

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

**Public Meeting  
March 26, 2019**

**U.S. Environmental Protection Agency  
N. C. Department of Environmental Quality  
Greenfield Environmental Multistate Trust LLC,  
Trustee of the Multistate Environmental Response Trust**



# Public Meeting Agenda

- ✓ **Introductions**
- ✓ **Update on EPA Information Repository**
- ✓ **NCDEQ and Navassa Trustee Council Update**
- ✓ **NCEERC Update**
- ✓ **Focused Feasibility Study**
- ✓ **Timeline for ROD**
- ✓ **Remediation Investigations (RI) Highlights and Plans**
- ✓ **Questions and Discussion**

# Introductions

**Tonya Spencer, EPA**

# Introductions

- ✓ **Navassa Superfund Site Cleanup Team**
  - ✓ U.S. Environmental Protection Agency (EPA)
  - ✓ N.C. Department of Environmental Quality (N.C. DEQ)
  - ✓ Multistate Environmental Response Trust (Multistate Trust)
- ✓ **Navassa Town Council**
- ✓ **Navassa Community Environmental and Economic Redevelopment Corporation (NCEERC)**
- ✓ **Navassa Trustees Council – Natural Resource Damage (NRD) Restoration**
- ✓ **Other Partners**
  - ✓ N.C. Department of Health and Human Services/N.C. Division of Public Health (N.C. DPH) – Health education and outreach
  - ✓ University of North Carolina – Wilmington (UNCW) – College / Underserved Community Partnership Program (CUPP)



# **Update on EPA Information Repository**

**Public Meetings Every Quarter**

**Next Meeting June 25<sup>th</sup>**

# **NCDEQ and Navassa Trustee Council Update**

**Anjie Ackerman, NCDEQ**



# Navassa Trustee Council

## NATURAL RESOURCE DAMAGE ASSESSMENT AND RESTORATION

A legal and scientific process

A collaborative process led by Trustees

Includes public involvement

NRDAR's goal is to restore the injured environment and services

# Navassa Trustee Council

## Kerr McGee NRDAR Trustee Activities

August 18, 2015 Public Scoping Meeting

September 27, 2017 Community Meeting

Continue to receive and review project proposals

- 25 projects have been submitted to date

Developing a Draft Restoration Plan

- Public Comment Period (likely 45 days)
- Trustees plan to present the Draft Restoration Plan and included projects to the community during this time

Restoration will take place in phases

- At this point no final decisions have been made and no funds have been allocated to particular projects
- Project funding decisions are not final until the public has had the opportunity to comment
- NRDAR Trustee activities are not completed until all restoration funds have been exhausted



# Navassa Trustee Council

Kerr McGee NRDAR  
Trustees

## NOAA:

- Howard Schnabolk
- (843) 740-1328
- [Howard.Schnabolk@noaa.gov](mailto:Howard.Schnabolk@noaa.gov)
- Krista McCracken
- 843-740-1203
- [Krista.mccracken@noaa.gov](mailto:Krista.mccracken@noaa.gov)

## US Fish and Wildlife Service:

- Sara Ward
- (252) 473-1132 ext.243
- [Sara\\_Ward@fws.gov](mailto:Sara_Ward@fws.gov)

## State of North Carolina:

- Carolina Jimenez
- (919) 707-8626
- [Guadalupe.Jimenez@ncdenr.gov](mailto:Guadalupe.Jimenez@ncdenr.gov)
- Anjie Ackerman
- (919) 707-8312
- [Anjie.Ackerman@ncdenr.gov](mailto:Anjie.Ackerman@ncdenr.gov)

# **Navassa Community Environmental and Economic Redevelopment Corporation (NCEERC) Update**

**Chris Graham, NCEERC**



# **Superfund Process and Record of Decision (ROD) Update**

**Erik Spalvins, EPA**

# How we got here

- ✓ 2005, Kerr McGee created “Tronox”, which went bankrupt in 2009
- ✓ EPA took over investigation in 2010
- ✓ Tronox Bankruptcy Settlement Agreement finalized in February 2011
  - ✓ Multistate Trust funds can only be used for cleanup
  - ✓ Navassa Trustees Council - Natural Resource Restoration by NOAA, N.C. DEQ, FWS
- ✓ Multistate Trust created in 2011

# Prioritizing Areas for Remediation

Remedial Investigation (RI)



Feasibility Study (FS)



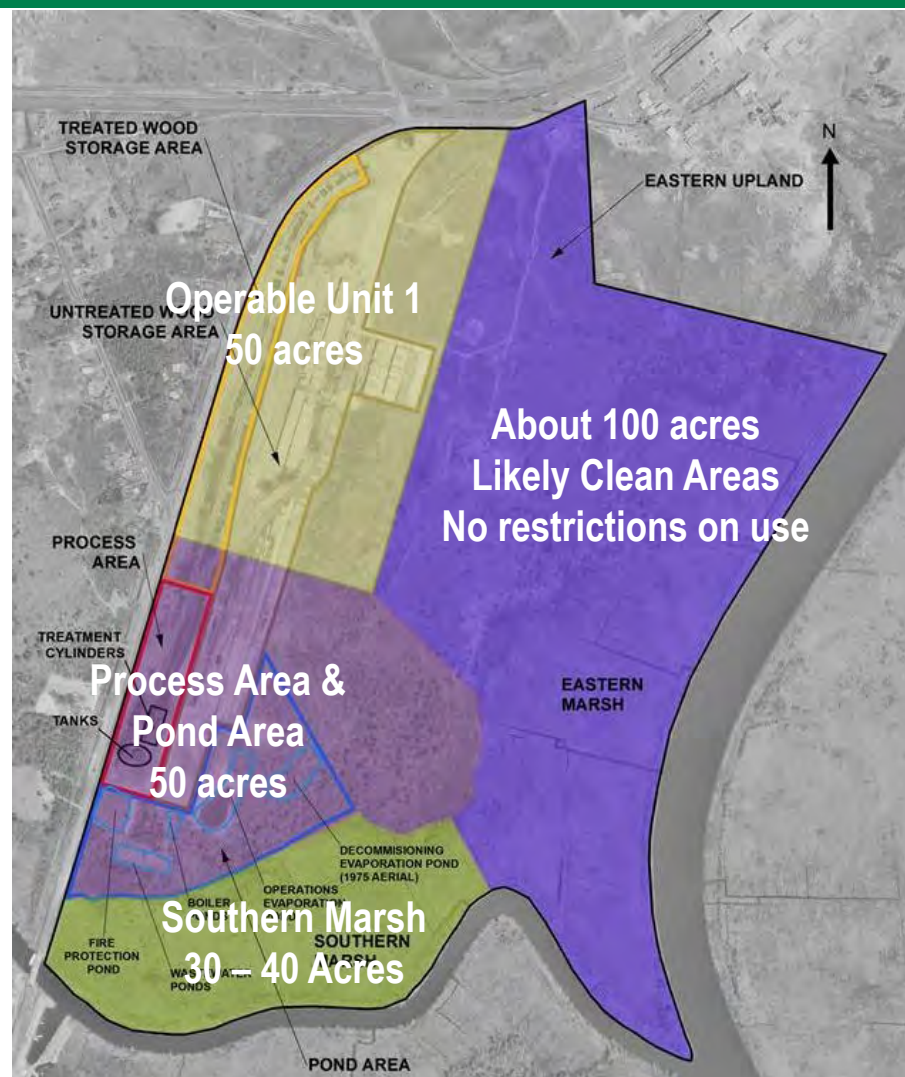
Proposed Plan  
(Record of Decision)



Remedial Design (RD)



Remedial Action (RA)



# Remediation Investigations Highlights and Plans

Richard Elliott, Multistate Trust



# Remedial Investigations (RI)

## **Purpose of Remedial Investigations (RI):**

**Identify areas of contamination on and around the Site that need to be remediated to protect people and the environment**

- ✓ **Investigate all potentially contaminated media on- and off-Site – soil, sediment, groundwater and surface water**
- ✓ **Determine the limits and concentrations of Site contaminants**
- ✓ **Use RI results to evaluate potential risks to people and the environment and identify remediation actions (Feasibility Study)**

# RI Highlights

- ✓ **Constituents of Concern (COCs)**
  - ✓ Polycyclic Aromatic Hydrocarbons (PAHs) (creosote-related SVOC contaminants)
  - ✓ Inorganics (Arsenic)
- ✓ **Extent of Contamination**
  - ✓ Surface Soils
  - ✓ Subsurface Soils
  - ✓ Terrestrial Sediment
  - ✓ Marsh Sediment
  - ✓ Groundwater
- ✓ **Human Health Risk Assessment**
- ✓ **Baseline Ecological Risk Assessment**



# Key Activities

## 2018 and First Quarter 2019 Progress

- **Complete Reports**

- **RI Report**

- Final Draft Near Complete, Middle of the Year
    - Awaiting Finalization of Human Health Risk Assessment (HHRA)

- **HHRA**

- Final Draft has been Submitted to EPA and NCDEQ and comments have been received.
    - Final Submittal Planned by April 2019

- **BERA**

- BERA has been Approved and Posted by EPA

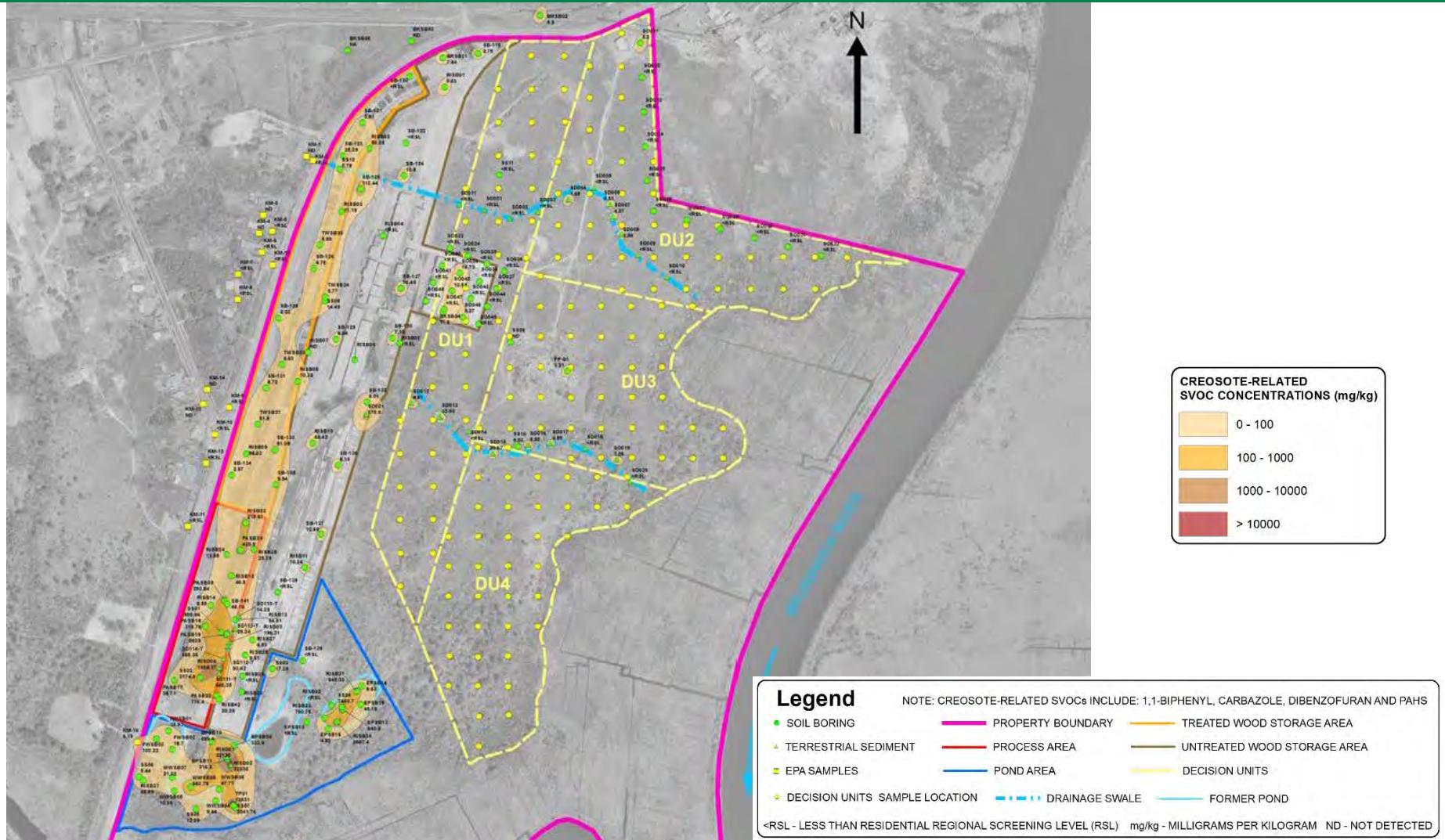
- **Complete Feasibility Study and Proposed Plan**

- Focused Feasibility Draft has been Reviewed and Commented on by the EPA and NCDEQ. There is a major change in approach directed by EPA that will require additional work and time.
    - Final Draft to be Submitted to EPA and NCDEQ, after EPA decides on a preferred strategy

# Key Activities 2018 Progress

- **OU1 (Original OU1)**
  - Completed Trench Study
- **Marsh**
  - Additional Sampling
    - Sampling and Analysis Completed in 2018
    - Additional Sampling to Support Toxicity Testing Planned for 2019
  - Marsh Study Plan
    - Draft proposal was reviewed with EPA and NCDEQ Process and Pond Area
  - Initiate Feasibility Study
- **Groundwater**
  - Two Sampling Events Completed
  - Initial Plume Studies are Completed
- **Completed Redevelopment Planning Initiative**
- **Started Marketing of the Site**

# Distribution of Creosote-Related SVOCs in Surface Soil and Terrestrial Sediments





# Distribution of Creosote-Related SVOCs in Groundwater

## March 2017 Results



## November 2018 Results



### Legend

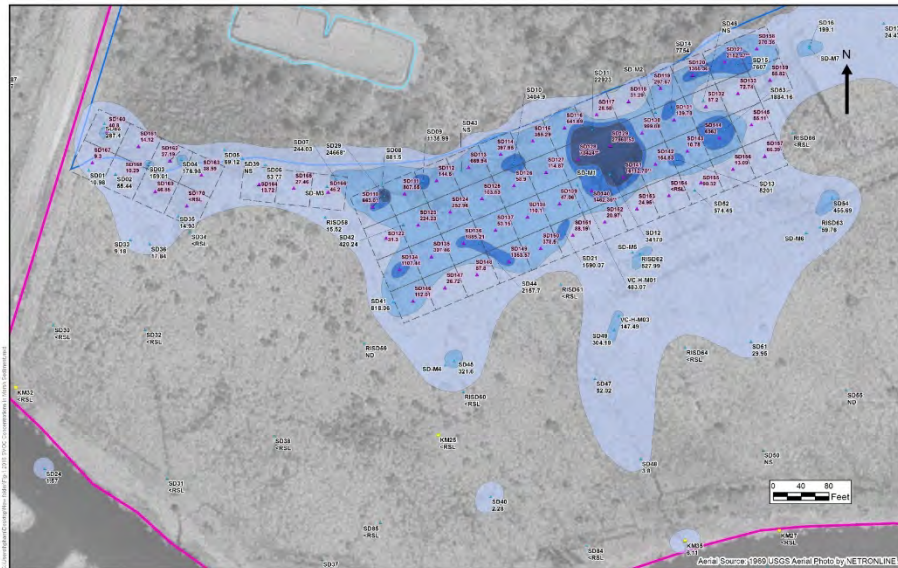
- SHALLOW MONITORING WELL
- PROPERTY BOUNDARY
- PROCESS AREA
- RSL - REGIONAL SCREENING LEVEL
- ug/L - MICROGRAMS PER LITER
- FP - FREE PRODUCT
- ND - NOT DETECTED
- UNTREATED WOOD STORAGE AREA
- POND AREA
- FORMER POND

NOTE: CREOSOTE-RELATED SVOCs INCLUDE:  
1,1-BIPHENYL, CARBAZOLE, DIBENZOFURAN AND PAHS

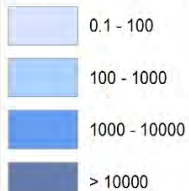
### CREOSOTE-RELATED SVOC CONCENTRATIONS (ug/L)

- 0-10
- 10-100
- 100-1000
- 1000-10000
- >10000

# BERA Results for 35-Acre Southern Marsh



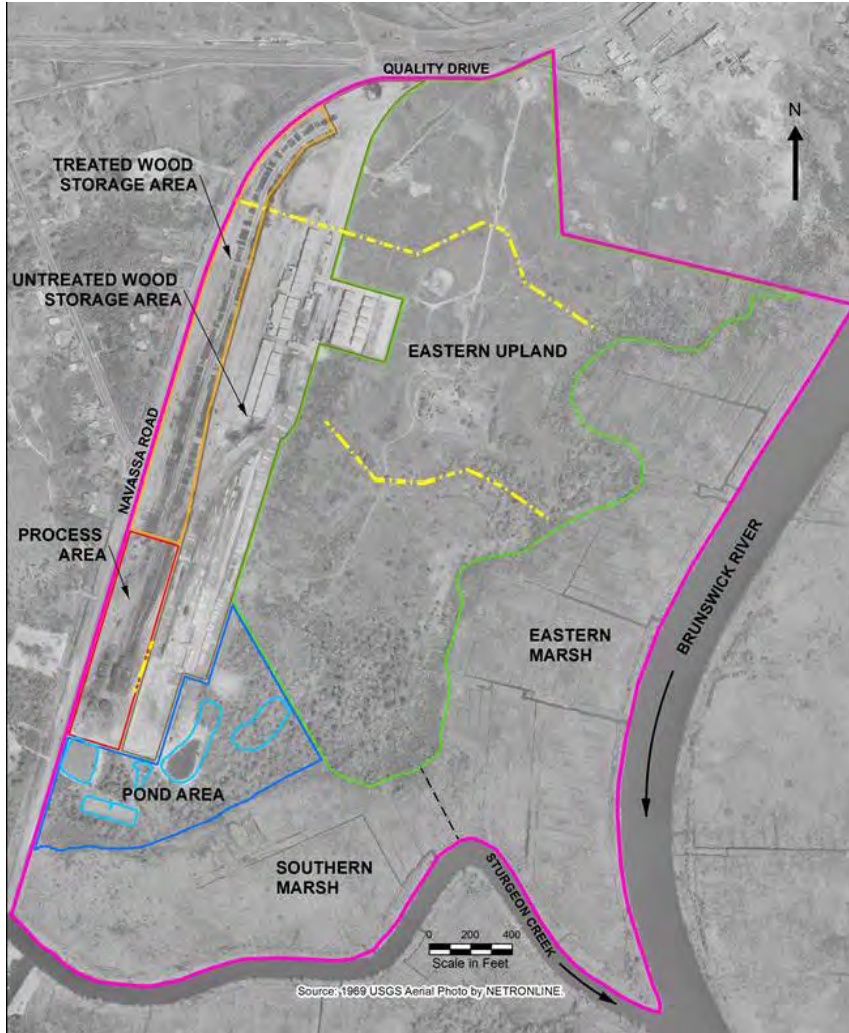
CREOSOTE-RELATED  
SVOC CONCENTRATION (mg/kg)



- Approximately 31.5 acres had samples with TUs  $\leq 1$
- Approximately 3.5 acres had samples with TUs  $> 1$
- Additional sampling and toxicity testing recommended to:
  - better quantify the threshold for ecological impacts
  - determine the concentration threshold for taking a remedial action



# HHRA Results



- No unacceptable risk from soils in Treated and Untreated Wood Storage Areas or Eastern Upland Area
- Unacceptable risk to residential and industrial receptors identified for soils in Pond and Process Areas
- Unacceptable risk to residential and industrial receptors identified for groundwater
- No unacceptable risk identified in Southern Marsh

# Key Activities 2019 Plan

- **Key RI Reports**
  - Complete HHRA
  - Complete RI Report
- **OU1**
  - Complete Focused Feasibility Study
  - EPA to prepare Proposed Plan and ROD
  - Initiate Remedial Design
- **Marsh**
  - EPA to Approve Action Levels
    - Sampling and Toxicity Testing
    - Completed Addendum to BERA
  - Start Marsh Area Feasibility Study
- **Pond and Process Area**
  - Complete Feasibility Study
- **Groundwater**
  - Complete Two Sampling Events
  - Conduct Plume Studies and Issue Report
  - Initiate Feasibility Study
- **Site Property Activities**
  - Market the Site
  - Work with Town Council to Rezone the Property
  - Initiate Institutional Controls Activities

# Contact Information

- Erik Spalvins, EPA Remedial Project Manager
  - (404) 562-8938, [spalvins.erik@epa.gov](mailto:spalvins.erik@epa.gov)
- Tonya Spencer, EPA Community Involvement Coordinator
  - (404) 562-8463, [spencer.latonya@epa.gov](mailto:spencer.latonya@epa.gov)
- David Mattison, NCDEQ Superfund Section Project Manager
  - (919) 707-8336, [david.mattison@ncdenr.gov](mailto:david.mattison@ncdenr.gov)
- Cindy Brooks, Multistate Trust Managing Principal
  - (617) 448-9762, [cb@g-etg.com](mailto:cb@g-etg.com)
- Richard Elliott, Multistate Trust Project Manager
  - (617) 953-1154, [re@g-etg.com](mailto:re@g-etg.com)



# Questions and Discussion