



WEST LAKE LANDFILL SUPERFUND SITE BRIDGETON, MO

June 10, 2019

TCAG Briefing

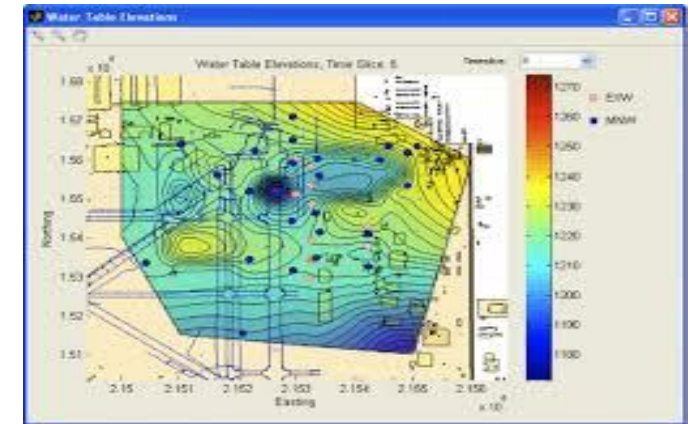
OU-3 RI/FS Process and Objectives

- Define nature and extent of Site-related contamination in groundwater.
 - Investigate impacts to Missouri River Alluvial Aquifer
 - Refine understanding of complex hydrogeologic system
 - Evaluate background groundwater quality
 - Provide predictive tools to evaluate potential future impacts
- Determine risks to human health and environment
- Depending on results of the RI, identify potential groundwater remedies



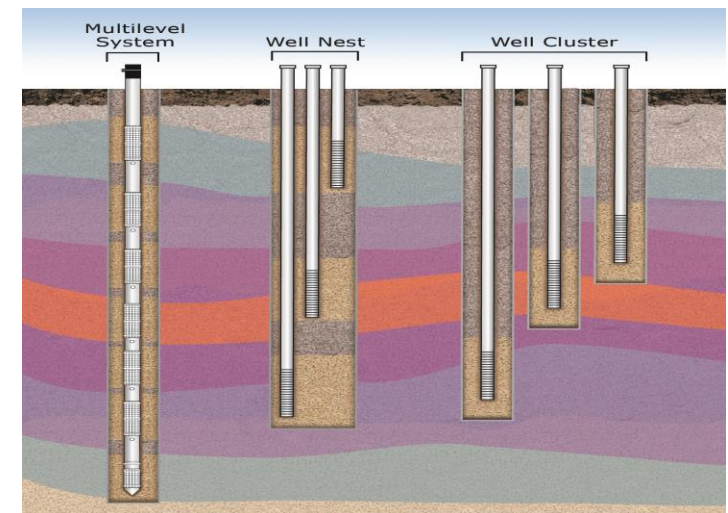
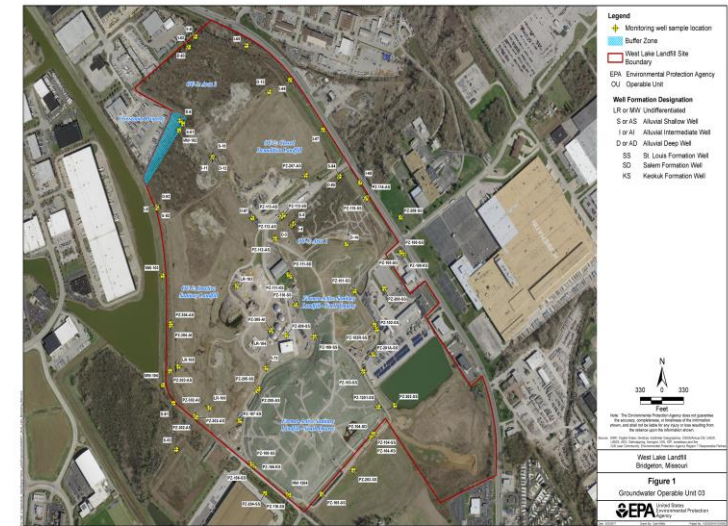
OU-3 Work Summary

- Well Inventory and Well Repairs
- Periodic sampling events (2 Years)
- Determine radionuclide background concentrations
- Assess and Address Data Gaps
- Sonic Drilling and Direct Push
- Groundwater Modeling
- Baseline Risk Assessment for OU-3



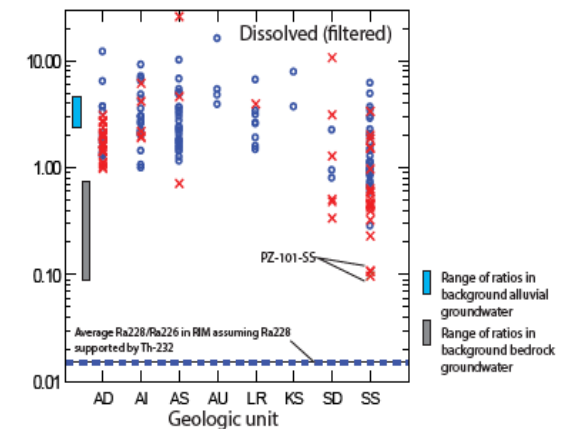
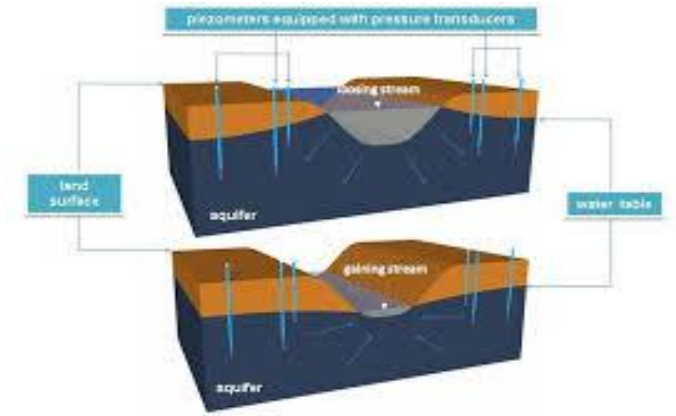
Existing Groundwater Information

- Data indicates groundwater impacts at some of the existing monitoring wells.
- Off-site water-supply wells sampled during the OU-1 RI did not identify Site related impacts in those wells.
- Landfill leachate and Radium exceeding the MCL for drinking water have been detected in groundwater.
- Sources of Radium in groundwater under investigation.
- Potential sources include bedrock, RIM in OU-1, and other sources.



Groundwater Units and Interactions

- Groundwater flow in the area is generally towards the Missouri River.
- The leachate collection system in Bridgeton Landfill affects groundwater in many ways.
- Interactions of waste and native materials with leachate is an important mechanism at the Site that will be further investigated.
- The use of isotopic ratios of radionuclides may support investigation objectives.
- Communication between the alluvial unit and bedrock units will be investigated in OU-3.



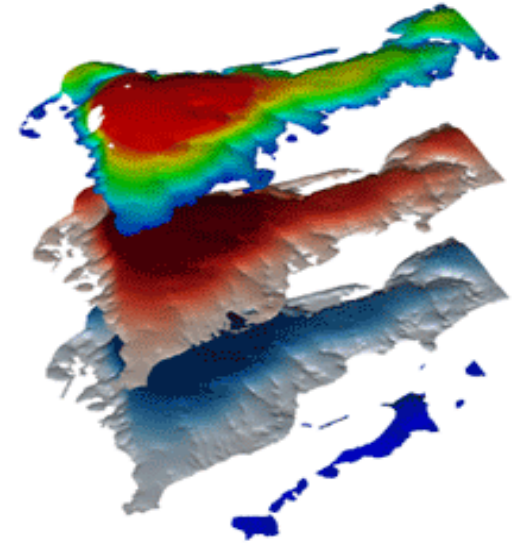
AD	Alluvium, deep	LR	Leachate Riser
AI	Alluvium, intermediate	KS	Bedrock, Keokuk Limestone
AS	Alluvium, shallow	SD	Bedrock, Salem Formation
AU	Unsaturated zone	SS	Bedrock, St. Louis Limestone

• Combined radium below 5 pCi/L (picocuries per liter) maximum contaminant level (MCL)

× Combined radium above 5 pCi/L (picocuries per liter) maximum contaminant level (MCL)

Technical Support

- EPA, USGS and MDNR will work together on the OU-3 RI planning and implementation process.
- Groundwater sampling data from Bridgeton Landfill will supplement the OU-3 RI.
- EPA Contractor Support on OU-3



Community Engagement for OU-3

- Continue to work and meet with the CAG “Technical” subgroup.
- Provide updated OU-3 information in West Lake Updates as it becomes available.
- Maintain the information repository to keep project stakeholders informed.
- Share draft documents and EPA comments during the OU-3 RI/FS process.



OU-1 Remedial Design

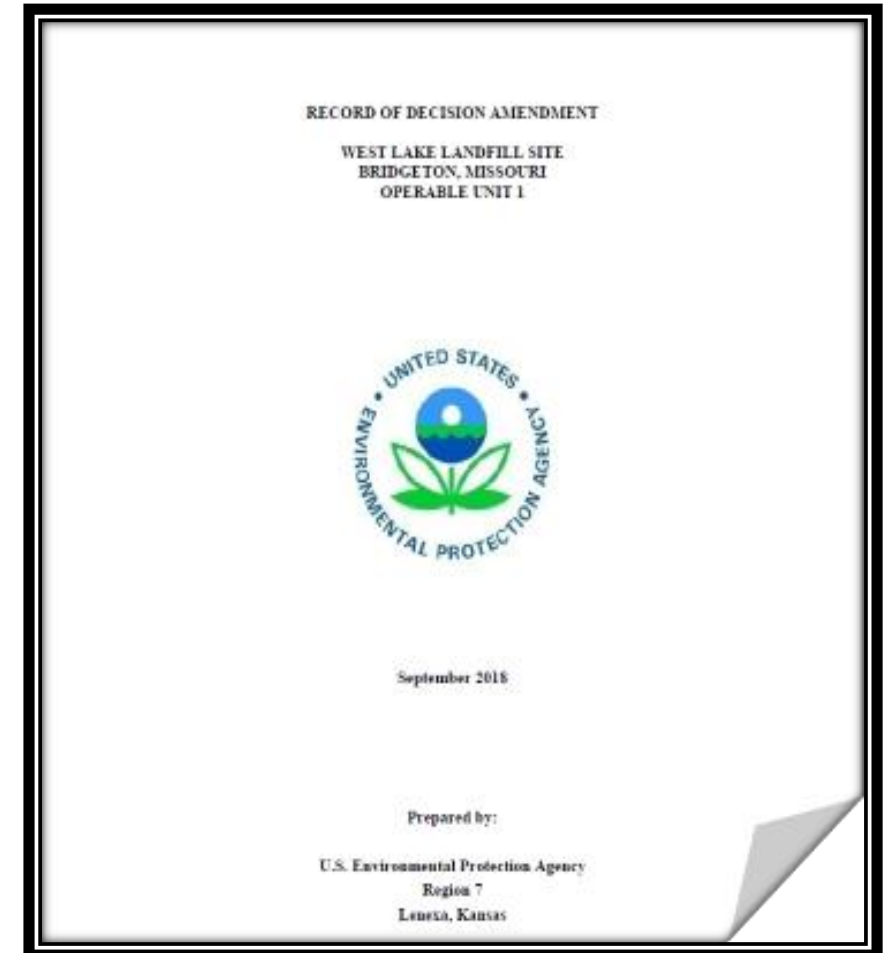
□ Overview of OU-1 Remedial Design (RD) Process

- Initial RD Deliverables
- 2nd Group of RD Deliverables
- OU-1 Design Investigation Field Work
- 3rd Group of Deliverables
- 4th Group of Deliverables
- Final Design



OU-1 Remedial Design

- **Initial RD Deliverables**
 - **Remedial Design Workplan**
 - **Design Criteria Report**
 - Emergency Response Plan
 - Site Management Plan





OU-1 Remedial Design

□ **Second Group of Deliverables**

- **Preliminary Excavation Plan**
- **Design Investigation Workplan**
- Field Sampling Plan
- Quality Assurance Project Plan
- Health and Safety Plan
- Data Management Plan
- **Preliminary Design (30%)**
- Loading, Transportation, and Offsite Disposal Plan



OU-1 Remedial Design

□ Design Investigation Field Work

- Refine/Confirm boundaries of Area 1 and Area 2 based on the definition of RIM
 - Samples from North Quarry are anticipated to be collected as part of Area 1 boundary confirmation
- Evaluate Preliminary Excavation Plan and update it based on additional data
- Use additional data in order to perform Optimization



OU-1 Remedial Design

- **Third Group of Deliverables**
 - Wildlife Hazard Mitigation Plan
 - Coordinate with Airport
 - Site-Wide Monitoring Plan
 - **Design Investigation Report**



OU-1 Remedial Design

□ Fourth Group of Deliverables

- Revised/Final Excavation
- Pre-Final Design (90%)
- Contractor Quality Assurance/Quality Control Plan
- Institutional Control Implementation and Assurance Plan
- Operations and Maintenance Plan and Manual



OU-1 Remedial Design

□ Final Design (100%)

- Will include Final or Pre-Final versions of all Supplemental Documents necessary for RA
- Pre-Final documents will be finalized in coordination with RA workplan by the RA contractor

OU-1 Remedial Design

- EPA
 - Chris Jump – project manager
 - Tom Mahler – Technical Expert
 - Ben Washburn – Public Affairs
- EPA Contractors
- Supporting Agencies
 - MDNR
 - Ryan Seabaugh
 - U.S Army Corps of Engineers



MISSOURI
DEPARTMENT OF
NATURAL RESOURCES



OU-1 Remedial Design

□ PRP's proposed Consultants

□ **PARSONS**

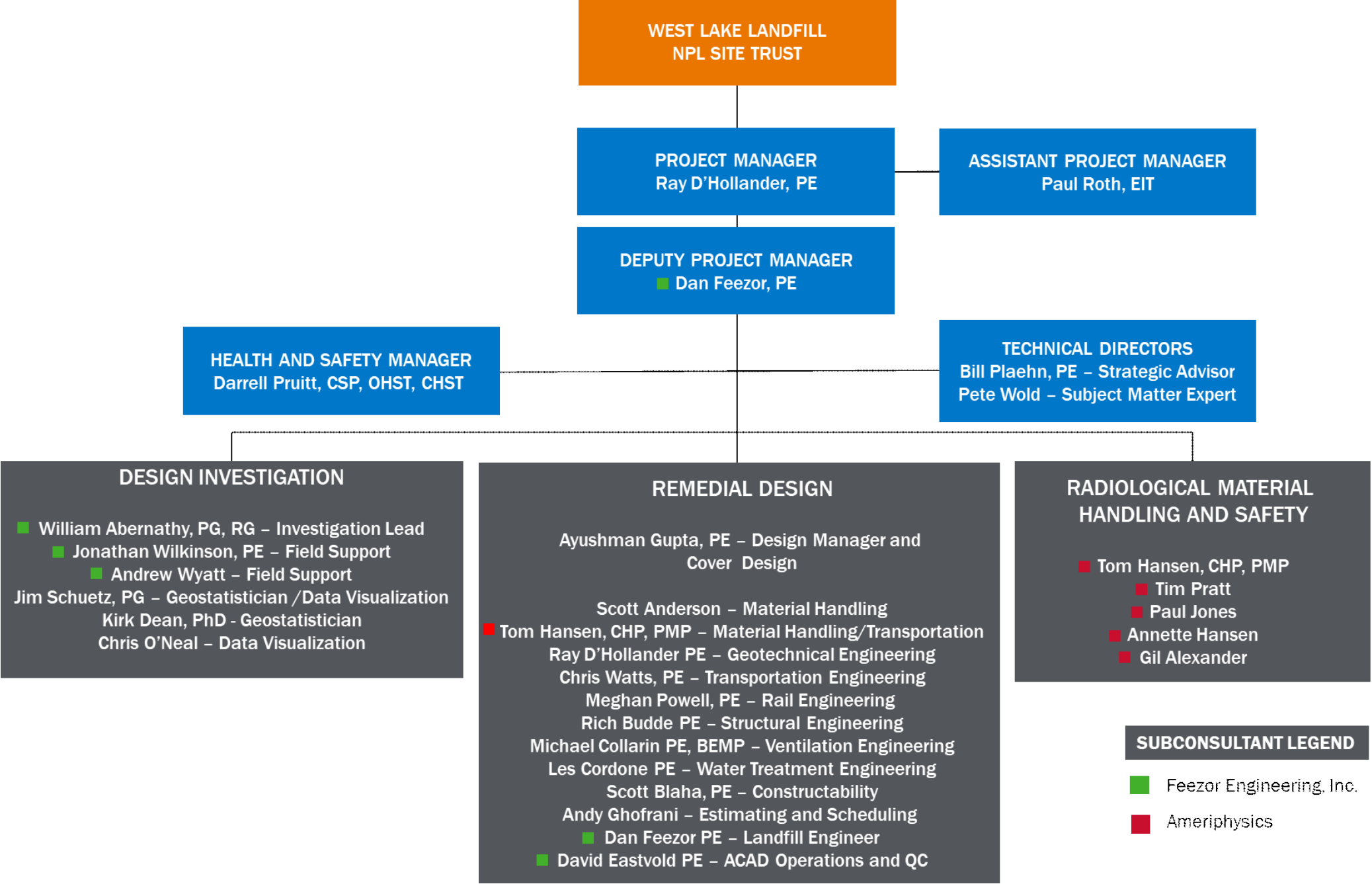
- Ray D'Hollander

■ **FEEZOR**
ENGINEERING ■

- Dan Feezor

■  **AMERIPHYSICS**

- Tom Hansen





OU-1 Remedial Design

- ❑ **Keeping the Public Informed throughout the Remedial Design Process.**
 - Site Profile Page
 - TCAG meetings
 - TASC contract
 - West Lake updates

OU-2 Remedial Design

- ❑ OU-2 includes the Closed Demolition Landfill, the Inactive Sanitary Landfill and the Bridgeton Landfill.
- ❑ Remedy Design for the Inactive Sanitary Landfill has been restarted per the 2008 Record of Decision.
- ❑ Initial OU-2 RD planning documents are due to the EPA later in June.
- ❑ The other OU-2 areas have been deferred to the MDNR per the 2008 ROD.
- ❑ Geotechnical and engineering evaluations to support the pending design work for the Inactive Sanitary Landfill is anticipated.

