



PROPOSED PLAN

Kerr-McGee Chemical Corp - Navassa Superfund Site

Operable Unit 1

Navassa, Brunswick County, North Carolina

You are Invited to Comment on this Proposed No Action Remedy for Operable Unit 1 of the Kerr-McGee Chemical Corp–Navassa Superfund Site in Navassa, North Carolina

INTRODUCTION

The U.S. Environmental Protection Agency seeks public review and comment on the proposed No Action Remedy for 20.2 acres of the Kerr-McGee Chemical Corp (Kerr-McGee)–Navassa **Superfund** Site (Site) located in the Town of Navassa, Brunswick County, North Carolina (Figure 1). The Site coordinates are 34°14'50.0" North latitude and 77°59'56.5" West longitude.

The EPA released a **Proposed Plan** for Operable Unit 1 (OU1) in October 2019. It defined OU1 as 21.6 acres with an anticipated commercial/industrial land use. After receiving additional information from the Town of Navassa, the EPA and the State of North Carolina determined the reasonably anticipated land use for OU1 may include residential uses, not only commercial, industrial, or recreational uses. As a result of the change in anticipated land use, additional sampling was conducted in August 2020 to evaluate residential risk. The results were summarized in the *OUI Soil Sampling Technical Memorandum – Residential Criteria Area Delineation*, which was approved by the EPA and the State in October 2020.

This Proposed Plan replaces and supersedes the 2019 Proposed Plan. It revises OU1 from 21.6 acres to 20.2 acres that currently meet the unrestricted use criteria under North Carolina General Statutes § 143B-279.9(b)(1). The areas of

COMMUNITY INVOLVEMENT OPPORTUNITIES

Public Comment Period:

Dates: January 25, 2021 to February 26, 2021

Purpose: To seek comments on the Proposed Plan for Operable Unit 1 of the Kerr-McGee Chemical Corp–Navassa Superfund Site.

Response to Public Comments:

The EPA will provide a written summary of significant comments, criticisms, and new relevant information submitted during the public comment period and will respond to each issue in the Record of Decision.

Virtual Public Meeting:

Thursday, January 28, 2021
5:00 – 6:30 PM

Join the Virtual Meeting at this link:

<https://tinyurl.com/epanavassameeting>

Meeting ID: 928 6505 9043

Passcode: B8U7EX

Join the Virtual Meeting by phone:

(301) 715-8592

Meeting ID: 928 6505 9043#

Passcode: 492124#

EPA Contacts:

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Atlanta Federal Center
Superfund Remedial Branch
Attention: Erik Spalvins
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Atlanta, Georgia 30303

the original OU1 that do not meet the unrestricted use criteria (approximately 1.4 acres) will be included in OU2 and addressed in a future Proposed Plan.

A glossary defining key terms is at the end of this document; the key terms appear in bold the first time they are used.

The EPA is the lead agency on this Site. The North Carolina Department of Environmental Quality (NC DEQ) is the support agency. The EPA is issuing this Proposed Plan as part of the EPA's public participation requirements under Section 117 (a) of the **Comprehensive Environmental Response, Compensation, and Liability Act of 1980** (CERCLA), as amended, 42 United States Code Section 9617, known as Superfund, and the **National Oil and Hazardous Substances Pollution Contingency Plan** (NCP), as set forth in 40 Code of Federal Regulations Section 300.430(f)(2).

This Proposed Plan summarizes and identifies key information from the **Remedial Investigation** (RI) Report and other documents contained in the **Administrative Record** file for this Site. The Administrative Record can be viewed at this link: <https://semspub.epa.gov/src/collection/04/AR66131>

The EPA and NC DEQ encourage the public to review these documents for additional details and to gain a more comprehensive understanding of the Site. The EPA established a local **Information Repository** at two locations where the public may review the online Administrative Record at:

- Navassa Community Center, 338 Main Street, Navassa, North Carolina, 28451; and
- Leland Library, 487 Village Road NE, Leland, North Carolina, 28451.

The EPA, in consultation with NC DEQ, may modify the proposed No Action Remedy presented in this Proposed Plan based on new information or public comments received during the public comment period. Therefore, the public is encouraged to review and comment on the proposed No Action Remedy in this Proposed Plan.

To ensure the community's concerns are being addressed, a public comment period will be held from January 25, 2021 to February 26, 2021. During this time, the public is encouraged to submit comments to the EPA on this Proposed Plan.

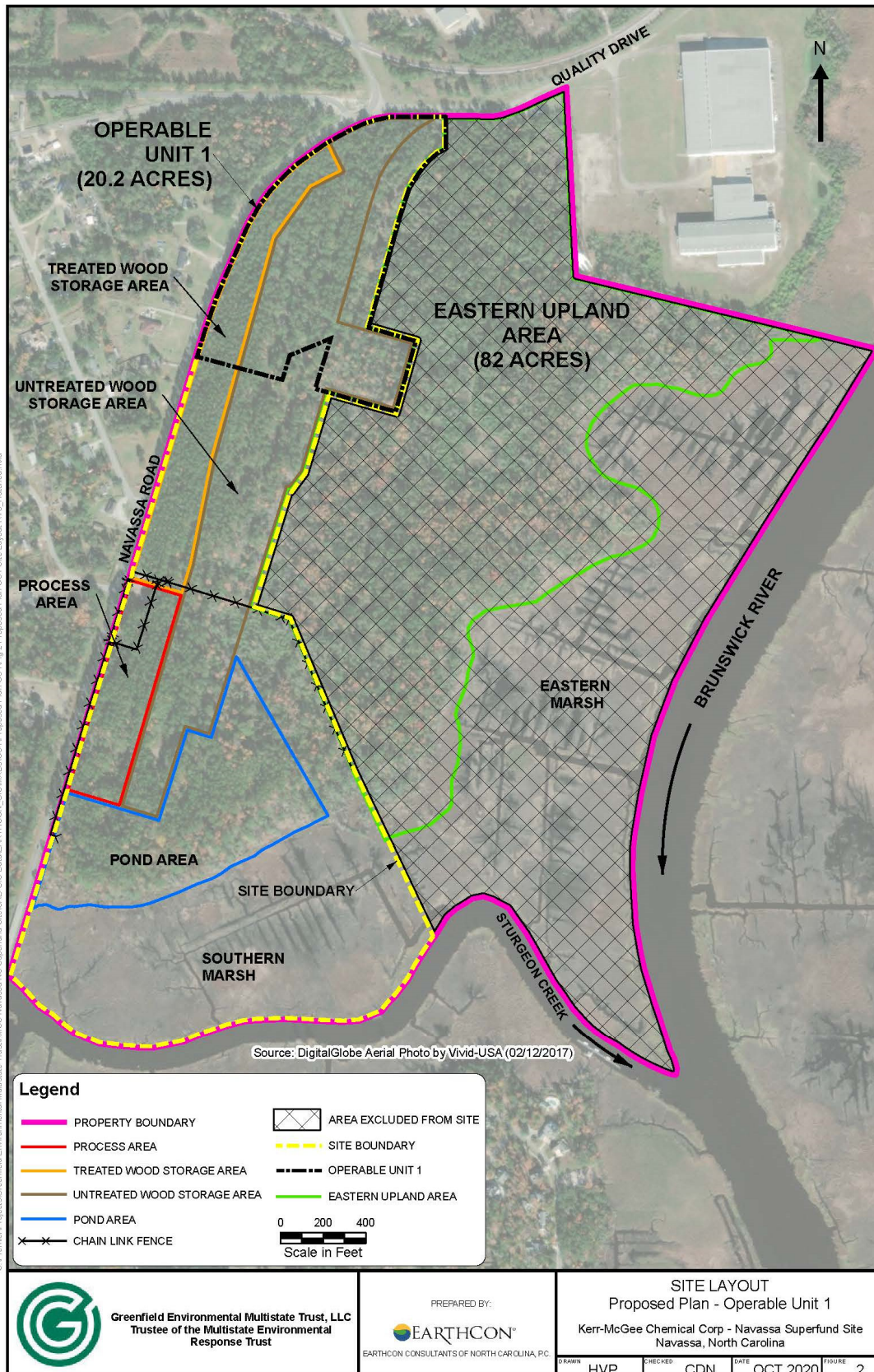
The EPA will hold a virtual public meeting on Thursday, January 28, 2021, from 5:00 – 6:30 PM. Join the virtual meeting at this link: <https://tinyurl.com/epanavassameeting> using Meeting ID: 928 6505 9043 and Passcode: B8U7EX. You may also join the virtual meeting by phone by calling (301) 715-8592 using Meeting ID: 928 6505 9043# and Passcode: 492124#.

Comments can be submitted through the mail, via facsimile, by email, or by phone. Please see the text box "Community Involvement Opportunities" for additional details on community participation.

Figure 1. Location of Kerr-McGee Navassa Property and Boundary of Superfund Site



Figure 2. Extent of Site, Operable Unit 1 and Eastern Upland Area



SITE BACKGROUND

Contaminated Media

Based on historical aerial photos (Figures 3 and 4), Kerr-McGee used about 70 acres along Navassa Road for wood treating operations. The facility contaminated soil, groundwater, and marsh sediments with polycyclic aromatic hydrocarbons (PAHs), pentachlorophenol, and dioxins. The contaminants that pose the most risk are the carcinogenic PAHs and dioxins (a group of chemicals that occur as an impurity associated with pentachlorophenol).

Because carcinogenic PAHs and dioxins are groups of compounds with varying amounts of toxicity and similar modes of toxicity, the concentrations are expressed as Toxicity Equivalents (TEQs). TEQs are weighted averages based on the toxicity of each compound relative to the most toxic members of the group. The most toxic carcinogenic PAH is benzo(a)pyrene (BaP), so PAH concentrations are expressed as BaP TEQ. The most toxic of the dioxins is 2,3,7,8-tetrachlorodibenzo-para-dioxin (TCDD), so concentrations of dioxins and furans are expressed as TCDD TEQ. For this Proposed Plan, the term “dioxins” will refer to TCDD plus dioxin-like compounds (dioxins, furans, and dioxin-like PCB compounds).

Site Description and Regional Background

The former facility is located on a 154-acre property. To the north is Quality Drive and the former Rampage Boat Company, to the east is marsh along the Brunswick River, to the south is marsh along Sturgeon Creek, and to the west is Navassa Road. The Site consists of the 70-acre former wood treating facility and about 30 acres of the marsh to the south of the former facility. The remainder of the property is about 82 acres, which is not part of the Site and is called the “Eastern Upland Area.” The focus of this Proposed Plan is the 20.2-acre OU1 area located on the northern portion of the Site (Figure 2).

Historically, the 154-acre property provided housing, jobs and recreation for the community. Historical aerial photos (Figures 3 and 4) show the facility alongside agriculture, homes, a baseball field, and footpaths to the marsh. The location along the Brunswick River influences both the historical and future uses of the property. The property was a rice plantation prior to the American Civil War. After the Civil War, the community developed a rural-industrial economy. A bluff adjacent to the property allowed barges to unload freight and became the location for a rail line connecting Wilmington to the rest of the United States. The bluff was used by the Navassa Guano Company, which imported guano from the Caribbean island of Navassa. Eventually, four fertilizer companies operated in the vicinity of the Site. A railyard developed in Navassa, as did other wood treating companies. The entirety of the community’s riverfront is currently occupied by three parcels: the Site, a former fertilizer plant that is ready for reuse, and an industrial parcel that is being developed for light industrial use.

Site Ownership

The wood treating operation was built by Gulf States Creosoting Company in 1936. American Creosoting purchased the facility in 1958 and sold it to Kerr-McGee in 1965. Kerr-McGee discontinued Site operations in 1974. Kerr-McGee decommissioned and dismantled the plant in 1980.

Kerr-McGee owned the property as a 244-acre parcel until 1991. In 1991, Kerr-McGee transferred 92 acres of marsh to the State of North Carolina, after which Kerr-McGee's property totaled about 152 acres. Historical real estate documents incorrectly reported the total acreage as 300 acres.

In March 2006, Kerr-McGee created Tronox, LLC (Tronox) as a spin-off corporation, and Tronox assumed responsibility for the Site. Anadarko Petroleum acquired Kerr-McGee in August 2006. In January 2009, Tronox filed for Chapter 11 bankruptcy protection in federal court.

In February 2011, the Tronox bankruptcy settlement established the Multistate Environmental Response Trust to own and assume responsibility for hundreds of Tronox-owned sites, including this Site. Greenfield Environmental Multistate Trust LLC (Multistate Trust) is the Trustee of the Multistate Environmental Response Trust. The Multistate Trust operates pursuant to the Tronox Bankruptcy Consent Decree and Environmental Settlement Agreement and pursuant to the February 14, 2011, Environmental Response Trust Agreement.

In 2016, the Multistate Trust purchased two 1-acre residential parcels in the interior of the Eastern Upland Area, increasing to 154 acres the size of the property that the Multistate Trust owns in trust.

History of Site Operations

The wood treating facility operated from 1936 to 1974. The facility treated wood for railroad ties, utility poles, and pilings. Kerr-McGee reported that the facility used only creosote as a preservative. However, sampling in 2020 documented pentachlorophenol and dioxins at the Site. Kerr-McGee discontinued Site operations in 1974. Kerr-McGee decommissioned and dismantled the plant in 1980.

The EPA has limited information about the operations at the facility. Most information about plant operations is from a six-page Kerr-McGee letter dated August 14, 1984. The 1984 letter describes plant operations from 1965 to 1974 when operations were discontinued. Aerial photos provide the only information about the Site prior to 1965. Figures 3 and 4 show selected historical aerial photographs that were reviewed during the investigation (1938, 1951, 1969, and 1975).

The entirety of Kerr-McGee's description of plant operations for the period of 1965 to 1974 is quoted as follows:

Pre-cut hardwood lumber was used by the plant as a raw material. In preparing for treating, the wood was sized, classified, and stacked in the plant yard for a period of one year to dry the wood. The dried wood was pressure treated in one of two treatment cylinders using a creosote and oil solution. The size of each cylinder was 8-foot diameter by 140 feet long. The creosote solution was stored in above-ground steel tanks contained within a dike. The treated product was stored in the yard until final shipment to customers.

The wastewater generated by the facility was collected and discharged to three surface impoundments in series. The first two impoundments were used to settle the creosote preservative which was reclaimed and reused in the production process. The ponds were installed by Gulf States Creosoting Company. Each pond's size was approximately 60 feet by 125 feet by six feet deep. The effluent from the two impoundments was recycled to a condenser as make-up

cooling water with excess wastewater discharged to an evaporation pond installed by Kerr-McGee in 1971. The pond was 200 feet by 300 feet with a variable depth. The plant also maintained a 140 feet by 170 feet fire water storage pond and a 0.5 acre boiler water storage pond.

Description of removal or previous remedial actions conducted under other authorities

Kerr-McGee decommissioned and dismantled the plant in 1980. Kerr-McGee reported that it dismantled and sold as scrap all plant equipment, treatment cylinders, buildings, and tanks. Kerr-McGee reforested the area by planting pine trees. The 1984 letter from Kerr-McGee is the only documentation of the decommissioning of the facility; there are no work plans, reports, photos, surveys, analytical results, or construction reports. At present, there are building foundations present at the Site, and the only intact railroad tracks are a 10- to 15-foot-long segment that is set into a concrete slab. It appears the decommissioning was not coordinated with any State or Federal cleanup programs.

History of CERCLA Enforcement Activity and Site Investigations

The following is a summary of the Site enforcement history and investigations. A more detailed history of the Site is provided in the RI Report, Section 1.3.3., Site Administrative History.

Investigation by Kerr-McGee and Tronox 2003–2009

In March 2003, the North Carolina Department of Environment and Natural Resources (NCDENR), now known as NC DEQ, recommended that the Site be considered for further evaluation by the EPA. The EPA and Kerr-McGee entered an Administrative Order on Consent for the performance of an Expanded Site Inspection, which is a step in the Superfund Site Evaluation process. The August 2005 Expanded Site Inspection Report documented creosote contamination at the Site and recommended additional Site assessment.

In July 2006, the EPA and Tronox entered into an Administrative Order on Consent to conduct the Remedial Investigation and Feasibility Study (RI/FS) under the Superfund Alternative Approach. Under the Superfund Alternative Approach, the listing of the Site on the **National Priorities List** (NPL) was deferred. Tronox conducted several investigations but did not finalize the risk assessments or the RI Report.

In January 2009, Tronox filed for Chapter 11 bankruptcy protection in federal court. Tronox was no longer able to conduct the RI/FS.

The EPA Takeover and NPL Listing 2010

On March 8, 2010, the EPA formally took over marsh and groundwater sampling activities from Tronox. In April 2010, the EPA placed the Site on the Superfund Program's NPL. The EPA's NPL listing package identified about 100 acres along Navassa Road and Sturgeon Creek as the total area used in the manufacturing process. This corresponds to the 70-acre former facility and the 30-acre Southern Marsh. The Site is defined as the former facility and other locations where the contamination has come to be located, such as the Southern Marsh. Figure 2 shows the extent of the Multistate Trust property and the Superfund Site. The area labeled as the "Eastern Upland Area" in Figure 2 is not part of the Superfund Site and could be separated from the Site as a new parcel.

Figure 3. Historical Aerial Photographs 1938 and 1951

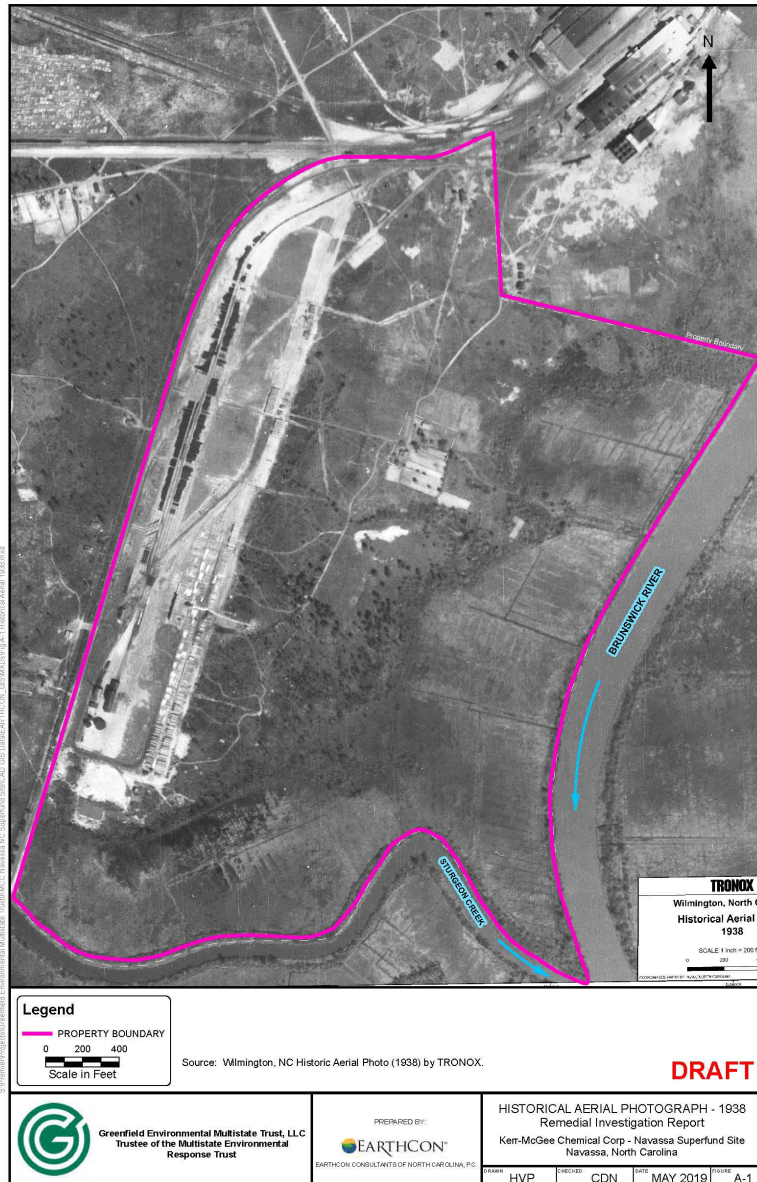
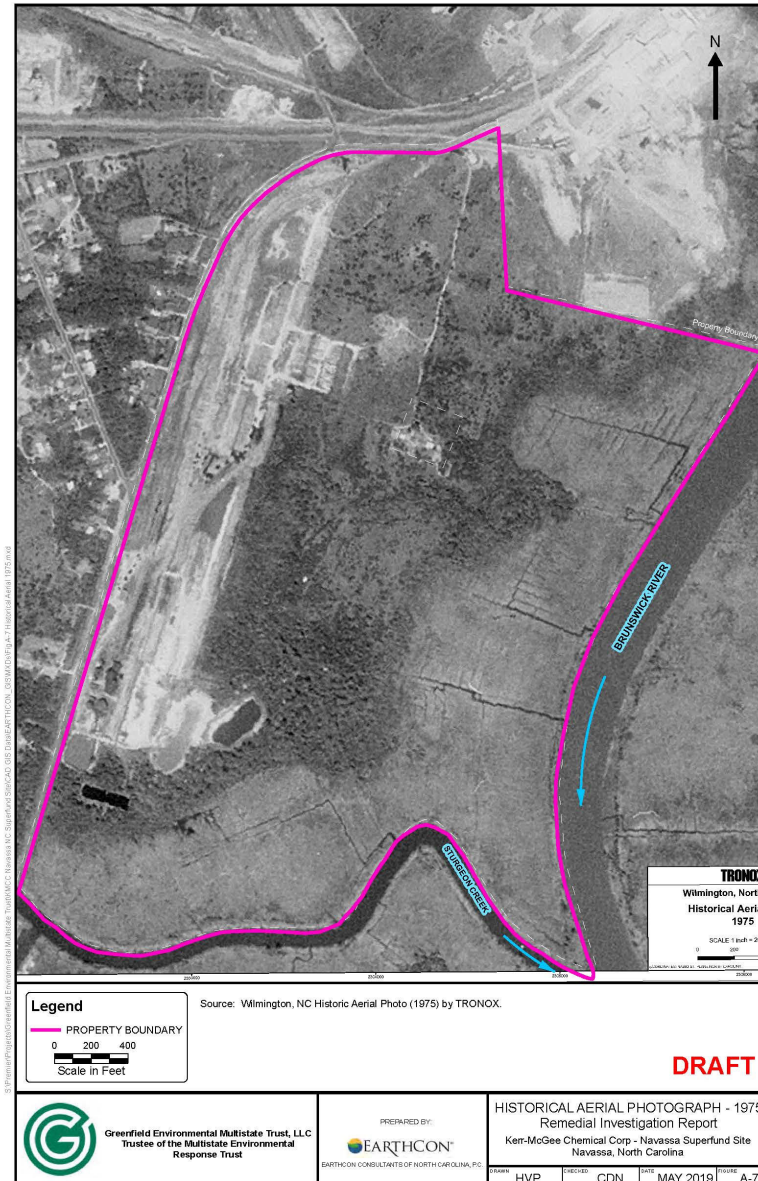
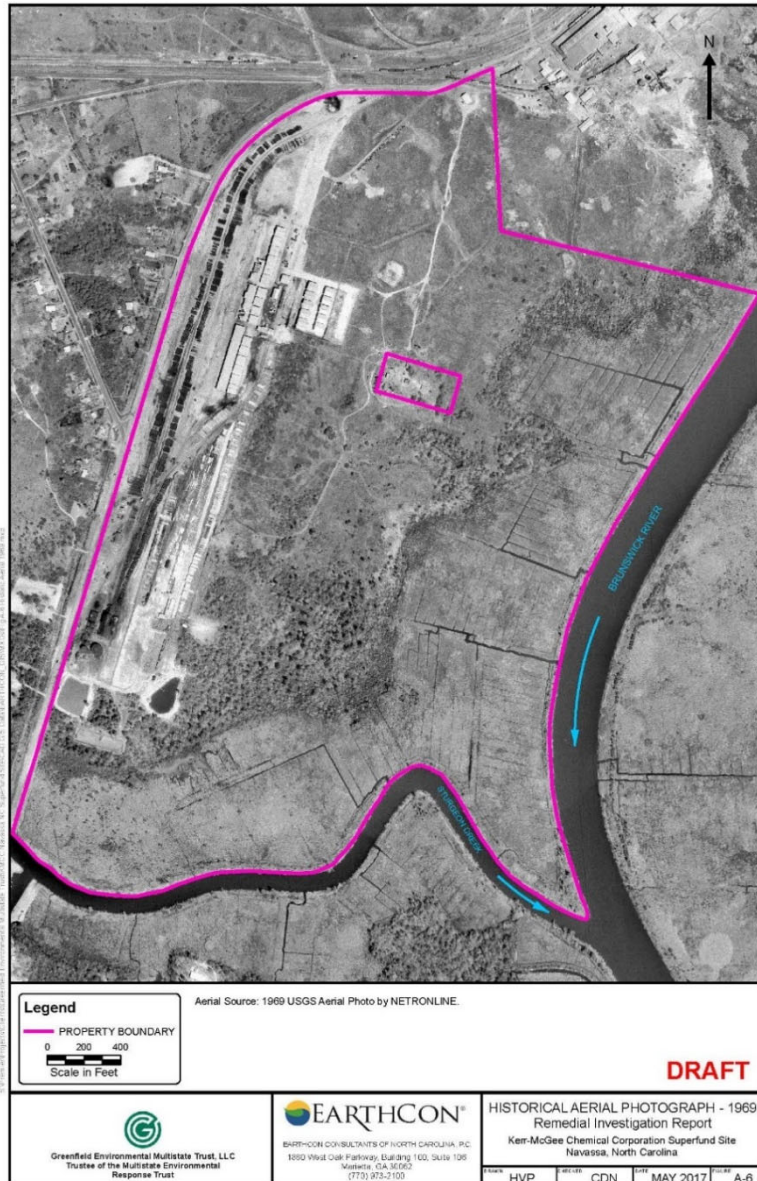


Figure 4. Historical Aerial Photographs from 1969 and 1975



Creation of Multistate Environmental Response Trust 2011

In February 2011, the Tronox bankruptcy settlement established the Multistate Trust to own and assume responsibility of this Site. The Multistate Trust is performing Environmental Actions at the Site for the beneficiaries of the Multistate Trust: the United States and the State of North Carolina.

Summary of Site Investigations

Beginning in the 1980s, multiple parties performed environmental investigations at the Site, including: Kerr-McGee, North Carolina Department of Environment, Health and Natural Resources (NCDEHNR) (subsequently the NCDENR and now known as NC DEQ), the North Carolina Department of Transportation (NCDOT), the EPA, and the Multistate Trust. Investigations include the following:

- NCDEHNR Site Inspection;
- NCDEHNR Site Inspection Prioritization;
- NCDEHNR Memorandum of Off-Site Visit;
- NCDOT Preliminary Site Assessment;
- NCDOT Soil Assessment;
- NCDENR Site Re-Assessment;
- Expanded Site Inspection;
- Pre-Remedial Investigation Soil Sampling;
- Remedial Investigation;
- 2018 Trenching Study;
- 2019 Soil Sampling; and
- 2020 Soil Sampling.

2019 Remedial Investigation Report and Supplemental Soil Sampling

The 2019 RI Report includes a detailed summary of all Site investigations undertaken up to March 2017. The RI report documented contamination in surface soils, subsurface soils, groundwater and marsh sediment, and the presence of free-phase creosote in the subsurface and in marsh sediments. The RI Report documents low levels of soil contamination in the northern parts of the Treated and Untreated Wood Storage Areas. Groundwater contamination is limited to the southern part of the Site.

To expedite decision making for the least-contaminated parts of the Site, the 2018 Trenching Study and the 2019 Soil Sampling were conducted in the Treated and Untreated Wood Storage Areas of the Site. In May 2018, concurrent with the preparation of the RI report, the Multistate Trust dug ten 4-foot deep trenches (totaling approximately 2,100 linear feet), targeting areas of interest based on historical photos and surface debris. The trenching study provided information that challenged the assumptions about the wood storage areas. As a result, the Site was divided into smaller exposure units based on anticipated future commercial, industrial, and recreational land uses: three 8-acre exposure units; one 5.7-acre exposure unit; and one 2.6-acre exposure unit. Based on this evaluation, the October 2019 Proposed Plan proposed a No Action decision for 21.6 acres assuming commercial, industrial, and recreational (walking trail) land uses.

2020 Soil Sampling to Delineate Area Meeting Residential Criteria

During the public comment period for the October 2019 Proposed Plan, the public and the local government expressed interest in residential land use for the proposed 21.6-acre OU1. On February 24, 2020, the Navassa Town Council voted to clarify the Town's position on land uses for OU1. On March 10, 2020, the Town Council provided a "Letter of Position" to the EPA, stating that the Town Council would like to pursue redevelopment scenarios in OU1 that could include residential uses.

Based on this input from the Town of Navassa, the EPA and NC DEQ decided to evaluate OU1 for residential land use. The EPA and NC DEQ agreed that a residential land-use evaluation would require additional sampling. The EPA, NC DEQ, and the Multistate Trust finalized the sampling approach in the May 2020 *OU1/OU2 Soil Sampling Work Plan*. The sampling approach met both the EPA's requirements for evaluating residential human health and NC DEQ's statutory requirements to evaluate suitability for unrestricted use, including no land-use restrictions. The main feature of the expanded sampling approach was to evaluate quarter-acre sampling units to represent potential residential exposure to surface soil.

The northern 35 acres of the Site, comprised of both OU1 and OU2, were divided into 91 sampling units (called "parcels" in the work plan) no larger than one quarter-acre, using Thiessen polygon methodology incorporating the historical soil sample locations (shown in Figure 5). There were 57 parcels with an existing surface soil sample and 34 parcels without a surface soil sample. The work plan was modified by two addenda: in July 2020 to add dioxin TEQ as an analyte and in August 2020 to add sample locations in the Eastern Upland Area to serve as potential background locations.

The Multistate Trust conducted the sampling in August 2020. The EPA asked the Multistate Trust to submit separate reports for OU1 and OU2. The OU1 results are documented in the *OU1 Soil Sampling Technical Memorandum Residential Criteria Area Delineation*, which was approved by the EPA and NC DEQ on October 5, 2020 and distributed to community stakeholders on October 6, 2020.

Public Participation Activities Prior to Issuance of Proposed Plan

The EPA, NC DEQ, and the Multistate Trust have held more than 15 community meetings in Navassa since late 2016. The EPA held the first OU1 Proposed Plan public meeting in October 2019. The EPA, NC DEQ, and the Multistate Trust held a joint public quarterly update meeting on January 14, 2020. The quarterly meeting planned for April 2020 was cancelled due to COVID-19. On May 8, 2020, the Multistate Trust distributed the "Quarterly Update Fact Sheet, 2nd Quarter 2020," which was jointly prepared by the EPA, NC DEQ, and the Multistate Trust. The Multistate Trust distributed the 2020 soil sampling work plan to community leaders prior to sampling. The EPA and Multistate Trust distributed the *OU1 Soil Sampling Technical Memorandum Residential Criteria Area Delineation* to community leaders prior to the beginning of the public comment period. The Multistate Trust (with the EPA and NC DEQ joining by phone) met with the Town and community leaders on October 9 and 10, 2020, to provide a Site update. The Multistate Trust posts the meeting presentations and fact sheets on <http://multi-trust.org/navassa-north-carolina>.

On December 8, 2020, the Multistate Trust distributed the "4th Quarter 2020 Update Fact Sheet," which was jointly prepared by the EPA, NC DEQ, and the Multistate Trust. On December 15, 2020, the EPA, NC DEQ, and Multistate Trust sponsored two Virtual Community Update Meetings at noon and at 6:30 pm to provide an update for the community.

4th Quarter 2020 Update Fact Sheet
Kerr-McGee Chemical Corp – Navassa Superfund Site, Navassa, NC

The purpose of this fact sheet is to update the Navassa community and other stakeholders about remediation and other activities at the Kerr-McGee Chemical Corp – Navassa Superfund Site (the Site). This fact sheet was prepared jointly by the U.S. Environmental Protection Agency (EPA), the North Carolina Department of Environmental Quality (NCDEQ), and the Multistate Environmental Response Trust (the Multistate Trust).

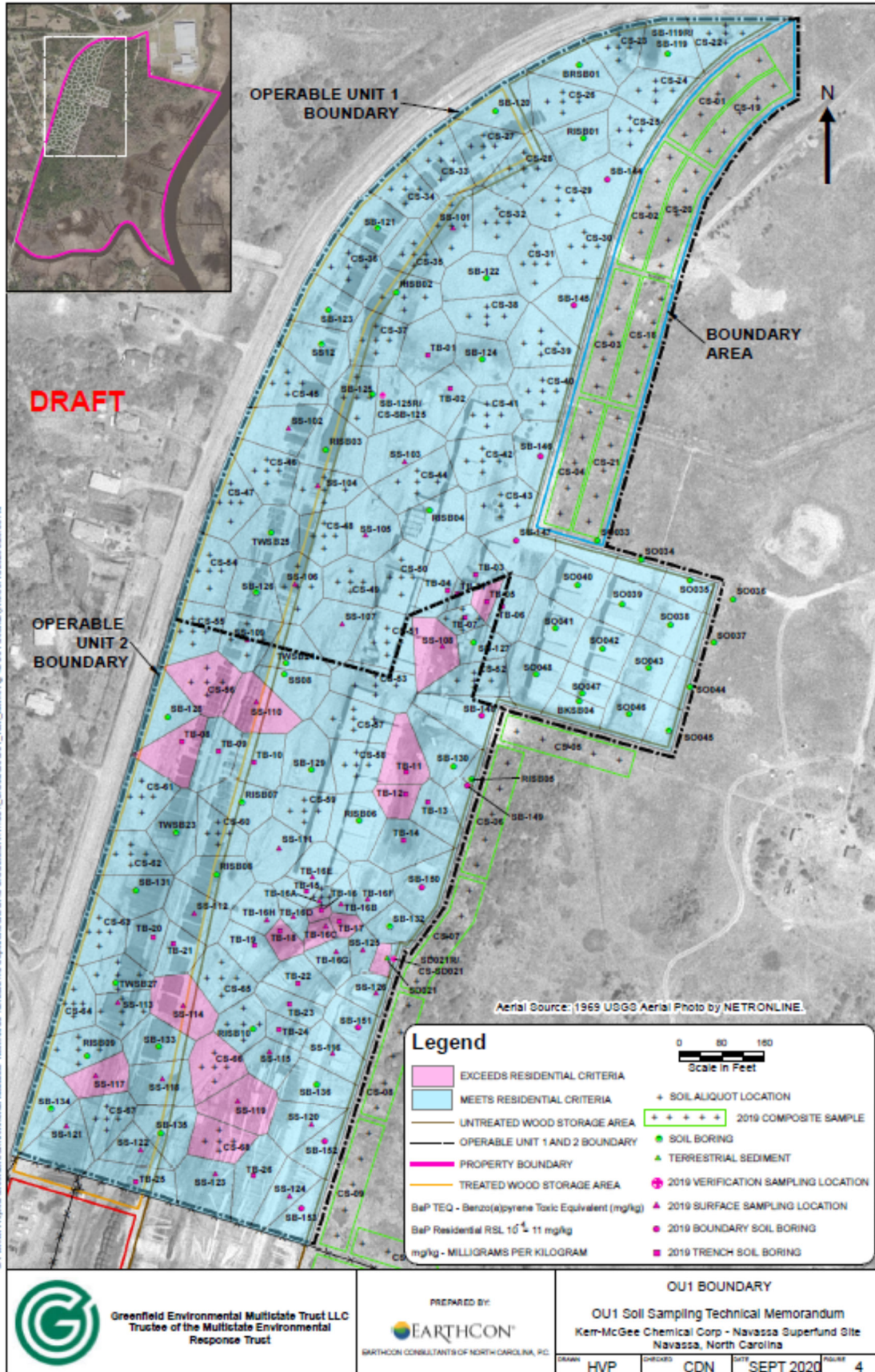
Progress on Site Activities Since 2nd Quarter 2020 Update Fact Sheet

- OU1** (the portion of the Treated and Untreated Wood Storage Areas requiring no remedial action to meet residential or unrestricted use criteria): The Multistate Trust has completed a soil sampling program, analyzed the data, and written an Operable Unit 1 (OU1) Soil Sampling Technical Memo – Residential Criteria Area Delineation, which supports the OU1 Proposed Plan.
- OU2** (the portion of the Treated and Untreated Wood Storage Areas requiring remedial action to meet residential or unrestricted use criteria): The Multistate Trust completed a soil sampling program to support a human health risk assessment for the future land uses described in the Town of Navassa's Position Letter dated Oct. 15, 2020; and an invertebrate sampling program to use in evaluating ecological risk in OU2.
- OU3** (Southern Marsh): The Multistate Trust completed a Passive Diffusion Sampler, sediment, and surface water sampling program to supplement the ecological risk assessment, and the results will be included in an addendum to the Baseline Ecological Risk Assessment.
- Property Management:** The Multistate Trust continued to provide oversight of installation of Brunswick County Wastewater Treatment Plant force main and replaced the damaged fence along Navassa Road.

Figure 1 shows the Kerr-McGee Chemical Corp – Navassa Superfund Site and its Operable Units 1 through 5, as well as the adjoining Eastern Upland Area and Eastern and Southern Marshes.

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Figure 5. Exposure Units from 2020 OU1/OU2 Soil Sampling Work Plan



SITE CHARACTERISTICS

Geographic and Topographic Factors

The main topographic and geographic features of the Site are its location along the marshes of the Brunswick River and Sturgeon Creek.

Nature and Extent of Contamination in Operable Unit 1

This discussion of the nature and extent of contamination is focused on the revised 20.2-acre OU1 that is the subject of this Proposed Plan. The soils in OU1 do not pose an unacceptable risk under CERCLA assuming residential land use. The soils in OU1 also meet the unrestricted use criteria under North Carolina General Statutes § 143B-279.9(b)(1), and institutional controls are not needed. The other parts of the Site will be addressed under future Proposed Plans.

All 91 sampling units/parcels in the *May 2020 OUI/OU2 Soil Sampling Work Plan* were sampled for creosote-related PAHs and pentachlorophenol, and 31 of 91 were sampled for dioxins. Sampling results for PAHs and dioxins were expressed as toxicity equivalents (TEQ), which express the toxicity of a group of chemicals as a single value that can be compared to a reference chemical. For PAHs, the results are expressed as toxicity equivalents of benzo(a)pyrene (BaP TEQ). For dioxins, furans, and dioxin-like PCB compounds, the results are expressed as toxicity equivalents of 2,3,7,8-tetrachlorodibenzo-para-dioxin (TCDD TEQ).

The sampling results for the revised 20.2-acre OU1 are below the thresholds for unacceptable risk under residential land use assumptions. The 20.2-acre OU1 is depicted in both Figures 2 and 5.

- The PAH results ranged from 0.08 to 8.32 milligrams per kilogram (mg/kg) BaP TEQ, below the threshold for unacceptable risk under residential land use, which is 11 mg/kg for BaP TEQ.
- Pentachlorophenol was detected in one sample at an estimated concentration of 0.0679 mg/kg, below the threshold for unacceptable risk under residential land use, which is 100 mg/kg PCP.
- The dioxins results ranged from 0.75 to 34.02 picograms/gram (pg/g) or parts per trillion (ppt) TCDD TEQ. These values are all below the EPA's screening criteria for TCDD TEQ, which is 50 ppt TCCD TEQ and is protective of human health based on a residential land use.

SCOPE AND ROLE OF OPERABLE UNIT 1

The national goal for the remedy selection process is to select remedies that are protective of human health and the environment, that maintain protection over time, and that minimize untreated waste. The EPA may determine that no action (i.e., no treatment, no engineering controls, and no institutional controls) is warranted under the following circumstances:

- When a site or a specific problem or area of the site (i.e., operable unit) poses no current or potential threat to human health or the environment;
- When CERCLA does not provide the authority to take remedial action; or
- When a previous response eliminated the need for further remedial response.

The EPA has determined that the 20.2-acre OU1 meets the no action criteria because it poses no current or potential threat to human health or the environment under the current and reasonably anticipated future land uses (residential, commercial, industrial or recreational). The proposed No Action Remedy applies to the sampling areas depicted on Figures 2 and 5. The groundwater under OU1 is not contaminated and there are no unacceptable ecological risks in OU1.

The proposed No Action Remedy for OU1 does not limit the investigation or cleanup of the remainder of the Site. The EPA will designate future operable units as needed. The remainder of the Site will be addressed in future decision documents which will also be subject to public comment.

SUMMARY OF OPERABLE UNIT 1 RISKS

Chemicals of Concern for OU1

The EPA evaluated risks to humans and the environment from soil containing wood treating chemicals, including PAHs, pentachlorophenol, and dioxins. Groundwater under OU1 is not contaminated.

Reasonably Anticipated Future Land Use in OU1

This Proposed Plan is based on anticipated residential land use, which is a change from the October 2019 Proposed Plan. The EPA and NC DEQ's decision to change the reasonably anticipated future land use was the result of public comments and of formal communications from the Navassa Mayor and Town Council. On March 9, 2020, the legislative body with zoning authority, the Navassa Town Council, provided a Letter of Position formally expressing its intent to pursue land use scenarios in OU1 that would include residential uses.

The Site is currently zoned industrial, which has been the land use since 1936. The surrounding land uses are mostly residential. Across Navassa Road and to the west of the Site is mostly residential and some commercial zoning. The riverfront properties to the north are zoned industrial. South of Sturgeon Creek, the waterfront land uses are single-family residential and recreational. The Eastern Upland Area, located east of the Site but on the same parcel, is not part of the NPL Site and has no CERCLA land use restrictions.

Summary of Site-Wide Risk Assessment Work

Kerr-McGee began CERCLA risk assessment work and transitioned all Site work to Tronox in 2006. Tronox did not finalize either ecological or human health risk assessments prior to the Tronox bankruptcy in 2009. The Multistate Trust resumed the risk assessment efforts and completed the 2019 Site-wide HHRA and the 2019 HHRA Addendum. These documents were the basis of the October 2019 Proposed Plan.

The previous risk assessments were focused on industrial, commercial, and recreational land uses and are not relevant to the quarter acre sampling units used as the basis for this Proposed Plan.

The ecological risk discussion summarizes a screening level evaluation of ecological risks in the OU1 area updated in 2020.

2020 Summary of Human Health Risks in OU1

The 2020 soil sampling effort was intended to identify the areas that meet the EPA's no action criteria for residential use and do not require institutional controls under State statute. The sampling strategy divided the area into parcels with a maximum size of a quarter acre and required surface soil samples from the parcels where there was no data. In July 2020, the EPA, NC DEQ, and the Multistate Trust agreed to include analysis of

the soil samples for dioxins (a common impurity associated with PCP) out of an abundance of caution and to ensure adequate characterization of these constituents. The EPA and NC DEQ provided thresholds to determine which parcels meet both the EPA no action criteria and the NC DEQ unrestricted use criteria under North Carolina General Statute § 143B-279.9(b)(1).

Cancer Risk in OU1

The concentration of carcinogenic PAHs that corresponds to a Cancer Risk of 10^{-4} (1 in 10,000) for residential land use is 11 mg/kg BaP TEQ. The PAH results ranged from 0.08 to 8.32 mg/kg BaP TEQ. These concentrations are below the threshold for unacceptable risk under residential land use.

The concentration of PCP that corresponds to a Cancer Risk of 10^{-4} (1 in 10,000) for residential land use is 100 mg/kg PCP. Pentachlorophenol was detected in one sample at an estimated concentration of 0.0679 mg/kg. This concentration is below the threshold for unacceptable risk under residential land use.

Noncancer Hazard in OU1

The concentration of dioxins that corresponds to a Hazard Index of 1 for residential land use is 50 ppt TCDD TEQ. The dioxins results ranged from 0.75 to 34.02 pg/g or ppt TCDD TEQ. These concentrations are below the threshold for unacceptable hazard levels under residential land use.

The potential risk to future residents from exposure to soil is less than a Hazard Index of 1 and within the risk range for cancer risk. There is no need for an updated risk assessment for the 20.2-acre OU1 described in this Proposed Plan. The revised OU1 area does not pose an unacceptable risk to human health under residential exposure scenarios. The revised 20.2-acre OU1 area also meets the unrestricted use criteria under North Carolina General Statute § 143B-279.9(b)(1) and institutional controls are not needed.

2020 Summary of Ecological Risks in OU1

This Proposed Plan incorporates an updated evaluation of ecological risks. The EPA conducted an updated screening level ecological risk assessment based on birds foraging in the 20.2-acre OU1 in the memo "*Revised Semi-Screening Level Ecological Risk Assessment Calculations for OU1*," dated October 14, 2020. The memo replaces a July 2019 analysis and incorporates the new soil PAH concentration data collected in OU1, the reduction of size of OU1, and a site-specific food chain PAH uptake factor developed for areas of the Site with higher levels of contamination.

Because OU1 is expected to be redeveloped, the analysis did not address resident ecological function but focused on risks to animals that live offsite but might forage on the site. Insect-eating songbirds were considered the most at-risk receptors for this type of exposure scenario; therefore, two types of songbirds were assessed for PAH risks using simple food chain models. Because there are no established ecological screening levels for birds exposed to PAHs, the EPA's Risk Assessor prepared a simplified food chain model to estimate the upper bound of potential risk. The estimate is more realistic than the July 2019 analysis. The food chain model assumes birds forage only in the OU1 area. The analysis used the 95% Upper Confidence Limit of PAH concentrations in surface soils to develop Hazard Quotients (HQs) based on the toxicity value associated with the lowest observed adverse effect level for birds (LOAEL HQs). The analysis estimated an upper bound of potential risk from HMW PAHs for American Robins ranging from an HQ of 3 to 4. For the American

Woodcock, the analysis estimated an HQ ranging from 2 to 3 assuming foraging across the 20.2-acre OU1. The EPA's analysis concluded that HMW PAH concentrations are not expected to pose an unacceptable risk to insect-eating birds that could visit the 20.2-acre OU1. There were estimated to be no risks associated with exposure to LMW PAHs.

SUMMARY OF THE PREFERRED ALTERNATIVE

The revised 20.2-acre OU1 area poses no current or potential threat to human health or the environment under the reasonably anticipated future land uses (residential, commercial, industrial, or recreational) and therefore meets the EPA's criterion for a No Action Remedy. Furthermore, the revised 20.2-acre OU1 area meets the unrestricted use criteria under North Carolina General Statute § 143B-279.9(b)(1) and institutional controls are not needed.

Because the 20.2-acre OU1 area is adjacent to the 82-acre "Eastern Upland Area," the proposed No Action Remedy would result in a total of about 100 contiguous acres that are available for reuse.

The EPA in consultation with the State of North Carolina may modify the proposed No Action Remedy presented in this Proposed Plan based on new information or comments received during the public comment period.

State Acceptance

State acceptance of the preferred alternative will be documented in the Record of Decision (ROD) following review of comments received on the Proposed Plan. NC DEQ has been actively involved in the Site investigation and risk assessment activities. NC DEQ has indicated a willingness to accept the No Action Remedy pending review of any public comments.

Community Acceptance

Community acceptance of the proposed No Action Remedy will be evaluated after the public comment period ends. Comments received during the public comment period will be addressed and responses will be presented in the **Responsiveness Summary** which will be included in the ROD.

COMMUNITY PARTICIPATION

The EPA seeks public review and comments on this Proposed Plan and on the EPA's proposed No Action Remedy for OU1. The Information Repository and Administrative Record for the Kerr-McGee Chemical Corp–Navassa Superfund Site are available online at: <https://semspub.epa.gov/src/collection/04/AR66131> The EPA established a local **Information Repository** at two locations where the public may review the online Administrative Record at:

- Navassa Community Center, 338 Main Street, Navassa, North Carolina, 28451; and
- Leland Library, 487 Village Road NE, Leland, North Carolina, 28451.

The EPA will accept public comments for at least 30 days and the comment period will be extended if requested by the public during the initial public comment period. Comments may be submitted by mail, email, or phone. The EPA will provide a written summary of significant comments, criticisms, and new relevant information submitted during the public comment period and will respond to each issue in the Record of Decision.

Due to public health concerns related to spread of the COVID-19 virus, the EPA and its Superfund site teams have reduced in-person public meeting events, door-to-door visits, and other site-related face-to-face interactions to reflect current COVID-19 guidance from federal, state, tribal and local officials. Protecting the health and safety of our staff, contractors, and the communities we serve is our top priority.

The EPA will provide a virtual public meeting on January 28, 2021. Join the virtual meeting at this link: <https://tinyurl.com/epanavassameeting> using Meeting ID: 928 6505 9043 and Passcode: B8U7EX. You may also join the virtual meeting by phone by calling (301) 715-8592 using Meeting ID: 928 6505 9043# and Passcode: 492124#.

The EPA will also publish a recorded video of the Proposed Plan presentation. You may view the presentation, complete with closed captioning, at: <https://www.epa.gov/superfund/kerr-mcgee-chemical-corp>. In order to access the video presentation, you will need: A device (phone, tablet, computer) with web access and sound capability. If you cannot access the EPA website, please contact EPA Community Involvement Coordinator L'Tonya Spencer-Harvey at 404-562-8463 or Spencer.LaTonya@epa.gov to arrange to receive the information in another format. Through these alternative means, the EPA seeks to provide a full opportunity for public participation and comment without risking public health.

Members of the site team are available to answer questions via email or over the phone, and members of the public are encouraged to call or write. If you have questions about the Proposed Plan, please contact Erik Spalvins, Remedial Project Manager at 404-562-8938 or spalvins.erik@epa.gov.

The Navassa Community Environmental and Economic Redevelopment Committee (NCEERC) is an additional point of contact for community engagement.

Please direct comments or questions to: Erik Spalvins, Remedial Project Manager, at spalvins.erik@epa.gov, (404) 562-8938, or to L'Tonya Spencer-Harvey, Community Involvement Coordinator, at spencer.latonya@epa.gov, or toll free at (800) 435-9234.



GLOSSARY

Administrative Record (AR): Material documenting EPA's selection of cleanup remedies at Superfund Sites, a copy of which is placed in the **Information Repository** near the Site.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA): A federal law (also known as **Superfund**) passed in 1980 and modified in 1986 by the Superfund Amendment and Reauthorization Act (SARA); the act created a trust fund, to investigate and clean up abandoned or uncontrolled hazardous waste sites. The law authorizes the federal government to respond directly to releases of hazardous substances that may endanger public health or the environment. EPA is responsible for managing the Superfund.

Chemicals of Concern (COCs): Chemical constituents associated with a Superfund Site that have been released into the environment and pose a risk to human health.

Feasibility Study (FS): A study of the applicability or practicability of proposed actions conducted after the Remedial Investigation to determine what alternatives or technologies could be applicable to clean up the site-specific COCs.

Groundwater: The supply of fresh water found beneath the Earth's surface (usually in aquifers) which is often used for drinking water.

Information Repository: A library or other location where documents and data related to a Superfund project are placed to allow public access to the material.

Institutional Control: Restriction that prevents an owner from inappropriately developing a property. The restriction is designed to reduce exposure to hazardous substances to workers or the general public and maintain the integrity of the remedy. Restrictive covenants are a form of institutional controls.

National Oil and Hazardous Substances Pollution Contingency Plan (NCP): The Federal Regulation that guides the Superfund program. The NCP was revised in February 1990.

National Priorities List (NPL): List of sites under EPA's Superfund program, which investigates and cleans up hazardous sites nationwide.

Proposed Plan: A Superfund public participation fact sheet that summarizes the preferred cleanup strategy for a Superfund Site.

Record of Decision (ROD): A public document that describes the rationale for the selection of a Superfund remedy.

Remedial Investigation / Feasibility Study (RI/FS): A two-part investigation conducted to fully assess the nature and extent of a release, or threat of release, of hazardous substances, pollutants, or contaminants, and to identify alternatives for cleanup. The Remedial Investigation gathers the necessary data to support the corresponding Feasibility Study.

Responsiveness Summary: A summary of oral and written comments received by EPA during a comment period on key EPA documents, and EPA's responses to those comments. The responsiveness summary is a key part of the ROD, highlighting community concerns for EPA decision-makers.

Superfund: The common name for the program operated under the legislative authority of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), the federal law that mandates cleanup of abandoned hazardous waste sites

Superfund Alternative Approach (SAA): The Superfund Alternative Approach is an alternative to listing a site on the NPL. The SAA uses the same process and standards for investigation, cleanup, and community involvement as sites on the NPL.