REDACTED VERSION

United States Environmental Protection Agency
Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

MEMORANDUM

SUBJECT: Request for Approval and Funding for a Removal Action and Exemption from the 1 Year Statutory Exemption at the Wilcox Oil Residence Site, Bristow, Creek County, Oklahoma

FROM: Stephen Mason, On-Scene Coordinator
Emergency Management Branch, Planning and Prevention Team (6SF-EP)

TO: Carl E. Edlund, P.E., Director
Superfund Division (6SF)

THRU: Craig Carroll, Branch Chief
Emergency Management Branch (6SF-E)

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval of the selected removal action described herein in accordance with the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9604, for the Wilcox Oil Residence Site, Bristow, Creek County, Oklahoma. This time-critical removal action provides for the removal of the threat to human health and the environment posed by the identified contaminants of concern listed herein that were a result of the actions conducted by this company.

The proposed plan of action meets the criteria for initiating a removal action under Section 300.415 of the National Contingency Plan (NCP), 40 C.F.R. § 300.415. This action is expected to require less than twelve months (from mobilization) and $2 million to complete.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS:	OK0001011917
Category of Removal:	Time Critical
Site ID:	06GG
National Significance:	NPL Site
Latitude:	35.840804 N
Longitude:	96.380193W

9684350

A. Site Description

1. Removal Site Evaluation

The sampling results indicate high concentrations of Polycyclic Aromatic Hydrocarbons (PAHs) in oily sludge waste at numerous locations onsite. In addition, oily sludge leaching from the ground has been observed in the past few months at the residence at (b) (6) [redacted]. A visit to the residence by the EPA On-Scene Coordinator (OSC) in July revealed staining on the ground, dried puddles of oily liquid, and a hole where the oily liquid has risen to the ground surface. The presence of sludge waste is within 350 feet of the home.

The site was included on the EPA National Priorities List (NPL) in December, 2013.

2. Physical Location

The Wilcox Refinery Site is located northeast of the City of Bristow, Creek County, Oklahoma at West 221st Street South/Refinery Road, 0.35 mile east of U.S. Highway, Latitude: 35.840804 N, and Longitude: 96.380193W. The residence proposed for action is located (b) (6) [redacted].

3. Site Characteristics

Refining operations began at the site about 1915, and ended in the 1960s, when the site was abandoned and most steel structures were salvaged and removed. The property was utilized by two different refineries with overlapping boundaries from 1915 to 1963. The former Lorraine Refinery, including associated tank farm, operated under numerous companies from approximately 1915 to 1937 when the property was sold to Wilcox Oil and Gas Company. Wilcox Oil and Gas Company purchased refinery operations on the remaining acres east of the railroad tracks and operated as a crude oil refinery from the 1920s until the property was sold on November 1, 1963. A skimming and cracking plant was constructed in 1929. The main components of the plant consisted of a skimming plant, cracking unit and re-distillation battery with vapor recovery system and treatment equipment.

After the refinery operations ceased and most of the tanks and buildings were demolished and sold for scrap, the property was sold to private interests. Currently, a church and seven residences, three of which are occupied, are located within the former refinery boundaries. In addition, three residential properties utilize ground water from private wells. Homes are located in areas of former waste operations.

The site covers approximately 140-150 acres, and the former refinery process areas are partially fenced. An intermittent stream drains the western portions of the site, while an intermittent-perennial stream drains the eastern portions of the site. These two streams flow south into Sand Creek. Sand Creek is a perennial stream that flanks the site on the western and southwestern boundaries.

4. Release or Threatened Release into the Environment of a Hazardous Substance, or Pollutant or Contaminant

Oily liquid leaching from the ground was observed during a site visit conducted by the EPA OSC on July 6, 2017. Similar areas of oily liquid around the site have been determined to contain elevated concentrations of PAHs, including benzo(a)pyrenes related to the disposal of wastes and abandonment of the refinery. These hazardous substances, as defined by section 101(14) of CERCLA, 42 U.S.C. §9601(14), are known to be present at the site.

5. NPL Status

Wilcox Refinery is ranked and identified as a site on the National Priorities List (NPL). It was listed on the NPL on December 12, 2013.

6. Maps, Pictures and Other Graphic Representations

Attachment 1 Site Overview Map
Attachment 2 Residence Sludge Affected Area Map

B. Other Actions to Date

1. Previous Actions

The Site was listed on the NPL December 12, 2013.

The EPA completed the following activities, including removal activities, at other properties on the site, after listing on the NPL.

- July 2014: contaminated drinking water well capped with key access
- August 2014: Oily sludge pit in resident's backyard fenced
- May 2015: former process area fenced.
- December 2015 to present: remedial investigation activities.

2. Current Actions

This removal action will remove the oily sludge from the front yard of an inhabited residence. The sludge has surfaced in recent months, exposing the resident to contaminants above the residential screening levels of a hazardous substance, benzo(a)pyrene.

C. State and Local Authorities' Role

1. State and Local Actions to Date

The ODEQ has periodically conducted most of the site assessments and investigations at the site between 1994 and 2011.

2. Potential for Continued State/Local response

The ODEQ has requested the assistance of the EPA in removing the oily sludge from the residential yard. The ODEQ does not have the ability to perform these response actions at present, however, the ODEQ has expressed interest in assisting with future potential remedial actions.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT AND STATUTORY AND REGULATORY AUTHORITIES

Section 300.415 of the NCP lists the factors to be considered in determining the appropriateness of a removal action. Paragraphs (b)(2)(i), (iii), (iv) and (vii) directly apply to the conditions at the Site. Any

one of these factors may be sufficient to determine whether a removal action is appropriate.

A. Threats to Public Health or Welfare

1. Exposure to Human Populations, Animals or the Food Chain, NCP Section 300.415(b)(2)(i).

Commented [KC1]: You could also add

Site data show that the indoor air and direct exposure pathways are complete exposure pathways related to the sludge waste

A family is currently living on the residential property. It is not feasible to fence off the contaminated areas in order to prevent access due to the proximity to the house and driveway in the front yard. The predominant threat to human populations is the potential exposure to the contaminated oily sludge and soils by the most sensitive populations. Exposure to these hazardous substances could be from ingestion, skin absorption, and inhalation. Polyaromatic Hydrocarbons (PAHs: specifically, benzo(a)pyrene) is a hazardous substance as defined at Section 101(14) of CERCLA, 42 U.S.C. 9601(14) and further defined at 40 C.F.R. 302.4.

2. High Levels of Hazardous Substances or Pollutants or Contaminants Soils Largely at or Near the Surface, that May Migrate, NCP Section 300.415(b)(2)(iv).

Recent leaching of the oily liquid has appeared on the ground surface at the residence. This oily liquid, similar to other liquids containing PAHs leaching onto the surface, confirms the presence of significant concentrations of PAH compounds in subsurface soils at the resident's front yard.

3. Availability of Other Response Mechanisms, NCP Section 300.415(b)(2)(vii).

Neither the State of Oklahoma nor the local government have the resources to remove the contaminated soil. The State has requested the EPA conduct the removal action in advance of future remedial actions.

B. Threats to the Environment

Wildlife, as well as humans, can access the contaminated area, and be exposed to surface contaminants. Removing the contaminated soil will remove the direct exposure to surface contaminants by wildlife as well as human receptors.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances, pollutants or contaminants from this Site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to the public health, welfare, or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed Action Description

The EPA will excavate soil containing visible oily sludge from the residential property. The excavated soils will be disposed within an appropriate and approved landfill followed by confirmation sampling and

restoration of the property to pre-removal conditions. Soil excavation will not exceed three feet below ground surface. The cleanup levels to be used for this action are:

Benzo(a)pyrene 0.11 mg/kg

Commented [KC2]: The screening number was updated in June

2. Contribution to Remedial Performance

Removing the contaminated soil in the residential property will contribute to remedial performance by protecting human health until further remedial action field work begins on-site. This action is consistent with any potential Remedial Action at this Site.

3. Description of Alternative Technologies

No alternative technologies exist to restrict access to the Site.

4. Applicable or Relevant and Appropriate Requirements

This removal action will be conducted to eliminate the actual or potential release of a hazardous substance, pollutant, or contaminant to the environment, pursuant to CERCLA, 42 U.S.C. § 9601 et seq., in a manner consistent with the NCP, 40 C.F.R. Part 300. As per 40 C.F.R. § 300.415(i), Fund-financed removal actions pursuant to CERCLA Section 104, 42 U.S.C. § 9604, and removal actions pursuant to CERCLA Section 106, 42 U.S.C. § 9606, shall, to the extent practicable considering the exigencies of the situation, attain the applicable or relevant and appropriate requirements under Federal environmental law, including the Toxic Substances and Control Act (TSCA), 15 U.S.C. § 2601 et. seq., the Safe Drinking Water Act (SDWA), 42 U.S.C. § 300 et. seq., the Clean Air Act (CAA), 42 U.S.C. § 7401 et. seq., Clean Water Act (CWA), 33 U.S.C. § 1251 et. seq., the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6901 et. seq., or any promulgated standard, applicable or relevant and appropriate requirements, criteria, or limitation under a state environmental or facility citing law that is more stringent than any Federal standard, requirement, criteria, or limitation contained in a program approved, authorized or delegated by the Administrator and identified to the President by the state.

Due to the fact that consolidation and offsite disposal are the principal elements of this removal action, RCRA waste analysis requirements found at 40 C.F.R. §§ 261.20 and 261.30, RCRA manifesting requirements found at 40 C.F.R. § 262.20, and RCRA packaging and labeling requirements found at 40 C.F.R. § 262.30 are deemed to be relevant and appropriate requirements for this removal action. Because onsite storage of hazardous wastes by the EPA is not expected to exceed ninety days, specific storage requirements found at 40 CFR Part 265 are not applicable or relevant and appropriate (See 40 CFR § 262.34). All hazardous substances, pollutants, or contaminants removed offsite for treatment, storage, or disposal shall be treated, stored, or disposed at a facility in compliance, as determined by the EPA, pursuant to 40 CFR § 300.440. All offsite transportation of hazardous materials will be performed in conformity with U.S. Department of Transportation (DOT) requirements at 49 CFR § 172.

5. Project Schedule

The EPA anticipates initiating such actions as quickly as possible to address the issues associated with the Site. The estimated time to conduct this removal action is approximately one month.

B. Estimated Costs

Extramural Costs:

ERRS Cleanup Contractor	$370,092
START-4	$ 70,000
Extramural Costs	$440,092
Contingency	$ 88,018
TOTAL EXTRAMURAL COSTS	$528,110

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

If this response action is not taken, the current residents will continue to be exposed to the contaminated oily sludge and soils, and surrounding residents can potentially be exposed to the contaminated soils. In addition, these contaminated soils may migrate with wind, water, and mechanical means which could result in the contamination of additional areas around the site.

VII. EXEMPTION FROM STATUTORY LIMITS

A. Emergency Exemption

1. There is an Immediate Risk to Public Health or Welfare or the Environment. There is an immediate risk to the public health via pathways of exposure. Uncontrolled access to the contaminated soils near the residence allows the residents and the public to make direct contact on the Site. Contact with hazardous substances can occur in the front yard.

2. Continued Response Actions Are Immediately Required to Prevent, Limit, or Mitigate an Emergency. Concentrations of hazardous substances in the residential soil represent an immediate risk to the residents through direct contact with soil contaminated with benzo(a)pyrenes above the residential screening levels, as well as the regional management levels (RMLs).

3. Assistance Will Not Otherwise Be Provided on a Timely Basis. The State of Oklahoma has indicated that it does not have the resources to adequately address the threats posed by the residential Site conditions.

VIII. OUTSTANDING POLICY ISSUES

There are no known outstanding policy issues associated with this Site.

IX. ENFORCEMENT

The total budget for this removal action based on full-cost accounting practices that will be eligible for cost recovery. The budgeted costs are estimated to be **$ 917,771.**

(Direct Costs)	+	(Indirect Costs)	= **Estimated EPA Cost for a Removal Action**
(Direct extramural + Direct intramural)	+	*[(Region-specific Indirect Cost Rate) x (Direct Costs)]*	

$ 528,110 + $ 40,000 + (61.55%(528,100 + $40,000)) = **$ 917,771**

Direct costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2002. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only, and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor the deviation of actual total costs from this estimate will affect the United States' right to cost recovery.

X. RECOMMENDATION

This decision documents the selected removal action for the Wilcox Oil Residence Site, Bristow, Creek County, Oklahoma, developed in accordance with CERCLA, 42 U.S.C. § 9601 et seq., and not inconsistent with the NCP, 40 C.F.R. Part 300. This action was based on the administrative record for the Site.

Because the conditions at the Site meet the criteria defined in Section 300.415 and 300.305 of the NCP, I recommend your approval of the proposed removal action.

APPROVED: _____ DATE: _____
Carl E. Edlund, P.E., Director
Superfund Division (6SF)

Attachments

Attachment 1 Site Overview Map
Attachment 2 Residence Sludge Affected Area Map
Attachment 3 Enforcement Attachment (Confidential)