

# Public Information Meeting

## Update on Conditions and Environmental Actions at the Former Kerr-McGee Wood Treatment Facility Springfield, MO



*Marc Weinreich, Managing Principal*  
*Lauri Gorton, Director of Environmental Programs*  
*Amber Igoe, Springfield Site Project Manager*

**September 14, 2016**



Greenfield Environmental Multistate Trust LLC  
Trustee of the Multistate Environmental Response Trust

# Public Meeting Agenda

- Welcome and Introductions
- Meeting objectives
- Brief history of site ownership
- Introduction to Multistate Environmental Response Trust
- Historic site operations and activities
- Current understanding of site conditions
- Multistate Trust remediation activities
- Follow-up contacts
- Questions and discussion



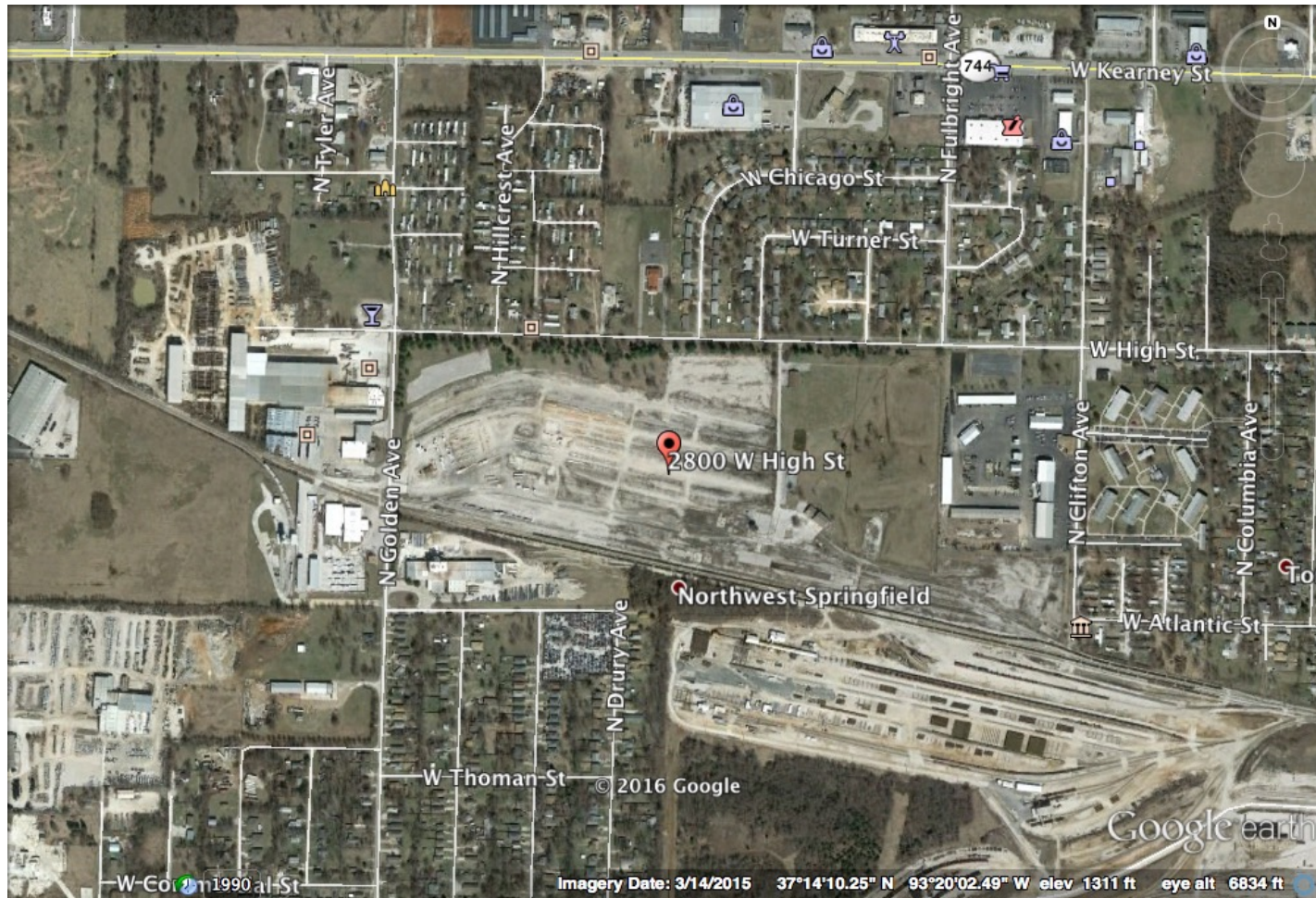
# Tonight's Objectives

Provide community with:

- An update about Site activities
- An opportunity to raise questions and express concerns that may help guide Multistate Trust's future investigations
- An understanding of how potential exposure risks are identified and managed



# Location of Former Kerr-McGee Wood Treatment Facility



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# Brief History of Site Ownership



- **1907:** 68-acre Facility treated railroad ties with **creosote** wood preservative
- **1964–2004:** **Kerr-McGee** acquired and operated Facility
- **2004:** **Kerr-McGee** closed Facility
- **2005:** **Kerr-McGee** spins Facility and other liabilities into subsidiary, **Tronox**



# Brief History of Site Ownership



- **2006–2009:** Tronox struggles financially to meet obligations
- **2009:** Tronox files bankruptcy
- **2011:** Court-appointed **Multistate Trust** takes title to Springfield Site and 100s of other contaminated former Kerr-McGee sites
- **2015:** Court finds **Kerr-McGee committed fraud** and awards Multistate Trust \$22M to investigate and clean up Site



# What Is the Multistate Trust?

- A unique public/private entity
- Its sole purpose is to protect human health and the environment (not motivated by profit or gain)
- Created to remediate 100s of sites contaminated by Kerr-McGee and Tronox operations
- Established as part of 2011 global Tronox bankruptcy settlement



# Greenfield Environmental Multistate Trust Trustee of the Multistate Environmental Response Trust



**Greenfield Environmental Multistate Trust LLC  
Trustee of the Multistate Environmental Response Trust**



# What is the Multistate Trust?

- Independent, court-appointed trustee
- Has duty of good faith and loyalty to beneficiaries
- Reports directly to beneficiaries—United States and State of Missouri
- Has cooperative, collaborative relationship with beneficiaries. Both sit on “same side of table”
- Governed by Tronox Settlement and Trust Agreement



# Multistate Trust Responsibilities

- Own in trust, remediate and facilitate reuse of 100s of former Kerr-McGee sites in 31 states
- Received \$1.2B for Site remediation (\$22M for Springfield) in 2015
- Implement investigations and remediation of Springfield Site, under EPA and MoDNR oversight, to manage current and potential future risks
- Can use Springfield funds only for environmental actions at Springfield



# MoDNR & EPA Site Responsibilities

## **Lead Agency: Missouri Department of Natural Resources (MoDNR)**

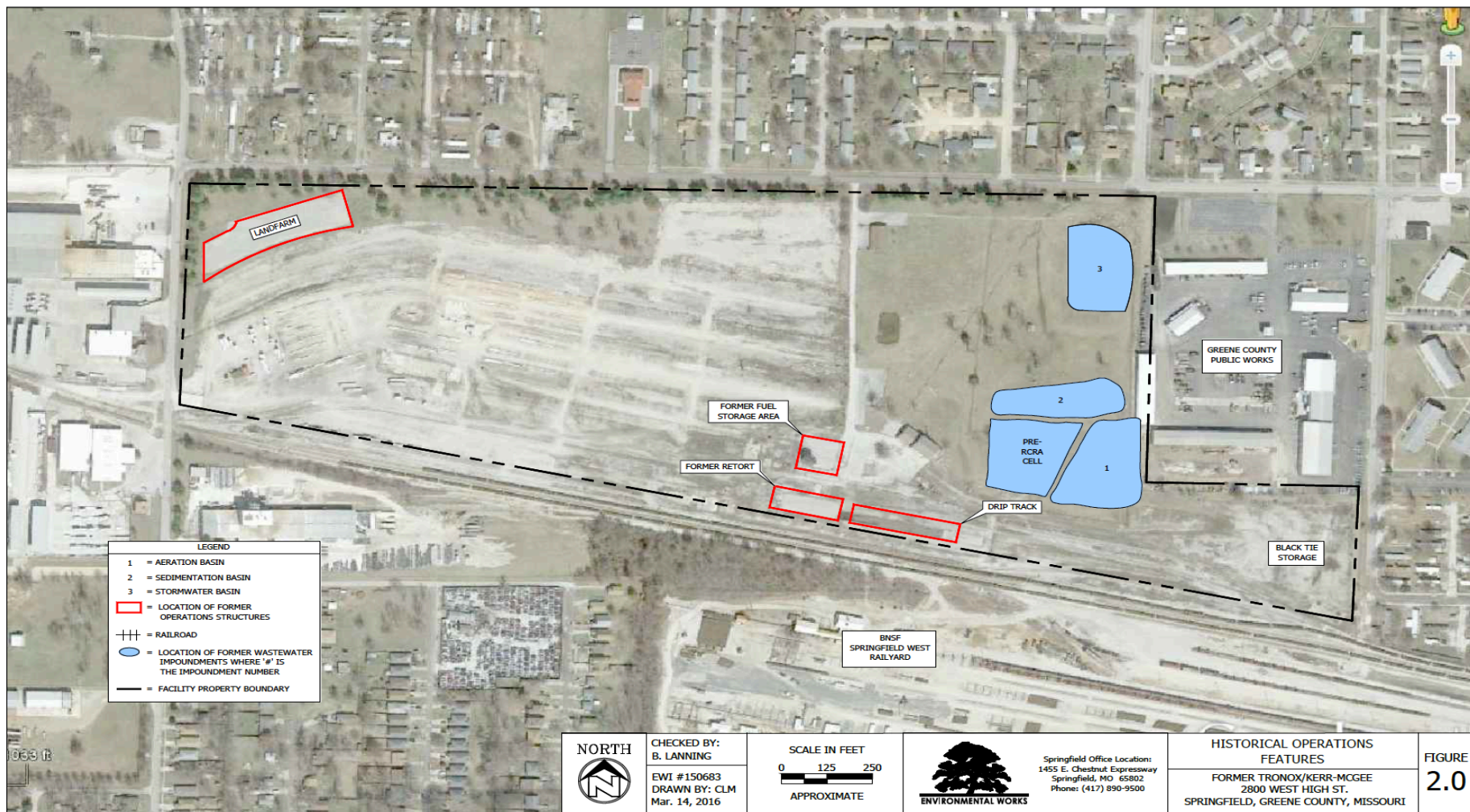
- Approves all Multistate Trust remediation plans, activities, and budgets
- Approves environmental contractors hired by Multistate Trust
- Confirms completion of environmental actions
- Not responsible for Site work or conditions

## **Beneficiaries: MoDNR and EPA**

- Approve sale, conveyance, or transfer of property
- MoDNR may consult EPA on remediation plans



# Kerr-McGee/Tronox Site Remedy



# Kerr-McGee/Tronox Site Remedy

- **1988:** Kerr-McGee closed wastewater impoundments used to treat hazardous waste
- **1992:** Kerr-McGee performed/completed RCRA Facility Investigation
  - Identified nature and extent of hazardous waste releases
  - Found creosote on and off-site



# Kerr-McGee/Tronox Site Remedy

- **1993:** Kerr-McGee completed Corrective Measure study
- **1993–2002:** Kerr-McGee installed approved Corrective Measures under MoDNR oversight
- **2002:** MoDNR issued post-closure care permit
- **2005:** Kerr-McGee spins Site into Tronox to avoid liability



# Kerr-McGee Remedy Actions Under MoDNR Oversight

- Kerr-McGee was forced to close:
  - Several solid waste management units
  - 3 surface impoundments
  - Land farm treatment unit
- Closure involved contaminated soil removal and placement of caps on surface impoundments



# Kerr-McGee Remedy Actions Under MoDNR Oversight



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# Kerr-McGee Remedy Actions Under MoDNR Oversight

- Trenches and pumps
  - Recover creosote
  - Remove contaminated groundwater
  - Limit movement of groundwater
- On-site treatment system
  - Collect creosote
  - Treat groundwater
- Groundwater wells to monitor conditions and remediation effectiveness



# Recovery Trenches and Pumps Located in Contaminated Areas



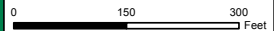
Uppermost Flow Zone  
Recovery Well and Pumping Center  
Location Map

### Legend

- Recovery Well
- Influent Meter
- Trenches
  - Trench #1
  - Trench #2
  - Trench #3
  - Trench #4
  - Trench #5
- Remediation System Piping
  - Group 1
  - Group 2
  - Group 3
- Water Course
- Pumping Centers
- Fence
- Property Boundary



1 inch = 150 feet



MAP NOTES:  
Date: March 30, 2015  
Data Sources: ESRI, GSI 2013

# Prior Investigation of Golden Hills and Spring

- **2005** – MoDNR, Missouri Department of Health & Senior Services, and Federal Agency for Toxic Substances and Disease Registry (ATSDR) examined residents' exposure to possible petroleum contamination in residential soils in Golden Hills Subdivision and Vich/Woodlawn Spring
- **2006** – ATSDR concluded that the areas presented “*no apparent public health hazard*”

## Health Consultation

KERR-MCGEE SITE  
EVALUATION OF VICH SPRING AND GOLDEN HILLS SUBDIVISION

SPRINGFIELD, GREENE COUNTY, MISSOURI

EPA FACILITY ID: MOD007129406

JANUARY 18, 2006

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
Public Health Service  
Agency for Toxic Substances and Disease Registry  
Division of Health Assessment and Consultation  
Atlanta, Georgia 30333



# What Is Creosote?

- Thick, oily liquid used to preserve wood
- Primary contaminant of concern at Site
- Major chemicals in creosote: polycyclic aromatic hydrocarbons (PAHs), phenol, and creosols



# Tronox Bankruptcy and Transition to Multistate Trust

- **2006–2011:** Under MoDNR oversight, Tronox continued to operate protective systems installed by Kerr-McGee
- **2009:** Tronox filed for bankruptcy
- **2011–2015:** With limited funds (\$2M) and no guarantee of future funds, Multistate Trust assumed status quo operation of existing systems:
  - Groundwater/creosote recovery and treatment
  - Maintenance of closed impoundments
  - Groundwater monitoring and reporting



# Multistate Trust Findings To Date

- Additional data required to evaluate corrective measure effectiveness of monitoring network
- Current recovery system may need optimization to fully control plume migration and remove creosote
- Potential exposure risks for soil, groundwater and surface water exposure are limited
- Additional evaluations may be required for potential vapor exposer risks, if any additional groundwater contamination is found



# How Do We Identify Potential Exposure Risk?

1. Is contamination present at concentrations above levels established to be protective of human health?
2. Is contamination moving in the environment?
  - By wind or in the air
  - With surface water or groundwater
3. Can people be exposed to the contamination?
  - Direct contact (touching with skin)
  - Ingestion (eating/drinking)
  - Inhalation (breathing)



# Existing Data Has Not Identified Potential for Contact/Ingestion for Soil or GW

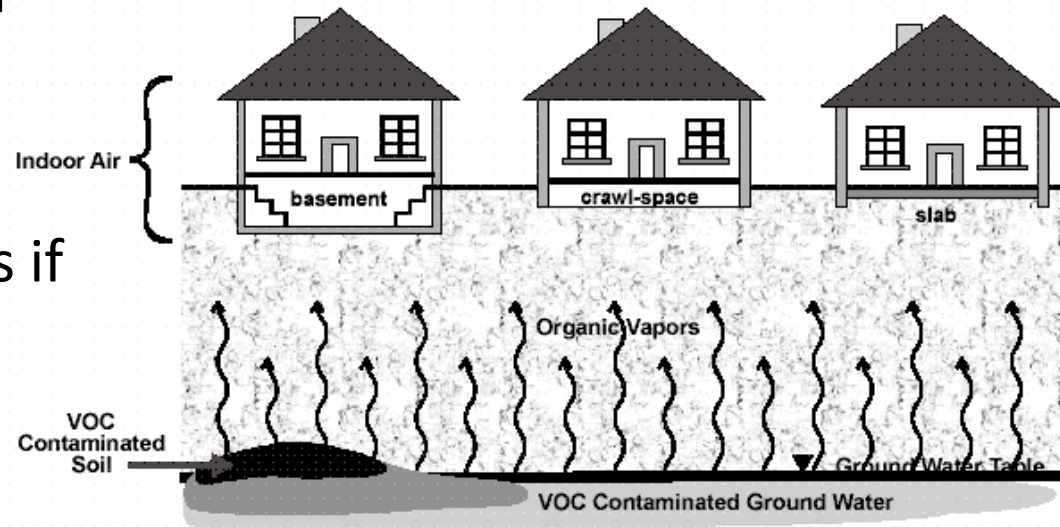
- Off-Site Soils: Previous limited off-site soil tests showed no impacts to off-site soils
- On-Site Soils: Site fencing and closure prevents human contact with on-site soils
- On and Off-Site Groundwater typically 1 to 4 feet below ground surface
  - Unlikely to be touched
  - No record of public or private drinking wells or other wells in area





# Evaluation of Potential Inhalation Exposure Risks

- Sampled subsurface utility corridors recently and found no pathway for workers
- Will be collecting additional information on vapors/odors if additional groundwater contamination is found
- Will report on findings after sampling and analyses are complete



# Multistate Trust's New Site Work

- **2015–2016:** With receipt of additional remedy funds:
  - Multistate Trust completed initial field evaluation
  - Multistate Trust prepared Supplemental Investigation Plan (includes vapor and other new studies) for MoDNR review/approval
- **2016:** Multistate Trust's initial evaluation resulted in replacement of Pumping Center 1 Trunk Line



# Objectives of Multistate Trust's 2016 Supplemental Investigation

- Provide comprehensive, up-to-date, independent understanding of Site conditions
- Delineate location and potential migration and impacts of groundwater plume
- Obtain technical data to
  - Evaluate current exposure potential
  - Inform additional remedial action, if required

## REMEDIAL ACTION OPTIMIZATION WORK PLAN

Former Tronox Facility  
2800 West High Street, Springfield, Missouri  
RCRA Permit Number MOD007129406

### Submitted by:



Greenfield Environmental Multistate Trust LLC,  
Trustee of the Multistate Environmental Response Trust

### Prepared by:



### For Submittal to:

Missouri Department of Natural Resources  
P.O. Box 176  
Jefferson City, Missouri 65102-0176

August 8, 2016



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# Next Steps: Planned Activities in 2016 and Beyond

- Additional soil and groundwater sampling to update and confirm current understanding of Site conditions
- Depending on sampling results, additional remedial actions may be proposed to maintain protective conditions at the Site



# Next Steps: Planned Activities in 2016 and Beyond

- Specifically, Multistate Trust will address uncertainties associated with current understanding of Site (monitoring wells installed 15-30 years ago)
- Multistate Trust will determine whether existing systems are adequate or should be modified to ensure overall protectiveness of remedy.



# Areas Being Investigated in Fall 2016





# Current Schedule

- **Fall 2016**
  - Field sampling and analyses – Fall 2016
  - Recovery and treatment system evaluation
- **Winter 2016–2017**
  - Data validation and evaluation
  - Draft report submittal and MoDNR review
- **Late Winter/Spring 2017**
  - Final report available
  - Additional investigation and remedial actions, if needed

*Multistate Trust Will Take Immediate Action  
if New Exposure Potential is Discovered*





# Who Can You Contact for Additional Information?

## **Springfield-Greene County Health Department**

- Erica Little (417) 864-1408

## **MoDNR**

- Don Dicks (573) 751-3553
- Heidi Rice (573) 291-1417

## **Multistate Trust**

- Marc Weinreich (617) 512-8063
- Amber Igoe (850) 322-8033



# Additional Information Resources

- **Missouri Department of Health & Senior Services**  
(573) 751-6102
- **Springfield-Greene County Health Department**  
(417) 864-1658
- **Agency for Toxic Substances and Disease Registry**  
(ATSDR) (800) 232-4636
- **Site Document Repository – The Library Center**  
Springfield-Greene County Library (417) 882-0714



# Questions?



# Public Information Meeting

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