. Admin. Regs. §§ 28-19-302, 28-19-650, and 28-19-20; and

(c) the federally enforceable permits issued to HFEDR by KDHE under Title V of the CAA, 42 U.S.C. § 7661-7661f; the KAQA, Kan. Stat. Ann. § 65-3001 et seq.; and the regulations promulgated thereunder.

Defendant does not admit any liability to the United States or the State arising out of the transactions or occurrences alleged in the Complaint.

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

NOW, THEREFORE, before the taking of any testimony, without the adjudication or admission of any issue of fact or law, and with the consent of the Parties, IT IS HEREBY ADJUDGED, ORDERED, AND DECREED as follows:

I. JURISDICTION AND VENUE

1. This Court has jurisdiction over the subject matter of this action, pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b), and 28 U.S.C. §§ 1331, 1345, and 1355, and over the Parties. This Court has supplemental jurisdiction over the State law claims asserted by the State pursuant to 28 U.S.C. § 1367. Venue lies in this District pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b), and 28 U.S.C. §§ 1391(b), (c), and 1395(a), because Defendant resides in this judicial district and the violations alleged in the Complaint are alleged to have occurred in this judicial district. For purposes of this Consent Decree, or any action to enforce this Consent Decree, Defendant consents to the Court's jurisdiction over this Consent Decree, any such action, and over Defendant, and consents to venue in this judicial district.

2. For purposes of this Consent Decree, Defendant agrees that the Complaint states claims upon which relief may be granted.

3. Notice of the violations of the Kansas SIP that are alleged in the Complaint has been given to the State and HFEDR in accordance with Sections 113(a)(1) and 113(b)(3) of the CAA, 42 U.S.C. §§ 7413(a)(1) and 7413(b)(3).

II. APPLICABILITY

4. The obligations of this Consent Decree apply to and are binding upon the United States and the State, and upon HFEDR and any successors, assigns, or other entities or persons otherwise bound by law. Any change in ownership, corporate status, or other legal status of HFEDR shall in no way alter HFEDR's responsibilities under this Consent Decree.

5. No transfer of ownership or operation of the Refinery, whether in compliance with the procedures of this Paragraph or otherwise, shall relieve Defendant of its obligation to ensure that the terms of the Consent Decree are implemented, unless the transferee agrees to

undertake the obligations required by this Decree and to be substituted for the Defendant as a Party under the Decree and thus be bound by the terms thereof. At least 30 Days prior to such transfer, Defendant shall provide a copy of this Consent Decree to the proposed transferee and shall contemporaneously provide written notice of the prospective transfer, together with a copy of the proposed written agreement, to EPA Region 7, the United States Attorney for the District of Kansas, and the United States Department of Justice, in accordance with Section XV (Notices). No earlier than 45 days after such notice, Defendant may file a motion to modify this Consent Decree with the Court to make the terms and conditions of this Consent Decree applicable to the transferee. Defendant shall not be released from the obligations and liabilities of this Consent Decree with respect to the Refinery unless the Court finds the transferee has the financial and technical ability to assume the obligations and liabilities under the Consent Decree. Notwithstanding the foregoing, however, Defendant shall not be released from any obligation and liability of this Consent Decree to pay the civil penalty as described in Section IV (Civil Penalty).

6. Defendant shall (a) provide a copy of this Consent Decree to all management-level employees whose duties might reasonably include compliance with any provision of this Decree, (b) ensure that any employees whose duties might reasonably include compliance with any provision of this Decree are made aware of the Consent Decree and specifically aware of the requirements of the Consent Decree that fall within such person's duties, and (c) provide relevant excerpts of the Consent Decree to any contractor retained to perform work required under this Consent Decree.

7. In any action to enforce this Consent Decree, Defendant shall not raise as a defense the failure by any of its officers, directors, employees, agents, or contractors to take any actions necessary to comply with the provisions of this Consent Decree.

III. DEFINITIONS

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

“2009 Consent Decree” shall mean the civil consent decree entered in *United States v. Frontier Refining Inc. and Frontier El Dorado Refining Company*, Civil Action No. 6:09-cv-1032 (D. Kan.) on March 26, 2009, as amended on July 23, 2010 and November 5, 2012, and all modifications or amendments entered in that matter on or before the date of lodging of this Consent Decree.

“Ambient Air” shall mean that portion of the atmosphere, external to buildings, to which persons have access.

“Assist Air” shall mean all air that intentionally is introduced prior to or at a Flare tip through nozzles or other hardware conveyance for the purposes including, but not limited to, protecting the design of the Flare tip, promoting turbulence for mixing or inducing air into the flame. Assist Air includes Premix Assist Air and Perimeter Assist Air. Assist Air does not include the surrounding Ambient Air.

“Assist Steam” shall mean all steam that intentionally is introduced prior to or at a Flare tip through nozzles or other hardware conveyance for the purposes including, but not limited to, protecting the design of the Flare tip, promoting turbulence for mixing or inducing air into the

flame. Assist Steam includes, but is not necessarily limited to, Center Steam, Lower Steam, and Upper Steam.

“Audit” shall mean the entirety of the compliance obligations set forth in Paragraph 28 and Appendix A attached to this Consent Decree.

“Calendar Quarter” shall mean any three-month period ending on either March 31, June 30, September 30, or December 31.

“Center Steam” shall mean the portion of Assist Steam introduced into the stack of a Flare to reduce burnback.

“Combustion Zone” shall mean the area of the Flare flame where the Combustion Zone Gas combines for combustion.

“Combustion Zone Gas” shall mean all gases and vapors found just after a Flare tip. This gas includes all Vent Gas, Total Steam, and Premix Air.

“Complaint” shall mean the Complaint filed by the United States and the State in this action.

“Compressor” shall mean, with respect to a Flare Gas Recovery System, a mechanical device designed and installed to assist in recovering gas from a Flare header.

“Consent Decree” or “Decree” shall mean this Decree, all appendices attached hereto (listed in Section XXV (Appendices)), and any modifications or amendments thereto.

“Day” or “day” shall mean a calendar day unless expressly stated to be a business day. In computing any period of time under this Consent Decree, where the last day would fall on a Saturday, Sunday, or federal or state holiday, the period shall run until the close of business of the next business day.

“Defendant” or “HFEDR” shall mean HollyFrontier El Dorado Refining LLC, f/k/a Frontier El Dorado Refining LLC.

“East Flare” shall mean Flare number B1303, which is a Steam-Assisted Flare and serves as a backup Flare at the Refinery.

“Effective Date” shall have the definition provided in Section XVI.

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

“FCCU” shall mean a fluidized catalytic cracking unit, its regenerator, and associated carbon monoxide boiler(s) and carbon monoxide furnace(s) where present.

“Flare” shall mean a combustion device lacking an enclosed combustion chamber that uses an uncontrolled volume of Ambient Air to burn gases.

“Flare Gas Recovery System” and “FGRS” shall mean a system of one or more Compressors, piping, and associated water seal, rupture disk, or similar device used to divert gas from a Flare and direct the gas to a fuel gas system, to a combustion device other than the Flare, or to a product, co-product, by product, or raw material recovery system.

“Flaring” shall mean anytime Waste Gas moves past the water seal and is combusted in the Flare. Intermittent Flaring due to the same root cause constitutes a single “Flaring event,” unless the end and start time of intermittence is separated by 24 consecutive hours or greater. If the end and start time of intermittence is separated by 24 consecutive hours or greater, the Flaring events shall be deemed separate “Flaring events,” even if the incident is due to the same root cause.

“Interest” means the London Interbank Offered Rate for a six-month Interest period on the Effective Date plus 1.5%.

“Kansas SIP” shall mean the Kansas State Implementation Plan.

“KDHE” shall mean the Kansas Department of Health and Environment and any successor departments or agencies.

“Lower Steam” shall mean the portion of Assist Steam piped to an exterior annular ring near the lower part of a Flare tip, which then flows through tubes to the Flare tip, and ultimately exits the tubes at the Flare tip.

“Opacity” means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background, as set forth at 40 C.F.R. § 60.2.

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

“Parties” shall mean the United States, the State, and Defendant.

“Perimeter Assist Air” shall mean the portion of Assist Air introduced at the perimeter of the Flare tip or above the Flare tip. Perimeter Assist Air includes air intentionally entrained in Lower and Upper Steam. Perimeter Assist Air includes all Assist Air except Premix Assist Air.

“Pilot Gas” shall mean gas introduced into a Flare tip that provides a flame to ignite the Vent Gas.

“Premix Assist Air” means the portion of Assist Air that is introduced to the Vent Gas, whether injected or induced, prior to the Flare tip. Premix Assist Air also includes any air intentionally entrained in Center Steam.

“Purge Gas” shall mean the gas introduced between a Flare header’s water seal and the Flare tip to prevent oxygen infiltration (backflow) into the Flare tip or for other safety reasons.

“Refinery” or “El Dorado Refinery” shall mean the refinery owned and operated by HFEDR and located in El Dorado, Kansas, which is subject to the requirements of this Consent Decree.

“Section” shall mean a portion of this Consent Decree identified by a Roman numeral.

“State” shall mean the State of Kansas.

“Steam-Assisted Flare” shall mean a Flare that utilizes steam piped to a Flare tip to assist in combustion.

“Supplemental Gas” shall mean all gas introduced to a Flare in order to improve the heat content of the Combustion Zone Gas. Supplemental Gas does not include Assist Air or Assist Steam.

“Sweep Gas” shall mean gas intentionally introduced into a Flare header system to maintain a constant flow of gas through the Flare header in order to prevent oxygen buildup in the Flare header. Sweep Gas is introduced prior to and recovered by the Flare Gas Recovery System.

“Total Steam” shall mean the total of all steam that is supplied to a Flare and includes, but is not limited to, Lower Steam, Center Steam, and Upper Steam.

“United States” shall mean the United States of America, acting on behalf of EPA.

“Upper Steam” shall mean the portion of Assist Steam introduced via nozzles located on the exterior perimeter of the upper end of a Flare tip.

“Vent Gas” shall mean all gas found just prior to the Flare tip. This gas includes all Waste Gas, that portion of Sweep Gas that is not recovered, Purge Gas, and Supplemental Gas, but does not include Pilot Gas, Total Steam, or Assist Air.

“Waste Gas” shall mean the mixture of all gases from facility operations that is directed to a Flare for the purpose of disposing of the gas. “Waste Gas” does not include Pilot Gas, Total Steam, Assist Air, Sweep Gas, Purge Gas, or Supplemental Gas.

“West Flare” shall mean Flare number B1302, which is a Steam-Assisted Flare and serves as the main Flare at the Refinery.

“Year” shall mean the twelve-month period beginning on the first day of the first quarter (or the yearly recurrence of such date) following entry of this Consent Decree.

IV. CIVIL PENALTY

9. Defendant shall pay to the Plaintiffs a total civil penalty in the principal amount of \$4,000,000 with Interest. Defendant shall pay the civil penalty to the Plaintiffs in two installments of \$2,000,000. Each installment shall be divided into two payments, one of \$1,000,000 to the United States and one of \$1,000,000 to the State, and be paid in accordance with the provisions of Paragraphs 10 and 11, below. Defendant shall pay the first installment of \$2,000,000 within 30 Days after the Effective Date, and the second installment of \$2,000,000 plus accrued Interest within six months after the Effective Date. Defendant may, at its election, prepay the second installment payment (plus Interest accrued as of the payoff date) at any time. Defendant may contact counsel for the Plaintiffs to request a calculation of Interest due on the second installment payment.

10. Defendant shall pay each civil penalty installment payment to the United States by FedWire Electronic Funds Transfer (“EFT”) to the United States Department of Justice account, in accordance with instructions provided to Defendant by the Financial Litigation Unit (“FLU”) of the United States Attorney’s Office for the District of Kansas after the Effective Date. The payment instructions provided by the FLU will include a Consolidated Debt Collection System (“CDCS”) number, which Defendant shall use to identify all payments required to be made in accordance with this Consent Decree. The FLU will provide the payment instructions to:

Darin L. Rains
VP Refining, Refinery Manager
HollyFrontier El Dorado Refining LLC
1401 Douglas Road
P.O. Box 1121
El Dorado, Kansas 67042
Darin.Rains@HollyFrontier.com

and Andrew Beard
Environmental Manager
HollyFrontier El Dorado Refining LLC
1401 Douglas Road
P.O. Box 1121
El Dorado, Kansas 67042
Andrew.Beard@HollyFrontier.com

on behalf of Defendant. Defendant may change the individual to receive payment instructions on its behalf by providing written notice of such change to the United States and EPA in accordance with Section XV (Notices).

At the time of each payment, Defendant shall send notice that payment has been made: (i) to EPA via email at cinwd_acctsreceivable@epa.gov or via regular mail at EPA Cincinnati Finance Office, 26 W. Martin Luther King Drive, Cincinnati, Ohio 45268; (ii) to the United States via email or regular mail in accordance with Section XV (Notices); and (iii) to EPA Region 7 in accordance with Section XV (Notices). Such notice shall state that the payment is for the civil penalty owed pursuant to the Consent Decree in *United States v. HollyFrontier El Dorado Refining LLC* and shall reference the civil action number, CDCS Number, and DOJ case number 90-5-2-1-08660/1.

11. Defendant shall pay each civil penalty installment payment to the State by (i) electronic transfer in accordance with instructions provided to Defendant by KDHE after the Effective Date or (ii) check sent by certified mail to KDHE and submitted to: Kansas Department of Health and Environment, Office of Legal Services, Suite 560, 1000 SW Jackson, Topeka, Kansas 66612-1371.

12. At the time each payment is made, Defendant shall send notice that payment has been made to the State via email or regular mail in accordance with Section XV (Notices).

13. Defendant shall not deduct any penalties paid under this Decree pursuant to this Section or Section IX (Stipulated Penalties) in calculating its federal or State or local income tax.

V. COMPLIANCE REQUIREMENTS

14. NSPS Subparts A and Ja. Beginning on the Effective Date, both the West and East Flares shall continue to be an “affected facility” within the meaning of Subparts A and Ja of 40 C.F.R. Part 60, will be subject to Subparts A and Ja, and will comply with the requirements of Subparts A and Ja, including all applicable monitoring, recordkeeping, reporting, and operating requirements. Nothing in this paragraph alters the provisions of 40 C.F.R. § 63.640(s).

15. Flare Tip. Beginning on the Effective Date, Defendant shall operate a Flare tip at the Refinery’s West Flare, with a smokeless capacity rate of at least 160,000 lbs. /hr. of Waste Gas from the FCCU.

16. Defendant shall submit documentation showing that the Flare tip and steam supply system at the Refinery’s West Flare are designed to operate with a smokeless capacity rate of at least 160,000 lbs. /hr. of Waste Gas in the first semi-annual report submitted under Section VIII (Reporting Requirements) after the Effective Date of this Consent Decree.

17. Flareless Startup of the FCCU. Beginning on the Effective Date, Defendant shall use the following procedure to startup the FCCU without Flaring:

a. Before sending feed to the FCCU reaction riser (L-1109, located in D-101), the wet gas compressor (J160) shall be in operation and in recirculation mode (gases from each stage of the discharge being routed back to the suction side). This shall be accomplished by using a supplemental gas supply (e.g., propane) to allow the compressor to start up and maintain this mode of operation.

b. Upon introducing feed to the FCCU reaction riser, gases generated by the

unit shall be directed to the wet gas compressor. As the unit feed rate is increased, the amount of recirculating gas in the compressor will be decreased until all the supplemental gas in the loop is removed. The wet gas compressor suction pressure shall be less than the set pressure of the pressure control valve(s) upstream of the compressor during the startup of the FCCU.

c. Defendant shall record the set pressure(s) of the pressure control valve(s) in subparagraph b above on a daily basis. Defendant shall maintain the records on site for a minimum of 3 years and shall make the information accessible during inspections.

d. Defendant shall continuously measure and record the inlet suction pressure of the wet gas compressor as described in subparagraph b above. Defendant shall store the data in an electronic database for a minimum of 3 years from the date of recording and shall make the data accessible during inspections.

e. Defendant shall record the date and start and end times of all FCCU startups. Defendant shall include in its reports under Paragraph 42 any time that the pressure control valve(s) upstream of the wet gas compressor open(s) during startup after the introduction of feed to the FCCU reaction riser (L-1109).

18. Opacity. In accordance with Kan. Admin. Reg. § 28-19-650, Defendant shall operate each Flare (West Flare and East Flare) such that the opacity does not exceed 20%.

19. Visible Emissions. In accordance with 40 C.F.R. §§ 60.18(c)(1) and 63.11(b), Defendant shall operate each Flare (West Flare and East Flare) with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours, when Vent Gas is routed to the Flare. Defendant shall comply with the overlap provisions in 40 C.F.R. § 63.640(s) once they are applicable to each Flare.

20. Defendant shall monitor for visible emissions from the Flares as specified in Paragraph 19 above. Defendant shall conduct an initial visible emissions demonstration at each Flare using an observation period of 2 hours and Method 22 at 40 C.F.R. Part 60, Appendix A-7. Defendant shall conduct the initial visible emissions demonstration the first time Waste Gas is routed to the Flare after the Effective Date. Defendant shall conduct subsequent visible-emissions observations using either the methods in Paragraph 20.a or, alternatively, the methods in Paragraph 20.b. Within 30 Days of the Effective Date of this Consent Decree, Defendant shall notify EPA and KDHE in writing whether Defendant will use the methods in Paragraph 20.a or the methods in Paragraph 20.b for the subsequent visible-emissions observations required by this Paragraph. Defendant must record and report any instances where visible emissions are observed for more than 5 minutes during any 2 consecutive hours as specified in Paragraphs 21 and 22 below.

a. At least once per day for each day Waste Gas is routed to the Flare, conduct visible emissions observations using an observation period of 5 minutes using Method 22 at 40 C.F.R. Part 60, Appendix A-7. If at any time Defendant sees visible emissions while Waste Gas is routed to the Flare, even if the minimum required daily visible emission monitoring has already been performed, Defendant shall immediately begin an observation period of 5 minutes using Method 22 at 40 C.F.R. Part 60, Appendix A-7. If visible emissions are observed for more than one continuous minute during any 5-minute observation period, the observation period using Method 22 at 40 C.F.R. Part 60, Appendix A-7 must be extended to 2 hours or until 5 minutes of visible emissions are observed. Defendant is not required to conduct daily 5-minute Method 22 observations on days the Flare does not receive any Waste Gas.

b. Use a video surveillance camera to continuously record (at least one frame

every 15 seconds with time and date stamps) images of the Flare flame and any visible emissions from the Flare. Defendant must provide real-time video surveillance camera output to the control room or other continuously manned location where the camera images may be viewed at any time.

21. Defendant shall retain records of daily visible emissions observations or video surveillance images required by Paragraphs 20.a and 20.b above, as applicable, for a minimum of 3 years from the date of recording. For each 2-hour period for which visible emissions are observed for more than 5 minutes in 2 consecutive hours, the record must include the date and time of the 2-hour period and an estimate of the cumulative number of minutes in the 2-hour period for which emissions were visible.

a. If visible emissions observations are performed using Method 22 at 40 C.F.R. Part 60, Appendix A-7, the record must identify whether the visible emissions observation was performed, the results of each observation, total duration of observed visible emissions, and whether it was a 5-minute or 2-hour observation. If Defendant performs visible emissions observations more than one time during a day, the record must also identify the date and time of day each visible emissions observation was performed.

b. If a video surveillance camera is used, the record must include all video surveillance images recorded, with time and date stamps.

22. Defendant shall report in the semi-annual reports required under Section VIII (Reporting Requirements) of this Consent Decree, visible emission records as specified in Paragraph 21 above for each period of 2 consecutive hours during which visible emissions exceeded a total of 5 minutes.

23. Sulfur Pit Emissions. Beginning on the Effective Date, Defendant shall continue to route all sulfur pit emissions so that sulfur pit emissions are eliminated, controlled, or included and monitored as part of the SRP's emissions subject to the NSPS Subpart Ja limit for SO₂, 40 C.F.R. § 60.102a(f)(1)(i).

24. Gas Con Project. Except as provided in Paragraph 24.a, beginning on the Effective Date, Defendant shall operate both inter-cooler draw pumps J-2736 and J-2737 (which direct liquid from absorber E-2701 to exchangers C-2702 and C-2703 respectively) anytime recirculation pump J-2701 A or B (which direct lean oil from surge drum F-2702 to absorber E-2701) is in operation in order to reduce the potential for generating excess fuel gas, which must be flared.

a. Defendant may operate pump J-2701 A or B while pumps J-2736 and J-2737 are not in operation, provided that pressure control valve PC05381 is closed.

b. Defendant shall maintain, and make available during inspections:
(1) records demonstrating when pumps J-2701 A and B and pumps J-2736 and J-2737 were in operation, and (2) records demonstrating when pressure control valve PC05381 was open.

c. Defendant shall include a statement of compliance with Paragraph 24.a in the semi-annual report required by Paragraph 42.a. For any time period in which pump J-2701 A or B was in operation while either pump J-2736 or J-2737 was not simultaneously in operation and pressure control valve PC05381 was open, Defendant shall report the date and start and end times when such event occurred.

25. Compressor. By January 31, 2021, Defendant shall install and commence operation of one additional Compressor on the FGRS with the following specification: maximum design capacity of at least 480 actual cubic feet per minute ("ACFM").

26. Defendant shall submit documentation showing that the new Compressor installed under Paragraph 25 has a maximum design capacity of at least 480 ACFM in the first semi-annual report submitted under Section VIII (Reporting Requirements) after January 31, 2021.

27. Operation of Flare Gas Recovery System. Defendant shall operate the FGRS in a manner to minimize Waste Gas to each Flare (West Flare and East Flare) while ensuring safe refinery operations. Defendant shall operate the FGRS consistent with good engineering and maintenance practices and in accordance with the manufacturer's specifications.

a. Starting January 31, 2022 and based on 12 months of data commencing on February 1, 2021, Defendant shall have four Compressors in operation at least 98% of the time and five Compressors in operation at least 90% of the time based on an 8,760-hour rolling sum, rolled hourly, except during periods described in Paragraphs 27.b and 27.c below.

b. The requirements of Paragraph 27.a shall not apply during periods of maintenance on equipment within the FGRS. These periods of maintenance shall not exceed 450 hours based on a five-year rolling sum, rolled daily. Defendant will make best efforts to schedule these maintenance activities during process unit turnarounds and to minimize the generation of Waste Gas during such periods.

c. The requirements of Paragraph 27.a also shall not apply during periods when Compressors are shut down consistent with the Compressor manufacturer's specifications for safety-instrumented systems shutdowns to preserve the mechanical integrity of the Compressors (for example, as a result of high pressure or temperature or air ingress into the Flare header).

d. Defendant shall monitor the operational time of each Compressor by tracking whether the electrical switchgear is open or closed for each Compressor when any

portion of the Refinery is operating (or by any other tracking method that EPA approves in advance of use) and shall report any deviations from the requirements of this Paragraph in the semi-annual report submitted under Section VIII (Reporting Requirements).

28. Audit.

a. Defendant shall comply with and implement all provisions of the Independent Third-Party Audit Protocol embodied in Appendix A attached hereto.

b. In addition, prior to the fourth semi-annual report required under Section VIII (Reporting Requirements), Defendant shall evaluate compliance with 40 C.F.R. Part 68, Subpart D, with respect to all Covered Processes not included in the Independent Third-Party Audit. With respect to the following units, Defendant may meet its obligation under this subparagraph by utilizing a representative sampling method provided in CCPS “Guidelines for Auditing Process Safety Management Systems, Second Edition” (Wiley, 2011): HTU3/ISOM, Crude-Vacuum, HF Alky, HTU5, and Reformate Splitter.

c. In the fourth semi-annual report required under Section VIII (Reporting Requirements), Defendant shall certify that the compliance audits required by subparagraph b are complete and that the procedures and practices developed under Subpart D are adequate and being followed. Defendant shall also submit a copy of the audit protocol(s) used for such audits, a copy of the findings of the audits, and a report documenting an appropriate response to each of the audit findings and corrective actions taken to correct any audit findings.

d. The audits required by this Paragraph and Appendix A shall be considered compliance audits for purposes of this Paragraph and of 40 C.F.R. § 68.79(a) with respect to all Covered Processes included in such audits.

29. Defendant shall comply with and implement all provisions of the Protocol for Fired Heater Tube Integrity Assessments embodied in Appendix B and attached hereto.

30. Defendant shall comply with and implement all provisions of the Protocol for Fired Heater Viewport Evaluations embodied in Appendix C and attached hereto.

31. Approval of Deliverables. After review of any plan, report, or other item that is required to be submitted pursuant to this Consent Decree, EPA after consultation with the State shall in writing: (a) approve the submission; (b) approve the submission upon specified conditions; (c) approve part of the submission and disapprove the remainder; or (d) disapprove the submission.

32. If the submission is approved pursuant to Paragraph 31, Defendant shall take all actions required by the plan, report, or other document, in accordance with the schedules and requirements of the plan, report, or other document, as approved. If the submission is conditionally approved or approved only in part pursuant to Paragraph 31(b) or (c), Defendant shall, upon written direction from EPA after consultation with the State, take all actions required by the approved plan, report, or other item that EPA after consultation with the State determines are technically severable from any disapproved portions, subject to Defendant's right to dispute only the specified conditions or the disapproved portions, under Section XI (Dispute Resolution).

33. If the submission is disapproved in whole or in part pursuant to Paragraph 31(c) or (d), Defendant shall, within 45 days or such other time as the Parties agree to in writing, correct all deficiencies and resubmit the plan, report, or other item, or disapproved portion thereof, for approval, in accordance with the preceding Paragraphs. If the resubmission is approved in whole or in part, Defendant shall proceed in accordance with the preceding Paragraph.

34. If a resubmitted plan, report, or other item, or portion thereof, is disapproved in whole or in part, EPA after consultation with the State may again require Defendant to correct any deficiencies, in accordance with the preceding Paragraphs, or may themselves correct any deficiencies subject to Defendant's right to invoke Dispute Resolution.

VI. ADDITIONAL INJUNCTIVE RELIEF

35. Mitigation Projects.

a. Safety-Instrumented System Upgrade on Sulfur Recovery Unit 2. By December 31, 2019, Defendant shall install a safety-instrumented system upgrade on sulfur recovery unit 2. The existing unit shutdown system will be updated with a new programmable logic computer and all associated piping, nozzles, and instruments. The purpose of the upgrade is to avoid unit trips and upsets.

b. Installation of Additional Flow Meters in the FGRS Header. By December 31, 2020, Defendant shall install five additional flow meters in the flare gas subheader system for the purpose of identifying and reducing, where possible, base load in the flare header. Such additional meters will be installed in locations appropriate to monitor for flow from the following:

- (1) Alky flare drums;
- (2) 16-inch crude flare line;
- (3) 30-inch crude/FCCU flare line;
- (4) HTU3/Isom flare drum; and
- (5) HTU2 flare line before the 48-inch header.

36. Mitigation Project Certification. With regard to the Mitigation Projects, Defendant certifies the truth and accuracy of each of the following:

a. That, as of the date of executing this Consent Decree, Defendant is not required to perform or develop the Mitigation Projects by any federal, state, or local law or regulation and is not required to perform or develop the Mitigation Projects by agreement, grant, or as injunctive relief awarded in any other action in any forum;

b. That the Mitigation Projects are not Mitigation Projects that Defendant was planning or intending to construct, perform, or implement other than in settlement of the claims resolved in this Decree;

c. That Defendant has not received and will not receive credit for the Mitigation Projects in any other enforcement action; and

d. That Defendant shall neither generate nor use any pollutant reductions from the Mitigation Projects as netting reductions, pollutant offsets, or to apply for, obtain, trade, or sell any pollutant reduction credits.

37. Mitigation Project Progress and Completion Reports. Defendant shall include in each semi-annual report required under Section VIII (Reporting Requirements), a status update on the Mitigation Projects required by this Section until the Projects are completed. In addition, the report required by Paragraph 42 for the period in which each Project is completed shall contain the following information:

- a. A detailed description of the Project as implemented;
- b. A description of any problems encountered in completing the Project and the solutions thereto;
- c. A description of the environmental and public health benefits resulting from implementation of the Project (with a quantification of the benefits and an estimate of the pollutant reductions); and

d. A certification that the Project has been fully implemented pursuant to the provisions of this Decree.

**VII. INCORPORATION OF CONSENT DECREE REQUIREMENTS INTO
FEDERALLY ENFORCEABLE PERMITS**

38. Obtaining Permit Limits for Consent Decree Emission Limits and Standards That Are Effective Starting on the Effective Date. By no later than 120 days after the Effective Date of this Consent Decree, Defendant shall submit applications to KDHE to incorporate the emission limits and standards required by this Consent Decree that are effective as of the Effective Date into federally enforceable minor or major new source review permits or other permits (other than the Refinery's CAA Title V permit). Following submission of the permit applications, Defendant shall cooperate with KDHE by promptly submitting to KDHE all information that KDHE seeks following its receipt of the permit applications. Upon issuance of such permits or in conjunction with such permitting, Defendant shall file any applications necessary to incorporate the requirements of those permits into the CAA Title V permit for the Refinery.

39. Obtaining Permit Limits for Consent Decree Emission Limits and Standards That Become Effective After the Effective Date. As soon as practicable, but in no event later than 90 days after the Effective Date or establishment of any emission limits and/or standards under Section V (Compliance Requirements) of this Consent Decree, Defendant shall submit applications to KDHE to incorporate those emission limits and/or standards into federally enforceable minor or major new source review permits or other permits (other than the Refinery's CAA Title V permit). Following submission of the permit application(s), Defendant shall cooperate with KDHE by promptly submitting to KDHE all information that KDHE seeks following its receipt of the permit application. Upon issuance of such permit or in conjunction

with such permitting, Defendant shall file any applications necessary to incorporate the requirements of that permit into the CAA Title V permit for the Refinery.

40. Mechanism for Title V Incorporation. The Parties agree that the incorporation of any emission limits or standards into the CAA Title V permit for the Refinery where required by this Consent Decree shall be in accordance with the applicable state or local CAA Title V rules.

41. Construction Permits. Defendant 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 set forth in Section V (Compliance Requirements) and Section VI (Additional Injunctive Relief) of this Consent Decree. To the extent that Defendant must submit permit applications for this construction or installation to KDHE, Defendant shall cooperate with KDHE by promptly submitting to KDHE all information that KDHE seeks following its receipt of the permit application.

VIII. REPORTING REQUIREMENTS

42. Defendant shall submit the following reports:

a. By April 30 and October 31 of each year after the Effective Date of this Consent Decree, until termination of this Decree pursuant to Section XIX (Termination), Defendant shall submit by regular mail semi-annual reports as provided in this Paragraph to the person designated for EPA in Paragraph 104.a of Section XV (Notices) and to the person designated for KDHE in Section XV (Notices). Each semi-annual report shall contain the following information for the preceding six months (i.e., October to March shall be addressed in the report submitted by April 30 and April to September shall be addressed in the report

submitted by October 31):

- (1) A progress report on the implementation of each requirement in Paragraphs 14-27 of Section V (Compliance Requirements) of this Consent Decree, including dates of implementation.
- (2) A description of any problems encountered or anticipated in meeting this Consent Decree's requirements in Paragraphs 14-27 of Section V (Compliance Requirements), together with implemented or proposed solutions.
- (3) A description of any non-compliance with this Consent Decree's requirements in Paragraphs 14-27 of Section V (Compliance Requirements). This description shall include an explanation of the violation's likely cause and of the remedial steps taken, or to be taken, to prevent or minimize such violation.
- (4) A copy of any construction permit application submitted to KDHE in order to meet this Consent Decree's requirements in Section V (Compliance Requirements).
- (5) If there is an FCCU startup that results in Flaring, records of data recorded under Paragraph 17.
- (6) Visible emissions records as required by Paragraph 22.
- (7) A statement verifying compliance with the requirements of Paragraph 24.a and a description of any deviations from those requirements, as required by Paragraph 24.c.
- (8) A description of any safety-instrumented systems shutdown that occurred under the conditions identified in Paragraph 27.c, including the date, duration, and cause(s) of the shutdown.
- (9) A status update on the Mitigation Projects as required by Paragraph 37.
- (10) Any additional items required by any other Paragraph or Appendix of this Consent Decree to be submitted with a semi-annual report.
- (11) Any additional matters that Defendant believes should be brought to the attention of EPA and the State.

b. In the first semi-annual report submitted under Paragraph 42.a Defendant shall include documentation of the design of the new Flare tip as required by Paragraph 16. In

the first semi-annual report due after January 31, 2021, Defendant shall include documentation of the new Compressor's design capacity as required by Paragraph 26.

c. By April 30 and October 31 of each year after the Effective Date of this Consent Decree, until termination of this Decree pursuant to Section XIX (Termination), Defendant shall submit by regular mail semi-annual reports as provided in this Paragraph to the person designated for EPA in Paragraph 104.b of Section XV (Notices). Each semi-annual report shall contain the following information for the preceding six months (i.e., October to March shall be addressed in the report submitted by April 30 and April to September shall be addressed in the report submitted by October 31):

- (1) A progress report on the implementation of each requirement in Paragraphs 28-30 of Section V (Compliance Requirements) of this Consent Decree.
- (2) A summary of Defendant's progress in completing its obligations under Paragraphs 28 through 30 and Appendices A, B, and C of this Consent Decree.
- (3) A description of any problems encountered or anticipated in meeting this Consent Decree's requirements in Paragraphs 28-30 of Section V (Compliance Requirements), together with implemented or proposed solutions.
- (4) A description of any non-compliance with the requirements of Paragraphs 28-30. This description shall include an explanation of the violation's likely cause and of the remedial steps taken, or to be taken, to prevent or minimize such violation.
- (5) Any additional items required by any other Paragraph or Appendix of this Consent Decree to be submitted with a semi-annual report.
- (6) Any additional matters that Defendant believes should be brought to the attention of EPA.

43. Defendant shall provide reports submitted under Kan. Admin. Reg. § 28-19-11 and Section XIII of Defendant's Title V Permit to the person designated for EPA in Paragraph

104.a of Section XV (Notices) and to the person designated for KDHE in Section XV (Notices) on all startup, shutdown, and malfunction events causing excess emissions within 10 days.

44. Whenever any violation of this Consent Decree or any other event affecting Defendant's performance under this Decree, or the performance of its Refinery, may pose an immediate threat to the public health or welfare or the environment, Defendant shall notify EPA and KDHE orally or by electronic transmission as soon as possible, but no later than 24 hours after Defendant first knew of the violation or event. This procedure is in addition to the requirements set forth in the preceding Paragraph.

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

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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

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

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

IX. STIPULATED PENALTIES

49. Defendant shall be liable for stipulated penalties to the United States and the State for violations of this Consent Decree as specified below, unless excused under Section X (Force Majeure). A violation includes failing to perform any obligation required by the terms of this Decree, including any work plan or schedule approved under this Decree, according to all applicable requirements of this Decree and within the specified time schedules established by or approved under this Decree. 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 United States in consultation with the State.

50. Non-Compliance with Consent Decree. The following stipulated penalties shall accrue per violation per Day for each violation of any requirement of this Consent Decree, except for the violations identified in Paragraphs 51-66 below:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$1,250	1st through 14th day
\$2,250	15th through 30th day
\$3,250	31st day and beyond

51. Late Payment of Civil Penalty. If Defendant fails to pay the civil penalty required to be paid under Section IV (Civil Penalty) when due, Defendant shall pay a stipulated penalty of \$3,750 per Day for each Day that the payment is late.

52. Failure to Comply with NSPS Subparts A and Ja. The following stipulated penalties shall accrue per violation per Day for each violation of the requirements of Subparts A and Ja of 40 C.F.R. Part 60 as required by Paragraph 14:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$1,500	1st through 14th day
\$2,500	15th through 30th day
\$3,500	31st day and beyond

53. Failure to Operate the Flare Tip. The following stipulated penalties shall accrue per Day for the failure to operate the Flare tip in accordance with Paragraph 15 by the deadline specified therein:

<u>Penalty Per Day</u>	<u>Period of Noncompliance</u>
\$3,750	1st through 14th day
\$6,250	15th through 30th day
\$10,000 or an amount equal to 1.2 times the economic benefit of delayed compliance, whichever is greater	31st day and beyond

54. Failure to Submit Documentation of the Flare Tip’s Smokeless Capacity Rate. If Defendant fails to submit documentation of the Flare tip’s smokeless capacity rate in accordance with Paragraph 16, Defendant shall pay a stipulated penalty of \$1,000 per day until it submits the required documentation up to a maximum of \$30,000.

55. Failure to Use the Flareless Startup Procedure for the FCCU.

a. On or after the Effective Date, if Defendant fails to follow the flareless startup procedure for the FCCU in Paragraph 17, and such failure results in FCCU waste gas being vented to the Flare tip, the following stipulated penalties shall accrue:

<u>Penalty Per Flaring Event</u>	<u>Period of Noncompliance</u>
\$2,000	1 to 30 minutes
\$3,000	31 to 119 minutes
\$5,000	2 hours to 5 hours
\$10,000	more than 5 hours

56. Failure to Operate Each Flare in Accordance with Paragraph 18. If Defendant fails to operate each Flare in accordance with each of the requirements of Paragraph 18, the following stipulated penalties shall accrue for each opacity event. For purposes of this Paragraph, an “opacity event” shall mean any time period during which opacity exceeds 20% in violation of Kan. Admin. Reg. § 28-19-650. Intermittent opacity exceedances during a single Flaring incident due to the same root cause constitute a single “opacity event.” For opacity exceedances with the end and start time of intermittence separated by 24 consecutive hours or greater, they shall be deemed separate “opacity events” even if the incident is due to the same root cause.

<u>Penalty Per Opacity Event</u>	<u>Number of Opacity Event(s)</u>
\$5,000	First Opacity Event
\$10,000	Second Opacity Event
\$15,000	Third Opacity Event
\$20,000	Any Additional Opacity Event

57. Failure to Operate Each Flare in Accordance with Paragraph 19. If Defendant fails to operate each Flare in accordance with each requirement of Paragraph 19, the following stipulated penalties shall accrue for each visible emissions event. For purposes of this Paragraph, a “visible emissions event” shall mean any time period during which visible emissions exceed a total of 5 minutes during any 2 consecutive hours in violation of 40 C.F.R. §§ 60.18(c)(1) and/or 63.11(b). Intermittent visible emission exceedances during a single Flaring incident due to the same root cause constitute a single “visible emissions event.”

<u>Penalty Per Visible Emissions Event</u>	<u>Number of Visible Emission Event(s)</u>
\$5,000	First Visible Emissions Event
\$10,000	Second Visible Emissions Event
\$15,000	Any Additional Visible Emissions Event

58. Failure to Monitor for Visible Emissions at Each Flare in Accordance with Paragraph 20. If Defendant fails to conduct an initial visible emissions demonstration the first time that Waste Gas is routed to each Flare after the Effective Date, as required by Paragraph 20, Defendant shall pay a stipulated penalty of \$2,500 per violation. If Defendant elects to conduct visible emissions observations using the method in Paragraph 20.a and fails to conduct subsequent visible emissions observations at each Flare under Paragraph 20.a, Defendant shall pay a stipulated penalty of \$1,500 per violation. If Defendant elects to conduct visible emissions observations using the method in Paragraph 20.b, no stipulated penalties shall accrue if the system is functioning at least 95% of the time during any Calendar Quarter and Defendant shall pay a stipulated penalty of \$1,500 per Calendar Quarter for any Calendar Quarter during which the system is in operation less than 95% of the time.

59. Failure to Maintain Visible Emissions Records. If Defendant fails to maintain proper visible emissions records as required by Paragraph 21, Defendant shall pay a stipulated penalty of \$1,000 for each Day for which no such records exists.

60. Failure to Route Sulfur Pit Emissions. For failure to route all sulfur pit emissions in accordance with the requirements of Paragraph 23, per unit, per day:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$2,000	1st through 30th day
\$3,500	31st through 60th day
\$5,000 or an amount equal to 1.2 times the economic benefit of delayed compliance,	

whichever is greater 61st day and beyond

61. Failure to Implement the Gas Con Project. The following stipulated penalties shall accrue per violation per Day for Flaring excess fuel gas due to the failure to operate inter-cooler draw pumps J-2736 and J-2737 anytime recirculation pump J-2701 A or B is in operation in accordance with the requirements of Paragraph 24.

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance Per Calendar Year</u>
\$1,500	1st through 30th day
\$2,500	31st through 60th day
\$3,500	61st day and beyond

62. Failure to Install and Commence Operation of a New Compressor on the FGRS. The following stipulated penalties shall accrue per Day for the failure to install and commence operation of one additional Compressor on the FGRS in accordance with each requirement of Paragraph 25 by the deadline specified therein:

<u>Penalty Per Day</u>	<u>Period of Noncompliance</u>
\$5,000	1st through 30th day
\$7,500	31st through 60th day
\$10,000 or an amount equal to 1.2 times the economic benefit of delayed compliance, whichever is greater	61st day and beyond

63. Failure to Submit Documentation of the New Compressor’s Design Capacity. If Defendant fails to submit documentation of the new Compressor’s maximum design capacity as required by Paragraph 26, Defendant shall pay a stipulated penalty of \$1,000 per day until it submits the required documentation.

64. Failure to Operate the FGRS in accordance with Paragraph 27. The following stipulated penalties shall accrue per violation per Day for the failure to operate the FGRS in

accordance with each requirement of Paragraph 27 if such failure results in Flaring of gas that otherwise would have been recovered by a fully functioning FGRS:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance per Calendar Year</u>
\$3,750	1st through 14th day
\$6,250	15th through 30th day
\$10,000 or an amount equal to 1.2 times the economic benefit of delayed compliance, whichever is greater	31st day and beyond

65. Failure to Meet the Obligations in Paragraphs 28-30 of this Consent Decree.

a. The following stipulated penalties shall accrue per violation per Day for each violation of the requirements identified in subparagraph 65.b:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$1,250	1st through 14th day
\$2,250	15th through 30th day
\$4,000	31st day and beyond

b. Stipulated penalties shall accrue under this Paragraph for the failure to complete the following obligations by the deadlines specified in Section V (Compliance Requirements) and Appendices A, B, and C:

- (1) Conduct the Audit required by Paragraph 28.a and Appendix A;
- (2) Complete the corrective actions required by Paragraph 28.a and Appendix A;
- (3) Complete the evaluation required by Paragraph 28.b;
- (4) Complete the evaluation required by Paragraph 28.c;
- (5) Conduct the assessments required by Paragraph 29 and Appendix B;
- (6) Complete the corrective actions required by Paragraph 29 and Appendix B;

- (7) Conduct the evaluations required by Paragraph 30 and Appendix C; and
- (8) Complete the corrective actions required by Paragraph 30 and Appendix C.

66. Reporting Requirements. The following stipulated penalties shall accrue per violation per Day for the failure to submit the reports required under Paragraphs 42 and 44:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$1,000	1st through 14th day
\$2,000	15th through 30th day
\$3,000	31st day and beyond

67. Stipulated penalties under this Section shall begin to accrue on the Day after performance is due or on the Day a violation occurs, whichever is applicable, and shall continue to accrue until performance is satisfactorily completed or until the violation ceases. Stipulated penalties shall accrue simultaneously for separate violations of this Consent Decree.

68. Defendant shall pay stipulated penalties to the United States and the State within 30 Days of a written demand by either Plaintiff. Defendant shall pay 50% of the total stipulated penalty amount due, or \$10,000 per day per violation, whichever is less, to the State, and the remainder of the total stipulated penalty amount due to the United States, unless the stipulated penalty is due under Paragraph 65, in which case 100% is due to the United States. The Plaintiff making a demand for payment of a stipulated penalty shall simultaneously send a copy of the demand to the other Plaintiff.

69. Either Plaintiff may in the unreviewable exercise of its discretion, reduce or waive stipulated penalties otherwise due it under this Consent Decree.

70. Stipulated penalties shall continue to accrue as provided in Paragraph 67, during any Dispute Resolution, but need not be paid until the following:

a. If the dispute is resolved by agreement of the Parties or by a decision of EPA or the State that is not appealed to the Court, Defendant shall pay accrued penalties determined to be owing, together with interest, to the United States or the State within 30 Days of the effective date of the agreement or the receipt of EPA's or the State's decision or order.

b. If the dispute is appealed to the Court and the United States or the State prevails in whole or in part, Defendant shall pay all accrued penalties determined by the Court to be owing, together with interest, within 60 Days of receiving the Court's decision or order, except as provided in subparagraph c, below.

c. If any Party appeals the District Court's decision, Defendant shall pay all accrued penalties determined to be owing, together with interest, within 15 Days of receiving the final appellate court decision.

71. Defendant shall pay stipulated penalties owing to the United States in the manner set forth and with the confirmation notices required by Paragraph 10, except that the transmittal letter shall state that the payment is for stipulated penalties and shall state for which violation(s) the penalties are being paid. Defendant shall pay stipulated penalties owing to the State in the manner set forth by Paragraph 11, except that the payment shall include a letter stating the payment is for stipulated penalties and shall state for which violation(s) the penalties are being paid.

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

73. The payment of penalties and interest, if any, shall not alter in any way Defendant's obligation to complete the performance of the requirements of this Consent Decree.

74. Non-Exclusivity of Remedy. Stipulated penalties are not the United States' exclusive remedy for violations of this Consent Decree. Subject to the provisions of Section XIII (Effect of Settlement/Reservation of Rights), the United States expressly reserves the right to seek any other relief it deems appropriate for Defendant's violation of this Decree or applicable law, including but not limited to an action against Defendant for statutory penalties, additional injunctive relief, mitigation or offset measures, and/or contempt. However, the amount of any statutory penalty assessed for a violation of this Consent Decree shall be reduced by an amount equal to the amount of any stipulated penalty assessed and paid pursuant to this Consent Decree.

X. FORCE MAJEURE

75. "Force majeure," for purposes of this Consent Decree, is defined as any event arising from causes beyond the control of Defendant, of any entity controlled by Defendant, or of Defendant's contractors, that delays or prevents the performance of any obligation under this Consent Decree despite Defendant's best efforts to fulfill the obligation. The requirement that Defendant exercise "best efforts to fulfill the obligation" includes using best efforts to anticipate any potential force majeure event and best efforts to address the effects of any such event (a) as it is occurring and (b) following the potential force majeure, such that the delay and any adverse effects of the delay are minimized. "Force majeure" does not include Defendant's financial inability to perform any obligation under this Consent Decree.

76. If any event occurs or has occurred that may delay the performance of any obligation under this Consent Decree for which Defendant intends or may intend to assert a claim of force majeure, Defendant shall provide notice by electronic transmission in writing to

EPA and KDHE, within 5 days of when Defendant first knew that the event might cause a delay. Within 14 days thereafter, Defendant shall provide in writing to EPA and KDHE: (i) an explanation and description of the reasons for the delay; (ii) the anticipated duration of the delay; (iii) all actions taken or to be taken to prevent or minimize the delay; (iv) a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; (v) Defendant's rationale for attributing such delay to a force majeure event; and (vi) a statement as to whether, in the opinion of Defendant, such event may cause or contribute to an endangerment to public health, welfare or the environment. Defendant shall include with any such written notice all available documentation supporting the claim that the delay was attributable to a force majeure event. The United States may, in its unreviewable discretion, extend the time within which notice must be given. No such extension shall be effective unless in writing. Failure to comply with the above requirements shall preclude Defendant from asserting any claim of force majeure for that event for the period of time of such failure to comply, and for any additional delay caused by such failure. Defendant shall be deemed to know of any circumstance of which Defendant, any entity controlled by Defendant, or Defendant's contractors knew or should have known.

77. If EPA, after a reasonable opportunity for review and comment by the State, agrees that the delay or anticipated delay is attributable to a force majeure event, the time for performance of the obligations under this Consent Decree that are affected by the force majeure event will be extended by EPA, for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the force majeure event shall not, of itself, extend the time for performance of any other obligation. EPA will notify

Defendant in writing of the length of the extension, if any, for performance of the obligations affected by the force majeure event.

78. If EPA, after a reasonable opportunity for review and comment by the State, does not agree that the delay or anticipated delay has been or will be caused by a force majeure event, EPA will notify Defendant in writing of its decision.

79. If Defendant elects to invoke the dispute resolution procedures set forth in Section XI (Dispute Resolution), it shall do so no later than 20 days after receipt of EPA's notice. In any such proceeding, Defendant shall have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a force majeure event, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Defendant complied with the requirements of Paragraphs 75 and 76 above. If Defendant carries this burden, the delay at issue shall be deemed not to be a violation by Defendant of the affected obligation of this Consent Decree identified to EPA and the Court.

XI. DISPUTE RESOLUTION

80. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes arising under or with respect to this Consent Decree.

81. Informal Dispute Resolution. Any dispute subject to Dispute Resolution under this Consent Decree shall first be the subject of informal negotiations. The dispute shall be considered to have arisen when Defendant sends the United States a written Notice of Dispute. Such Notice of Dispute shall state clearly the matter in dispute. The period of informal negotiations shall not exceed 25 Days from the date the dispute arises, unless that period is

modified by written agreement. If the Parties cannot resolve a dispute by informal negotiations, then the position advanced by the United States, after consultation with KDHE, shall be considered binding unless, within 10 Days after the conclusion of the informal negotiation period, Defendant invokes formal dispute resolution procedures as set forth below.

82. Formal Dispute Resolution. Defendant may invoke formal dispute resolution procedures, within the time period provided in the preceding Paragraph, by serving on the United States, with a copy to KDHE, a written Statement of Position regarding the matter in dispute. The Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting Defendant's position and any supporting documentation relied upon by Defendant.

83. After consultation with KDHE, the United States shall serve upon HFEDR, with a copy to KDHE, its Statement of Position within 45 Days of receipt of Defendant's Statement of Position. The United States' Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting that position and any supporting documentation relied upon by the United States. The United States' Statement of Position shall be binding on Defendant, unless Defendant files a motion for judicial review of the dispute in accordance with the following Paragraph. Where appropriate, EPA may allow submission of supplemental statements of position by the parties to the dispute.

84. Defendant may seek judicial review of the dispute by filing with the Court and serving on the United States, with a copy to KDHE, in accordance with Section XV (Notices), a motion requesting judicial resolution of the dispute. The motion must be filed within 10 Days of receipt of the United States' Statement of Position pursuant to the preceding Paragraph. The motion shall contain a written statement of Defendant's position on the matter in dispute,

including any supporting factual data, analysis, opinion, or documentation, and shall set forth the relief requested and any schedule within which the dispute must be resolved for orderly implementation of the Consent Decree.

85. The United States shall respond to Defendant's motion within the time period allowed by the Local Rules of this Court. Defendant may file a reply memorandum, to the extent permitted by the Local Rules.

86. Standard of Review.

a. In a formal dispute proceeding under this Section, Defendant shall bear the burden of demonstrating that its position complies with this Consent Decree and the Clean Air Act, and that it is entitled to relief under applicable principles of law.

87. The invocation of dispute resolution procedures under this Section shall not, by itself, extend, postpone, or affect in any way any obligation of Defendant under this Consent Decree, unless and until final resolution of the dispute so provides. Stipulated penalties with respect to the disputed matter shall continue to accrue from the first Day of noncompliance, but payment shall be stayed pending resolution of the dispute as provided in Paragraph 70. If Defendant does not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section IX (Stipulated Penalties).

XII. INFORMATION COLLECTION AND RETENTION

88. The United States, KDHE, and their representatives, including attorneys, contractors, and consultants, shall have the right of entry into any facility covered by this Consent Decree, at all reasonable times (subject to any applicable federal health and safety laws and regulations), upon presentation of proper identification for EPA personnel and proper credentials for anyone else, to:

- a. monitor the progress of activities required under this Consent Decree;
- b. verify any data or information submitted to the United States or the State in accordance with the terms of this Consent Decree;
- c. obtain samples and, upon request, splits of any samples taken by Defendant or its representatives, contractors, or consultants;
- d. obtain documentary evidence, including photographs and similar data; and
- e. assess Defendant's compliance with this Consent Decree.

89. Upon request, EPA and the State shall provide Defendant splits of any samples taken by EPA or the State.

90. Upon request, Defendant shall provide EPA and the State all continuous emissions monitoring system and process data available.

91. Until three years after the termination of this Consent Decree, Defendant shall retain, and shall instruct its contractors and agents to preserve, all non-identical copies of all documents, records, or other information (including documents, records, or other information in electronic form) (hereinafter referred to as "Records") in its or its contractors' or agents' possession or control, or that come into its or its contractors' or agents' possession or control, and that relate to Defendant's performance of its obligations under this Consent Decree. This information-retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures. At any time during this information-retention period, upon request by the United States or KDHE, Defendant shall provide copies of any Records required to be maintained under this Paragraph. This retention requirement does not apply to voicemail messages or text messages, so long as those forms of communication are not used for substantive discussions concerning compliance with the Consent Decree. Nor does this retention

requirement apply to Defendant's outside counsel retained specifically for the purpose of potential litigation.

92. At the conclusion of the information-retention period provided in the preceding Paragraph, Defendant shall notify the United States and KDHE at least 60 Days prior to the destruction of Records subject to the requirements of the preceding Paragraph and, upon request by the United States or KDHE, Defendant shall deliver any such Records to EPA or KDHE.

93. Defendant may assert that certain Records are privileged under the attorney-client privilege or any other privilege recognized by federal law. If Defendant asserts such a privilege, it shall comply with Federal Rule of Civil Procedure 26(b)(5) regarding claims of privilege. However, no Records created or generated pursuant to the requirements of this Consent Decree shall be withheld on grounds of privilege.

94. Defendant may also assert that information required to be provided under this Section is protected as Confidential Business Information ("CBI") under 40 C.F.R. Part 2. As to any information that Defendant seeks to protect as CBI, Defendant shall follow the procedures set forth in 40 C.F.R. Part 2.

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

XIII. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS

96. This Consent Decree is a partial remedy for the civil claims of the United States and the State for the violations alleged in the Complaint filed in this action through the date of

lodging. This Consent Decree resolves the civil claims of the United States and the State for the alleged violations of Section 110 of the CAA, 42 U.S.C. § 7410, and the Kansas SIP issued thereunder; Section 111 of the CAA, 42 U.S.C. § 7411, and the New Source Performance Standards (“NSPS”), 40 C.F.R. Part 60; Section 112 of the CAA, 42 U.S.C. § 7412, and the NESHAPs, 40 C.F.R. Part 63; and the federally enforceable permits issued to HFEDR by KDHE under Title V of the CAA, 42 U.S.C. § 7661-7661f, through the date of lodging. This Consent Decree also resolves the United States’ civil claims for injunctive relief for the alleged violations of Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1); and Section 112(r)(7) of the CAA, 42 U.S.C. § 7412(r)(7), and the Risk Management Program, 40 C.F.R. Part 68, through the date of lodging.

97. This Consent Decree does not resolve the United States’ claims for civil penalties for the alleged violations of Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1); and Section 112(r)(7) of the CAA, 42 U.S.C. § 7412(r)(7), and the Risk Management Program, 40 C.F.R. Part 68. This Consent Decree is therefore without prejudice to the United States’ right to seek civil penalties for the alleged violations of Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1); and Section 112(r)(7) of the CAA, 42 U.S.C. § 7412(r)(7), and the Risk Management Program, 40 C.F.R. Part 68. The United States reserves the right to take such actions as it deems necessary and appropriate to resolve these claims for civil penalties.

98. The United States and the State reserve all legal and equitable remedies available to enforce the provisions of this Consent Decree. Except as otherwise provided herein, this Consent Decree shall not be construed to limit the rights of the United States or the State to obtain penalties or injunctive relief under the CAA or implementing regulations, or under other federal or state laws, regulations, or permit conditions. The United States and the State further

reserve all legal and equitable remedies to address any imminent and substantial endangerment to the public health or welfare or the environment arising at, or posed by, Defendant's Refinery, whether related to the violations addressed in this Consent Decree or otherwise.

99. In any subsequent administrative or judicial proceeding initiated by the United States or the State for injunctive relief, civil penalties, other appropriate relief relating to the Refinery, Defendant shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States or the State in the subsequent proceeding were or should have been brought in the instant case, except with respect to claims that have been specifically resolved pursuant to Paragraph 96.

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

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

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

XIV. COSTS

103. The Parties shall bear their own costs of this action, including attorneys' fees, except that the United States and the State shall be entitled to collect the costs (including attorneys' fees) incurred in any action necessary to collect any portion of the civil penalty or any stipulated penalties due but not paid by Defendant.

XV. NOTICES

104. Unless otherwise specified in this Consent Decree, whenever notifications, submissions, or communications are required by this Consent Decree, they shall be made in writing addressed as follows, with a courtesy copy by email (except that attachments that are too voluminous to email must be copied onto other electronic media and sent by mail):

As to the United States by email: eescdcopy.enrd@usdoj.gov
Re: DJ # 90-5-2-1-08660/1

As to the United States by mail: EES Case Management Unit
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, D.C. 20044-7611
Re: DJ # 90-5-2-1-08660/1

As to EPA:

- a. Bill Peterson
Environmental Engineer
Enforcement and Compliance Assurance Division
U.S. Environmental Protection Agency, Region 7
11201 Renner Boulevard
Lenexa, Kansas 66219
- b. Chemical Branch Chief
Enforcement and Compliance Assurance Division
U.S. Environmental Protection Agency, Region 7
11201 Renner Boulevard
Lenexa, Kansas 66219

c. Julie Murray
Office of Regional Counsel
U.S. Environmental Protection Agency, Region 7
11201 Renner Boulevard
Lenexa, Kansas 66219

d. Clarissa Howley Mills
Attorney Adviser
U.S. Environmental Protection Agency, Region 6
1201 Elm Street
Dallas, Texas 75270

As to the State:

a. Connie Ellis
Section Chief
Compliance and Enforcement
Kansas Department of Health and Environment
1000 SW Jackson, Suite 310
Topeka, Kansas 66612-1366

b. Kate Gleeson
Attorney
Kansas Department of Health and Environment
1000 SW Jackson, Suite 560
Topeka, Kansas 66612-1366

As to Defendant:

a. Darin L. Rains
VP Refining, Refinery Manager
HollyFrontier El Dorado Refining LLC
1401 Douglas Road
P.O. Box 1121
El Dorado, Kansas 67042

b. Andrew Beard
Environmental Manager
HollyFrontier El Dorado Refining LLC
1401 Douglas Road
P.O. Box 1121
El Dorado, Kansas 67042

c. Timothy T. Jones
Assistant General Counsel
The HollyFrontier Companies
2828 North Harwood, Suite 1300
Dallas, Texas 75201

105. Any Party may, by written notice to the other Parties, change its designated notice recipient or notice address provided above.

106. Notices submitted pursuant to this Section shall be deemed submitted upon mailing, in paper and electronic form, unless otherwise provided in this Consent Decree or by mutual agreement of the Parties in writing.

XVI. EFFECTIVE DATE

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

XVII. RETENTION OF JURISDICTION

108. The Court shall retain jurisdiction over this case until termination of this Consent Decree, for the purpose of resolving disputes arising under this Decree or entering orders modifying this Decree, pursuant to Sections XI (Dispute Resolution) and XVIII (Modification), or effectuating or enforcing compliance with the terms of this Decree.

XVIII. MODIFICATION

109. The terms of this Consent Decree, including any attached appendices, may be modified only by a subsequent written agreement signed by all the Parties. Where the modification constitutes a material change to this Consent Decree, it shall be effective only upon approval by the Court.

110. Any disputes concerning modification of this Consent Decree shall be resolved pursuant to Section XI (Dispute Resolution), provided, however, that, instead of the burden of proof provided by Paragraph 86, the Party seeking the modification bears the burden of

demonstrating that it is entitled to the requested modification in accordance with Federal Rule of Civil Procedure 60(b).

XIX. TERMINATION

111. After Defendant has completed the requirements of Section V (Compliance Requirements), has thereafter maintained continuous satisfactory compliance with this Consent Decree and Defendant's Title V permit for a period of 12 months, has complied with all other requirements of this Consent Decree, has applied for and received permits incorporating the surviving emission limits and standards established under Section V (Compliance Requirements), and has paid the civil penalty and any accrued stipulated penalties, as required by this Consent Decree, Defendant may serve upon the United States and the State a Request for Termination, stating that Defendant has satisfied those requirements, together with all necessary supporting documentation.

112. Following receipt by the United States and the State of Defendant's Request for Termination, the Parties shall confer informally concerning the Request and any disagreement that the Parties may have as to whether Defendant has satisfactorily complied with the requirements for termination of this Consent Decree. If the United States after consultation with the State agrees that the Decree may be terminated, the Parties shall submit, for the Court's approval, a joint stipulation terminating the Decree.

113. If the United States, after consultation with the State, does not agree that the Decree may be terminated, Defendant may invoke dispute resolution under Section XI (Dispute Resolution). However, Defendant shall not seek dispute resolution of any dispute regarding termination until 90 days after service of its Request for Termination.

XX. PUBLIC PARTICIPATION

114. This Consent Decree shall be lodged with the Court for a period of not less than 30 Days for public notice and comment in accordance with 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold its consent if the comments regarding the Consent Decree disclose facts or considerations indicating that the Consent Decree is inappropriate, improper, or inadequate. Defendant consents to entry of this Consent Decree without further notice and agrees not to withdraw from or oppose entry of this Consent Decree by the Court or to challenge any provision of the Decree, unless the United States has notified Defendant in writing that it no longer supports entry of the Decree.

XXI. SIGNATORIES/SERVICE

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

116. This Consent Decree may be signed in counterparts, and its validity shall not be challenged on that basis.

117. Defendant agrees to accept service of process by mail with respect to all matters arising under or relating to this Consent Decree and to waive the formal service requirements set forth in Rules 4 and 5 of the Federal Rules of Civil Procedure and any applicable Local Rules of this Court including, but not limited to, service of a summons. Defendant shall identify, on the attached signature page, the name, address, and telephone number or an agent who is authorized

to accept service of process by mail on its behalf. Defendant need not file an answer to the Complaint in this action unless or until the Court expressly declines to enter this Consent Decree.

XXII. INTEGRATION/HEADINGS

118. This Consent Decree and its appendices constitute the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in the Decree and supersedes all prior agreements and understandings, whether oral or written, concerning the settlement embodied herein. Other than deliverables that are subsequently submitted and approved pursuant to this Decree, the Parties acknowledge that there are no representations, agreements, or understandings relating to the settlement other than those expressly contained in this Consent Decree.

119. Headings to the sections and subsections of this Consent Decree are provided for convenience and do not affect the meaning or interpretation of the provisions of this Decree.

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

120. For purposes of the identification requirement of Section 162(f)(2)(A)(ii) of the Internal Revenue Code, 26 U.S.C. § 162(f)(2)(A)(ii), performance of Section II (Applicability), Paragraph 6; Section V (Compliance Requirements), Paragraphs 14-30 and related Appendices A-C; Section VI (Additional Injunctive Relief), Paragraphs 35-36; Section VII (Incorporation of Consent Decree Requirements Into Federally Enforceable Permits), Paragraphs 38-41; Section VIII (Reporting Requirements), Paragraphs 42 and 44; and Section XII (Information Collection and Retention), Paragraphs 88-91, is restitution or required to come into compliance with law.

XXIV. FINAL JUDGMENT

121. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment of the Court as to the United States, the State, and

Defendant. The Court finds that there is no just reason for delay and therefore enters this judgment as a final judgment under Federal Rules of Civil Procedure 54 and 58.

XXV. APPENDICES

122. The following Appendices are attached to and part of this Consent Decree:

- a. “Appendix A” is the Independent Third-Party Audit Protocol;
- b. “Appendix B” is the Protocol for Fired Heater Tube Integrity Assessments; and
- c. “Appendix C” is the Protocol for Fired Heater Viewport Evaluations.

Dated and entered this __ day of _____, 20__

UNITED STATES DISTRICT JUDGE

Signature Page for Consent Decree in *United States of America and State of Kansas, ex rel Kansas Department of Health and Environment v. HollyFrontier El Dorado Refining LLC*:

FOR THE UNITED STATES OF AMERICA:

NATHANIEL DOUGLAS
Deputy Section Chief
Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice

May 6, 2020
Date

s/ Katherine L. Matthews
KATHERINE L. MATTHEWS
Senior Counsel
Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice

May 6, 2020
Date

s/ Genevieve Parshalle
GENEVIEVE PARSHALLE
Trial Attorney
Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice

STEPHEN R. MCALLISTER
United States Attorney
District of Kansas

EMILY METZGER
Civil Chief
Office of the United States Attorney
District of Kansas

Signature Page for Consent Decree in *United States of America and State of Kansas, ex rel Kansas Department of Health and Environment v. HollyFrontier El Dorado Refining LLC*:

FOR THE U.S. ENVIRONMENTAL PROTECTION AGENCY:

SUSAN
BODINE

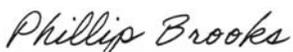
 Digitally signed by SUSAN
BODINE
Date: 2020.04.24 10:25:04
-04'00'

Date

Susan Parker Bodine
Assistant Administrator
Office of Enforcement and Compliance Assurance
U.S. Environmental Protection Agency

04/13/2020

Date



Phillip A. Brooks
Director, Air Enforcement Division
Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
U.S. Environmental Protection Agency

OF COUNSEL:

Teresa Dykes
Attorney, Air Enforcement Division
Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
U.S. Environmental Protection Agency

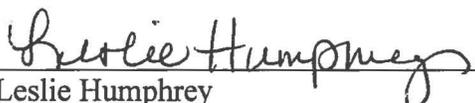
Signature Page for Consent Decree in *United States of America and State of Kansas, ex rel Kansas Department of Health and Environment v. HollyFrontier El Dorado Refining LLC*:

FOR THE U.S. ENVIRONMENTAL PROTECTION AGENCY:

3/30/2020
Date


James B. Gulliford
Regional Administrator
U.S. Environmental Protection Agency, Region 7

3.27.2020
Date


Leslie Humphrey
Acting Regional Counsel
U.S. Environmental Protection Agency, Region 7

OF COUNSEL:

Julie Murray
Assistant Regional Counsel
U.S. Environmental Protection Agency, Region 7
Office of Regional Counsel

Clarissa Mills
Assistant Regional Counsel
U.S. Environmental Protection Agency, Region 6
Office of Regional Counsel

Signature Page for Consent Decree in *United States of America and State of Kansas, ex rel Kansas Department of Health and Environment v. HollyFrontier El Dorado Refining LLC*:

FOR THE STATE OF KANSAS:

3-27-2020
Date



LEE A NORMAN, MD ⁴¹
Secretary
Kansas Department of Health and Environment

3/26/20
Date



KATE J. GLEESON, No. 25518
Special Assistant Attorney General
Senior Environmental Attorney
Kansas Department of Health and Environment

Signature Page for Consent Decree in *United States of America and State of Kansas, ex rel Kansas Department of Health and Environment v. HOLLYFRONTIER EL DORADO REFINING LLC*:

FOR DEFENDANT:

5/8/2020

Date


James M. Stump
Senior Vice President, Refining

APPENDIX A:

INDEPENDENT THIRD-PARTY AUDIT PROTOCOL

Background and Purpose

1. As part of the settlement embodied in the Consent Decree, Defendant has agreed to and shall conduct a third-party Audit of its compliance with the Risk Management Program requirements of Section 112(r)(7) of the CAA, 42 U.S.C. § 7412(r)(7), and the implementing regulations at 40 C.F.R. Part 68, at the Refinery and take corrective actions in accordance with the requirements and processes set forth in this Appendix A: Independent Third-Party Audit Protocol (Appendix A).

2. The terms used herein shall have the meaning set forth in Section III (Definitions) of the Consent Decree, Section 112(r) of the CAA, 42 U.S.C. § 7412(r), and the regulations found at 40 C.F.R. Part 68, unless otherwise specified below:

- a. “Auditor” shall mean a third-party individual or firm meeting the Auditor Qualifications set forth herein as specified or approved pursuant to this Appendix A.
- b. “Finding” shall mean an item that the Auditor has judged to be in present non-compliance with the applicable requirements of 40 C.F.R. Part 68 at the time of the Audit.

Auditor

Auditor Selection Process

3. Defendant has proposed and the United States has agreed that AcuTech Consulting Group shall serve as the Auditor pursuant to the requirements of this Appendix A until such time, if any, that Defendant proposes and the United States approves a successor

Auditor.

4. In the event it becomes necessary for Defendant to replace a previously approved Auditor, Defendant shall notify the United States within ten (10) days of learning of the need for a successor, and within forty-five (45) days Defendant shall submit to the United States the name, contact information (including mailing address, phone number, and e-mail address), and qualifications of the proposed successor Auditor with a signed certification. The certification shall be signed by the proposed successor Auditor and an authorized representative of Defendant and shall certify that the competency and independence requirements set forth in Auditor Qualifications of this Appendix A are met.

5. Within thirty (30) days of receipt of Defendant's proposed successor Auditor submission with certification, the United States shall either approve or disapprove of the proposed successor Auditor. If the United States disapproves of the proposed Auditor, the United States will provide notification to Defendant stating the good-faith reasons for disapproval. Within forty-five (45) days of Defendant's receipt of the United States' disapproval notification, Defendant shall submit to the United States another proposed successor Auditor in accordance with the requirements set forth above.

Auditor Qualifications

6. Any proposed or approved Auditor must meet the following competency and independence qualification criteria, unless otherwise agreed by the Parties in writing:

- a. Competency Requirements: The Auditor shall be:
 - i. Knowledgeable in the requirements of 40 C.F.R. Part 68;
 - ii. Experienced with hydrocarbon refining processes and recognized and generally accepted good engineering practices applicable

thereto; and

iii. Trained or certified in proper auditing techniques.

b. Independence Requirements: The Auditor shall:

i. Receive no financial benefit from the outcome of the Audit, apart from payment for the auditing services;

ii. Not have conducted past research, development, design, construction services, or consulting for Defendant within the last two (2) years. An Auditor's firm with personnel who, before working for the Auditor, conducted research, development, design, construction, or consulting services for Defendant within the last two (2) years as an employee or contractor may meet the requirements of this paragraph by ensuring such personnel do not participate in the Audit, or manage or advise the auditing team concerning the Audit, unless otherwise agreed to by the United States;

iii. Not provide other business or consulting services to Defendant, including advice or assistance to implement the Findings or recommendations of the Audit Report, for a period of at least two (2) years following submission of the final Audit Report, beyond the scope of Appendix A, unless otherwise agreed to by the United States;

iv. Ensure that all third-party personnel involved in the Audit sign and date a conflict of interest statement documenting that they meet the

independence criteria of this subparagraph titled Independence Requirements; and

- v. Have written policies and/or procedures to ensure that all personnel comply with the independence criteria of this subparagraph titled Independence Requirements.

Auditor Engagement

7. Within thirty (30) days after the Effective Date (or after the United States' approval of a successor Auditor, if any), Defendant shall retain the approved Auditor (or successor Auditor) to perform the requirements of this Appendix and execute a contract with the Auditor for the auditing services requiring that the Auditor maintain the Independence Requirements. Within thirty-five (35) days after the Effective Date (or after the United States' approval of a successor Auditor, if any), Defendant shall submit to EPA: an executed copy of the contract for auditing services, Auditor contact information (including mailing address, phone number, and e-mail address), and a certification(s) signed by the Auditor and an authorized representative of Defendant certifying that the competency and independence requirements set forth in Auditor Qualifications of this Appendix A are met.

Audit

Audit Commencement

8. Within the later of (a) sixty (60) days after Defendant retains the approved Auditor (or successor Auditor, if any) or (b) thirty (30) days after the Refinery is restarted after a turnaround, if the period in (a) above ends within sixty (60) days prior to or during a turnaround, the Auditor (or successor Auditor) shall commence the Audit, pursuant to the requirements set forth in this Appendix A.

9. At least ten (10) days prior to the commencement of the Audit, Defendant shall provide notice to EPA of the day that the Audit will commence and provide to EPA the audit protocol or checklist that the Auditor intends to utilize for the Audit.

10. Defendant shall provide the Auditor with a copy of the Consent Decree, including Appendix A.

Audit Requirements

11. Defendant shall ensure that the Auditor conducts the Audit in accordance with the requirements and deadlines set forth herein.

12. Scope: The Auditor shall conduct an Audit that evaluates Defendant's compliance with 40 C.F.R. Part 68 for the CRU2/HTU2, Gas CONC, LPGT/GLU, LPG Storage, Gofiner, and FCCU covered processes¹ and identify any Findings. The Audit shall include an increased focus and review of the following:

- a. Defendant's compliance with the requirements of 40 C.F.R. Part 68, Subpart D;
- b. Defendant's application of its Reliability Based Mechanical Integrity ("RBMI") program;
- c. Defendant's compliance with the requirements of 40 C.F.R. § 68.73(d) and (e) for the piping system located between the LPGT/GLU and Gofiner;
- d. Any overdue inspections for process equipment or where inspection records are not available. For the purposes of this subparagraph, a process equipment inspection shall be overdue if not conducted at a frequency

¹ Those covered processes are described in the 2019 Risk Management Plan submitted by Defendant.

consistent with applicable manufacturers' recommendations and/or good engineering practices or as otherwise set forth in Defendant's RBMI program; and

- e. Any and all equipment deficiencies as that term is used in 40 C.F.R. § 68.73(e).

13. Auditor Team: The Auditor may assemble an auditing team, led by the Auditor, to assist the Auditor in completing the Audit. The team may include: (a) employees of the Auditor's firm that meet the Independence Requirements set forth in Auditor Qualifications; and (b) Defendant's employees. Defendant's employees, however, shall only assist in gathering information for the Auditor's review and shall not complete any evaluations, make any Findings, or participate in the preparation of the Audit Report.

14. Access to Information: Defendant shall provide the Auditor with access to any and all documents, tracking systems, and databases necessary to complete the evaluations required by the Audit, subject to Defendant's rights under Paragraph 93 of the Consent Decree.

15. Audit Completion: Defendant anticipates that the Audit will require approximately three to four weeks of field work to conduct. The Auditor shall complete the Audit within ninety (90) business days of commencement of the Audit.

16. Audit Briefing: Within ten (10) days of the completion of the Audit, the Auditor shall conduct an out-briefing with Defendant, in which the Auditor shall orally convey all known Findings. Defendant shall notify EPA of the scheduled date of the out-briefing at least five (5) days prior to the out-briefing. EPA shall have the right to have its representatives attend the out-briefing either in person or telephonically. If the out-briefing date changes, Defendant shall notify EPA as soon as possible, but no later than twenty-four (24) hours prior to the out-briefing

time.

Findings and Corrective Actions

17. **Audit Report Completion:** Within forty-five (45) days of the completion of the Audit, the Auditor shall submit an Audit Report directly to EPA, with a copy sent concurrently to Defendant, pursuant to Section XV (Notices) of this Consent Decree. The Auditor shall not share any written draft reports with Defendant prior to the submission of the Audit Report to EPA.

18. **Audit Report Requirements:** The Audit Report shall:

- a. Be completed by the Auditor, including employees of Auditor's firm. Defendant's employees shall not contribute to any portion of the Audit Report;
- b. Document the dates of the Audit;
- c. Document the protocols followed and auditing standards utilized when completing the Audit;
- d. Document the names/positions of all personnel, including Defendant's employees, involved in the Audit;
- e. Document the type of information and records, equipment, processes, practices, and other items reviewed, tested, observed, or evaluated in the course of the Audit, provided, however, that any information from Defendant that is Confidential Business Information shall be appropriately marked as such;
- f. Document all Findings, including how each was discovered;
- g. Include the following certification, signed and dated by the Auditor:

I certify that this Audit report was prepared in accordance with a system designed to assure qualified personnel, including myself, properly gathered and evaluated the information upon which the Audit is based. I further certify that the Audit was conducted and prepared pursuant to the requirements of this Appendix A, including the requirements of competency, independence, impartiality, and conflict of interest standards and protocols. Based on my personal knowledge and experience, and inquiry of personnel involved in the Audit, the information submitted herein is true, accurate, and complete.

19. Audit Report Findings Response: Within forty-five (45) days of receipt of the Audit Report, Defendant shall submit a written response to the Audit Report to EPA, in which Defendant shall:

- a. Document any and all completed or proposed actions to correct each Finding, including a reasonable schedule by which corrective actions that have not been completed are scheduled to take place and be completed;
- b. Identify all Findings that Defendant believes are inaccurate or incorrect and the factual, technical, or legal basis, with supporting evidence, demonstrating Defendant's belief;
- c. Include the following certification, signed and dated by an authorized representative of Defendant:

I certify under penalty of law that that the foregoing response to the Audit Report was prepared under my direction or supervision by qualified personnel and that the information submitted herein is true, accurate, and

complete to the best of my knowledge. I am aware that there are significant penalties for making false material statements, representations, or certifications, including the possibility of fines and imprisonment for knowing violations.

20. EPA Response to Contested Findings: Should Defendant identify any Finding in its response to the Audit Report that Defendant believes to be inaccurate or incorrect, and provides the factual or technical basis and supporting evidence demonstrating such belief, EPA shall review such basis and supporting evidence and may waive any corrective actions consistent with its determination that the Finding was incorrect or inaccurate. Defendant may invoke Dispute Resolution pursuant to Section XI of the Consent Decree with respect to any contested Finding that EPA does not waive pursuant to this Paragraph, if invoked within thirty (30) days of receiving notice from the EPA.

21. Corrective Actions: Except as provided herein, Defendant shall implement corrective action to correct each Finding with respect to the Covered Process at issue and any other related Covered Processes where a similar Finding could be present, according to a reasonable schedule under the circumstances, or by the earlier of six (6) months from receipt of the Audit Report or the later of twenty-four (24) months from the Effective Date. In the event that the appropriate corrective action for any Finding would require a shutdown of the covered process, a “reasonable schedule” shall include the time to and including the next unit or refinery turnaround or capital project, unless that schedule would otherwise cause Defendant to violate 40 C.F.R. Part 68 or any other requirement. For each Finding corrected, Defendant shall notify EPA of the method and date of the correction, with supporting documentation, in its response to the Audit Report or the quarterly report submitted pursuant to Section VIII (Reporting

Requirements) of the Consent Decree for the quarter in which the correction was completed.

Reports

22. The Reports required by Section VIII (Reporting Requirements) of the Consent Decree shall describe the following:

- a. The status of the Audit;
- b. The status of the Audit Report;
- c. The status of Defendant's response to the Audit Report;
- d. The status of any disputes regarding any Findings in the Audit Report; and
- e. The status of implementation of corrective actions to correct Findings, including certifications regarding Findings for which corrective measures have been completed during the calendar-quarter at issue, if not already reported to EPA.

The Report shall also include a description of any non-compliance with this Appendix A and a description of the violation's likely cause and any remedial steps taken, or to be taken, to prevent or minimize such violation.

General Provisions

23. The Auditor shall act impartially when performing any and all Audit activities.

24. Nothing in this Appendix precludes the United States from assessing stipulated penalties for a missed Audit deadline, unless an extension of the deadline is otherwise mutually agreed upon by the Parties in writing.

25. Defendant shall be solely responsible for paying the Auditor's fees and expenses.

APPENDIX B:

Protocol for Fired Heater Tube Integrity Assessments
HollyFrontier El Dorado Refinery

Section 1: Background and Purpose

1.1 As part of the settlement embodied in the Consent Decree, HFEDR shall assess the mechanical integrity of the tubular coils in Covered Heaters at the Refinery and shall take corrective measures as provided herein.

Section 2: Definitions

2.1 Except as defined specifically herein, the terms herein shall have the meaning defined in the Consent Decree, Section 112(r) of the CAA, 42 U.S.C. § 7412(r), and the regulations found at 40 C.F.R. Part 68.

2.2 “API 530” means American Petroleum Institute (“API”) Standard 530 – Calculation of Heater-tube Thickness in Petroleum Refineries, Seventh Edition (April 2015).

2.3 “API 570” means API Standard 570 – Piping Inspection Code: In-service Inspection, Rating, Repair, and Alteration of Piping Systems, Fourth Edition (Feb. 2016).

2.4 “API 571” means API Recommended Practice 571 – Damage Mechanisms Affecting Fixed Equipment in the Refining Industry, Second Edition (April 2011).

2.5 “API 579-1/ASME FFS-1” means API Recommended Practice 579-1/ASME FFS-1 – Fitness for Service, Third Edition (June 2016).

2.6 “Fired Heater” means an exchanger that transfers heat from the combination of fuel to fluids contained in tubular coils within an internally insulated enclosure.

2.7 “Covered Heaters” mean the fired heaters described in Section 3 and listed in Attachment A hereto.

2.8 “Covered Process” has the meaning provided in the RMP Regulations.

2.9 “Protocol” means this Protocol for Fired Heater Tube Integrity Assessments HollyFrontier El Dorado Refinery.

2.10 “RAGAGEP” means recognized and generally accepted good engineering practices as the term is used in the RMP Regulations.

2.11 “Refinery” means the HollyFrontier El Dorado Refinery.

2.12 “RMP Regulations” means the regulations at 40 C.F.R. Part 68.

Section 3: Scope

3.1 The Covered Heaters included in the scope of this Protocol are all existing Fired Heaters at the Refinery within Covered Processes (i.e., cabin heaters, box heaters, and vertical cylindrical heaters with firebox burners) as described in API 560 section 4.3 and API 560 figure 1 and as certified by HFEDR in Attachment A hereto.

Section 4: Tube Integrity Assessments

4.1 HFEDR shall perform an assessment of the mechanical integrity of the tubular coils in the Covered Heaters. The assessments will evaluate the tubular coils' suitability for service and projected remaining life in accordance with appropriate sections pertaining to tubular coils in API 530, API 570, and API 579-1/ASME FFS-1, as applicable (the "Assessments," as described further below).

4.2 The Assessments will include, at a minimum, a review of the following for each Covered Heater:

- Heater design and construction parameters – materials of construction, temperature, pressure, process fluid characteristics;
- Historical operating conditions, current operating conditions – temperature, pressures, process fluid characteristics;
- Inspection history and data; and
- API 571 guidance for the potential damage mechanisms applicable to each Covered Heater.

4.3 The assessments may be undertaken at HFEDR's election by HFEDR employees (e.g., engineers and/or inspectors) or by consultants.

4.4 Within ninety (90) days of the Effective Date of this Consent Decree, HFEDR shall submit a report to the United States, documenting at a minimum:

- a. The date each assessment was completed;
- b. The names of the personnel involved in the assessment;
- c. The protocols followed, and standards utilized when completing the assessment;
- d. Documentation regarding the software used for each assessment, including the source of the equations or computations utilized by the software when completing the assessment;
- e. The type of information and records, equipment, and other items reviewed, tested, observed, or evaluated in the course of the assessment; and

- f. Conclusions as to the present mechanical integrity of the tubular coils, including projected remaining life calculations assessing all applicable damage mechanisms, including the accumulated creep calculations, whether they are fit to continue service at current operating parameters, and findings that would lead to a level 3 fitness for service evaluation pursuant to API 579-1/ASME FFS-1.

Section 5: Corrective Actions

5.1 HFEDR shall take appropriate corrective action(s) for all Covered Heaters for which (a) the tubular coil does not meet the acceptance criteria of a level 3 fitness for service evaluation pursuant to API 579-1/ASME FFS-1; (b) the tubular coil is projected to fail or exceed the projected remaining life within twenty-four (24) months; or (c) the tubular coil is deemed not suitable for continued service at current or expected operating conditions at the time of the assessment.

5.2 In general, corrective actions may include:

- Temporary or permanent removal of Covered Heaters from service;
- Changes to operating parameters that address suitability for service;
- Changes to monitoring and inspection plans, frequencies, and methods; and
- Repairs or replacements that address suitability for service.

5.3 In the case of any Covered Heater that has already exceeded its projected remaining life at operating conditions used for this assessment, corrective action(s) will, at a minimum, include: (a) temporary removal from service until remaining life can be extended through repairs or replacements; or (b) prompt changes to operating parameters (e.g., temperature, charge rate, firing rate) sufficient to increase the remaining useful life.

5.4 HFEDR may, at its election, propose corrective actions for Covered Heaters that do not meet the criteria of Section 5.1.

5.5 All proposals for corrective actions will be accompanied by the projected reevaluation of suitability for service that would apply once such actions are implemented.

5.6 Corrective actions and implementation schedules will be proposed to EPA pursuant to Section 5.7. All corrective actions that require (a) taking a Covered Heater temporarily out of service, (b) changes to inspection plans, frequencies, and methods, and (c) changes to operating parameters will be implemented or become effective within thirty (30) days of completion of the Assessments.

5.7 Within one hundred twenty (120) days of the Effective Date of this Consent Decree, HFEDR shall submit a report to the United States, documenting at a minimum:

- a. The proposed corrective action(s) set forth in Section 5.2 for each Covered Heater containing a tubular coil meeting the qualification set forth in Section 5.1;

- b. Any corrective action(s) already taken, including pursuant to Section 5.6; and
- c. The proposed implementation schedule for the remaining corrective action(s).

5.8 The Parties recognize that there are multiple factors that must be considered in determining the proposed corrective action for any given Covered Heater, given differences in design, risk, age, utilization, and other factors. HFEDR will propose appropriate corrective action using its best professional engineering judgment in light of all the relevant factors.

5.9 The Parties also recognize that there are multiple factors that must be considered in determining the proposed schedule for corrective actions that require the repair or replacement for any given Covered Heater, including factors identified in Section 5.8 as well as the Refinery's schedule for turnarounds and other planned maintenance. HFEDR will propose reasonable schedules using its best engineering judgment in light of all the relevant factors. Except as provided in the following sentence, HFEDR will complete all corrective action required by this Protocol within twenty-four (24) months of the Effective Date of the Consent Decree. In the event that the corrective action for any Covered Heater would require a shutdown of the Covered Heater and/or Covered Process, a "reasonable schedule" shall include the time to and including the next unit or refinery turnaround or capital project, unless that schedule would otherwise cause HFEDR to violate 40 C.F.R. Part 68 or any other requirement.

Section 6: EPA Approval

6.1 The Parties will follow the approval process set forth in Paragraphs 31-34 of the Consent Decree, provided that EPA may only disapprove any element of the report required by Section 4.4 to the extent that element does not comply with this Protocol, the Consent Decree, or the Clean Air Act, including the RMP Regulations and RAGAGEP.

6.2 To the extent any element is disapproved, HFEDR will address the deficiency and resubmit the report for approval pursuant to Paragraph 33 of the Consent Decree within forty-five (45) days after receipt of EPA's disapproval.

6.3 Once approved by EPA, HFEDR will implement the approved corrective actions according to the approved implementation schedules.

6.4 HFEDR may at any time request to alter any approved corrective actions or implementation schedules for good cause. EPA will not unreasonably withhold approval.

6.5 Any EPA decision disapproving any element of the report or any request to alter any approved corrective actions or implementation schedules is subject to dispute resolution pursuant to Section XI of the Consent Decree.

6.6 Nothing in this Protocol shall prevent the Refinery from continuing to operate, inspect, monitor, and maintain any Covered Heater in the ordinary course of its business. Furthermore, nothing in this Protocol shall prevent the Refinery from implementing corrective actions, at its own risk, prior to approval by EPA.

Section 7: Progress and Final Reports

7.1 Until such time as the final report is submitted pursuant to Section 7.2, HFEDR will summarize its progress toward completing the tube integrity assessments and corrective actions in the Reports required by Section VIII (Reporting Requirements) of the Consent Decree.

7.2 Within sixty (60) days after completion of the approved corrective actions, HFEDR will submit a final report documenting that the corrective actions have been completed.

Attachment A – List of Existing Covered Heaters¹

Unit	Equipment Description	Equipment ID
01 FCC	Fresh Feed Heater	B-0140
03 Crude	Crude charge heater	B-0306
03 Crude	Crude Charge Heater	B-0307
05 GLU	Regeneration Gas Heater	B-0501
06 TGTU	Hot Oil Heater	B-0630
10 Gofiner	Feed Preheat Furnace	B-1001
10 Gofiner	Fractionator Preheat Furnace	B-1002
10-Gofiner	Isotherming Heater	B1003
14 HTU#3	Unifining Reactor Charge Heater	B-1401
20 CRU 1	Charge Heater	B-2001
20 CRU 1	No. #3 Reheater	B-2002
20 CRU 1	Stabilizer Reboiler	B-2003
20 CRU 1	No. Three Charge Heater	B-2006B
20 CRU 1	No. 2 Charge heater	B-2006A
20 HTU#1	Charge Heater	B-2031
20 HTU#1	Reboiler Furnace	B-2004
21 ALKY	Isostripper Reboiler	B-2104
21 ALKY	Deisobutanizer Reboiler	B-2105
21 ALKY	Gas Oil Heater	B-2106
23 CRU 2	No 1 Reheater	B-2306-02
23 CRU 2	#4 Reactor Charge Heater	B-2304
23 CRU 2	Stabilizer Reboiler Can Heater	B-2305
23 CRU 2	Charge Heater	B-2306-01
23 CRU 2	No 2 Reheater	B-2306-03
24 Vacuum	Vacuum Heater	B-2402
25 HTU#2	Debutanizer Reboiler Heater	B-2502
25 HTU#2	Charge Heater	B-2504

¹ HFEDR certifies that Attachment A includes fired heaters at the Refinery as defined in Section 3.1 above.

Unit	Equipment Description	Equipment ID
26 Coker	Coker Charge Heater (West)	B-2609
26 Coker	Coker Charge Heater (East)	B-2610
27 GasCon	Stripper Reboiler Tubes	B-2701
34 HTU#4	Stripper Reboiler	B-3402
34 HTU#4	Charge Heater	B-3401
41 HTU #5	Charge Heater	B-4101
41 HTU #5	Stripper Reboiler	B-4102
47 HTU #6	Hot Oil Heater	B-2901
47 HTU #6	HDS RX Feed Heater	B-4701

APPENDIX C:

Protocol for Fired Heater Viewport Evaluations
HollyFrontier El Dorado Refinery

Section 1: Background and Purpose

1.1 As part of the settlement embodied in the Consent Decree, HFEDR shall assess the condition and accessibility of the viewports on the fired heaters in Covered Processes at the Refinery and shall take corrective actions as provided herein.

Section 2: Definitions

2.1 Except as defined specifically herein, the terms herein shall have the meaning defined in the Consent Decree, Section 112(r) of the CAA, 42 U.S.C. § 7412(r), and the regulations found at 40 C.F.R. Part 68.

2.2 “API 560” means American Petroleum Institute (“API”) Standard 560 – Fired Heaters for General Refinery Service (Feb. 2016).

2.3 “API 573” means API Recommended Practice 573 – Inspection of Fired Boilers and Heaters, Third Edition (Oct. 2013).

2.4 “Fired Heater” means an exchanger that transfers heat from the combination of fuel to fluids contained in tubular coils within an internally insulated enclosure.

2.5 “Covered Heaters” means the heaters described in Section 3, including the existing Covered Heaters listed in Attachment A hereto.

2.6 “Covered Process” has the meaning provided in the RMP Regulations.

2.7 “Protocol” means this Protocol for Fired Heater Viewport Evaluations HollyFrontier El Dorado Refinery.

2.8 “Refinery” means the HollyFrontier El Dorado Refinery.

2.9 “RAGAGEP” means recognized and generally accepted good engineering practices as the term is used in the RMP Regulations.

2.10 “RMP Regulations” means the regulations at 40 C.F.R. Part 68.

Section 3: Scope

3.1 The Covered Heaters included in the scope of this Protocol are all existing Fired Heaters at the Refinery within Covered Processes (i.e., cabin heaters, box heaters, and vertical cylindrical heaters with firebox burners) as described in API 560 section 4.3 and API 560 figure 1 and as certified by HFEDR in Attachment A hereto.

3.2 New Fired Heaters that have been designed and planned for installation by the time the viewport assessments required by Section 4 are conducted are considered Covered Heaters and included in the scope of this Protocol solely for purposes of Sections 4.3, 5, and 6.

Section 4: Viewport Assessments

4.1 HFEDR shall perform viewport assessments of Covered Heaters conducted in accordance with API 573.

4.2 Viewport assessments will include, at a minimum, a review of the following for each Covered Heater:

- Process safety information;
- Viewport design and location;
- Percentage of the flame, including the top of the flame, that is visible from the existing viewports;
- Percentage of the radiant tubes that are visible from the existing viewports; and
- Assessment of online inspection options.

4.3 All new, proposed Covered Heaters that have been designed and planned for installation by the time the viewport assessments required by this Section are conducted will be reviewed to ensure the design is in compliance with API 560.

4.4 Viewport assessments may be undertaken at HFEDR's election either by HFEDR employees (e.g., engineers and/or inspectors) or by consultants.

Section 5: Risk Ranking

5.1 HFEDR will risk rank all Covered Heaters. The risk ranking will consider the probability of a loss of containment and the consequence of a loss of containment. Risk is the combination of the probability of a scenario occurring and the potential consequences associated with the event.

5.2 Probability categories will be determined based on a review of the potential damage mechanisms, current and historical operating conditions (temperatures, pressure, process fluid characteristics), and inspection and maintenance history. Five probability categories from 1-5 will be used to represent all scenarios from most to least probable.

5.3 Consequence categories will be determined based on the potential for personnel impact, environmental impact, community impact, equipment impact, and economic impact. Five consequence categories from A-E will be used to represent all scenarios from those with the greatest to the least consequences.

5.4 Each Covered Heater will then be risk ranked low, medium, medium high, or high based on the probability and consequence scenarios according to the following matrix.

MEDIUM HIGH	MEDIUM HIGH	HIGH	HIGH	HIGH	1
MEDIUM LOW	MEDIUM LOW	MEDIUM HIGH	MEDIUM HIGH	HIGH	2
LOW	MEDIUM LOW	MEDIUM LOW	MEDIUM HIGH	HIGH	3
LOW	LOW	MEDIUM LOW	MEDIUM LOW	MEDIUM HIGH	4
LOW	LOW	LOW	MEDIUM LOW	MEDIUM HIGH	5
E	D	C	B	A	

5.5 The determinations of probability, consequence, and the final risk ranking will be documented.

Section 6: Corrective Actions

6.1 HFEDR shall take appropriate corrective action(s) for existing Covered Heaters: (a) that are risk ranked medium high, or high; (b) for which not all of the flame is visible from the existing viewports; or (c) for which not all radiant tubes are visible, consistent with Section 6.2.

6.2 In general, corrective actions for existing Covered Heaters may include:

- Viewport additions, changes, repairs, or replacement to allow for visibility of all of the flame and radiant tubes;¹
- Viewport additions or changes to allow more comprehensive online inspections and monitoring, including visibility of the flame and radiant tubes (including, for example, adding new viewports or relocating existing viewports);
- Repair or replacement of existing viewport doors to assist with improved online inspection and monitoring, including visibility of the flame and radiant tubes;
- The application of other technologies to enhance online inspection and monitoring, including visibility of the flame and radiant tubes;
- Interim or ongoing measures, such as changes in operating parameters, if any, that will be implemented prior to any permanent changes to enhance online inspection and monitoring, including visibility of the flame and radiant tubes.

¹ The parties recognize that some Covered Heaters pre-date current RAGAGEP, including with respect to visibility of the flame and radiant tubes. In those circumstances, HFEDR will propose corrective action(s) consistent with the Covered Heater's risk ranking and the remaining elements of Section 6.2.

6.3 HFEDR will take appropriate corrective action for new Covered Heaters designed and planned for installation, as described in Sections 3.2 and 4.3, that are not designed or installed in compliance with API 560. Any Corrective actions will include steps to meet API 560.

6.4 HFEDR may, at its election, propose corrective actions for Covered Heaters that do not meet the criteria of Section 6.1.

6.5 Corrective actions and implementation schedules will be proposed to EPA pursuant to Section 8.

6.6 The Parties recognize that there are multiple factors that must be considered in determining the proposed corrective action for any given Covered Heater, given differences in design, risk, age, utilization, and other factors. Thus, there is no single form of corrective action that is necessarily the best option for any given Covered Heater. HFEDR will propose appropriate corrective action using its best professional engineering judgment in light of all the relevant factors.

6.7 The Parties also recognize that there are multiple factors that must be considered in determining the proposed schedule for corrective action for any given Covered Heater, including factors identified in Section 6.6 as well as the Refinery's schedule for turnarounds and other planned maintenance. HFEDR will propose reasonable schedules using its best professional engineering judgment in light of all the relevant factors. Except as provided in the following sentence, HFEDR will complete all corrective action required by this Protocol within twenty-four (24) months of the Effective Date of the Consent Decree. In the event that the corrective action for any Covered Heater would require a shutdown of the Covered Heater and/or Covered Process, a "reasonable schedule" shall include the time to and including the next unit or refinery turnaround or capital project, unless that schedule would otherwise cause HFEDR to violate 40 C.F.R. Part 68 or any other requirement.

Section 7: Viewport Assessments, Risk Ranking, and Corrective Actions Report

7.1 Within ninety (90) days of the Effective Date of this Consent Decree, HFEDR will submit a report to EPA summarizing the viewport evaluations required by Section 4 and the risk ranking required by Section 5. Within one hundred and twenty (120) days of the Effective Date of this Consent Decree, HFEDR will submit a report to EPA proposing corrective actions and associated implementation schedules pursuant to Section 6, including an explanation where it is found to be impracticable to make viewport additions, changes, repairs, or replacements in order to allow for visibility of all of the flame and radiant tubes. Each of the reports required by this Section may be combined with the reports required, respectively, by Sections 4.4 and 5.7 of Appendix B to the Consent Decree.

Section 8: EPA Approval

8.1 The Parties will follow the approval process set forth in Paragraphs 31-34 of the Consent Decree, provided that EPA may only disapprove any element of the report required by Section 7 to the extent that element does not comply with this Protocol, the Consent Decree, or the Clean Air Act, including the RMP Regulations and RAGAGEP.

8.2 To the extent any element is disapproved, HFEDR will address the deficiency and resubmit the report for approval pursuant to Paragraph 33 of the Consent Decree within forty-five (45) days after receipt of EPA's disapproval.

8.3 Once approved by EPA, HFEDR will implement the approved corrective actions according to the approved implementation schedules.

8.4 HFEDR may at any time request to alter any approved corrective actions or implementation schedules for good cause. EPA will not unreasonably withhold approval.

8.5 Any EPA decision disapproving any element of the report or any request to alter any approved corrective actions or implementation schedules is subject to dispute resolution pursuant to Section XI of the Consent Decree.

8.6 Nothing in this Protocol shall prevent the Refinery from continuing to operate, inspect, monitor, and maintain any Covered Heater in the ordinary course of its business. Furthermore, nothing in this Protocol shall prevent the Refinery from implementing corrective actions, at its own risk, prior to approval by EPA.

Section 9: Progress and Final Reports

9.1 Until such time as the final report is submitted pursuant to Section 9.2, HFEDR will summarize its progress toward completing the viewport assessments, risk rankings, and corrective actions in the Reports required by Section VIII (Reporting Requirements) of the Consent Decree.

9.2 Within sixty (60) days after completion of the approved corrective actions, HFEDR will submit a final report documenting that the corrective actions have been completed.

Attachment A – List of Existing Covered Heaters²

Unit	Equipment Description	Equipment ID
01 FCC	Fresh Feed Heater	B-0140
03 Crude	Crude charge heater	B-0306
03 Crude	Crude Charge Heater	B-0307
05 GLU	Regeneration Gas Heater	B-0501
06 TGTU	Hot Oil Heater	B-0630
10 Gofiner	Feed Preheat Furnace	B-1001
10 Gofiner	Fractionator Preheat Furnace	B-1002
10-Gofiner	Isotherming Heater	B1003
14 HTU#3	Unifining Reactor Charge Heater	B-1401
20 CRU 1	Charge Heater	B-2001
20 CRU 1	No. #3 Reheater	B-2002
20 CRU 1	Stabilizer Reboiler	B-2003
20 CRU 1	No. Three Charge Heater	B-2006B
20 CRU 1	No. 2 Charge heater	B-2006A
20 HTU#1	Charge Heater	B-2031
20 HTU#1	Reboiler Furnace	B-2004
21 ALKY	Isostripper Reboiler	B-2104
21 ALKY	Deisobutanizer Reboiler	B-2105
21 ALKY	Gas Oil Heater	B-2106
23 CRU 2	No 1 Reheater	B-2306-02
23 CRU 2	#4 Reactor Charge Heater	B-2304
23 CRU 2	Stabilizer Reboiler Can Heater	B-2305
23 CRU 2	Charge Heater	B-2306-01
23 CRU 2	No 2 Reheater	B-2306-03
24 Vacuum	Vacuum Heater	B-2402
25 HTU#2	Debutanizer Reboiler Heater	B-2502
25 HTU#2	Charge Heater	B-2504

² HFEDR certifies that Attachment A includes fired heaters at the Refinery as defined in Section 3.1 above.

Unit	Equipment Description	Equipment ID
26 Coker	Coker Charge Heater (West)	B-2609
26 Coker	Coker Charge Heater (East)	B-2610
27 GasCon	Stripper Reboiler Tubes	B-2701
34 HTU#4	Stripper Reboiler	B-3402
34 HTU#4	Charge Heater	B-3401
41 HTU #5	Charge Heater	B-4101
41 HTU #5	Stripper Reboiler	B-4102
47 HTU #6	Hot Oil Heater	B-2901
47 HTU #6	HDS RX Feed Heater	B-4701