



ACTION MEMORANDUM

Date: May 16, 2023

Subject: Request for a Removal Action at the Federal Pacific Electric Site

County: Edgefield South Carolina.

From: Tim Hornosky, P.G., Project Manager
State Voluntary Cleanup Program

Thru: Lucas Berresford, Section Manager
State Voluntary Cleanup Program

To: Henry Porter, Chief
Bureau of Land and Waste Management

I. Purpose

The Purpose of this action memorandum is to request and document approval of a proposed removal action at the former Federal Pacific Electric Facility in Edgefield, South Carolina. This action is intended to protect Human Health from a release threat, as defined by Section 101 of CERCLA, that exists at the site in the form of chlorinated volatile organic compound (CVOC) contamination in the soil and groundwater. This site poses a threat to human health and the environment that meets the National Contingency Plan (NCP) Section 300.415(b)(2) criteria for removal actions.

II. Site Conditions and Background

1. Physical Location and Site History

The former Federal Pacific Electric (FPE) Site was a manufacturing facility which produced baseboard heaters. The Site property is currently unoccupied. The Site property consists of an approximate 23.92-acre parcel located at the northeast corner of the intersection of S.C. Highway 25 and Star Road in Edgefield, South Carolina (Figure 1). The Site property is relatively flat, gently sloping from southwest to northeast.

The former manufacturing building was demolished in 2015 due to safety concerns. A warehouse building on the Site property houses a groundwater treatment system that has been operational since 2004. An adjacent warehouse building will be demolished as part of the proposed action to facilitate safe removal of contaminated soils. The Site property is currently zoned for industrial use and is surrounded by a mix of commercial

S.C. Department of Health and Environmental Control

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and residential properties. The Site property is bounded to the north by Industrial Rigging, LLC and Star Road, to the east by residential properties along Rabbit Trail Road and Odell Reservoir beyond, to the south by Augusta Road and land belonging to Stag Edgefield LLC and the National Wild Turkey Federation, to the west by Star Road and several businesses (Figure 2).

The property was first developed for industrial use in 1961 as National Steel Cabinet Company. FPE acquired the property in March 1965 and manufactured electric baseboard heating systems until operations ceased in July 1984. FPE subsequently leased the property to Carolina Production Enterprises, Inc. (CPE), which continued to manufacture electrical heating systems and control equipment until 1989. Portions of the facility were then leased to Profab, Inc. and Moore Lambert Lighting Inc., which manufactured electric panel boards and industrial lighting at the facility until 1992.

2. Previous Investigations

Reliance Electric Company, FPE's parent company, began investigating the Site in September 1989 in response to potential environmental impacts observed during a site visit by its Director of Corporate Real Estate. SCDHEC and FPE signed a Consent Order in 1995 for the investigation and cleanup of soil and groundwater at the Site.

Several phases of investigation and cleanup have been conducted by FPE's contractors since 1989. Nearly 100 monitoring wells have been installed on-site and off-site, and numerous borings have been drilled and sampled to characterize impacts to soil and groundwater. The primary contaminant of concern at the site is the solvent trichloroethylene (TCE). Other contaminants present include perchloroethylene, and breakdown products of TCE including dichloroethylene and vinyl chloride. Collectively these chemicals are referred to as chlorinated hydrocarbons (CHCs). Past cleanup efforts have included removal of drums, removal of contaminated soils, groundwater extraction and treatment, passive groundwater capture and treatment, and soil flushing. Remedial action effectiveness is monitored by semiannual sampling and analysis of groundwater and surface water.

In March 1993, CHCs were detected in the supply wells serving two residences on Rabbit Trail Road. Homes along Rabbit Trail Road were subsequently connected to municipal water. Surface water quality impacts were identified in Odell Reservoir and Beaverdam Creek in the summer of 1993. Sampling of surface water in the reservoir and creek has been conducted regularly since 1994.

A. Soil

Soil CHC concentrations as high as 1,940 milligrams per kilogram (mg/kg) were identified within the Paint Bed Drying Area. The Drum Burial Area had concentrations as high as 5,416 mg/kg. The highest total CHC concentration in the Degreasing Operations Area was 35.69 mg/kg. The predominant contaminant in soil is TCE. The detected levels greatly exceed the USEPA Industrial Regional Screening Level (IRSL) for TCE of 1.9 milligrams per kilogram (mg/kg), as well as the screening levels for migration to groundwater.

B. Groundwater

TCE concentrations as high as 14,000 micrograms per liter (ug/l) were detected in monitoring wells during the most recently reported monitoring event. From 2004 through June 2022, the groundwater treatment system has treated 228 million gallons of contaminated groundwater from wells both on the FPE property and adjacent downgradient properties, including the Odell Reservoir dam. This treatment has resulted in the removal of over 11,000 pounds of CHC mass.

C. Surface Water

Surface water samples collected from Odell Reservoir have met South Carolina Surface Water Quality Standards since March 2010, and did not contain detectable concentrations of CVOCs in 2021 or 2022.

D. Non-aqueous Phase Liquids (NAPL)

Non-aqueous phase liquids have not been reported from the FPE Site.

E. Vapor Intrusion

There are no normally occupied structures in the footprint of the groundwater plume. The warehouse containing the treatment system is within the source zone, but is not normally occupied.

F. Removal Evaluation

The primary source areas at the site are associated with releases from drum storage, buried drums, degreasing operations, and a paint drying bed. These areas were excavated in the 1990s, prior to operation of the groundwater extraction and treatment system. Operation of the system over the last 19 years has resulted in significant lowering of the water table in these areas, creating an opportunity to eliminate a significant amount of contaminant mass quickly through soil removal and treatment. The Phase III Source Area Investigation Report (January 2016) determined that three well-defined, discrete source areas contained the majority of remaining contaminant mass in soils. The areas proposed for removal are illustrated in Figure 3.

III. Threats to Public Health or Welfare or the Environment, and Statutory and Regulatory Authorities.

The Department has determined that a release of hazardous substances has occurred at the Site and presents an ongoing source of contamination to groundwater. In order to protect public health and the environment, it is necessary that action be taken to abate the release of hazardous substances from the site. The following NCP Section 300.415(b)(2) criteria are being met for this removal action:

- (i) **Actual or potential exposure to nearby humans, animals or the food chain from hazardous substances or contaminants.**

Due to the level of contamination at the Site, there is a direct threat of human exposure by either direct contact, inhalation and/or ingestion by persons working on the property.

- (ii) **Actual or potential contamination of drinking water supplies or sensitive ecosystems.**

The bedrock aquifer downgradient of the FPE facility was used for domestic water supply until 1993, when CHCs were detected in samples from two residential supply wells.

- (iv) **High levels of hazardous substances or pollutants or contaminants in soils at or near the surface that may migrate.**

A 2016 investigation determined that significant additional mass is trapped in soils above the water table. If left in place, these soils will serve as a continuing source of contaminants to groundwater.

IV. Proposed Actions

1. Proposed Action Description

FPE will remove, treat, and replace contaminated soils associated with the former Drum Burial Area, Degreasing Operations Area, and Paint Bed Drying Area. Soils that do not meet treatment goals and are deemed unsuitable for placement back into the subsurface will be properly disposed of off-site, and replaced with clean soils from an off-site source.

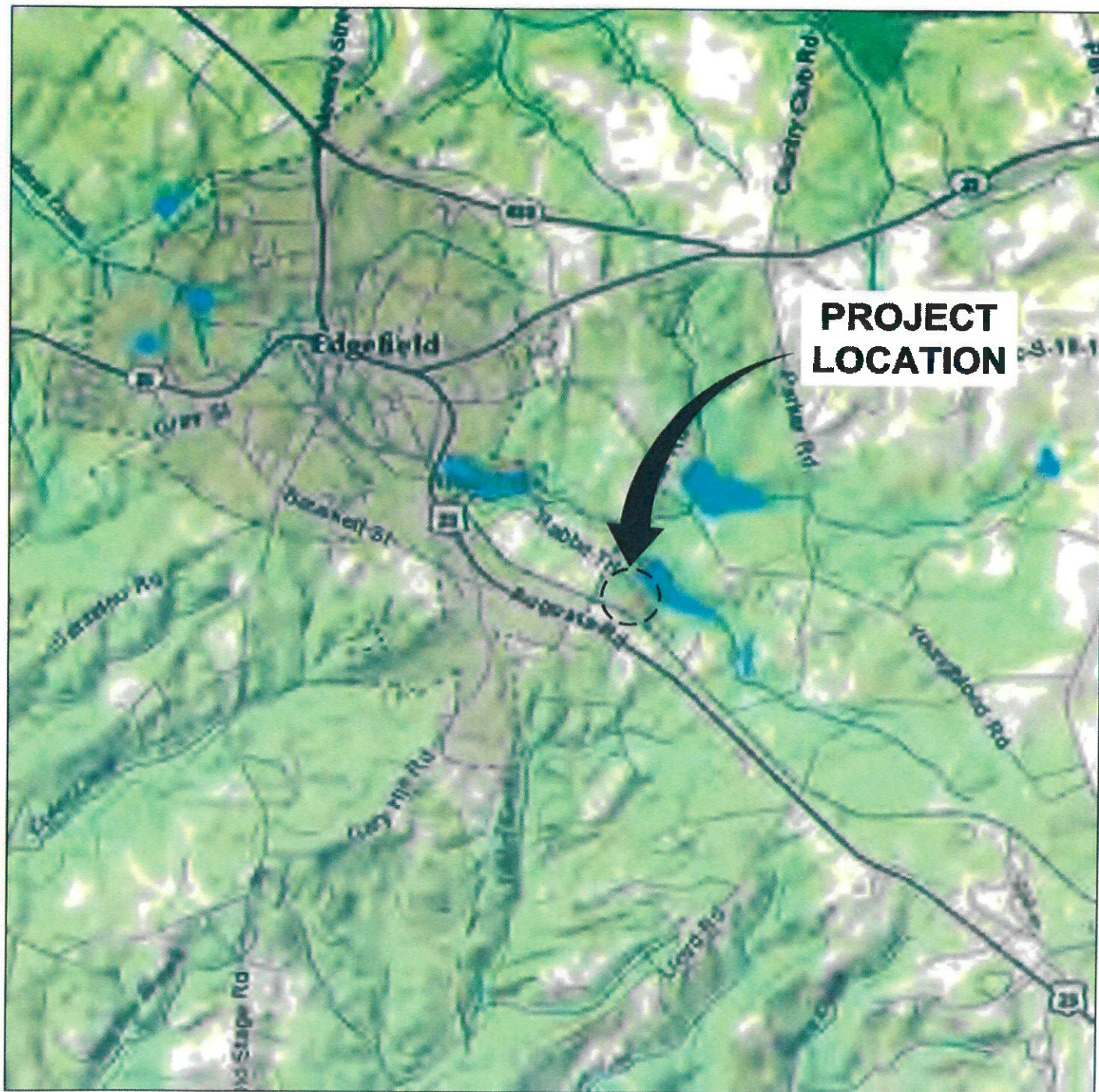
2. Engineering Evaluation/Cost Analysis (EE/CA)

The proposed action is being undertaken by the respondent at their expense under Consent Agreement 95-056-W. This action is being conducted as a Time Critical Removal Action, therefore an EE/CA has not been conducted.

3. Applicant or Relevant and Appropriate Requirements (ARARs)

Federal ARARs proposed for the removal action are the Resource Conservation and Recovery Act (RCRA), Occupational Safety and Health Act (OSHA), the Hazardous Material Transportation Act (HMTA) and the Offsite Rule. State ARARs include the Pollution Control Act, and the South Carolina Hazardous Waste Management Act. These ARARs will be followed during the removal action. Air modelling has been conducted in coordination with the Department's Bureau of Air Quality. This effort resulted in a determination that an air pollution permit was not required.

Figure 1



GRAPHIC SCALE

Approximate Scale: 1 in. = 4000 ft.



SOUTH CAROLINA



REFERENCE: BASE MAP USGS 7.5. MIN. TOPO. QUAD.,
EDGEFIELD, SC, ESRI WEBSITE

FORMER FEDERAL PACIFIC ELECTRIC SITE
EDGEFIELD, SOUTH CAROLINA
ANNUAL 2018 SUMMARY REPORT

SITE LOCATION

CITY: AUGUSTA, GA DIV/GROUP: ENV/CAD DB: A. SAUL LD: A. SAUL PIC: PIR TM: LYS: ONS-OFF-REF
 C:\BIMOneDrive - ARCADIS\BIM 360 Docs\EXCON\OB\FILEP\2019\AS000240\0300\00003001-DWG\01_AS240B01.dwg LAYOUT: 1 SAVED: 2/9/2018 1:57 PM ACADVER: 23.08 (LMS TECH) PAGESETUP: — PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 5/21/2018 9:44 AM BY: BERNDGEB, WENDY
 XREFS: IMAGES: PROJECTNAME: USGS-Topo-Edgefield.jpg

Figure 2

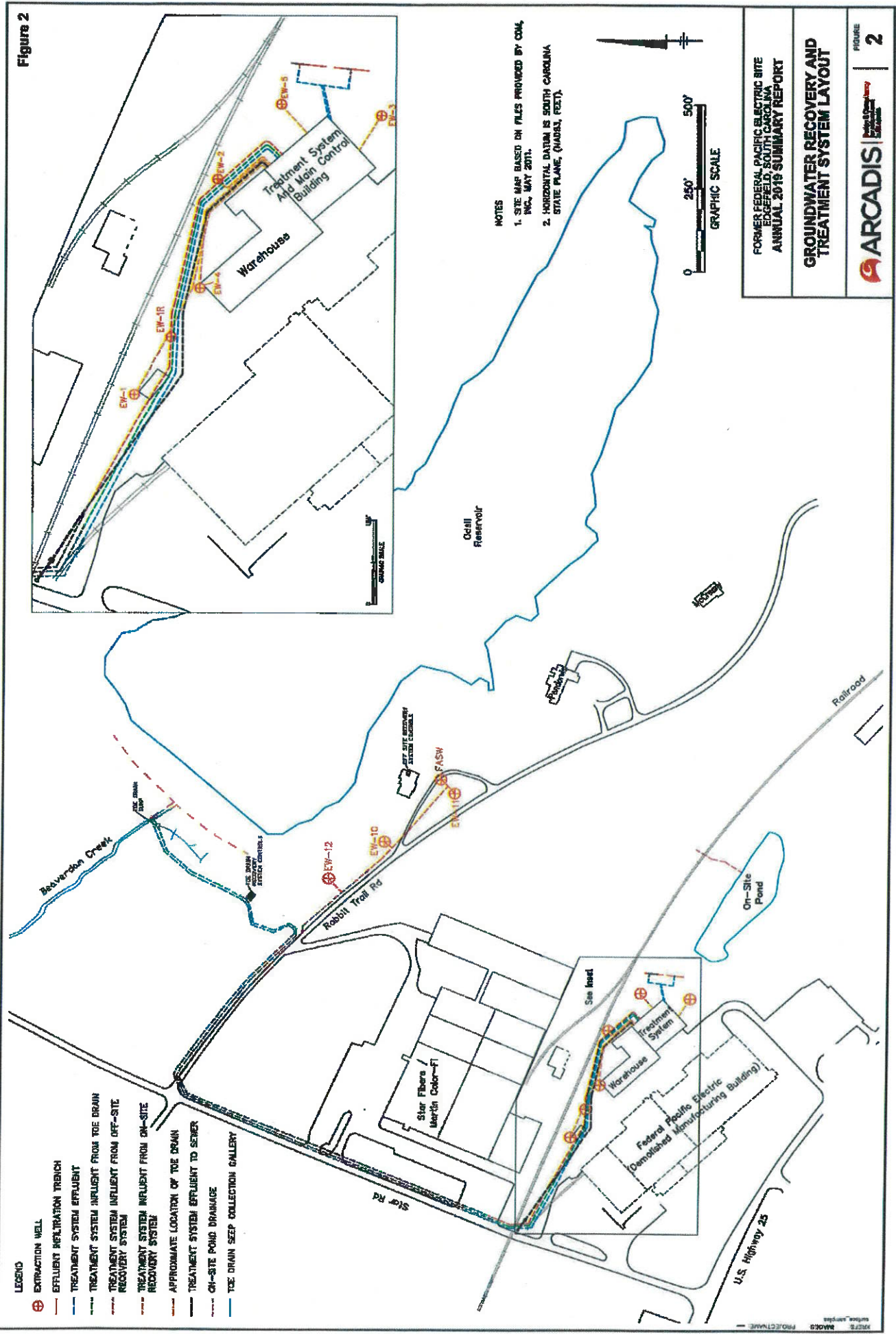


FIGURE 3

FPE Edgefield Source Areas



(1) Paint Bed Drying Area (PBDA)

(2) Drum Burial Area (DBA)

(3) Degreasing Operational Area (DOA)

V. Expected change in the Situation Should Action be Delayed or Not Taken.

If the recommended action is not taken or is delayed, the source areas will remain in place and allow contaminants to continue to migrate to groundwater. This would require continued operation of the on-site groundwater extraction and treatment system even as its efficiency decreases over time. Threats to adjacent property through migration would continue to exist.

VI. Public Participation

Post cards announcing the planned removal will be mailed to area residents within a ½ mile radius of the site. A site-specific web page has been established to provide information to the community.

A summary of the proposed response action is being published in the Edgefield Advertiser and the Administrative Record has been established containing all documents used to make this decision. The Administrative record is available through the Department's webpage.

VII. Outstanding Policy Issues

None.

VIII. Enforcement

Federal Pacific Electric Company entered into Consent Order 95-056-W with the Department on December 14, 1995 with respect to assessment and remediation of the Site. The Consent Order was modified in 1998 and 2003. FPE and the Department entered into Letter Agreement 20-2552-RP on December 30, 2020 to address oversight cost recovery. FPE will conduct and finance all activities in the approved work plan.

IX. Recommendation:

This decision document represents the selected removal action for the FPE Site. It was developed according to CERCLA, as amended, and is not inconsistent with the NCP. This decision is based on available information contained in the Administrative Record for the Site. Conditions of the site meet the NCP Section 300.415(b)(2) criteria for a removal and I recommend your approval of the proposed removal action.

APPROVE:



Date:

5-23-2023

DISAPPROVE:

Date:
