

Overview of Remediation Progress and Plans

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

November 2018

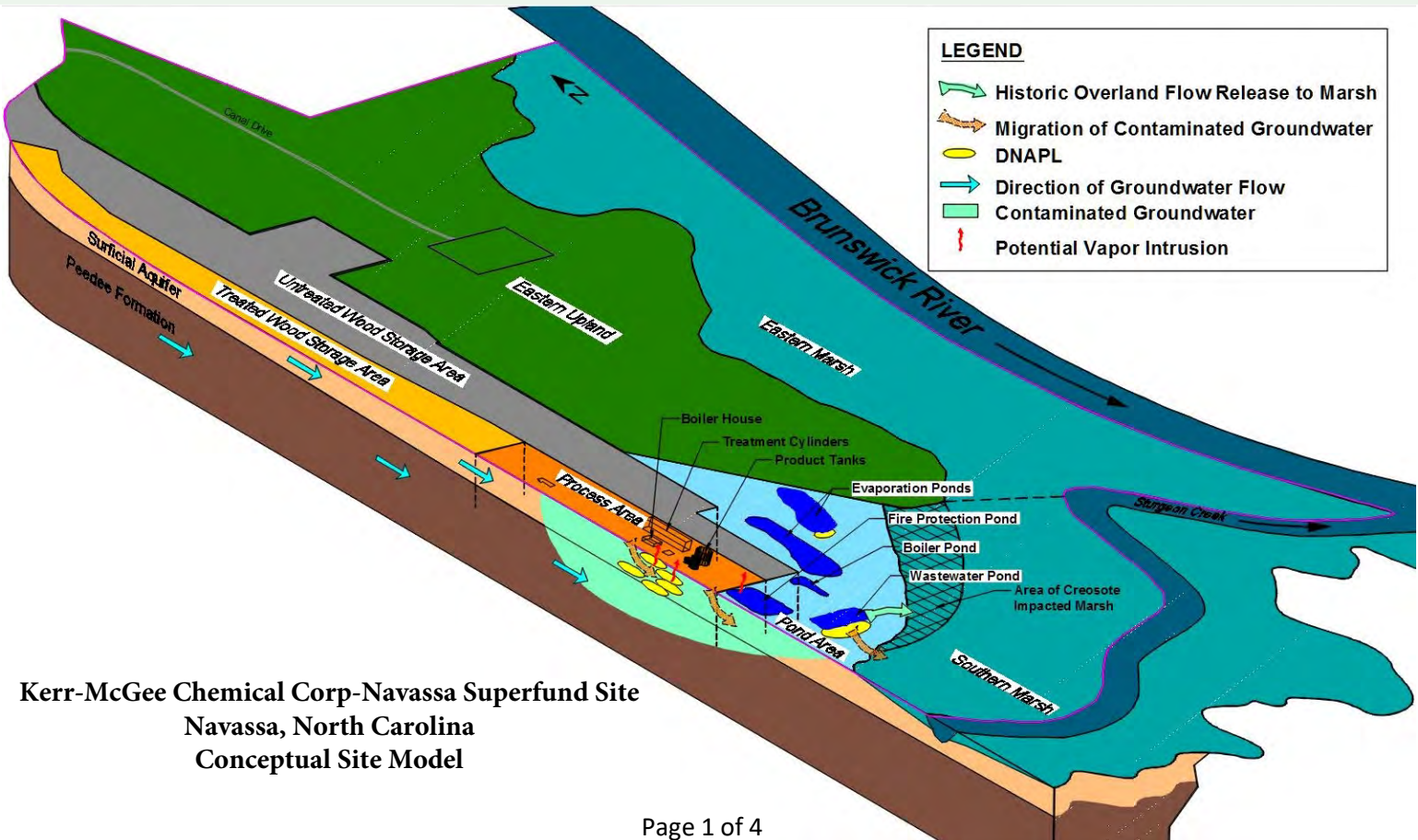
The U.S. Environmental Protection Agency (EPA), the North Carolina Department of Environmental Quality (NCDEQ) and the Multistate Environmental Response Trust (the Multistate Trust) prepared this fact sheet to update the community and other stakeholders about progress and plans for remediation of the 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 245-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 boiling operations used in the treating process.

In 1980, all wood-treatment buildings and facilities were demolished. At that time, creosote sludge from the Wastewater Ponds and Product Tanks was mixed with clean fill, and then disposed in the Wastewater Pond basins, which were backfilled and vegetated. Water from the Boiler Ponds was drained, and the Boiler Pond basins were backfilled and vegetated. The Fire Protection Pond dike was breached and drained.



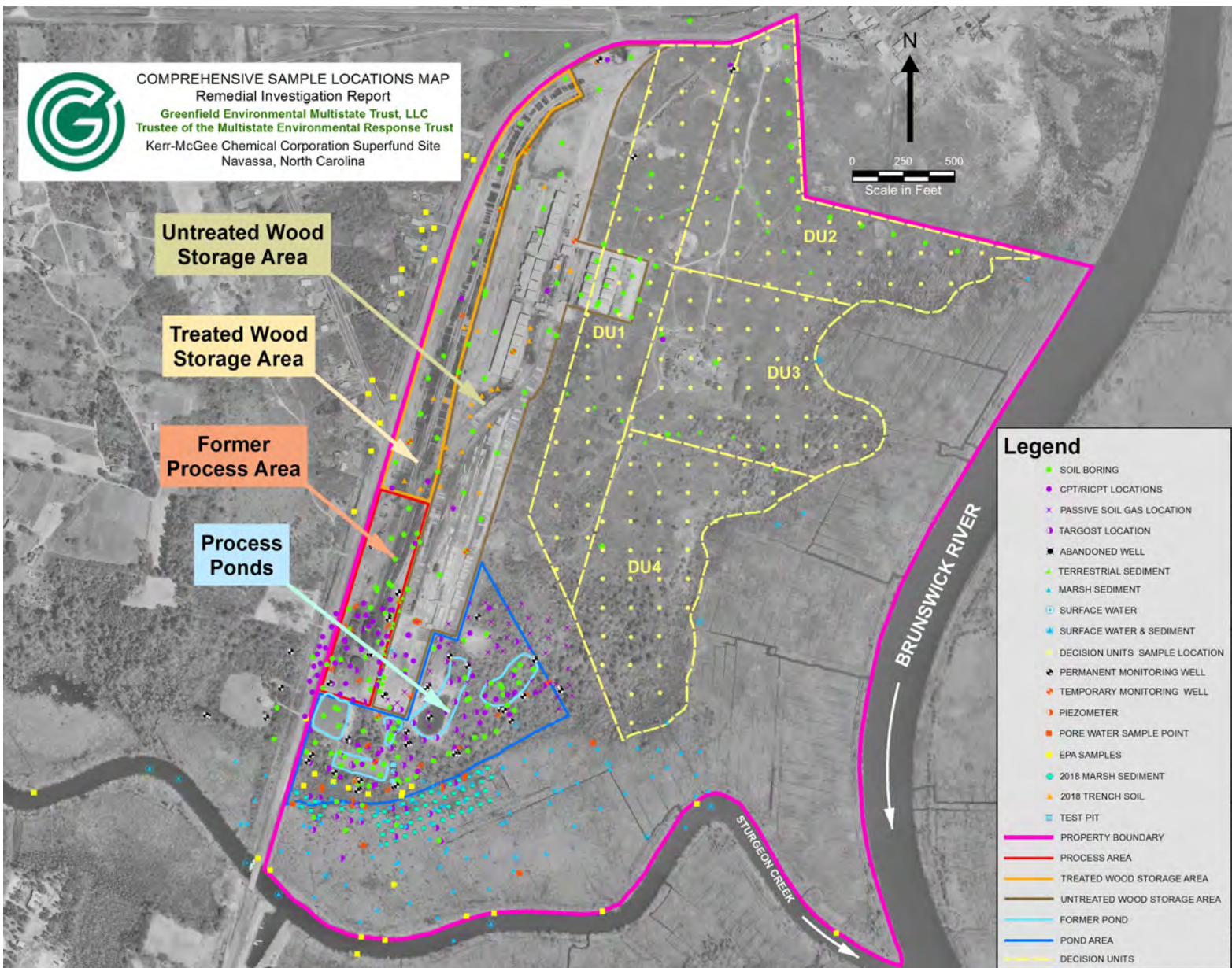
**Kerr-McGee Chemical Corp-Navassa Superfund Site
Navassa, North Carolina
Conceptual Site Model**

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:

- ✓ **368 soil samples** from 239 locations—210 surface soil samples (at depths between 0 and 12 inches below ground surface [BGS]) and 158 subsurface samples (at depths greater than 1 foot BGS);
- ✓ **22 surface water samples** from Sturgeon Creek and the tidal marsh areas;
- ✓ **234 sediment samples** from 175 locations; and
- ✓ **450 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 will be used to determine the risk posed by Site contamination to human health and the environment (the Risk Assessments). Once the RI and Risk Assessments are complete, the Multistate Trust will evaluate the feasibility of different options for remediating the Site (the Feasibility Studies or FS). Based on the results of the RI, Risk Assessments and FS, EPA will select the preferred remedy or remedies for the Site.



What We Have Learned About Site Contamination

- ✓ Surface and subsurface soils are impacted by creosote-related constituents. The most highly contaminated soils were found in the former Process Area. Contaminant concentrations appear to be lower in the former Treated and Untreated Wood Storage Areas.
- ✓ Contaminants in the former Process Area are leaching to groundwater. A plume of creosote and fuel contamination in groundwater (centered under the former Process Area) is migrating off-site toward Sturgeon Creek. Additional groundwater data is required to fully delineate the location of the plume.
- ✓ Creosote in sediments appears to be confined to the Tidal Marsh area south and southeast of the former Process Area.
- ✓ 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.
 - 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.
- ✓ The RI and Risk Assessment Reports will be finalized.
- ✓ 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?

U.S. Environmental Protection Agency (EPA)

Erik Spalvins, 404-909-0345, spalvins.erik@epa.gov
L'Tonya Spencer, 404-562-8463, spencer.latonya@epa.gov

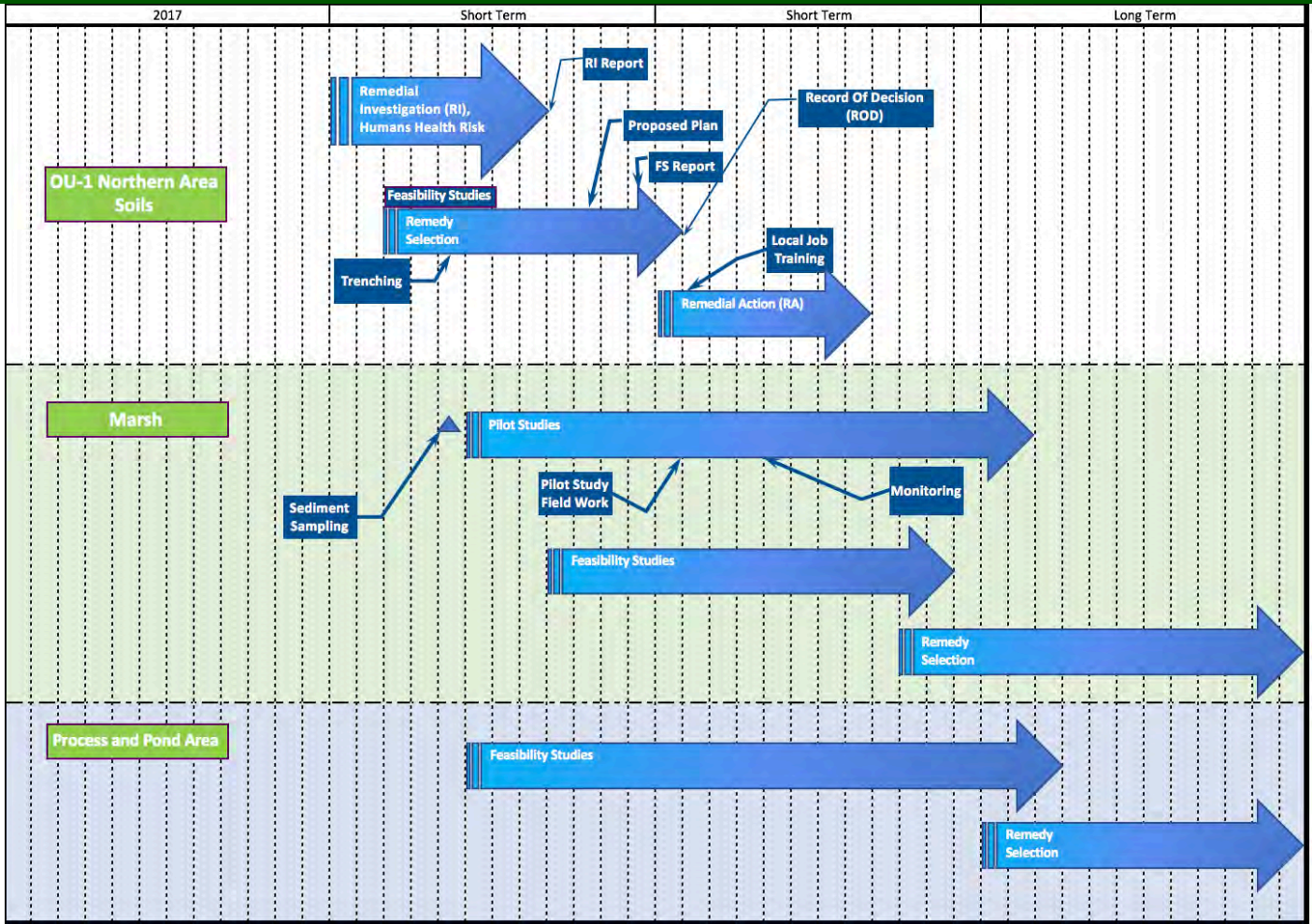
North Carolina Department of Environmental Quality (NCDEQ)

Dave Mattison, 919-707-8336, david.mattison@ncdenr.gov

Multistate Environmental Response Trust (Multistate Trust)

Richard Elliott, 617-953-1154, re@g-etg.com and Christine Amrhine, 540-846-3163, ca@g-etg.com

Remediation Plans and Progress Timeline



Multistate Trust contractors (above and right) use innovative, state-of-the-art sampling technology to cost effectively determine whether creosote contaminants are present in marsh sediments near the Brunswick River and Sturgeon Creek.



A Multistate Trust contractor is sampling groundwater from a monitoring well at the Kerr-McGee Chemical Corp – Navassa Superfund Site.