

Overview of Remediation Progress and Plans

Kerr-McGee Chemical Corp – Navassa Superfund Site, Navassa, North Carolina

June 2019

The U.S. Environmental Protection Agency (EPA), the North Carolina Department of Environmental Quality (NCDEQ) and the Multistate Environmental Response Trust (the Multistate Trust) prepared this fact sheet to update the community and other stakeholders about progress and plans for remediation of the Kerr-McGee Chemical Corp – Navassa Superfund Site (the Site). The Multistate Trust is implementing Site remediation plans that are approved by EPA, as Lead Agency, in consultation with NCDEQ.

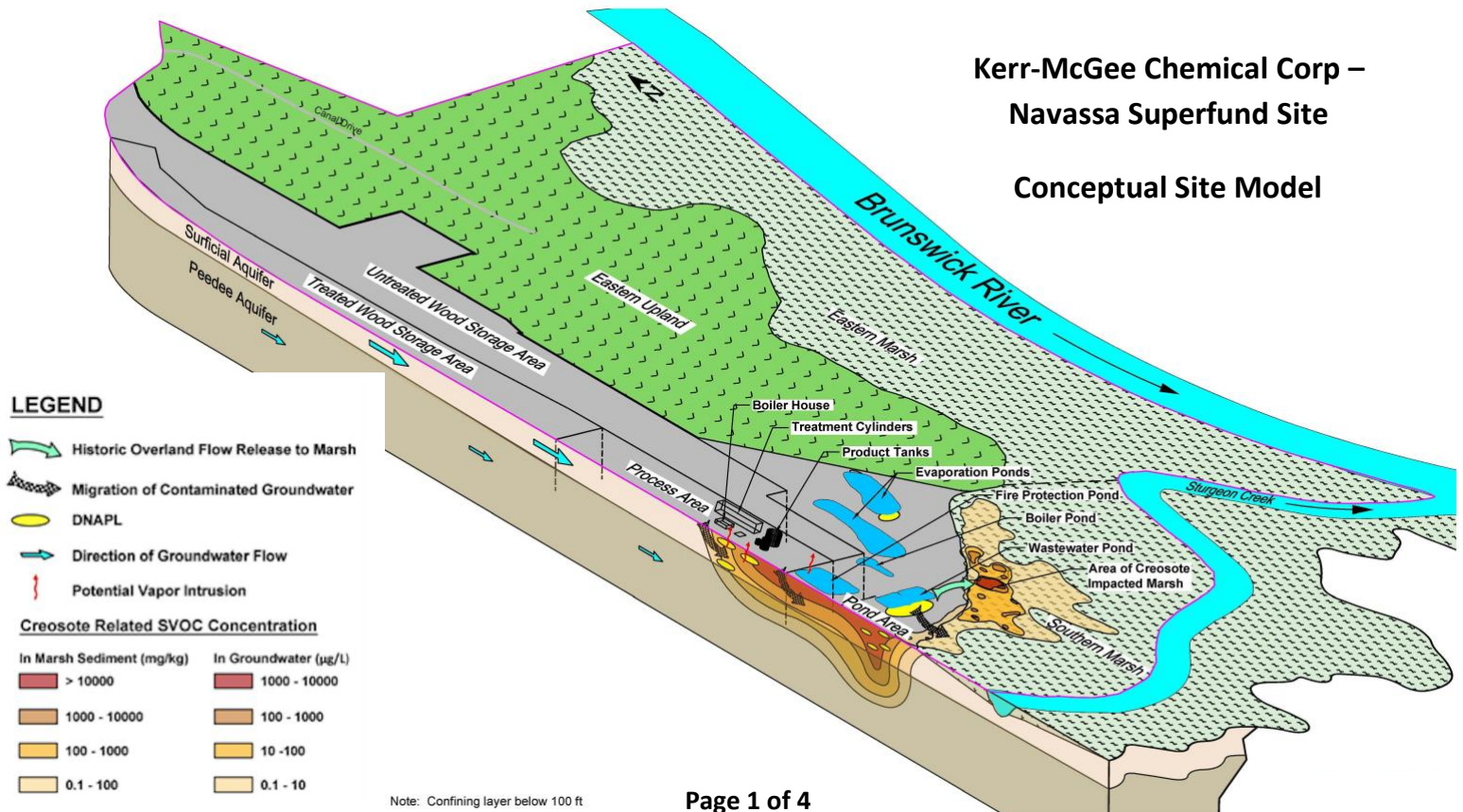
A Brief History of Kerr-McGee Chemical Corp – Navassa Superfund Site (the Site)

From 1936 to 1974, the 246-acre Site was used for treating wood. Dried lumber for railroad ties, utility poles and pilings was pressure-treated with creosote in Treatment Vessels. Treated lumber was then allowed to dry outside. Treated and untreated lumber was stockpiled and stored in the Treated and Untreated Wood Storage Areas. Creosote was stored in aboveground Product Tanks.

Process water was discharged into two unlined Wastewater Ponds, where creosote was separated from water for reuse in the treatment process. Water from the Wastewater Ponds was either reused as cooling water or discharged into an Evaporation Pond. A Fire Protection Pond was used to store water for fighting facility fires, and two Boiler Ponds received water from boiler operations used in the treating process.

By 1980, the wood-treatment operation was dismantled, its buildings and facilities demolished. At that time, creosote sludge from the Wastewater Ponds and Product Tanks reportedly was mixed with clean fill, and then disposed in the Wastewater Pond basins, which were backfilled and vegetated. The Boiler Ponds were drained of water, and the Boiler Pond basins were backfilled and vegetated. The Fire Protection Pond dike was breached, and the pond drained.

**Kerr-McGee Chemical Corp –
Navassa Superfund Site
Conceptual Site Model**



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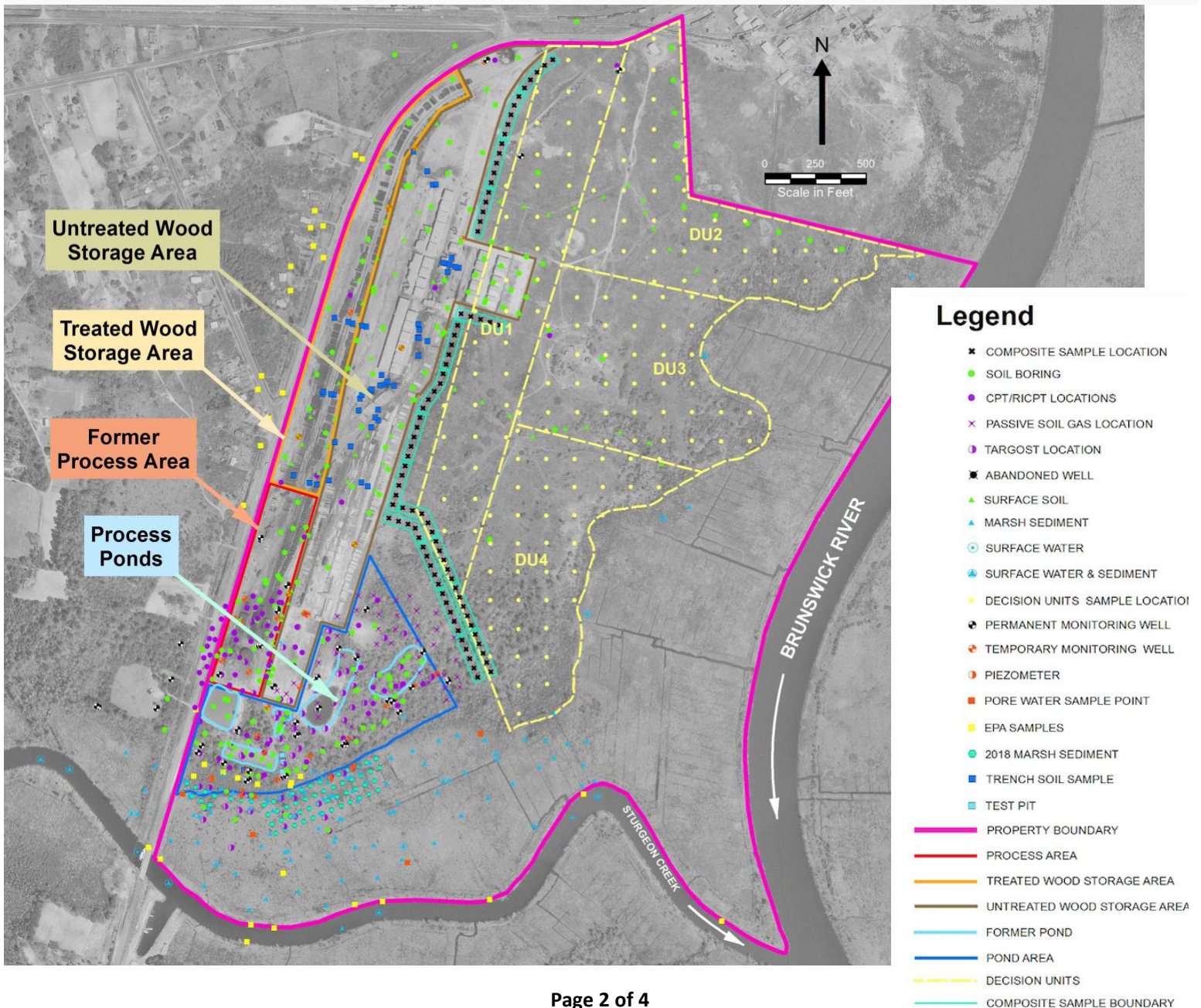
Kerr-McGee Chemical Corp – Navassa Superfund Site

What We Have Been Doing at the Site

As part of the Remedial Investigations (RI), the Multistate Trust has been collecting samples from soil, sediment, surface water and groundwater to determine the lateral (aerial) and vertical (depth) extent of contamination from wood treating operations at the Site. Sampling to date has included collection and analysis of:

- ✓ **485 soil samples** from 323 locations—292 surface soil samples (at depths between 0 and 12 inches below ground surface [BGS]) and 193 subsurface samples (at depths greater than 1 foot BGS);
- ✓ **20 surface water samples** from Sturgeon Creek and the tidal marsh areas;
- ✓ **225 sediment samples** from 175 locations; and
- ✓ **548 groundwater samples** from 53 on-site groundwater wells, 6 off-site groundwater wells, and 37 temporary on-site groundwater wells installed at depths up to 95 feet BGS.

RI results are being used to determine the risk posed by Site contamination to human health and the environment (the Risk Assessments). The Multistate Trust is evaluating the feasibility of different options for remediating the Site (the Feasibility Studies or FS). Based on the results of the RI, the Risk Assessments and the FS, EPA will select the preferred remedy or remedies for the Site.



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What We Have Learned About Site Contamination

- ✓ Site contamination does not currently threaten people living or working near the Site.
- ✓ Surface soil, subsurface soil, groundwater and marsh sediment are impacted by creosote-related constituents.
 - The most highly contaminated soils were found in the former Process and Pond Areas.
 - Contaminant concentrations are lower in the former Treated and Untreated Wood Storage Areas.
- ✓ Contaminants in the former Process and Pond Areas are leaching to groundwater.
 - A plume of creosote and fuel contamination in groundwater (centered under the former Process and Pond Areas) is migrating off-Site toward Sturgeon Creek and southwest under Navassa Road.
 - Additional groundwater data are being collected to fully delineate the location and movement of the plume.
- ✓ Creosote in marsh sediments appears to be confined to the Southern Marsh area south and southeast of the former Process and Pond Areas.
- ✓ Approximately one-third of the Site, in the northeastern area, is not impacted because it was not used in wood-treating operations.

What Will Happen Next

- ✓ The Multistate Trust expects to complete these activities in the next few months.
 - To evaluate the stability and extent of the groundwater contaminant plume, we will sample existing groundwater wells and possibly drill additional groundwater wells.
 - To support the assessment of potential risks to ecological receptors, such as fish or invertebrates, we will collect additional sediment samples from the Tidal Marsh areas and conduct toxicity tests on the samples.
 - We will collect additional soil samples in the northern area of the Site to refine the extent of contaminants that may require remediation in the former Wood Storage areas and to define the boundaries of the Site.
- ✓ The Baseline Ecological Risk Assessment Report has been approved and posted by the EPA at <https://semspub.epa.gov/work/04/11120402.pdf>.
- ✓ The RI and Human Health Risk Assessment Reports have been finalized and issued to EPA and NCDEQ for final approval.
- ✓ Combined, the results of the RI and Risk Assessments will be used to evaluate the feasibility of different options for remediating the Site (the Feasibility Studies, or FS).
- ✓ The Site will be divided into distinct areas or Operable Units (OUs) to facilitate the FS. A separate FS will be prepared for each OU.
- ✓ Based on the results of each FS, EPA will propose the agency's preferred remediation plan for each OU (the Proposed Plan), which will be issued for formal public review and comment.
- ✓ After considering all stakeholder and public comments received on the Proposed Plan, EPA will select the preferred remedy for each OU, which will be set forth in a Record of Decision (ROD).
- ✓ Design and implementation of the EPA-selected remedy—commonly referred to as Remedial Design (RD) and Remedial Action (RA)—follow the ROD.
- ✓ Future reuse of the Site will be incorporated into the RD/RA.
- ✓ Long-term Operation and Maintenance (O&M), long-term stewardship, and Site redevelopment can be coordinated with RD/RA activities. But O&M, stewardship, and reuse could be implemented in phases if certain areas (OUs) of the Site are released for future use.

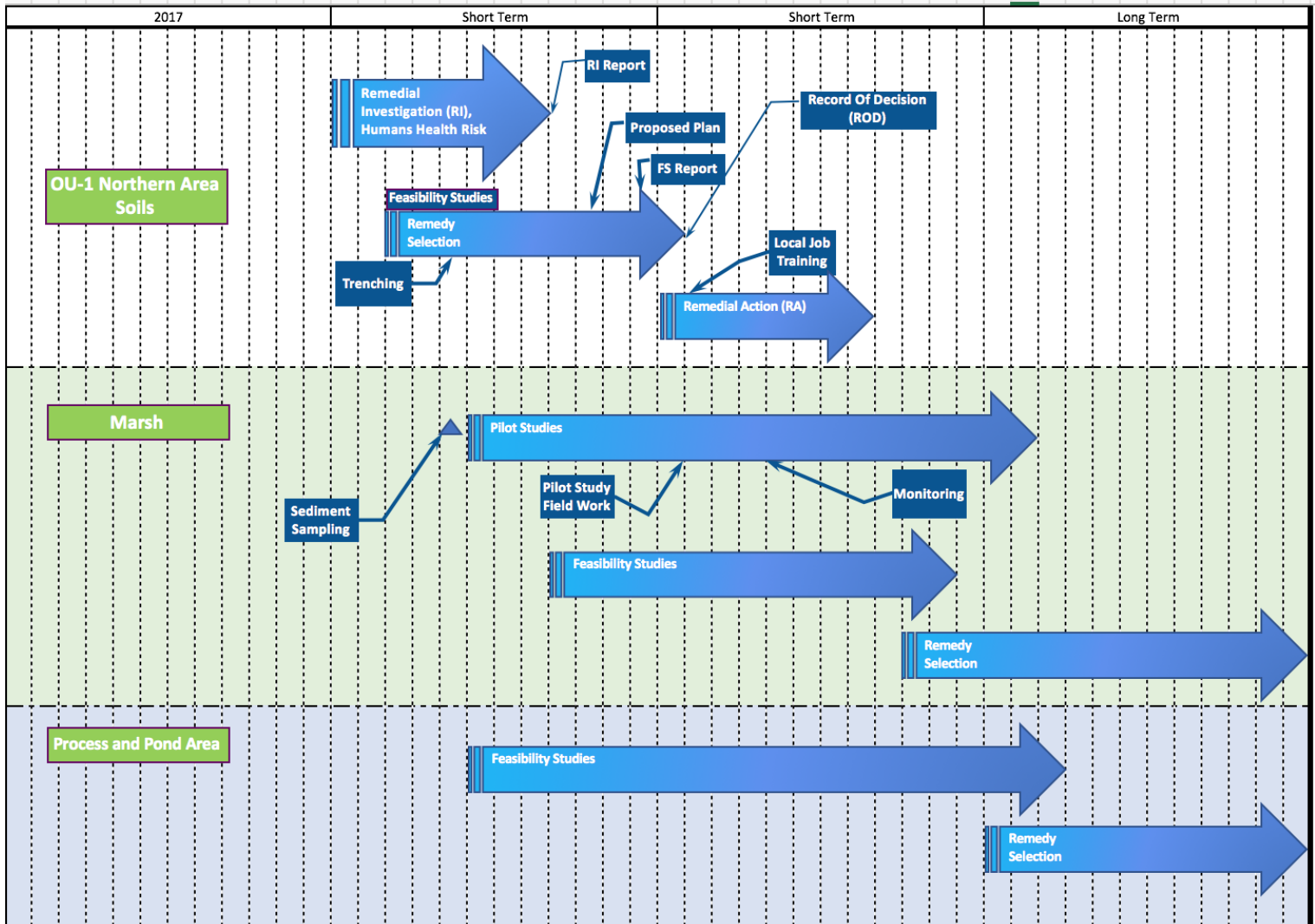
Questions or Comments?

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Timeline of Remediation Progress and Plans, June 2019 Kerr-McGee Chemical Corp – Navassa Superfund Site



Photos of Our Soil Sampling Activities, 2018–2019



In June 2019, during soil sampling in the northern area of the Site, a Multistate Trust contractor's team (left) collects soil samples using a Geoprobe drilling rig. In May 2018, a Multistate Trust contractor's team (right) installs trenches to collect soil samples needed to evaluate subsurface conditions.