

October 17, 2024

Kyle Reedy  
Environmental Manager  
HF Sinclair Tulsa Refining LLC – East Refinery  
1700 South Union Avenue  
Tulsa, OK 74107

RE: RCRA Corrective Action and Post-Closure Permit-Public Draft  
HF Sinclair Tulsa Refining LLC – West Refinery (HFSTRW)  
EPA ID # OKD058078775; RCRA Permit 058078775-PC (Permit)

Dear Mr. Reedy:

On December 3, 2018, the Department of Environmental Quality's Land Protection Division (DEQ) received the above-referenced post-closure permit renewal application. The application was reviewed for administrative completeness in accordance with Title 40 of the Code of Federal Regulations (40 C.F.R.) §§ 264 and 270, the Oklahoma Hazardous Waste Management Act (27A O.S. §§ 2-7-101 *et seq.*), and Oklahoma Administrative Code (OAC) 252:4 and 252:205. DEQ determined that the application addressed the requirements of the applicable laws and regulations and found the application to be administratively complete in a letter dated August 29, 2019, and technically complete in a letter dated July 16, 2024.

On July 16, 2024, DEQ issued a courtesy draft of the permit to HFSTRW for review and comment. On August 30, 2024, DEQ received comments from HFSTRW. DEQ has reviewed the comments and prepared the enclosed RCRA Corrective Action and Post-Closure Permit for public comment.

The enclosed draft permit has been finalized for public review and comment. HFSTRW is required to publish notice of opportunity to comment and request a public meeting on the draft permit in at least one (1) local newspaper of general circulation. Concurrently, a notice should be broadcast on a local radio station. These notices will announce the opening of a forty-five (45) day comment period. Additionally, HFSTRW is to send a notice of the draft permit to all persons on the facility mailing list and to appropriate state and local government agencies as specified in 40 C.F.R. § 124.10(c)(1)(ix) and (x). Subsequently, proofs of publication and broadcasts must be furnished to DEQ within twenty (20) days after the date of publication pursuant to OAC 252:4-7-13(d).

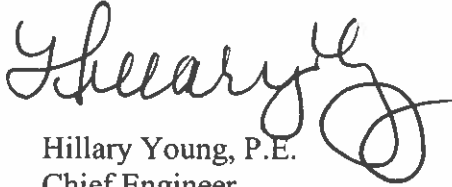
A fact sheet is included in the draft permit for public information. Please ensure that a copy of the draft permit is made available at the Tulsa City County Library. A copy of the draft permit will also be available at DEQ's office and on the DEQ website at <https://www.deq.ok.gov/land-protection-division/permit-public-participation-process/>.

Mr. Reedy  
October 17, 2024

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If you have any questions, please contact Mike Schornick of my staff at (405) 702 – 5166 or [mike.schornick@deq.ok.gov](mailto:mike.schornick@deq.ok.gov).

Sincerely,



Hillary Young, P.E.  
Chief Engineer  
Land Protection Division

Enclosure: Draft Permit

cc: Harry Shah (6PD-O) EPA Region VI (via email)

## **Newspaper Notice Text**

### **OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY NOTICE OF DRAFT CORRECTIVE ACTION AND POST-CLOSURE PERMIT OF AN EXISTING HAZARDOUS WASTE MANAGEMENT FACILITY**

The Oklahoma Department of Environmental Quality (DEQ) has received an application to renew a Resource Conservation and Recovery Act Corrective Action and Post-Closure Permit for the remediation and monitoring of closed Hazardous Waste Management Units at HF Sinclair Tulsa Refining LLC – Tulsa West Refinery (HFSTRW), 1700 South Union Avenue, Tulsa, Oklahoma 74107 located in Sections 9, 10, and 11, Township 19 North, Range 12 East, Tulsa County, Oklahoma. The application was filed on December 3, 2018.

DEQ has tentatively found that the application meets the requirements of Title 40 of the Code of Federal Regulations (40 CFR) Parts 264 and 270, Title 27A of the Oklahoma Statutes (27A O.S. §§ 2-7-101, *et seq.*), and Oklahoma Administrative Code (OAC) 252:4 and 252:205 and has prepared a draft corrective action and post-closure and corrective action permit for public review.

The draft corrective action and post-closure permit and its conditions propose that the HFSTRW facility continues to remediate and monitor the existing closed Hazardous Waste Management Units. It includes semi-annual site-wide groundwater monitoring, ongoing on-site and offsite corrective action, and post-closure care of the closed Land Treatment Units. The corrective action and post-closure permit would be issued under the authority of the Oklahoma Hazardous Waste Management Act and the federal Resource Conservation and Recovery Act.

The application, draft permit, and related documents may be reviewed on DEQ's website at <https://www.deq.ok.gov/land-protection-division/permit-public-participation-process/>; DEQ's offices at 707 North Robinson, Oklahoma City, OK, 73012; and at the Tulsa City County Library at 400 Civic Center, Tulsa, Oklahoma 74103. The DEQ and HFSTRW contacts are:

Hillary Young, P.E., Chief Engineer  
Land Protection Division,  
Oklahoma Department of Environmental Quality  
P. O. Box 1677  
Oklahoma City, Oklahoma 73101-1677  
(405) 702-5100

Arsin Sahba, P.G.  
Corporate Environmental Specialist – Remediation  
HF Sinclair Tulsa Refining LLC  
2828 N. Harwood, Suite 1300  
Dallas, TX 75201  
(972) 689-8540

Persons wishing to comment on the draft permit should submit their comments in writing to DEQ at the above address or website. Also, any person may request, in writing, a formal public meeting to present written or oral statements and data concerning the draft permit. A request for a public meeting must identify the nature of the issues to be raised in the meeting. If DEQ determines, based on the requests it receives, that there is significant degree of public interest in the draft permit, it will schedule a public meeting and provide notice of the date, time, and place.

Written comments and requests for a public meeting must be received by DEQ within forty-five (45) days after the date of this publication at the DEQ address or website given above. More specific information may be obtained by contacting the applicant at the HFSTRW contact given above or by contacting DEQ at the contact listed above.

## **Radio Broadcast Text**

### **Oklahoma Department of Environmental Quality Notice of Potential Corrective Action and Post-Closure Permit Conditions For a Hazardous Waste Management Facility**

The Oklahoma Department of Environmental Quality (DEQ) has reviewed a permit application submitted by HF Sinclair Tulsa Refining LLC for the remediation and monitoring of closed Hazardous Waste Management Units at the Tulsa West Refinery located in Sections 9, 10, and 11, Township 19 North, Range 12 East, Tulsa County, Oklahoma. The street address for the refinery is 1700 South Union Avenue, Tulsa, Oklahoma, 74107. DEQ has made a tentative determination to renew a post-closure and corrective action permit for HF Sinclair Tulsa Refining LLC for its Tulsa West Refinery in Tulsa, Oklahoma.

The draft permit and its conditions propose that the HF Sinclair Tulsa Refining LLC - Tulsa West Refinery continues to remediate and monitor the existing closed Hazardous Waste Management Units which includes semi-annual groundwater monitoring and ongoing onsite and offsite corrective actions. The draft permit would be issued under the authority of the Oklahoma Hazardous Waste Management Act and the federal Resource Conservation and Recovery Act.

Further information, including the application, draft permit, and a fact sheet may be reviewed on DEQ's website at [www.deq.ok.gov](http://www.deq.ok.gov); and at the Tulsa City County Library at 400 Civic Center, Tulsa, Oklahoma, 74103, telephone number 918-549-7323.

Persons wishing to comment on the draft permit or to request a public meeting should submit their comments or requests in writing to DEQ no later than forty-five (45) days from the date of this broadcast. DEQ's mailing address is P. O. Box 1677, Oklahoma City, Oklahoma, 73101-1677.

For further information about this notice, please contact Hillary Young with DEQ at 405-702-5100. That number again is 405-702-5100.



**OKLAHOMA**  
**Environmental**  
**Quality**

**HF SINCLAIR TULSA REFINING LLC  
TULSA WEST REFINERY  
TULSA, OKLAHOMA**

**EPA ID # OKD058078775**

**CORRECTIVE ACTION AND POST-CLOSURE PERMIT  
FOR THE REMEDIATION AND MONITORING  
OF  
CLOSED HAZARDOUS WASTE MANAGEMENT UNITS**

*ISSUED BY*

**OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY**

**[MONTH, DAY], 2024**

**HF SINCLAIR TULSA REFINING LLC**  
**TULSA WEST REFINERY**  
**FACT SHEET**

Potential Permit Conditions for the renewal of a Resource Conservation and Recovery Act (RCRA) Corrective Action and Post-Closure Permit. This is a Tier II Permit Action.

**Type of Proposed Action:** Renewal RCRA Corrective Action and Post-Closure Permit.

**Type of Facility:** Hazardous Waste Disposal Facility (Land Treatment Unit and Corrective Action)

**Facility Name:** HF Sinclair Tulsa Refining LLC – Tulsa West Refinery

**EPA ID Number:** OKD058078775

**Location:** 1700 South Union Avenue, Tulsa, OK, 74107

**Legal Description:** Sections 9, 10, and 11, Township 19 North, Range 12 East, Tulsa County, Oklahoma.

**Geographic Location:** Latitude: 36° 08' 24" North  
Longitude: 96° 01' 05" West

**Landowner:** HF Sinclair Tulsa Refining LLC  
2828 N. Harwood, Suite 1300  
Dallas, TX 75201

**Facility Operator:** HF Sinclair Tulsa Refining LLC  
1700 South Union Avenue, Tulsa, OK 74107

**Comment Period:** 45 days from the date of publication

**Basis of the Draft Permit**

HF Sinclair Tulsa Refining LLC, Tulsa West Refinery (HFSTRW and the Permittee), is located within Township 19 North, Range 12 East, Section 9, 10, and 11, Tulsa County, Oklahoma, at 1700 South Union Avenue, City of Tulsa. HFSTRW is a petroleum refinery located on approximately seven hundred and fifty (750) acres. The refinery has been in operation since approximately 1913. The petroleum products normally produced at the facility include gasoline, diesel fuel, liquified petroleum gas, lube oils, waxes, asphalts, petrochemicals, petroleum coke, and commercial jet fuel.

The RCRA corrective action and post-closure permit is for post-closure care of three (3) closed hazardous waste land treatment units (LTUs) [East LTU, Central LTU, and West LTU] and several

other recognized solid waste management units (SWMUs) or areas of concern (AOCs) located on the HFSTRW refinery property, site-wide groundwater monitoring, and ongoing onsite and offsite (adjacent to the facility boundary) corrective actions.

A consent order (CO), Case No. 15-215, was agreed to between HFSTRW and the Department of Environmental Quality (DEQ) on November 9, 2015. The CO required HFSTRW to develop a plan to identify the scope and condition of the process sewer system, to include a comprehensive sewer inspection process and a system to identify, schedule and document maintenance and repairs to the process sewer system. Subsequently, by correspondence dated June 16, 2016, DEQ approved the HFSTRW Sewer Inspection and Maintenance Work Plan (Plan) dated February 5, 2016, submitted to meet the requirements of the CO. The Plan proposed a ten (10) year program to implement the CO requirements. The Plan is being implemented as approved with the Sewer Inspection and Maintenance Program Annual 2023 Report dated May 16, 2024, documenting all activities conducted in Year 7 of the program, reviewed, and accepted by DEQ.

The closed LTUs are areas of the facility that were previously used for land treatment operations.. The East LTU and Central LTU began operations in the mid-1970s, and the West LTU began operations in 1985. Historically, applied wastes consisted of liquid, sludge, and solid residues from various refinery operations. The most recent RCRA post-closure and corrective action permit for the facility, Permit # 058078775-PC, was renewed on June 1, 2009. Waste application to all three (3) LTUs ceased by 1998, and all were closed with vegetative cover in 1999. The LTUs were certified closed with DEQ's approval on August 22, 2003, and post-closure care began at that time.

The current Permit Renewal Application was initially received on December 3, 2018. This renewal application has been through a series of Notices of Deficiencies and responses. DEQ determined the application to be administratively complete on August 29, 2019. Revisions to the application attachments were submitted on May 24, 2019; August 6, 2019; October 15, 2021; and May 17, 2024, to address technical deficiencies. The latest technical deficiency revision of the application received on May 20, 2024, (dated May 17, 2024) completed the permit application. DEQ reviewed the technical deficiency update documents and determined the application was technically complete on July 16, 2024. DEQ issued a courtesy draft of the permit to HFSTRW for review and comment on July 16, 2024. On August 30, 2024, DEQ received comments and proposed revisions from HFSTRW. DEQ reviewed the comments, the proposed revisions, and prepared the enclosed RCRA Corrective Action and Post-Closure Permit for public comment.

The basic requirements of the Oklahoma Hazardous Waste Management Act (OHWMA) 27A O.S. §§ 2-7-101 *et seq*; the Oklahoma Administrative Code (OAC 252:205), as amended; the federal Resource Conservation and Recovery Act (RCRA); and the Hazardous and Solid Waste Amendments of 1984 (HSWA) having been met, DEQ has prepared draft permit conditions. DEQ has the authority to issue permits for these activities and to enforce compliance with RCRA and HSWA programs.

DEQ developed the draft permit conditions and incorporated applicable conditions from OAC 252:205 and Title 40 of the Code of Federal Regulations (C.F.R.) Part 270,; additional conditions to enhance compliance with OAC 252:205 and 40 C.F.R. Part 264, and other conditions (as required) to achieve environmentally sound hazardous waste management.



The administrative record supporting this draft permit consists of the Part B permit application, additional supporting documentation, the draft permit, and this Fact Sheet.

### **Information Resources**

Copies of the proposed draft permit conditions, this Fact Sheet, and the Part B application are available for review on DEQ's website: <https://www.deq.ok.gov/land-protection-division/permit-public-participation-process/>; and during normal business hours at the Tulsa City County Library at 400 Civic Center, Tulsa, OK 74103.

Telephone inquiries may be directed to:  
Hillary Young, Chief Engineer  
Land Protection Division, DEQ  
(405) 702-5100

### **Comment Period and Procedures**

Persons wishing to comment on the draft permit conditions may submit their comments in writing to DEQ at the address listed below and on DEQ's website: <https://www.deq.ok.gov/land-protection-division/permit-public-participation-process/>. Comments should be directed to the appropriateness of the permit decision and the permit conditions and should be of a factual nature. All comments must be received at the Oklahoma Department of Environmental Quality no later than forty-five days (45) after notice of this Permit action has been published, at the address below.

Oklahoma Department of Environmental Quality  
Land Protection Division  
707 N. Robinson, Oklahoma City, OK 73102 or  
P.O. Box 1677, Oklahoma City, OK 73101-1677

Attn: Hillary Young, PE, Chief Engineer  
Land Protection Division

DEQ's comment and public hearing procedures may be found in OAC 252:004 and 40 C.F.R. §§ 124.10 and 124.12. A public meeting will be held by DEQ upon written request when there is a significant degree of public interest. If a public meeting is requested, public notice will be given at least thirty (30) days before the meeting.

### **Public Meeting**

The purpose of any public meeting is to clarify issues involved in the permit decision. Any person may submit oral or written statements and data concerning the draft permit conditions. The public is urged to address the issues set forth in the Notice of Draft Permit Conditions and this Fact Sheet and to present factual, relevant statements on these issues. All such pertinent and material testimony will be considered in reaching a final determination on the permit. A reasonable limit may be set upon time allowed for oral statements, and the submission of statements in writing may be required.

### **Notice of Final Determination**

DEQ will notify the applicant and each person who has submitted written comments or requested notice of the final permit decision. Within thirty (30) days after a RCRA permit decision has been issued, any person who filed comments on the draft permit renewal or participated in the public meeting/hearing may petition the Executive Director of the DEQ to review any condition of the permit decision. The petition shall include a statement of the reasons supporting that review, including a demonstration that any issues being raised were raised during the public comment period, and when appropriate, a showing that the condition in question is based on a finding of fact or conclusion of law that is clearly erroneous or an exercise of discretion or important policy consideration which DEQ should review. A petition to DEQ is a prerequisite to judicial review under OAC 252:205-3-2 and 40 C.F.R. 124.19 and should be directed to the address listed below:

Robert Singletary, Executive Director  
Department of Environmental Quality  
707 N. Robinson  
Oklahoma City, Oklahoma 73101-1677

If no comments are received during the comment period, the permit will become final and effective immediately upon issuance.

**OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY  
CORRECTIVE ACTION AND POST-CLOSURE PERMIT  
FOR A HAZARDOUS WASTE MANAGEMENT FACILITY**

**Permittee:** HF Sinclair Tulsa Refining LLC – Tulsa West Refinery  
1700 S. Union Ave.  
Tulsa, OK 74107

**EPA ID Number:** OKD058078775

**Effective Date:** Month, Day, 2024

**Permit Number:** 058078775-PC

**Expiration Date:** Month, Day, 2034

Pursuant to the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. §§ 6901 *et seq.*, commonly known as RCRA), including the Hazardous and Solid Waste Amendments of 1984 (HSWA), and regulations promulgated thereunder by the U.S. Environmental Protection Agency (EPA) (codified in Title 40 of the Code of Federal Regulations) and the Oklahoma Hazardous Waste Management Act (OHWMA), 27A O.S. §§ 2-7-101 *et seq.*, as amended) and regulations promulgated thereunder in the Oklahoma Administrative Code (OAC) 252:205, the Oklahoma Uniform Environmental Permitting Act at 27A O.S. § 2-14-101 *et seq.*, and rules promulgated thereunder in OAC 252:4-7, this Permit to perform post-closure care for the closed portions of the facility is hereby issued by the Oklahoma Department of Environmental Quality (DEQ) to HF Sinclair Tulsa Refining LLC – Tulsa West Refinery (hereafter called the Permittee). The facility is located within Township 19 North, Range 12 East, Sections 9, 10, and 11, Tulsa County, Oklahoma, at 1700 South Union Avenue, City of Tulsa, at latitude 36° 08' 24" North and longitude 96° 01' 05" West.

The HF Sinclair Tulsa Refining LLC – Tulsa West Refinery is an approximately 750-acre parcel. The facility has been in operation since approximately 1913 under several operators. The petroleum products normally produced at the facility include gasoline, diesel fuel, liquified petroleum gas, lube oils, waxes, asphalts, petrochemicals, petroleum coke, and commercial jet fuel.

The RCRA corrective action and post-closure permit is for three (3) closed refinery hazardous waste land treatment units (LTUs) and several other recognized solid waste management units (SWMUs) or areas of concern (AOCs) located on the facility property.

A consent order (CO), Case No. 15-215, was agreed to between the Permittee and DEQ on November 9, 2015. The CO required the Permittee to develop a plan to identify the scope and condition of the refinery process sewer system, to include a comprehensive sewer inspection process and a system to identify, schedule and document maintenance and repairs to the process sewer system. Subsequently, by correspondence dated June 16, 2016, DEQ approved the Permittee Sewer Inspection and Maintenance Work Plan (Plan) dated February 5, 2016, submitted to meet the requirements of the CO. The Plan proposed a ten (10) year program to implement the CO requirements. The Plan is being implemented as approved with the Sewer Inspection and Maintenance Program Annual 2023 Report dated May 16, 2024, documenting all activities conducted in Year 7 of the program, reviewed and accepted by DEQ.

The closed LTUs are areas of the facility that were previously used for land treatment operations. The East LTU and Central LTU began operations in the mid-1970s, and the West LTU began operations in 1985. Historically, applied wastes consisted of liquid, sludge, and solid residues from various refinery operations. The most recent RCRA post-closure permit for the facility, Permit # 058078775-PC, was renewed on June 1, 2009. Waste application to all three (3) LTUs ceased by 1998, and all were closed with vegetative cover in 1999. The LTUs were certified closed with DEQ's approval on August 22, 2003, and post-closure care began at that time.

The current Permit Renewal Application was dated and initially received on December 3, 2018. This renewal application has been through a series of Notices of Deficiencies and responses. The Permittee submitted revisions to the Permit Attachments dated May 24, 2019; August 6, 2019; October 15, 2021; and May 17, 2024. The latest revision of the application received on May 20, 2024 (dated May 17, 2024) completed the permit application. DEQ reviewed the revision documents and determined that the application was administratively complete (August 29, 2019) and technically complete (July 16, 2024).

DEQ issued a courtesy draft of the permit to HFSTRW for review and comment on July 16, 2024. On August 30, 2024, DEQ received comments and proposed revisions from HFSTRW. DEQ reviewed the comments, the proposed revisions, and prepared the RCRA Corrective Action and Post-Closure Permit for public comment.

The Permittee must comply with all terms and conditions of this Permit. This Permit consists of the conditions contained herein (including those in any attachments), and the applicable regulations contained in Title 40 of the Code of Federal Regulations (C.F.R.) Parts 124, 260 through 264, 266, 268, and 270, as specified in the Permit. Applicable regulations are those which are in effect on the date of issuance of the Permit, in accordance with 40 C.F.R. § 270.32(c). Primary responsibility for the enforcement of the provisions of this Permit lies with DEQ.

This Permit is based on the assumption that all the information submitted in the Part B Permit application dated December 3, 2018, as modified through Permittee submittals dated May 24, 2019; August 6, 2019; October 15, 2021; May 17, 2024; and the courtesy permit comments and proposed revisions dated August 30, 2024 (hereafter referred to as the application) is accurate and that the facility will be operated as specified in the application.

Any inaccuracies found in the submitted information may be grounds for the termination, revocation and reissuance, or modification of this Permit in accordance with 40 C.F.R. §§ 270.41, 270.42, and 270.43.

This Permit is effective as of **Month, Day**, 2024, and shall remain in effect until **Month, Day**, 2034, unless revoked and reissued under 40 C.F.R. § 270.41, terminated under 40 C.F.R. § 270.43, or continued in accordance with 40 C.F.R. § 270.51(a), and the Oklahoma rules and regulations for hazardous waste management (OAC 252:205) and the Oklahoma Administrative Procedures Act.

Issued this **xx**<sup>st</sup> day of **Month**, 2024.

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Hillary Young, P.E. Date  
Chief Engineer  
Land Protection Division  
Oklahoma Department of Environmental Quality

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Kelly Dixon Date  
Director  
Land Protection Division  
Oklahoma Department of Environmental Quality



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## SECTION I. GENERAL PERMIT CONDITIONS

### A. GENERAL

The Permittee shall monitor and maintain the permitted facility in compliance with the provisions of the Oklahoma Hazardous Waste Management Act (OHWMA), 27A O.S. §§ 2-7-101 *et. seq.*, as amended, the Oklahoma Department of Environmental Quality rules for hazardous waste management (OAC 252:205), the Federal Resource Conservation and Recovery Act (RCRA), the Hazardous and Solid Waste Amendments of 1984 (HSWA), the federal rules for hazardous waste management, 40 C.F.R. Parts 260-270, and this Permit as specified through the permit conditions set herein.

### B. BASIS OF PERMIT

This Permit is issued based on the information submitted and the design criteria presented in the application. Any inaccuracies found in this information could provide cause for the termination or modification of this Permit, and for enforcement action. The Permittee is to inform the Land Protection Division (LPD) of DEQ of any deviation from or changes in the design or operation of the facility which could affect the Permittee's ability to comply with the applicable regulations or permit conditions.

This Permit may be reviewed by DEQ at any time after the date of permit issuance and shall be modified as necessary, as provided in 40 C.F.R. § 270.41 and 27A O.S. § 2-7-127(B). Except as provided in Permit Condition I.F.3. and 40 C.F.R. § 270.51, the term of this Permit shall not be extended by modification beyond the expiration date appearing on the face of this Permit. 40 C.F.R. § 270.50(b).

### C. INCORPORATION BY REFERENCE

All the referenced Code of Federal Regulations, 40 C.F.R. Parts 124, 260 through 266, 268, and 270, as specified in the permit are, unless otherwise stated, incorporated in their entirety by OAC 252:205-3-2.

### D. DEFINITIONS

For purposes of this Permit and the special conditions pursuant to the 1984 Hazardous and Solid Waste Amendments to RCRA, terms used herein shall have the same meaning as those in 40 C.F.R. Parts 124, 260 through 266, 268, and 270; and OAC 252:205-1-2 through OAC 252:205-3-6; unless this Permit specifically provides otherwise. Where terms are not defined in the Oklahoma Administrative Code or the permit, the meaning associated with such terms shall be defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

“**Action Levels**” means health- and environmental-based levels of constituent concentrations determined by DEQ to be indicators for protection of human health and the environment.

“**Alternate Concentration Limit**” (ACL) means a risk-based action or cleanup level derived from a site-specific risk assessment established under 40 C.F.R. § 264.94.

“**Area of Concern**” (AOC) means any discernable unit or area which, in the opinion of DEQ, may have received solid or hazardous waste or waste containing hazardous constituents at any time. DEQ may require investigation of the unit as if it were a SWMU. If shown to be a SWMU by the investigation, the AOC must be reported by the Permittee as a newly identified SWMU. If the AOC is shown not to be a SWMU by the investigation, DEQ may determine that no further action is necessary and notify the Permittee in writing.

“**CAP**” means Corrective Action Plan, as further described in Permit Sections III and IV, and to be developed by the Permittee after issuance of this Permit.

“**CERCLA**” means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and amended 1986.

“**CMS**” means Corrective Measures Study.

“**COCs**” means Constituents of Concern.

“**CQA**” means Construction Quality Assurance Program per 40 C.F.R. § 264.19.

“**DEQ**” means Oklahoma Department of Environmental Quality.

“**Director**” means the Executive Director of the Oklahoma Department of Environmental Quality, or his/her designee or authorized representative.

“**Division Director**” means the Director of the Land Protection Division of the Oklahoma Department of Environmental Quality, or his/her designee or authorized representative.

“**EPA**” means the United States Environmental Protection Agency.

“**Facility**” means all contiguous property under the control of the owner or operator seeking a permit under Subtitle C of RCRA.

“**GWPS**” means Groundwater Protection Standard which will be site-specific risk-based levels as established under 40 C.F.R. § 264.94.

“**HSWA**” means the 1984 Hazardous and Solid Waste Amendments to RCRA.

“**Hazardous Constituent**” means any constituent identified in Appendix VIII of 40 C.F.R. Part 261, or any constituent identified in Appendix IX of 40 C.F.R. Part 264.

“**Hazardous Waste**” means any waste that is identified in 40 C.F.R. §§ 261.31-261.33.

“**Land Protection Division**” (**LPD**) means the Land Protection Division of DEQ.

“**LNAPLs**” means Light Non-Aqueous Phase Liquids.

“**MCL**” means maximum contaminant level as required by the Safe Drinking Water Act and codified in 40 C.F.R. Part 142.

“**OAC**” means Oklahoma Administrative Code

“**OHWMA**” means the Oklahoma Hazardous Waste Management Act, 27A O.S. § 2-7-101 *et. seq.*

“**Permittee**” means HF Sinclair Tulsa Refining LLC – Tulsa West Refinery, 1700 S. Union Avenue, Tulsa, Oklahoma 74107, EPA ID # OKD058078775.

“**Point of Compliance**” (**POC**) means the vertical plane in the uppermost aquifer located at the hydraulically downgradient limit of the Permittee’s property boundary at which the applicable GWPS applies and at which monitoring must be conducted.

“**Point of Exposure**” (**POE**) means the location(s) within an environmental medium where a human or ecological receptor could potentially come into contact with constituents of concern.

“**RCRA**” means the Resource Conservation and Recovery Act of 1976 as amended by HSWA in 1984.

“**RFA**” means RCRA Facility Assessment.

“**RFI**” means RCRA Facility Investigation.

“**RSL**” means Regional Screening Levels established by U.S. EPA.

“**Regional Administrator**” means the Regional Administrator of EPA Region VI, or his/her designee or authorized representative.

“**Release**” means any spilling, leaking, pouring, emitting, emptying, discharging, injecting, pumping, escaping, leaching, dumping, or disposing of hazardous wastes (including hazardous constituents) into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing hazardous wastes or hazardous constituents). RCRA section 3004(u) corrective action authority does not routinely reevaluate permitted releases.

“**Risk-Based Screening Level**” (**RBSL**) means a health-based screening value derived using risk assessment approaches, which combine toxic potency estimates, acceptable

target risks and hazards, and default exposure values.

**“Solid Waste Management”** means the systematic administration of activities which provide for the collection, source separation, storage, transportation, transfer, processing, treatment, and disposal of solid waste.

**“Solid Waste Management Unit” (SWMU)** means any discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at a facility at which solid wastes have been routinely and systematically released. The definition includes regulated units (i.e., landfills, surface impoundments, waste piles and land treatment units) but does not include passive leakage or one-time spills from production areas and units in which wastes have not been managed (e.g., product storage areas).

**“USACE”** means U.S. Army Corps of Engineers

If, subsequent to the issuance of this Permit, regulations are promulgated which redefine any of the above terms, DEQ may, at its discretion, apply the new definition to this Permit by modifying the Permit in accordance with 40 C.F.R. § 270.41.

## **E. EFFECT OF PERMIT**

The Permittee is required to monitor and maintain the facility in accordance with the conditions of this Permit. Any treatment and/or storage of hazardous waste not authorized in this Permit is prohibited, unless exempted from permit requirements.

Pursuant to 40 C.F.R. § 270.4, compliance with this Permit constitutes compliance, for purposes of enforcement, with Subtitle C of RCRA, except for those requirements not included in the permit which:

1. Become effective by statute;
2. Are promulgated under 40 C.F.R. Part 268 restricting the placement of hazardous wastes in or on the land; or
3. Are promulgated under 40 C.F.R. Part 264 regarding leak detection systems for new and replacement surface impoundment, waste pile, and landfill units, and lateral expansions of surface impoundment, waste pile, and landfill units. The leak detection system requirements include double liners, CQA programs, monitoring action leakage rates, and response action plans, and will be implemented through the procedures of 40 C.F.R. § 270.42 Class 1 permit modifications. Issuance of this Permit does not convey any property rights of any sort or any exclusive privilege, nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of state or local laws or regulations.

Except as set out in the previous paragraphs, compliance with the terms of this Permit does not constitute a defense to any order issued or any action brought under the OHWMA; Sections 3008(a), 3008(h), 3013, or 7003 of RCRA; Sections 104, 106(a) or 107 of CERCLA, or any other law providing for protection of public health or the environment from an imminent or substantial endangerment.

## F. PERMIT ACTIONS

### 1. Permit Modification, Revocation and Reissuance, and Termination

This Permit may be modified, revoked, and reissued, or terminated for cause, as specified in 40 C.F.R. §§ 270.41, 270.42, and 270.43. The filing of a request for a permit modification, revocation and re-issuance, or termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittee, does not stay the applicability or enforceability of any permit condition. 40 C.F.R. §§ 270.4(a), 270.30(f).

### 2. Permit Renewal

This Permit may be renewed as specified in 40 C.F.R. § 270.30(b) and Permit Condition I.H.2. Review of any application for a permit renewal shall consider improvements in the state of control and measurement technology as well as changes in applicable regulations. 40 C.F.R. § 270.30(b), HSWA Sec. 212.

### 3. Permit Expiration

Pursuant to 40 C.F.R. § 270.50 and OAC 252:205-3-2, this Permit shall be effective for a fixed term not to exceed ten (10) years.

a. Notwithstanding the expiration date or the ten-year life of this Permit, the conditions of this Permit will continue in full force and effect (“Continued Permit”) until the effective date of a new permit or issuance of a final denial of the new permit pursuant to 27A O.S. § 2-14-304 if the following conditions are met and an enforcement action pursuant to subparagraph (b) below has not been instituted:

- i. The Permittee has submitted an application for a new permit that is both complete and timely pursuant to 27A O.S. § 2-14-101 *et seq.*; OAC 252:4-7-1; 40 C.F.R. §§ 270.10(c), 270.14; and the applicable sections in 40 C.F.R. §§ 270.15 through 270.29; and
- ii. DEQ, through no fault of the Permittee, does not issue a final denial of the new permit or does not issue a new permit with an effective date on or before the expiration date of the expiring permit.

- b. Enforcement. When the Permittee is not in compliance with the conditions of the Continued Permit, DEQ may do any or all of the following:
  - i. Pursuant to 27A O.S. § 2-7-126, § 2-7-127, § 2-7-129, § 2-7-130, § 2-7-131 and/or § 2-7-134, issue an order with penalties; require corrective action; temporarily suspend the Continued Permit; revoke the Continued Permit and/or cause proceedings to be instituted in the district court for civil or criminal penalties; and
  - ii. Pursuant to 27A O.S. § 2-7-113.1, issue a final denial of the new permit. If the permit is denied, the owner or operator shall cease the activities authorized by the Continued Permit or be subject to enforcement action for operating without a permit; or
  - iii. Take other actions authorized by 27A O.S. § 2-1-101 *et seq.*, OAC 252:205-1-1 *et seq.*, or other applicable laws or regulations.

#### 4. Transfer of Permits

This Permit is not transferable to any person except after notice to DEQ as required by 40 C.F.R. § 270.40. DEQ may require modification or revocation and re-issuance of the permit pursuant to 40 C.F.R. § 270.40. Before transferring ownership or operation of the facility during its operating life, the Permittee shall notify the new owner or operator in writing of the requirements of 40 C.F.R. Parts 264 and 270 and this Permit. 40 C.F.R. §§ 270.30(1)(3), and 264.12(c).

### **G. SEVERABILITY**

The provisions of this Permit are severable, and if any provision of this Permit, or the application of any provision of this Permit to any circumstance, is held invalid, the application of such provision to other circumstances and the remainder of this Permit shall not be affected thereby. 40 C.F.R. § 124.16(a).

### **H. DUTIES AND REQUIREMENTS**

#### 1. Duty to Comply

The Permittee shall comply with all conditions of this Permit except to the extent and for the duration that noncompliance is authorized by an emergency permit. Any permit noncompliance, other than noncompliance authorized by an emergency permit, constitutes a violation of OHWMA and RCRA and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. 40 C.F.R. § 270.30(a).

#### 2. Duty to Reapply

If the Permittee wishes to continue an activity allowed by this Permit after the expiration date of this Permit, the Permittee shall submit a complete application for a new permit at least 180 days prior to permit expiration. 40 C.F.R. §§ 270.10(h) and 270.30(b).

3. Biennial Report

The Permittee shall comply with the biennial reporting requirements of OAC 252:205-3-2 and 40 C.F.R. § 264.75, if applicable.

4. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the Permittee, in an enforcement action, that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit. 40 C.F.R. § 270.30(c).

5. Duty to Mitigate

In the event of noncompliance with this Permit, the Permittee shall take all reasonable steps to minimize releases to the environment and shall carry out such measures as are reasonable to prevent significant adverse impacts on human health or the environment. 40 C.F.R. § 270.30(d).

6. Proper Operation and Maintenance

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance include effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance/quality control procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Permit. 40 C.F.R. § 270.30(e).

7. Duty to Provide Information

The Permittee shall furnish to DEQ, within a reasonable time, any relevant information which DEQ may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit, or to determine compliance with this Permit. The Permittee shall also furnish to DEQ, upon request, copies of records required to be kept by this Permit. 40 C.F.R. § 270.30(h).

8. Inspection and Entry



Pursuant to 40 C.F.R. § 270.30(i), the Permittee shall allow DEQ, or an authorized representative, upon the presentation of credentials and other documents, as may be required by law, to:

- a. Enter at reasonable times upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and
- d. Sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by RCRA, any substances or parameters at any location.

9. Monitoring and Records

- a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the waste to be analyzed must be the appropriate method from Appendix I of 40 C.F.R. -Part 261 or an equivalent method approved by DEQ. Laboratory methods must be those specified in the most recent edition of Test Methods for Evaluating Solid Waste: Physical/Chemical Methods SW-846, *Standard Methods for the Examination of Water and Wastewater, Fifteenth Edition, 1980, and 1981 supplement, or current adopted edition*; *RCRA Ground-Water Monitoring: Draft Technical Guidance, 1992*; OSWER Directive 9950.1 or an equivalent method approved in writing by DEQ. 40 C.F.R. § 270.30(j)(1).
- b. The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports and records required by this Permit, the certification required by 40 C.F.R. § 264.73(b)(9), and records of all data used to complete the application for this Permit for a period of at least three (3) years from the date of the sample, measurement, report, record, certification, or application. These periods may be extended by request of DEQ at any time and are automatically extended during the course of any unresolved enforcement action regarding this facility. 40 C.F.R. § 270.30(j)(2).

- c. Pursuant to 40 C.F.R. § 270.30(j)(3), records of monitoring information shall specify:
- i. The date(s), exact place, and times of sampling or measurements;
  - ii. The individual(s) who performed the sampling or measurements;
  - iii. The date(s) analyses were performed;
  - iv. The individual(s) who performed the analyses;
  - v. The analytical techniques or methods used; and
  - vi. The results of such analyses.

10. Reporting Planned Changes

The Permittee shall give notice to DEQ, as soon as possible, of any planned physical alterations or additions to the permitted facility. 40 C.F.R. § 270.30(l)(1). This requirement is only applicable to the remediation and monitoring equipment directly associated with the Corrective Action Plan to be developed in accordance with Permit Condition III.I and the Post-Closure Care Plan provided in Permit Attachment 2.

11. Reporting Anticipated Noncompliance

The Permittee shall give advance notice to DEQ of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements. 40 C.F.R. § 270.30(l)(2).

12. Monitoring Reports

- a. The Permittee shall conduct the sampling at the intervals specified elsewhere in the permit.
- b. The Permittee must report the results of all environmental monitoring to DEQ per the schedules set forth in the Permit or other DEQ approved time frame. 40 C.F.R. § 270.30(l)(4).

13. Incident Reporting

Upon discovery of a release of materials that are or become hazardous waste whether by spillage, leakage, or discharge to soils or to air or to surface or groundwaters (outside the limits of a discharge permit), or by other means, and which could threaten human health or the environment, the owner or operator shall immediately notify DEQ and take all necessary action to contain, remediate, and mitigate hazards from the release. OAC 252:205-13-1, 40 C.F.R. § 270.30. The Permittee is not required to notify DEQ of a release if it is completely contained in a secondary containment area.

- a. The report shall include the following:

- i. Information concerning release of any hazardous waste that may cause an endangerment to public drinking water supplies.
  - ii. Any information of a release or discharge of hazardous waste, or of a fire or explosion from the hazardous waste management facility, which could threaten the environment or human health outside the facility.
- b. The description of the occurrence and its cause shall include:
  - i. Name, address, and telephone number of the owner or operator;
  - ii. Name, address, and telephone number of the facility;
  - iii. Date, time, and type of incident;
  - iv. Name and quantity of materials involved;
  - v. The extent of injuries, if any;
  - vi. An assessment of actual or potential hazards to the environment and human health outside the facility, where this is applicable; and
  - vii. Estimated quantity and disposition of recovered material that resulted from the incident.
- c. A written submission shall also be provided within five (5) days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period(s) of noncompliance (including exact dates and times); whether the noncompliance has been corrected and, if not, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. DEQ may waive the five-day written notice requirement in favor of a written report within fifteen (15) days.

14. Other Noncompliance

The Permittee shall report all other instances of noncompliance not otherwise required to be reported above in Permit Conditions I.H.10-13 at the time monitoring reports are submitted. The reports shall contain the information listed in Permit Condition I.H.14. 40 C.F.R. § 270.30(l)(10).

15. Other Information

Whenever the Permittee becomes aware that it failed to submit any relevant facts in the permit application or submitted incorrect information in a permit application or in any report to DEQ, the Permittee shall promptly submit such facts or information. 40 C.F.R. § 270.30(l)(11).

16. Force Majeure

The requirements of this Permit shall be followed as set forth herein and in any approved future plans, unless the performance or progress is delayed by events which constitute a "force majeure," defined here as an event that is caused by an Act of God, labor strike, or work stoppage, changed business conditions, changed economic circumstances, or other circumstance beyond the Permittee's control that could not have been prevented by reasonable due diligence.

The occurrence of a "force majeure" event that justifies the missing of one deadline shall not automatically justify the missing of later deadlines unless there is a cumulative effect due to such an event. The Permittee shall keep a record of any delaying events.

If the Permittee anticipates or experiences an inability to comply with any of the conditions of this Permit due to a "force majeure" event, the Permittee shall notify DEQ as soon as possible, but not later than within twenty-four (24) hours. A written notice must be submitted to DEQ within ten (10) days, which describes the nature, cause, and anticipated length of the delay and all steps that the Permittee has taken and will take, with a schedule for their implementation, to avoid or minimize the delay. In the event that performance of any of the activities required by this Permit is affected by a "force majeure" event, then the Permittee shall propose a plan for DEQ's approval for achieving the objectives of this Permit by alternative means in the timeliest manner.

**I. SIGNATORY REQUIREMENT**

All applications, reports, or information submitted to or requested by DEQ, its designee, or authorized representative shall be signed and certified in accordance with 40 C.F.R. §§ 270.11 and 270.30(k).

**J. REPORTS, NOTIFICATIONS, AND SUBMISSIONS TO DEQ**

All reports, notifications, or other submissions which are required by this Permit to be sent or given to DEQ should be sent by certified mail, or equivalent trackable delivery services, or hand-delivered to :

Chief Engineer  
Land Protection Division  
Oklahoma Department of Environmental Quality  
707 North Robinson  
P.O. Box 1677  
Oklahoma City, Oklahoma 73101-1677  
Phone Number (405) 702-5100

**K. CONFIDENTIAL INFORMATION**

In accordance with 40 C.F.R. § 270.12 and OAC 252:205-1-4, the Permittee may claim confidential any information required to be submitted by this Permit. Any such claim must be asserted at the time of submission in the manner prescribed on the application form or instructions or, in the case of other submissions, by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of the submission, EPA and DEQ may make the information available to the public without further notice. If a claim is asserted, the information will be treated in accordance with the procedures in 40 C.F.R. Part 2 (Public Information). Claims of confidentiality for the name and address of any permit applicant or Permittee will be denied.

**L. DOCUMENTS TO BE MAINTAINED AT THE FACILITY**

The Permittee shall maintain at the facility, until corrective action is completed, and certified by an independent, registered professional engineer, as needed, the following documents and all amendments, revisions, and modifications to these documents:

1. Preparedness and Prevention Plan (Permit Attachment 1);
2. Post-Closure Care Plan (Permit Attachment 2), as required by 40 C.F.R. § 264.118(a);
3. Groundwater Monitoring and LNAPL Management Plan (Permit Attachment 3), as required by 40 C.F.R. § 264.97(d);
4. Sampling and Analysis Plan and Quality Assurance Project Plan (Permit Attachment 3, Appendix 8.1), as required by 40 C.F.R. § 264.97(d) (hereafter referred to as the Sampling and Analysis Plan);
5. Inspection and Maintenance Plan (Permit Attachment 4), as required by 40 C.F.R. § 264.15(b);
6. Annually adjusted cost estimate for corrective measures (Permit Attachment 5); and
7. All other documents required by Permit Condition I.H.

## **SECTION II. GENERAL FACILITY CONDITIONS**

### **A. DESIGN AND OPERATION OF FACILITY**

The Permittee shall monitor and maintain the facility to minimize the possibility of a fire, explosion, or any unplanned, sudden or non-sudden release of waste constituents to air, soil, groundwater, or surface water which could threaten human health or the environment, as required by 40 C.F.R. § 264.31.

### **B. REQUIRED NOTICES**

The Permittee is not authorized to receive any hazardous waste from any source either on-site, offsite, or from a foreign source.,

### **C. SECURITY**

The Permittee shall comply with the applicable security provisions of 40 C.F.R. § 264.14 and the approved Post-Closure Care Plan (Permit Attachment 2).

### **D. GENERAL INSPECTION REQUIREMENTS**

The Permittee shall follow the inspection provisions of 40 C.F.R. § 264.15 and the inspection schedule set out in Permit Attachment 4. The Permittee shall remedy any deterioration or malfunction discovered by an inspection, as required by 40 C.F.R. § 264.15(c). Records of inspections shall be kept, as required by 40 C.F.R. § 264.15(d).

### **E. PERSONNEL TRAINING**

The Permittee shall conduct personnel training, as required by 40 C.F.R. § 264.16. The Permittee shall maintain training documents and records, as required by 40 C.F.R. §§ 264.16(d) and (e).

### **F. SPECIAL PROVISIONS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTE**

The Permittee shall comply with the requirements concerning the management of ignitable, reactive, and incompatible wastes as required by 40 C.F.R. § 264.17.

### **G. PREPAREDNESS AND PREVENTION**

The Permittee shall follow the provisions of 40 C.F.R. § 264, Subpart C, and the Preparedness and Prevention Plan provided in Permit Attachment 1.

1. Required Equipment

At a minimum, the Permittee shall maintain at the facility the equipment required by 40 C.F.R. § 264.32.

2. Testing and Maintenance of Equipment

The Permittee shall test and maintain the equipment specified in Permit Condition II.G.1, as necessary, to assure its proper operation in time of emergency.

3. Access to Communications or Alarm System

The Permittee shall maintain access to the communications or alarm system.

4. Arrangements with Local Authorities

The Permittee shall maintain arrangements with state and local authorities. If state or local officials refuse to enter into preparedness and prevention arrangements with the Permittee, the Permittee must document this refusal in the operating record.

**SECTION III. POST-CLOSURE AND CORRECTIVE ACTION**

**A. SCOPE OF REQUIREMENTS**

This Section addresses post-closure for the Permittee’s closed Land Treatment Units (LTUs) and corrective action for the identified Solid Waste Management Units (SWMUs), Areas of Concern (AOCs), any newly identified SWMUs and potential AOCs, and the dissolved phase plume. This section also includes the recovery requirements for the Light Non-Aqueous Phase Liquids (LNAPLs).

**B. UNIT IDENTIFICATION**

Waste Unit	Unit Location/Description	Hazardous Waste No.
East LTU  <u>Certified Closed:</u> DEQ approval dated August 22, 2003, initiated the post-closure care period.  <u>Present Condition:</u> Post-closure care	East LTU is located along the southern border of the facility and west of SWMU 8 in Section 10 of T 19 N and R 12 E. Approximate area is 15.37 acres.	D018 K048 K049 K051 K052 F037
Central LTU  <u>Certified Closed:</u> DEQ approval dated August 22, 2003, initiated the post-closure care period.  <u>Present Condition:</u> Post-closure care	Central LTU is located along the southern border of the facility in Section 9 of T 19 N and R 12 E. Approximate area is 28.74 acres.	D018 K048 K049 K051 K052 F037
West LTU  <u>Certified Closed:</u> DEQ approval dated August 22, 2003, initiated the post-closure care period.  <u>Present Condition:</u> Post-closure care	West LTU is located along the western boundary of the facility and adjacent to SWMU 2 in Section 9 of T 19 N and R 12 E. Approximate area is 22.71 acres.	D018 K048 K049 K051 K052 F037



<p>SWMU 1: Midco Landfill</p> <p><u>Present Condition:</u>          No Further Remedial Action Required (NFA)</p>	<p>SWMU 1 historically received refinery petroleum sludge waste from the early 1900s until 1982. Wastes were subsequently removed, and the landfill was closed in 1982 and was not a regulated unit under the Permittee’s initial RCRA operating permit effective October 1988. The status of SWMU 1 in the 2009 permit was no further remedial action (NFA). Approximate area is 2.5 acres.</p>
<p>SWMU 2: West Landfarm</p> <p><u>Present Condition:</u>          Deleted from permit effective June 1, 2009</p>	<p>SWMU 2 historically received refinery waste from the mid-to-late 1970s to 1980 and was a former land treatment unit. The 1988 RCRA operating permit required an RFI for SWMU 2. The RFI was completed, and it was concluded there were no hazardous constituents above background present. NFA status for SWMU 2 was approved, and SWMU 2 was deleted from the 2009 permit. Approximate area is 4.72 acres.</p>
<p>SWMU 3: Tetraethyl Lead (TEL) Weathering Area</p> <p><u>Present Condition:</u>          Deleted from permit effective June 1, 2009</p>	<p>SWMU 3 historically received refinery steel waste used in hydrofluoric acid and TEL services. The area has gone unused since before 1966. The unit was cleaned during the winter of 1981. The July 21, 1986 RFA Report included a recommendation for NFA due to prior waste removal. The 1988 RCRA operating permit did not require a RFI for SWMU 3, and SWMU 3 was deleted from the 2009 permit. Approximate area is 0.3 acres.</p>
<p>SWMU 4: Asphalt Sludge Landfill</p> <p><u>Present Condition:</u>          A risk assessment is proposed and will be conducted for SWMU 4.</p>	<p>SWMU 4 received refinery asphaltic sludge waste from 1949 until 1966. Sunoco submitted a RFI Phase I Report for SWMU 4 dated March 4, 1991. In 2003, an interim remedial measure was implemented to place a collection and drainage trench on the downgradient edge of the landfill because seepage was noted from the base of the fill. The area was contoured for drainage and erosion control. Closure of SWMU 4 was accepted on March 12, 2004. SWMU 4 is subject to continued monitoring and operation of the collection system. Approximate area is 1.8 acres.</p>

<p>SWMU 5: North Petroleum Sludge (Area D) Landfill</p> <p><u>Present Condition:</u>        A risk assessment is proposed and will be conducted for SWMU 5.</p>	<p>SWMU 5, located north of the USACE levee, historically received refinery acid sludge, petroleum sludge, coke fines, spent filter clays, catalyst fines, and demolition wastes for an unknown period prior to 1971. SWMU 5 was assessed in a 1986 RFA. EPA did not include SWMU 5 in the 1988 RCRA operating permit. Since then, interim remedial measures were completed that involved re-grading the SWMU 5 area, erosion control measures, stabilization of the riverbank, limited removal and conditioning of exposed surface waste, limited removal and conditioning of waste material from the riverbank and adjacent riverbed, and overall surface conditioning. The interim remedial measures were completed in 2006 and accepted in February 2007. SWMU 5 is closed and subject to continued monitoring and maintenance. Approximate area is 5.5 acres.</p>
<p>SWMU 6: Northeast Landfill</p> <p><u>Present Condition:</u>        A risk assessment is proposed and will be conducted for SWMU 6.</p>	<p>SWMU 6 historically received refinery demolition debris, acidic sludges, refining residue from burn pits, and trash from 1949 or earlier until sometime between 1954 and 1961. Sunoco submitted a RFI Phase I Report/Phase II Workplan dated March 4, 1991. SWMU 6 interim measures completed in 2006 involved re-grading the area, erosion control measures, riverbank stabilization, limited removal and conditioning of exposed surface waste, limited removal of waste material from the riverbank and the adjacent riverbed, and overall surface conditionings. In 2010, hydrocarbon sheening was observed along the riverbank adjacent to SWMU 6, and interim measure remediation repairs to the previously constructed 2006 interim measures were completed. In 2018, hydrocarbon sheening was again observed in the same riverbank area adjacent to SWMU 6. A proposed interim measure repair scope of work, dated September 28, 2023, was submitted to DEQ; additional information was submitted December 20, 2023; and upon discussions with DEQ on February 14, 2024, and April 4, 2024, it was agreed the proposed interim measure repair should be evaluated by an engineering firm, and by correspondence dated April 16, 2024, DEQ approved a withdrawal request dated April 11, 2024. The interim measure repair scope of work will be resubmitted to DEQ once the engineering evaluation is completed. SWMU 6 is closed. Approximate area is 9 acres.</p>

<p>SWMU 7: East Landfill</p> <p>Present Condition: No Further Remedial Action Required</p>	<p>SWMU 7 historically received trash, filter clay, and petroleum sludge from 1954 until 1961. An RFA Report dated July 21, 1986, included a recommendation for NFA, except for the inclusion in the facility-wide groundwater program. SWMU 7 was not a regulated unit under the initial 1988 RCRA operating permit. An RFI was completed, and as of June 1, 2009, the SWMU was in NFA. Approximate area is 6 acres.</p>
<p>SWMU 8: Scrap Metal Landfill</p> <p><u>Present Condition:</u> No Further Remedial Action Required</p>	<p>SWMU 8 historically received refinery scrap metals previously used in HF (hydrofluoric acid) units and possibly leaded gas units from 1958 until 1980. An RFA Report dated July 21, 1986, included a recommendation for NFA, except for inclusion in the facility-wide groundwater program. The landfill was not a regulated unit under the initial 1988 RCRA operating permit. SWMU 8 is in NFA status and is closed. Approximate area is 0.3 acres.</p>
<p>SWMU 9: Concrete Sump</p> <p><u>Present Condition:</u> Deleted from permit effective June 1, 2009</p>	<p>SWMU 9 historically received refinery petroleum sludge waste from 1973 until 1981. The July 21, 1986, RFA Report included a recommendation for NFA, except for inclusion in the facility-wide groundwater program. The 1988 RCRA permit required a RFI for SWMU 9, and the RFI was completed in accordance with an approved work plan. The RFI determined a groundwater hydrocarbon plume to be present 12 to 13 feet below the ground surface. A clean zone was identified below SWMU 9 and above the hydrocarbon plume indicating the hydrocarbon plume did not originate from SWMU 9 but from historical refinery petroleum leaks and spills. SWMU 9 was deleted from the 2009 Permit. Approximate area is 0.26 acres.</p>
<p>SWMU 10: Wastewater Processing Unit (WPU)</p> <p><u>Present Condition:</u> Investigation of SWMU 10 will be performed when the refinery ceases operation or the WPU is taken out of permanent service.</p>	<p>SWMU 10 is an active refinery treatment unit which receives wastewater from various refinery processes. Approximate area is 6.9 acres.</p>

<p>SWMU 11: Spray Pond</p> <p><u>Present Condition:</u>          A risk assessment is proposed and will be conducted for SWMU 11.</p>	<p>SWMU 11 historically was a refinery cooling water pond up to around 1960 and was converted to a storm water pond around 1972. The July 21, 1986 RFA Report included a recommendation for NFA, except for inclusion in the facility-wide groundwater program. The 1988 RCRA operating permit required a RFI for SWMU 11, and the RFI was completed in accordance with an approved work plan. The RFI results found no contaminant concentrations significantly greater than background and requested a NFA determination for SWMU 11. Storm water samples collected from SWMU 11 in April 1999 and test results complied with NPDES permit limits. SWMU 11 was deleted from the 2009 permit. A release occurred at SWMU 11 in 2015. Soil samples were collected from SWMU 11 in 2016 and 2019. Based on the soil sample results, SWMU 11 is being reactivated in this permit. Approximate area is 4 acres.</p>
<p>SWMU 12: Cat Cracker Landfill</p> <p><u>Present Condition:</u>          No Further Remedial Action Required</p>	<p>SWMU 12 historically received refinery coke fines, cinders, railroad engines, rocks, scrap wood, scrap metal, and bricks from an unknown period prior to and up to 1948. A number of structures and refinery units have been constructed in this area. SWMU 12 was not regulated under the 1988 RCRA operating permit. An RFI was completed and concluded there were no concentrations of hazardous constituents greater than background and requested a determination of NFA. In 1993, EPA requested piezometers be installed, and in 1998 DEQ requested data from the piezometers. By letter dated March 22, 1999, DEQ noted that the data appeared to be demonstrate limited mobility of constituents to the groundwater. SWMU was in NFA status as of June 1, 2009, and is closed. Approximate area is 3 acres.</p>
<p>SWMU 13: Scrap Metal Landfill</p> <p><u>Present Condition:</u>          No Further Remedial Action Required</p>	<p>SWMU 13 historically received refinery scrap metal from HF (hydrofluoric) and TEL (tetraethyl lead) units for an unknown period of time. A gas flare has been constructed in this area. The July 21, 1986 RFA Report included a recommendation for NFA. The 1988 RCRA operating permit did not require an RFI for SWMU 13. As of June 1, 2009, the SWMU was in NFA status. SWMU 13 is closed. Approximate area is 0.02 acres.</p>

<p>SWMU 14: Allison Property Landfill</p> <p><u>Present Condition:</u> No Further Remedial Action Required</p>	<p>SWMU 14 received refinery asphaltic sludge waste from an unknown period prior to and up to around 1942. Interim Measures approved by EPA were completed in 1995. The unit was not a regulated unit under the 1988 RCRA operating permit. As of June 1, 2009, the SWMU is in NFA status and is closed. Approximate area is 3 acres.</p>
<p>SWMU 15: Storm Water Impoundments</p> <p><u>Present Condition:</u> Deleted from permit effective June 1, 2009; no longer inspected.</p>	<p>The two (2) SWMU 15 impoundments previously received refinery hazardous wastewater and were RCRA regulated units from 1991 to 1944. In 1994, the impoundments were clean closed and ceased being RCRA regulated. The impoundments operate as surge basins for nonhazardous storm water and emergency process wastewater bypasses. The impoundments are underlain by a liner system composed of two feet of compacted clay and an eighty-mil HDPE liner. SWMU 15 was deleted from the 2009 permit. Approximate area is 5.5 acres.</p>
<p>SWMU 16: Land Treatment Units</p> <p><u>Present Condition:</u> Post-closure care; vegetative cover</p>	<p>SWMU 16 is the designated solid waste management unit consisting of three (3) closed LTUs the East LTU, Central LTU, and West LTU which are in post-closure care. Closure certification of all three (3) LTUs was approved August 22, 2003. All three (3) LTUs have established and maintained vegetative covers. Total approximate area is 66.8 acres.</p>
<p>SWMU 17: Oily Sludge Roads</p> <p><u>Present Condition:</u> Deleted prior to the 1988 RCRA operating permit.</p>	<p>SWMU 17 consisting of various oily sludge roads was not included in the original 1988 RCRA operating permit.</p>
<p>SWMU 18: Tank Diked Area</p> <p><u>Present Condition:</u> Deleted prior to the 1988, RCRA operating permit.</p>	<p>SWMU 18 consisting of various tank diked areas was not included in the 1988 RCRA operating permit.</p>

<p>AOC 1: The Riverbank Area</p> <p><u>Present Condition:</u>          Investigating hydrocarbon sheening in two (2) areas and developing remedies; inspection and monitoring</p>	<p>AOC 1 (The Riverbank Area), designated by DEQ in the 2009 permit, is located along the south bank of the Arkansas River lying north of the USACE levee crest extending to the northern facility property boundary and extending from the eastern end of SWMU 14 (approximately facility coordinate line E. 2547700) eastward to the easternmost facility property boundary (approximate coordinate line E. 2556800). AOC 1 does not include SWMUs 4, 5, 6, and 13. The AOC 1 area was subdivided into smaller, discrete sub-areas designated as Areas A through H. In August 2019, the Permittee notified DEQ of hydrocarbon sheening in Area C-5 and deployed and continues to maintain hard and soft booms to contain the sheening. The Permittee submitted a report dated February 9, 2024, delineating LNAPL zones in this area and finding the sheening source to be the interior of the facility. The Permittee is proceeding to develop an engineering design to address the Area C-5 hydrocarbon sheening. In July 2018, the Permittee notified DEQ of hydrocarbon sheening in Area H associated with SWMU 6 and deployed and continues to maintain hard and soft booms to contain the sheening. The Permittee submitted a report dated September 2023 and a revision dated December 20, 2023, proposing an interim measure action to prevent sheening. See SWMU 6 for a detailed description of the of the interim repair action status.</p>
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**C. LAND TREATMENT UNITS (East, Central, and West)**

1. The Permittee began post-closure care for the East LTU, Central LTU, and West LTU (collectively referenced as LTUs) on August 22, 2003, when the units' certified closure was approved by DEQ. Post-closure care shall continue for thirty (30) years from the date of closure certification, except that the 30-year post-closure care period may be shortened upon application and demonstration approved by DEQ that the facility is secure or may be extended by DEQ if necessary to protect human health and the environment. 40 C.F.R. § 264.117(a).
2. The Permittee shall maintain and monitor the groundwater monitoring system and comply with all other applicable requirements of 40 C.F.R. Part 264 Subpart F during the post-closure period. 40 C.F.R. § 264.117(a)(1).
3. The Permittee shall not allow post-closure use of the property to disturb the integrity of the final cover or any other components of the LTUs (other than routine

surface or intrusive maintenance activities performed per the Post-Closure Care Plan, Permit Attachment 2), the run-on/run-off containment system, or the function of the LTUs monitoring systems. 40 C.F.R. § 264.117(c).

4. The Permittee shall comply with the requirements for the LTUs as follows (40 C.F.R. § 264.280(c)):
  - a. Continue all operations (including pH control, as needed) necessary to enhance degradation and transformation and sustain immobilization of hazardous constituents in the treatment zone to the extent that such measures are consistent with other post-closure care activities;
  - b. Maintain a vegetative, gravel, and/or paved cover over closed portions of the LTUs;
  - c. Maintain the run-on control system required under 40 C.F.R. § 264.273(c);
  - d. Maintain the run-off management system required under 40 C.F.R. § 264.273(d);
  - e. Control wind dispersal of hazardous waste as required under 40 C.F.R. § 264.273(f); and
  - f. Continue to comply with any prohibitions or conditions concerning growth of food-chain crops required under 40 C.F.R. § 264.276.
5. The Permittee shall comply with all security requirements, as specified in 40 C.F.R. § 264.117(b).
6. The Permittee shall implement the Post-Closure Care Plan (Permit Attachment 2). All post-closure care activities must be conducted in accordance with the provisions of the Post-Closure Care Plan. 40 C.F.R. §§ 264.117(d) and 264.118(b). The Permittee shall amend the Post-Closure Care Plan in accordance with 40 C.F.R. § 264.118(d) and 40 C.F.R. Parts 124 and 270 whenever necessary.

#### **D. INSPECTIONS OF LTUs**

The Permittee shall inspect the components, structures, and equipment at the LTUs in accordance with the Inspection Schedule, as provided in the Inspection and Maintenance Plan, Permit Attachment 4. 40 C.F.R. § 264.117(a)(1)(ii).

#### **E. NOTICES AND CERTIFICATION FOR LTUs**

1. If the Permittee or any subsequent owner or operator of the land upon which the LTUs are located wishes to remove hazardous wastes and hazardous waste residues

or contaminated soils, or propose the land for reuse, then it shall request a modification to this post-closure permit in accordance with the applicable requirements in 40 C.F.R. Parts 124 and 270. The Permittee or any subsequent owner or operator of the land shall demonstrate that the removal of hazardous wastes will satisfy the criteria of 40 C.F.R. § 264.117(c). 40 C.F.R. § 264.119(c).

2. No later than sixty (60) days after completion of the established post-closure care period for the LTUs, the Permittee shall submit to DEQ, by registered mail, a certification that the post-closure care was performed in accordance with the specifications in the approved Post-Closure Care Plan. The certification must be signed by the Permittee and an independent, registered professional engineer. Documentation supporting the independent, registered professional engineer's certification must be furnished to DEQ upon request until DEQ releases the Permittee from the financial assurance requirements for post-closure care under 40 C.F.R. § 264.145(i). 40 C.F.R. § 264.120.
3. No later than sixty (60) days after certification of completion of post-closure care of LTUs or corrective action for SWMUs and AOCs (if applicable), a notice must be placed in the property deed and record. This notice must state that the land was used for hazardous waste management (if appropriate); that the use of the land is restricted per 40 C.F.R. Part 264/265, Subpart G (if appropriate); and that the survey plat and record of closure were submitted to the local zoning authority and DEQ.

#### **F. FINANCIAL ASSURANCE**

The Permittee shall maintain financial assurance for corrective action. The Permittee shall maintain financial assurance under this Permit Condition III.F during the ten-year term of this Permit and any period of continuance prior to re-issuance. In all other respects, the financial assurance shall be consistent with all applicable requirements of 40 C.F.R. Part 264, Subpart H, as if the costs were post-closure care costs [40 C.F.R. § 264.145], including the following:

1. The Permittee shall submit updated cost estimates for the financial assurance required by Permit Condition III.F, which subject to any changes required by Permit Conditions II.F.2, 3, or 4 shall be used as the basis of the financial assurance.
2. Within sixty (60) days of DEQ's approval of any new corrective measure, the Permittee shall submit a cost estimate consistent with 40 C.F.R. § 264.145. Within sixty (60) days of DEQ approval of such cost estimate, the Permittee shall update the financial assurances to include the estimated costs.
3. The cost estimates shall be adjusted annually consistent with 40 C.F.R. §§ 264.144 and 264.145.



4. The Permittee shall submit the information required in 40 C.F.R. § 264.143(f)(3) within ninety (90) days after the closing of each fiscal year. 40 C.F.R. § 264.143(f)(5).
5. If the Permittee is no longer able to meet the requirements of the financial test, the Permittee shall send notice to DEQ of intent to establish alternate financial assurance as specified in 40 C.F.R. § 264.143. The notice must be sent by certified mail within ninety (90) days after the end of the fiscal year for which the year-end financial data show that the Permittee no longer meets the requirements. The Permittee must provide the alternate financial assurance within one hundred and twenty (120) days after the end of such fiscal year.

#### **G. INCAPACITY OF OWNERS OR OPERATORS, GUARANTORS, OR FINANCIAL INSTITUTIONS**

An owner or operator must notify DEQ by certified mail of the commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming the owner or operator as debtor, within ten (10) days after commencement of the proceeding. A guarantor of a corporate guarantee as specified in 40 C.F.R. § 264.143(f) and 40 C.F.R. § 264.145(f) must make such a notification if he is named as debtor, as required under the terms of the corporate guarantee, 40 C.F.R. § 264.151(h). 40 C.F.R. § 264.148(b).

An owner or operator who fulfills the requirements of 40 C.F.R. §§ 264.143, 264.145, or 264.147 by obtaining a trust fund, surety bond, letter of credit, or insurance policy will be deemed to be without the required financial assurance or liability coverage in the event of bankruptcy of the trustee or issuing institution, or a suspension or revocation of the authority of the trustee institution to act as trustee or of the institution issuing the surety bond, letter of credit, or insurance policy to issue such instruments. The owner or operator must establish other financial assurance or liability coverage within sixty (60) days after such an event. 40 C.F.R. § 264.148(b).

#### **H. LIABILITY REQUIREMENTS**

The Permittee shall demonstrate continuous compliance with the requirement of 40 C.F.R. § 264.147(a) to have and maintain liability coverage for sudden accidental occurrences in the amount of at least \$1 million per occurrence, with an annual aggregate of at least \$2 million, exclusive of legal defense costs.

#### **I. CORRECTIVE ACTION PLAN (CAP)**

Upon issuance, this permit authorizes development of a CAP that will holistically address facility-wide corrective action for releases from multiple sources within the facility boundary. The CAP may include a risk-based strategy developed to focus corrective actions in areas (on-site) that may exhibit risk to refinery employees and for areas where there may be the potential for off-site migration of constituents of concern (COCs) subject

to DEQ approval. The CAP may consider corrective actions for both the permitted LTUs and SWMUs/AOCs as necessary, including facility-wide groundwater impacts, and with consideration of current and future land use, which is subject to DEQ approval.

If SWMUs or AOCs are discovered subsequent to issuance of this permit and CAP, the Permittee will review and revise the CAP as necessary to address any new COCs, complete pathways, or address other exposure concerns. If DEQ or the Permittee determines that the CAP no longer satisfies the requirements of 40 C.F.R. § 264.100, then within ninety (90) days the Permittee will submit a revised CAP as applicable for DEQ review. Changes to the CAP related to adoption of the final remedy and those items specifically listed in 40 C.F.R. § 270.42, Appendix I, will require a permit modification with applicable public notice and DEQ approval.

## **J. SPECIFIC CONDITIONS**

### **1. LNAPL Recovery System**

The Permittee shall operate and maintain the refinery LNAPL recovery system as specified in the Groundwater Monitoring and LNAPL Management Plan (Permit Attachment 3) to contain and reduce LNAPL presence within the facility boundaries during the life of the Permit. Modifications and expansions of the LNAPL Recovery System will be made as necessary to prevent LNAPL migration to the Arkansas River and off-site. An assessment of the LNAPL Recovery System operational performance, maintenance, and upgrade requirements shall be presented in the semi-annual groundwater monitoring reports.

### **2. SWMU 4 (Asphalt Sludge Landfill) Risk Assessment**

In a discussion paper describing SWMU 4 from Sun Oil, dated November 26, 2001, it was noted that small amounts of seepage (approximately a droplet every few seconds) was noted to occur from the base of the fill below the Asphalt Sludge Landfill, usually following rainfall. Four (4) seepage areas were identified along the Arkansas River (River). The seepage along the River was analyzed for benzene, toluene, ethylbenzene, and xylene (BTEX) in 1994, with none of these constituents detected. Surface run-off was evaluated, and results were below the United States Environmental Protection Agency's (USEPA's) National Pollutant Discharge Elimination System (NPDES) effluent limitations. In addition, gauging data was collected from monitoring wells immediately upgradient of the SWMU. In 2003, an interim remedial measure was implemented to place a collection and drainage trench on the downgradient end of the landfill and to install a cap over the former landfill. The area around the SWMU was also contoured for proper drainage and erosion control. The closure of this SWMU was accepted by DEQ in March of 2004. The SWMU is currently subject to additional assessment, primarily along the riverbank, for maintenance and to identify potential effects of the approved remedy.

The Permittee has proposed a Risk Assessment at SWMU 4 to evaluate whether the area presents risk and whether additional remediation work is warranted. The Permittee shall submit all Risk Assessment work plans and reports for DEQ review and approval.

3. SWMU 5 (North Petroleum Sludge Landfill Area D) Risk Assessment

Historically there has been some refinery waste exposure at the River's edge at this unit. In a discussion paper from Sun Oil, dated November 26, 2001, it was noted that areas of the fill extended to or below the normal River elevation. In 2005, interim measures were implemented that involved re-grading the SWMU 5 area, implementing erosion control measures, stabilizing the riverbank, limited removal and conditioning of exposed surface waste, limited removal and conditioning of waste material from the riverbank and the adjacent riverbed, and surface conditioning of the overall SWMU. The interim remedial measure was accepted by DEQ in February 2007.

The Permittee has proposed a Risk Assessment at SWMU 5 to evaluate whether the area presents risk and whether additional remediation work is warranted. The Permittee shall submit all Risk Assessment work plans and reports for DEQ review and approval.

4. SWMU 6 (Northeast Landfill) and AOC 1 Area H Interim Measure Repair and SWMU 6 Risk Assessment

In a discussion paper describing SWMU 6 from Sun Oil, dated November 26, 2001, it was noted that the surface of the refinery unit was generally well-vegetated, but little or no vegetation was seen in areas where oily or tar wastes were exposed. Interim measures were implemented because wastes were exposed in several locations. The primary objective was to remove and cover exposed historical waste material and mitigate erosion of the Riverbank Area. Surface run-off water was evaluated, and the results were below the USEPA NPDES effluent limitations. Groundwater monitoring results were collected from six (6) upgradient wells. Data indicated that BTEX concentrations beneath the unit were greater than within the unit itself, thereby indicating that the landfill was not the source of BTEX contamination. These interim measures involved re-grading the SWMU 6 area, implementing erosion control measures, stabilizing the riverbank and adjacent riverbed, limited removal and conditioning of exposed surface waste, limited removal of waste material from the riverbank and adjacent riverbed, and resurfacing SWMU 6. Remedial activities were completed in 2006, but the Permittee continues maintenance and monitoring of the SWMU.

Surface run-off water was later evaluated to determine if SWMU 6 was the cause of hydrocarbon sheening seen along the Riverbank Areas, located at AOC 1 areas B and H. Interim Measures were performed in Area B which included removing a

small volume of refinery waste that had sloughed off into the river and stabilizing a small area of the riverbank that had been eroded from surface water run-off (Hull & Associates, 2014).

Additional Interim Measures remediation at AOC 1 Area H constituted a repair of the previously constructed Interim Measures at AOC 1 Area H, because four (4) consecutive hydrocarbon sheening events had been observed along the easternmost two-thirds of Area H, adjacent to SWMU 6, in 2010. The hydrocarbon sheening was attributed to waste materials and/or LNAPL leaking through the geotextile and riprap along the stabilized portions of the SWMU 6-associated Riverbank Area. The Interim Measure repairs at AOC 1 Area H and SWMU 6 included the following:

- Removed existing riprap. If petroleum products were observed, the riprap was washed, rinsed, and re-deployed;
- Excavated the material adjacent to the riverbank to the depth of the riverbed, and field tested it for petroleum to determine the limits of excavation;
- Once excavation was complete, the area was backfilled with suitable clean and washed aggregate materials;
- Upland of the riverbank, the top 24 inches were filled with 18 inches of compacted clayey soils covered with 6 inches of topsoil to establish a vegetative cover;
- Reconstructed the riverbank by installing a geosynthetic clay liner along the bank to be covered by a minimum of 1.5 feet of compacted clayey soils;
- Woven geotextile was placed over the clay and any aggregate for protection from deterioration; and
- Completed a report documenting the post-construction activities and repairs made to the original Interim Measures.

*An Interim Measure Summary Report for Riverbank Areas B & H* was submitted to DEQ in January 2014.

Additional interim measures are required at AOC 1 Area H and SWMU 6 due to hydrocarbon sheening events initially reported to DEQ in 2018 and which continued thereafter. A Scope of Work for Repair of Solid Waste Management Unit 6 dated September 28, 2023 (IM Repair), to eliminate the hydrocarbon sheening at AOC 1 Area H associated with SWMU 6 was submitted to DEQ for review and approval. On December 20, 2023, additional information was submitted in the Response to DEQ Correspondence Dated October 26, 2023 (Response). DEQ and the Permittee discussed the IM Repair and Response during a technical meeting at DEQ on February 14, 2024, and a DEQ site visit on April 4, 2024. DEQ and the Permittee agreed the IM Repair and Response should be evaluated by an engineering firm, including a hydraulic evaluation and design review. Subsequently, on April 11, 2024, DEQ received the West Refinery – SWMU 6

Interim Measure Repair 2023 Submittal Withdraw Request from the Permittee to withdraw the Permittee 2023 submittals, and the withdrawal request was approved by DEQ correspondence dated April 16, 2024. The Permittee will conduct the engineering evaluation and resubmit the SWMU 6 Interim Measure Repair Scope of Work for DEQ review and approval. The Permittee will provide a schedule to DEQ for developing and implementing the engineering design to eliminate hydrocarbon sheening in AOC 1 Area H associated with SWMU 6. All related engineering reports and designs will require DEQ review and approval. The Permittee shall submit a final report documenting the engineering design implementation and elimination of the hydrocarbon sheening in AOC 1 Area H with as-built drawings for DEQ review and approval.

The Permittee has proposed a Risk Assessment at SWMU 6 to evaluate whether the area presents risk and whether additional remediation work is warranted. The Permittee shall submit all Risk Assessment work plans and reports for DEQ review and approval.

5. SWMU 11 Risk Assessment

SWMU 11 was a cooling water pond until circa 1960. In 1972 it was converted to a stormwater pond used to collect stormwater run-off. The July 21, 1986 RFA Report included a recommendation of NFA for SWMU 11, except for inclusion in the facility-wide groundwater monitoring program. An RFI for SWMU 11 was required by the 1988 RCRA Permit. Sunoco completed the RFI in accordance with an approved work plan and concluded that the RFI results showed no significant results greater than background and requested a determination for NFA. Sunoco collected storm water samples from the SWMU on April 14, 1999. All results complied with the NPDES permit limits, and this SWMU was deleted from the 2009 Permit. A release occurred in August 2015, resulting in a release of approximately 2 million gallons of wastewater and stormwater into SWMU 11. Soil samples were collected from SWMU 11 in 2016 and 2019. These soil samples provided new information to justify the reactivation of SWMU 11. The Permittee requested SWMU 11 be added back into the 2018 Permit Application and resulting Permit.

The Permittee has proposed a Risk Assessment at SWMU 11 to evaluate whether the area presents risk and whether additional remediation work is warranted. The Permittee shall submit all Risk Assessment work plans and reports for DEQ review and approval.

6. AOC 1 The Riverbank Area

Area C-5

In August 2019, the Permittee notified DEQ of hydrocarbon sheening in the

Arkansas River (River) in refinery AOC 1 Area C-5 and concurrently deployed and continues to maintain hard and sorbent booms to contain the hydrocarbon sheening. On February 12, 2024, DEQ received the Area C-5 LNAPL Investigation Report dated February 9, 2024 (Report). The Report states an increased frequency of Area C-5 hydrocarbon sheening in the River observed from January 2023 to December 2023 during weekly inspections was likely due to low groundwater and River elevations associated with the Zink Dam construction activities. The Report details the Permittee's August 2023 LNAPL investigation of the Area C-5 hydrocarbon sheening source and findings.

The Report determined the presence of a discontinuous shallow LNAPL zone in the unsaturated zone above the groundwater LNAPL smear zone ranging in thickness from 0 to 16.15 feet in portions of AOC 1 Area C-5 and a continuous deep LNAPL zone within the groundwater LNAPL smear zone ranging in thickness from 4.65 to 11.85 feet across the AOC 1 Area C-5 investigation area. The Report states the greatest deep LNAPL zone thicknesses are directly upgradient from the Area C-5 hydrocarbon sheen area, and that the deep LNAPL zone appears to originate from the interior of the facility and is likely the source of the hydrocarbon sheen in the Arkansas River observed in AOC 1 Area C-5. The Permittee shall develop an engineering design and implement the engineering design to eliminate the hydrocarbon sheening in Area C-5 and submit the engineering design for review and approval by DEQ. The Permittee will provide a schedule to DEQ for completing and implementing the engineering design. All related engineering reports and designs will require DEQ review and approval. The Permittee shall submit a final report documenting the engineering design implementation and elimination of the hydrocarbon sheening in AOC 1 Area C-5 with as-built drawings for DEQ review and approval.

Area H and SWMU 6

Refer to SWMU 6 (Northeast Landfill) and AOC 1 Area H Interim Measure Repair and SWMU 6 Risk Assessment for description.

#### 7. Hydrocarbon Sheening in the Arkansas River

The Permittee shall conduct weekly inspections for hydrocarbon sheening along the Arkansas Riverbank in refinery Areas A through H, as described in the Inspection and Maintenance Plan, Permit Attachment 4, Section 3.3, to detect the presence of hydrocarbon discharge to the Arkansas River. Inspections will be conducted during representative flow conditions.

If hydrocarbon sheen is identified during an inspection, the Permittee will undertake the following actions:

- a. File an initial report via email with DEQ's Land Protection Division (LPD) and Water Quality Division (WQD) within twenty-four (24) hours of discovery of a hydrocarbon sheen; and
- b. Determine whether the source of the hydrocarbon sheen is from the refinery and if confirmed, then perform the following actions:
  - i. Modify the inspection frequency at the location of the observed hydrocarbon sheen to three (3) times per week (generally Monday, Wednesday and Friday);
  - ii. Commence remedial actions, as appropriate (including placement of sorbent booms);
  - iii. File monthly reports via email with DEQ's LPD and WQD until the hydrocarbon sheen is no longer observed during inspections; and
  - iv. File a summary report with DEQ's LPD and WQD and return to once-a-week inspections once the hydrocarbon sheen is no longer observed for four (4) consecutive weeks of three (3)-times-a-week inspections.

## **K. GROUNDWATER MONITORING**

The facility-wide groundwater monitoring program in place at the facility under the RCRA Permit issued by DEQ on June 1, 2009, is detailed in the *Facility-Wide Groundwater Performance Monitoring Plan* and *Light Non-Aqueous Phase Liquid (LNAPL) Recovery Plan* submitted to DEQ in February 2003 and January 2007, respectively. A revised, single, integrated, facility-wide Groundwater Monitoring and LNAPL Management Plan detailed in Permit Attachment 3 replaces the referenced 2009 RCRA Permit groundwater monitoring program plans in this Permit. The Permittee shall follow the detailed procedures outlined in the Groundwater Monitoring and LNAPL Management Plan as presented in Permit Attachment 3. As allowed under 40 C.F.R. § 264.90(f), the facility-wide program is operated in lieu of a monitoring program established per the requirements of 40 C.F.R. §§ 264.97 and 264.98. The groundwater monitoring system Program Well Network detailed in the Groundwater Monitoring and LNAPL Management Plan (Permit Attachment 3) consists of point of compliance (POC) wells and gauging network wells. The Permittee may evaluate and modify the groundwater monitoring system, with approval of DEQ, based on changed conditions, new information, or results of risk assessments, as appropriate.

The refinery POC wells will be sampled for nine (9) Constituents of Concern (COCs), five (5) Volatile Organic Compounds (VOCs), and four (4) inorganics, derived from the modified EPA Region 5 Skinner List. The COCs were derived by analyzing the historic groundwater monitoring data set and removing constituents that were not detected or were detected at less than 10 % frequency. The POC wells and the COCs are listed in the Groundwater Monitoring

and LNAPL Management Plan (Permit Attachment 3).

The gauging network wells to evaluate groundwater elevations and apparent LNAPL thickness beneath the facility are listed in the Groundwater Monitoring and LNAPL Management Plan (Permit Attachment 3).

## **L. WELL LOCATION, INSTALLATION, AND CONSTRUCTION**

The Permittee shall maintain and operate the facility-wide groundwater monitoring system as specified below:

1. Monitoring Wells  
The Permittee shall maintain groundwater monitoring wells at the locations specified in the Permittee's Groundwater Monitoring and LNAPL Management Plan (Permit Attachment 3). The gauging network wells and the POC wells are listed in the Permittee's Groundwater Monitoring and LNAPL Management Plan (Permit Attachment 3), Tables 8-2 and 8-3.
2. Well Maintenance  
The Permittee shall maintain the monitoring wells in accordance with the detailed plans and specifications presented in the Groundwater Monitoring and LNAPL Management Plan (Permit Attachment 3), as applicable.
3. Monitoring Well Removal  
The Permittee must apply for a permit modification, as applicable, to request a change in the number, location, depth, or design of POC monitoring wells in the facility-wide groundwater monitoring system as required under 40 C.F.R. § 270.42 Appendix I(C)(1).

Wells shall be plugged and abandoned in accordance with procedures specified by the Oklahoma Water Resources Board (OWRB). A list of plugged wells and corresponding certification shall be submitted to DEQ at least semi-annually, as appropriate.

4. Well Log Submission  
The Permittee shall submit all well logs to DEQ in the report following the work element performed.

## **M. GROUNDWATER PROTECTION STANDARD (GWPS)**

1. Initially, as part of the work proposed in the CAP to be developed per Permit Condition III.I, the Permittee will perform a facility-wide groundwater risk assessment from which risk-based screening levels (RBSLs) or alternate concentration limits (ACLs) may be calculated. Until the Permittee develops RBSLs/ACLs and DEQ approves the RBSLs/ACLs, the MCL for drinking water



set by EPA —or if there is no established MCL, then the RSL for Tap Water for each of the COCs—will be used as the applicable groundwater protection standard (GWPS). Following approval from DEQ of the RBSLs/ACLs, the RBSLs/ACLs will become the GWPS.

2. The Permittee shall monitor the facility monitoring wells at the point of compliance as designated the Groundwater Monitoring and LNAPL Management Plan (Permit Attachment 3). 40 C.F.R. § 264.95.

## **N. SAMPLING AND ANALYSIS PROCEDURES**

The Permittee shall use the techniques and procedures described in the Groundwater Monitoring and LNAPL Management Plan (Permit Attachment 3), including Permit Attachment 3, Appendix 8.1: Sampling and Analysis Plan and Quality Assurance Project Plan, when obtaining and analyzing samples from the groundwater monitoring wells.

## **O. ELEVATION OF THE GROUNDWATER SURFACE**

### **1. Groundwater Elevation**

The Permittee shall evaluate groundwater elevations and apparent LNAPL thickness beneath the facility at the gauging network wells that are listed in the Permittee's Groundwater Monitoring and LNAPL Management Plan (Permit Attachment 3). The Permittee shall also determine the elevation of the groundwater surface at each well each time the groundwater is sampled as detailed in the Groundwater Monitoring and LNAPL Management Plan (Permit Attachment 3) and Sampling and Analysis Plan and Quality Assurance Project Plan (Permit Attachment 3, Appendix 8.1).

### **2. Groundwater Elevation Recording**

The Permittee shall record the surveyed elevation of the monitoring well(s) when installed (with as-built drawings). In the event that a monitoring well is damaged, the Permittee shall re-survey the monitoring well after it is repaired. The total depth of the well and the elevations of the groundwater surface, the top of casing, and ground surface and/or apron elevation shall be included in all groundwater monitoring reports.

## **P. MONITORING PROGRAM AND DATA EVALUATION**

The Permittee shall determine facility groundwater quality as follows:

1. The Permittee shall collect, preserve, and analyze groundwater samples pursuant to Permit Condition III.N as detailed in the Groundwater Monitoring and LNAPL

Management Plan (Permit Attachment 3) and Sampling and Analysis Plan and Quality Assurance Project Plan (Permit Attachment 3, Appendix 8.1).

2. The Permittee shall evaluate groundwater quality at each monitoring well semi-annually as detailed in the Groundwater Monitoring and LNAPL Management Plan (Permit Attachment 3) and Sampling and Analysis Plan and Quality Assurance Project Plan (Permit Attachment 3, Appendix 8.1). The Permittee shall determine the concentration of COCs (as specified in Permit Condition III.K) in groundwater at each POC well. These determinations shall be made annually for the upgradient POC wells and semi-annually for the downgradient POC wells.
3. The Permittee shall determine the groundwater flow rate and direction in the uppermost aquifer at least annually.
4. The Permittee shall determine whether there is an exceedance, as described in the Permittee's Groundwater Monitoring and LNAPL Management Plan (Permit Attachment 3) and Sampling and Analysis Plan and Quality Assurance Project Plan (Permit Attachment 3, Appendix 8.1), each time groundwater quality is determined at the POC wells.
5. The Permittee shall perform the statistical evaluations described in Groundwater Monitoring and LNAPL Management Plan (Permit Attachment 3) and Sampling and Analysis Plan and Quality Assurance Project Plan (Permit Attachment 3, Appendix 8.1).
6. The Permittee may propose RBSLs/ACLs, as part of the CAP to be developed per Permit Conditions III.I and III.M.1, which if approved by DEQ would replace the use of previously approved standards in groundwater evaluations.

**Q. RECORDKEEPING AND REPORTING**

1. The Permittee shall enter all monitoring, testing, and analytical data obtained pursuant to Permit Conditions III.K–III.Q in the operating record.
2. The Permittee shall submit a semi-annual groundwater monitoring report to DEQ within forty-five (45) days of the end of each six-month period (January 1–June 30) and (July 1–December 31) for a given sampling event. 40 C.F.R. § 264.97(j). The report shall include the following:
  - a. Groundwater monitoring results;
  - b. Groundwater elevations;
  - c. Groundwater flow direction map;
  - d. Any noted changes or trends in the groundwater quality;
  - e. LNAPL recovery and interim measures;
  - f. Plume maps;

- g. Reporting requirements as described in Permit Condition IV.F.1; and
  - h. Attachments to include well gauging data forms, well purging data field forms, and well inspection field forms.
3. If the Permittee determines, pursuant to the Permittee's Groundwater Monitoring and LNAPL Management Plan (Permit Attachment 3) and Sampling and Analysis Plan and Quality Assurance Project Plan (Permit Attachment 3, Appendix 8.1), that there is an exceedance at a POC well or facility boundary well above the GWPS for the parameters specified in Permit Condition III.M, the Permittee shall:
- a. Notify DEQ in writing within seven (7) days of receipt of data. The notification must include the list of wells having exceedance and list of parameters or constituents that have exceedance in the corresponding wells.
  - b. The Permittee shall resample within thirty (30) days of discovery of the exceedance and repeat the analysis for those compounds detected. If the results from this second analysis confirm the initial results, then these constituents will be considered as an exceedance and will form the basis for investigation. If the Permittee chooses not to resample, the hazardous constituents found during the initial analysis will form the basis for investigation. In any case, the Permittee shall do the following:
    - i. If resampling confirms the exceedance, or if the Permittee chooses not to resample, then the Permittee shall follow Permit Condition III.Q.3.c below.
    - ii. If resampling does not confirm the exceedance, the Permittee shall notify DEQ, and the exceedance will be considered an anomaly.
  - c. Within thirty (30) days after receiving the result of exceedance confirmation, the Permittee shall notify DEQ of the confirmed exceedance and the path forward following the procedures in the CAP to investigate the exceedance. Alternatively, the Permittee may make the demonstration specified in Permit Condition III.Q.3.f. below.
  - d. The Permittee shall execute any proposed investigation with the approval of DEQ and submit the investigation report to DEQ within sixty (60) days after completion of all field work.
  - e. Within sixty (60) days of receiving the response from DEQ regarding the investigation report, the Permittee shall submit to DEQ, if needed, a modification of the CAP and/or Permit (as determined by DEQ) meeting the requirements of 40 C.F.R. § 264.100. The Permit modification shall include at a minimum, [40 C.F.R. 264.99(h)(2)]:

- i. A detailed description of corrective actions that will achieve compliance with the GWPS; and
  - ii. A plan for a groundwater monitoring program that will demonstrate the effectiveness of the corrective action.
- f. The Permittee may make a demonstration that the GWPS was exceeded due to sources other than the facility or due to errors in sampling, analysis, or evaluation.
- i. The Permittee must notify DEQ in writing, within seven (7) days, that a demonstration will be made.
  - ii. The Permittee must submit a report to DEQ, within ninety (90) days, that demonstrates that a source other than the facility caused the GWPS to be exceeded or that the apparent non-compliance was a result of an error in sampling, analysis, or evaluation.

## **R. REQUEST FOR PERMIT MODIFICATION**

If the Permittee or DEQ determines the groundwater monitoring program no longer satisfies the requirements of 40 C.F.R. 264.99, then DEQ may direct the Permittee to make a permit modification or revise the CAP to be developed per Permit Condition III.I as appropriate.

[Note: Submittal is required within ninety (90) days if an engineering feasibility study has been previously submitted to DEQ, within one hundred and eighty (180) days otherwise. The application content is described in 40 C.F.R. § 264.99(h)(2).]

**SECTION IV. SPECIAL CONDITIONS PURSUANT TO HAZARDOUS AND SOLID WASTE AMENDMENTS (HSWA) - CORRECTIVE ACTION STRATEGY (CAS)**

**A. STANDARD CONDITIONS**

1. Waste Minimization

The Permittee shall place into the facility operating record, a certification according to 40 C.F.R. § 270.11(d) annually by December 1 for the previous year ending September 30 as required by 40 C.F.R. § 264.73(b)(9), specifying that:

- a. The Permittee has a program in place to reduce the volume and toxicity of hazardous wastes generated by the facility's operation to the degree determined by the Permittee to be economically practicable; and
- b. The proposed method of treatment, storage, or disposal is that practicable method currently available to the Permittee which minimizes the present and future threat to human health and the environment.

2. Dust Suppression

- a. As stated in OAC 252:205-3-2(m), the use of used oil as a dust suppressant is prohibited.
- b. Pursuant to 40 C.F.R. § 266.23(b), and the Toxic Substances Control Act, the Permittee shall not use waste or used oil or any other material which is contaminated with dioxins, polychlorinated biphenyls (PCBs), or any other hazardous waste (other than a waste identified solely on the basis of ignitability), for dust suppression or road treatment.

3. Permit Modification

a. DEQ-Initiated Modifications:

If at any time for the reasons specified in 40 C.F.R. § 270.41, DEQ determines that modification of this Permit is necessary, DEQ may initiate Permit modification proceedings in accordance with the regulations set forth at 40 C.F.R. § 270.41.

b. Permittee-Initiated Modifications:

The Permittee may, where appropriate, initiate permit modifications in accordance with the regulations set forth at 40 C.F.R. § 270.42. All applicable requirements and procedures as specified in 40 C.F.R. § 270.42

shall be followed in initiating such proceedings.

c. Modification of Corrective Action Schedules of Compliance (CASCs) for SWMUs:

i. The Permittee shall adhere to CASCs developed for newly identified and previously identified SWMUs covered by this Permit. If at any time the Permittee determines that such schedules cannot be met, the Permittee shall, within fifteen (15) days of such determination, notify DEQ and submit a request for a permit modification under 40 C.F.R. § 270.42, with a justification as to why the current CASC cannot be met and revise the CAP to be developed per Permit Condition III.I accordingly.

ii. If DEQ determines that a modification of the CASC is required, the following procedure will apply. CASC modifications made under this procedure are not subject to administrative appeal.

1. DEQ will notify the Permittee in writing of the proposed modification. Such notice will:

a. Describe the exact changes to be made to the permit conditions;

b. Provide an explanation of why the modification is needed;

c. Provide notification of the date by which comments on the proposed modification must be received. Such date will not be less than twenty (20) days from the date the notice of proposed modification is received by the Permittee, or after the public notice is published;

d. Provide notification that supporting documentation or data may be available for inspection at the State or EPA Regional office; and

e. Include the name and address of a representative of DEQ to whom comments may be sent.

2. The Permittee shall:

a. Publish a notice, approved by DEQ, of the proposed modification in a newspaper distributed in the

locality of the facility, which includes notice of items in 40 C.F.R. § 124.10(d);

- b. Mail a notice of the proposed modification to all persons on the facility mailing list maintained according to 40 C.F.R. § 124.10(c)(1). Such notice will include items in 40 C.F.R. § 124.10(d) and shall be mailed concurrently with notice to the Permittee; and
- c. For facilities which have established an information repository, the Permittee shall place a notification of the proposed modification, including items under 40 C.F.R. § 124.10(d), in the information repository concurrently with actions taken under those items.

iii. DEQ's Decision Regarding Modification

- 1. If DEQ receives no written comment on the proposed modification, the modification shall become effective five (5) calendar days after the close of the comment period. DEQ shall:
  - a. Notify the Permittee in writing of the final decision; and
  - b. Notify individuals on the facility mailing list in writing that the modification has become effective and place a copy of the modified Permit in the information repository, if a repository is required for the facility.
- 2. If DEQ receives written comment on the proposed modification, DEQ shall make a final determination concerning the modification after the end of the comment period. DEQ shall:
  - a. Notify the Permittee in writing of the final decision; and
  - b. Provide notice of the final modification decision in a locally distributed newspaper and place a copy of the modified permit in the information repository, if a repository is required for the facility.

4. Permit Review

This Permit may be reviewed by DEQ five (5) years after the date of permit issuance and may be modified as necessary as provided for in Permit Condition IV.A.3. Nothing in this section shall preclude DEQ from reviewing and modifying the Permit at any time during its term.

5. Compliance with Permit

Compliance with a RCRA permit during its term constitutes compliance, for purposes of enforcement, with Subtitle C of RCRA, except for those requirements not included in the permit which:

- a. Become effective by statute;
- b. Are promulgated under 40 C.F.R. Part 268 restricting the placement of hazardous wastes in or on the land; or
- c. Are promulgated under 40 C.F.R. Part 264 regarding leak detection systems for new and replacement surface impoundment, waste pile, and landfill units, and lateral expansions of surface impoundment, waste pile, and landfill units. The leak detection system requirements include double liners, CQA programs, monitoring action leakage rates, and response action plans, and will be implemented through the procedures of 40 C.F.R. § 270.42 Class 1 permit modifications.

6. Specific Waste Ban

- a. The Permittee shall not place in any land disposal unit the wastes specified in 40 C.F.R. Part 268 after the effective date of the prohibition, unless the Regional Administrator has established disposal or treatment standards for the hazardous waste, and the Permittee meets such standards and other applicable conditions of this Permit.
- b. The Permittee may store wastes restricted under 40 C.F.R. Part 268 solely for the purpose of accumulating quantities necessary to facilitate proper recovery, treatment, or disposal, provided that it meets the requirements of 40 C.F.R. § 268.50(a)(2) including, but not limited to, clearly marking each tank or container.
- c. The Permittee is required to comply with all requirements of 40 C.F.R. § 268.7 as amended.
- d. The Permittee must comply with requirements restricting placement of hazardous wastes in or on land, which become effective by statute or promulgated under Part 268, regardless of the requirements of this Permit.



Failure to comply with the regulations may subject the Permittee to enforcement action under Section 3008 of RCRA.

7. Information Submittal

Failure to comply with any condition of the Permit, including information submittal, constitutes a violation of the Permit and is grounds for enforcement action, Permit amendment, termination, revocation, suspension, or denial of Permit renewal application. Falsification of any submitted information may also constitute grounds for termination of this Permit. 40 C.F.R. § 270.43.

The Permittee shall ensure that all plans, reports, notifications, and other submissions to DEQ required in this Permit are signed and certified in accordance with 40 C.F.R. § 270.11. One (1) hard copy and one (1) Windows-compatible soft copy of each of these plans, reports, notifications, or other submissions shall be submitted to DEQ by Certified Mail, or equivalent trackable delivery services or hand delivered to:

Chief Engineer  
Land Protection Division  
Oklahoma Department of Environmental Quality  
707 N. Robinson  
P. O. Box 1677  
Oklahoma City, Oklahoma 73101-1677  
Phone Number (405) 702-5100

8. Plans and Schedules Incorporated into Permit

All plans and schedules required by this Permit are, upon approval by DEQ, incorporated into this Permit by reference and become an enforceable part of this Permit. Since required items are essential elements of this Permit, failure to submit any of the required items or submission of inadequate or insufficient information may subject the Permittee to enforcement action under Section 3008 and under the OHWMA which may include fines, suspension, or revocation of the Permit.

Any noncompliance with approved plans and schedules shall be termed noncompliance with this Permit. Written requests for extensions of due dates for submittals may be granted by DEQ in accordance with Permit Condition IV.A.3.

If DEQ determines that actions beyond those provided for, or changes to what is stated herein, are warranted, DEQ may modify this Permit according to procedures in Permit Condition IV.A.3.

9. Data Retention

All raw data, such as laboratory reports, drilling logs, bench-scale or pilot-scale data, and other supporting information gathered or generated during activities undertaken pursuant to this Permit shall be maintained in an accessible format by the Permittee and/or its consultants at the facility during the term of this Permit, including any reissued Permits.

10. Management of Wastes

All solid wastes which are managed pursuant to a remedial measure taken under the corrective action process or as an interim measure addressing a release or the threat of a release from a LTU or SWMU or AOC shall be managed in a manner protective of human health and the environment and in compliance with all applicable Federal, State, and local requirements. Regulations under 40 CFR § 101 Corrective action for solid waste management units and Subpart S - Special Provisions for Cleanup, 40 C.F.R. § 264.550 *et seq.*, shall be applicable as guidance for managing these wastes. Approval of units for managing wastes and conditions for operating the units, if approved, shall be granted through the permitting process.

**B. SPECIFIC CONDITION - INFORMATION REPOSITORY**

1. Within thirty (30) days of the effective date of this Permit, the Permittee must establish and maintain an information repository to provide the public an opportunity to review and comment on the corrective action activities specified in this Permit. This repository shall be established at a local public library or similar institution that is easily accessible to the public.
2. Within thirty (30) days of the effective date of this Permit, the Permittee shall mail a notice of public repository availability to all individuals on the facility-specific mailing list maintained by DEQ, including all individuals that submitted oral or written comments on the Permittee's draft permit during the public comment period. The Permittee shall amend this mailing list as necessary to include those individuals that submit a written request to DEQ and the Permittee for inclusion in this list.
3. This notice shall state the location, purpose, and content of the repository. A copy of this notice shall be provided to DEQ for approval prior to mailing to the public.
4. Once established, the Permittee shall place into the repository, on or before the date due to DEQ, all corrective action documents (e.g., work plans and final reports) as specified in this Permit. The Permittee shall specify within the text or cover letter of each document the date each submittal was placed in the repository.

**C. SPECIFIC CONDITION - INVESTIGATION OF AREA(S) OF CONCERN**

Within 180 days of the identification of newly identified Areas of Concern (AOCs), the Permittee shall submit a plan to determine if the AOCs are SWMUs. The work plan shall describe the objective of the investigation and the overall technical and analytical approach to completing all actions necessary to determine if activity at the AOC resulted in solid waste management at any time. If such determination is made, the AOC shall be designated as a newly identified SWMU. If hazardous wastes including hazardous constituents are determined to be managed at the SWMU or potential AOC, and if DEQ determines that further investigation is necessary, a plan for the investigation shall be prepared according to Permit Condition IV.G.

**D. SPECIFIC CONDITION – CONCEPTUAL SITE MODEL (CSM)**

The Permittee shall provide a CSM consistent with the applicable requirements of the EPA Region 6 CAS and shall incorporate the CSM into the CAP to be developed for the facility in accordance with Permit Condition III.I.

The CSM shall identify the known or potential constituent source(s), routes of constituent migration, exposure media, exposure points and pathways, receptors, and source media. The CSM shall be considered as the "base document" to be prepared and updated by the facility as new information is gathered during investigations. The Permittee shall evaluate the CSM periodically for necessary changes and inform DEQ in writing of its recommendations, if any. The CSM shall be used by the facility to make decisions regarding risk management options, ecological risk, and any needed changes to the remedy applications as site conditions change or when deemed appropriate by DEQ.

**E. CORRECTIVE ACTION USING THE CAS**

The EPA Region 6 Corrective Action Strategy (CAS) is a streamlined corrective action approach, which has been adopted by the State of Oklahoma and can be implemented during any phase of corrective action. The Permittee shall use the CAS approach as guidance for development and implementation of the facility-wide corrective action program and shall compare all contaminants in the soil and groundwater to the current MCLs, RSLs, or DEQ-approved RBSLs for screening new releases to determine if additional action is warranted. Screening should use the most conservative levels based on the chosen receptors or scenario, unless otherwise directed by DEQ. Work plans and reports completed as part of the corrective action program are subject to DEQ approval and shall be submitted according to the schedule provided in Table IV-1.

1. Performance Standards and Corrective Action Objectives (CAOs)

Expectations for the outcome of corrective action at a facility are established in the CAS by three performance standards. Through the application of the performance standards and screening with the current EPA Regional Screening Levels, the Permittee and DEQ shall determine whether a release must be addressed through

corrective action and whether implemented corrective actions are protective of human health and the environment.

The three CAS performance standards approved by DEQ are defined below. The order in which the performance standards are listed does not imply that one performance standard takes priority over another. CAOs are described under each performance standard. All CAOs must be achieved by the Permittee.

a. Source Control Performance Standard

Source control refers to the control of materials that include or contain hazardous wastes or hazardous constituents that act as a reservoir for migration of contamination to soil, sediment, ground water, surface water, or air or as a source for direct exposure.

The facility must determine if source material is present. Removal, containment, and treatment, or a combination of the three, must be evaluated on a case-by-case basis. Controlling source material is a predominating issue in the CAS and must be addressed to ensure protectiveness over time.

b. Statutory and Regulatory Performance Standard

Applicable statutory and regulatory requirements (Federal, State, and local) must be identified. These requirements may dictate media-specific contaminant levels (e.g., maximum contaminant levels (MCLs) in drinking water) that must be achieved and may become a performance standard for the Permittee.

c. Final Risk Goal Performance Standard

The final risk goal is the level of protection to be achieved and maintained by the Permittee. The final risk goal shall be based on site-specific issues including land use, special subpopulations, contaminant concentrations based on acceptable risk, location at which the levels are measured, and the remediation time frame.

2. Corrective Action for Releases Beyond Facility Boundary

Section 3004(v) of RCRA as amended by HSWA requires corrective actions beyond the facility property boundary where necessary to protect human health and the environment, unless the Permittee demonstrates that, despite the Permittee's best efforts, the Permittee was unable to obtain the necessary permission to undertake such actions. The Permittee is not relieved of all responsibility to clean

up a release that has migrated beyond the facility boundary where off-site access is denied.

## **F. REPORTING REQUIREMENTS**

1. The Permittee shall submit signed semi-annual progress reports of all activities conducted pursuant to the provisions of this Permit on the schedule and incorporated in the semi-annual groundwater monitoring report described in Condition III.Q.2. These progress reports shall contain information not otherwise reported or submitted to DEQ in other documentation. These reports shall contain:
  - a. A description of the work completed and an estimate of the percentage of work completed;
  - b. Summaries of all findings, including summaries of laboratory data;
  - c. Summaries of all problems or potential problems encountered during the reporting period and actions taken to rectify problems;
  - d. Projected work for the next reporting period;
  - e. Summaries of contacts pertaining to corrective action with representatives of the local community, public interest groups, or State government during the reporting period; and
  - f. Summaries of all changes made in implementation of the CAP (to be developed per Permit Condition III.I) during the reporting period.
2. Copies of other reports relating to or having bearing upon the corrective action work (e.g., inspection reports), drilling logs, and laboratory data shall be made available to DEQ upon request.
3. In addition to the written reports required in Permit Condition IV.F.1 and 2, above, at the request of DEQ, the Permittee shall provide status review briefings.

## **G. NOTIFICATION REQUIREMENTS FOR AND ASSESSMENT OF NEWLY IDENTIFIED SWMUs AND POTENTIAL AOCs**

The Permittee shall notify DEQ, in writing, of any newly identified SWMU(s) and potential AOCs (i.e., a unit or area not specifically identified during the RFA), discovered in the course of groundwater monitoring, field investigations, environmental audits, or other means, no later than thirty (30) calendar days after discovery. The Permittee shall also notify DEQ of any newly constructed land-based SWMUs (including, but not limited to, surface impoundments, waste piles, landfills, and land treatment units) and newly constructed SWMUs where any release of hazardous constituents may be difficult to

identify (e.g., underground storage tanks) no later than thirty (30) days after construction. The notification shall include the following items, to the extent available:

1. The location of the newly identified SWMU or potential AOC on the topographic map required in 40 C.F.R. § 270.14(b)(19). Indicate all existing units (in relation to other SWMUs);
2. The type and function of the unit;
3. The general dimensions, capacities, and structural description of the unit (supply any available drawings);
4. The period during which the unit was operated;
5. The specifics, to the extent available, on all wastes that have been or are being managed at the SWMU or potential AOC; and
6. Results of any sampling and analysis required for the purpose of determining whether releases of hazardous waste including hazardous constituents have occurred, are occurring, or are likely to occur from the SWMU or whether the AOC should be considered a SWMU.

Based on the results of this notification, DEQ will designate the newly identified SWMU(s) or AOC(s). Based on the results of this notification or investigation conducted, DEQ will determine the need for further investigations or corrective measures at any newly identified SWMU(s) or AOC(s). If DEQ determines that such investigations are needed, DEQ may require the Permittee to prepare a plan for such investigations.

#### **H. NOTIFICATION REQUIREMENTS FOR NEWLY DISCOVERED RELEASES AT SWMU(s) AND AOC(s)**

The Permittee shall notify DEQ in writing immediately of any release(s) from a SWMU or AOC of hazardous waste or hazardous constituents discovered during the course of groundwater monitoring, field investigation, environmental auditing, or other means as described in OAC 252:205-13-1. Such newly discovered releases may be from newly identified SWMUs or AOCs, newly constructed SWMUs, or from SWMUs or AOCs for which, based on the findings of the RFA, completed RFI, or investigation of an AOC(s), DEQ had previously determined no further investigation was necessary. The notification shall include information concerning actual and/or potential impacts beyond the facility boundary and on human health and the environment, if available at the time of the notification. DEQ may require further investigation and/or interim measures for the newly identified release(s) and may require the Permittee to prepare a plan for the investigation and/or interim measure. The plan will be reviewed for approval as part of the RFI Work Plan or a new RFI Work Plan. The Permit will be modified to incorporate the investigation, if required.

## I. INTERIM MEASURES

1. If, during the course of any activity initiated under this permit, DEQ determines that a release or potential release of hazardous constituents from a SWMU or AOC poses a threat to human health and the environment, DEQ may require interim measures. DEQ shall determine the specific measure(s) or require the Permittee to propose a measure(s). The interim measure(s) may include a permit modification, a schedule for implementation, and a written plan. DEQ shall notify the Permittee in writing of the requirement to perform interim measures. DEQ may modify this permit to incorporate interim measures into the permit.
2. The Permittee may propose interim measures at any time. The proposal shall include a written plan and a schedule for implementation. Depending upon the nature of the interim measure, a permit modification may not be required.
3. The following factors will be considered by DEQ in determining the need for interim measures and the need for permit modification:
  - a. Time required to develop and implement a final remedy;
  - b. Actual and potential exposure to human and environmental receptors;
  - c. Actual and potential contamination of drinking water supplies and sensitive ecosystems;
  - d. The potential for further degradation of the medium in the absence of interim measures;
  - e. Presence of hazardous wastes in containers that may pose a threat of release;
  - f. Presence and concentration of hazardous waste including hazardous constituents in soil that have the potential to migrate to groundwater or surface water;
  - g. Weather conditions that may affect the current levels of contamination;
  - h. Risks of fire, explosion, or accident; and
  - i. Other situations that may pose threats to human health and the environment.

## **J. DETERMINATION OF NO FURTHER ACTION**

1. Based on the results of the site investigations, screening, risk evaluations, and risk management activities, the Permittee may submit an application to DEQ for a Class 3 Permit modification under 40 C.F.R. § 270.42 to terminate further corrective action for a specific unit. This permit modification application must contain information demonstrating that there are no releases of hazardous waste including hazardous constituents from a particular SWMU at the facility that pose threats to human health and/or the environment as well as additional information required in 40 C.F.R. § 270.42.

If, based upon review of the Permittee's request for a permit modification, the results of the site investigations, and other information, including comments received during the sixty (60)-day public comment period required for Class 3 Permit modifications, DEQ determines that releases or suspected releases that were investigated either are non-existent or do not pose a threat to human health and/or the environment, DEQ may grant the requested modification.

2. If necessary to protect human health or the environment, a determination of no further action shall not preclude DEQ from requiring continued or periodic monitoring of air, soil, groundwater, or surface water when site-specific circumstances indicate that releases of hazardous waste or hazardous constituents are likely to occur.
3. A determination of no further action shall not preclude DEQ from requiring further investigations, studies, or remediation at a later date if new information or subsequent analysis indicates a release or likelihood of a release from a SWMU or AOC at the facility that is likely to pose a threat to human health or the environment. In such a case, DEQ shall initiate a modification to the permit according to 40 C.F.R. § 270.41.



**Table IV-1: RFI/CMS SUBMISSION SUMMARY AND SCHEDULE**

Below is a summary of the planned reporting requirements pursuant to this Permit which may be required by DEQ. Note that this table is subject to change based on DEQ approval of the CAP to be developed per Permit Condition III.I:

<b>ACTION</b>	<b>DUE DATE (examples)</b>
Corrective Action Plan (CAP)	180 days after permit issuance, or at later date with approval from DEQ
Progress reports on all activities	Semi-annual (in conjunction with routine semi-annual groundwater reporting)
RFI Work Plan (if required)	180 calendar days after the effective date of the Permit
Revised RFI Work Plan (if required)	As determined by DEQ, not less than 90 calendar days after receipt of DEQ comments
RFI Report and Summary (if required)	90 calendar days after completion of RFI
Revised RFI Report and Summary (if required)	As determined by DEQ, not less than 90 calendar days after receipt of DEQ comments
Risk Assessment Work Plans for SWMU 4, SWMU 5, SWMU 6, SWMU 11.	As determined by DEQ
Notification of newly identified SWMUs	30 calendar days after discovery
Notification of newly discovered releases	15 calendar days after discovery
Interim Measures Plan	As determined by DEQ
Revised Interim Measure Plan	As determined by DEQ
CMS Plan (if required)	180 calendar days after notification of requirement to perform CMS
Revised CMS Plan (if required)	As determined by DEQ, not less than 90 calendar days after receipt of DEQ comments
CMS Final Report and Summary (if required)	180 calendar days after completion of CMS
Revised CMS Final Report (if required)	As determined by DEQ, not less than 90 calendar days after receipt of DEQ comments
Demonstration of Financial Assurance at the facility	60 calendar days after permit modification to implement corrective measures

**Table IV-2: COMPLIANCE SCHEDULE**

Note that this table is subject to change based on DEQ approval of the CAP to be developed per Permit Condition III.I:

<b>ACTION</b>	<b>DUE DATE</b>
Semi-Annual Groundwater Monitoring Report	Within 45 days after the end of each six-month period (January 1–June 30) and (July 1–December 31)
Investigation Work Plan (Pursuant to Permit Condition III.Q.3.c)	Within 30 days after receiving the final result(s) of exceedance confirmation
Alternate Source Demonstration	Within 30 days after receiving the final result(s) of exceedance confirmation
Investigation Report (Pursuant to Permit Condition III.Q.3.d)	Within 60 days after receipt of final analytical report regarding delineation
Corrective Action Work Plan (Pursuant to Permit Condition III.Q.3.e)	Within 60 days after receiving DEQ response to investigation report
Risk Assessment (RA) Reports for SWMU 4, SWMU 5, SWMU 6, and SWMU 11	180 days from DEQ approval of a RA Work Plan or 90 days from receipt of final analytical report for SWMU 4, SWMU 5, SWMU 6, or SWMU 11
Vapor Intrusion Investigation Work Plan (following June 2015 EPA guidance)	Within 180 days after receiving DEQ approval of CAP
Vapor Intrusion Investigation Summary Report	180 days from DEQ approval of Vapor Intrusion Investigation Work Plan or 90 days from receipt of final analytical report.

**Table IV-3: SWMUs REQUIRING AN RFI**

There are no newly identified SWMUs at the facility presently requiring an RFI. Should new units be found in the future, the CAP to be developed per Permit Condition III.I will be modified, and a modification of this permit may be necessary to include such units in the corrective action process of this section.

**HF SINCLAIR TULSA REFINING LLC  
TULSA WEST REFINERY  
TULSA, OKLAHOMA**

**PERMIT ATTACHMENTS:**

**Due to DEQ Website File Size Limitations the Five Permit Attachments Identified on the Following Pages are Only Available for Review on the DEQ Land Protection Division (LPD) Public Participation Process Webpage**

**NOTE: ALL THE PAGES FOR THE ATTACHMENTS ARE TAKEN FROM THE PERMIT APPLICATION AND PAGE NUMBERS MAY NOT BE IN SEQUENCE.**

HF Sinclair Tulsa Refining LLC, Tulsa West Refinery  
RCRA Corrective Action and Post-Closure Permit  
EPA ID# OKD058078775  
August 2024

**HF SINCLAIR TULSA REFINING LLC  
TULSA WEST REFINERY  
TULSA, OKLAHOMA**

**PERMIT ATTACHMENT 1**

**PREPAREDNESS AND PREVENTION PLAN**

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SECTIONS TAKEN DIRECTLY FROM THE PERMIT  
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**HF SINCLAIR TULSA REFINING LLC  
TULSA WEST REFINERY  
TULSA, OKLAHOMA**

**PERMIT ATTACHMENT 2**

**POST-CLOSURE CARE PLAN**

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**HF SINCLAIR TULSA REFINING LLC  
TULSA WEST REFINERY  
TULSA, OKLAHOMA**

**PERMIT ATTACHMENT 3**

**GROUNDWATER MONITORING AND LNAPL  
MANAGEMENT PLAN**

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TULSA WEST REFINERY  
TULSA, OKLAHOMA**

**PERMIT ATTACHMENT 4**

**INSPECTION AND MAINTENANCE PLAN**

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TULSA WEST REFINERY  
TULSA, OKLAHOMA**

**PERMIT ATTACHMENT 5**

**CORRECTIVE ACTION AND POST-CLOSURE  
COST ESTIMATES**