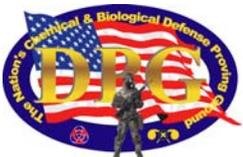


PROJECT UPDATE

Consent Order Sites

Jeff Ogawa, PE
Shaw Environmental, Inc.



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Hazardous Waste Management Units

- **HWMU (Hazardous Waste Management Units), otherwise known as Consent Order Sites, are sites at which waste disposal continued after 1980. The Consent Order, issued by the state of Utah, requires the investigation and development of closure plans for 41 sites at Dugway.**



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Recently Completed Work

- **HWMU 47**
- **HWMU 42**
- **HWMU 43**
- **HWMU 163**
- **Groundwater Monitoring**
- **Approved Site Closures**



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HWMU 47 – Former English Village Sewage Lagoons

- **Interim Actions Completed: August 2002**
 - Hot Spot Removals, Plugging Influent/Effluent Piping and Removal of Cables/Conduit
- **Non-Hazardous Petition for Biosolids Sludge**
 - Approved by the State; Biosolids will be Re-used at DPG IRP Projects for Vegetative Covers
- **Remedial Action: June - September 2003**
 - Demolition, Basin Pipe Removal, Biosolids Removal, Site Grading
- **Hydroseeding: November 2003**



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HWMU 47 –Hydroseeding



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HWMU 47 – Completed Site After Hydroseeding



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HWMU 47 – New Grass Sprouting



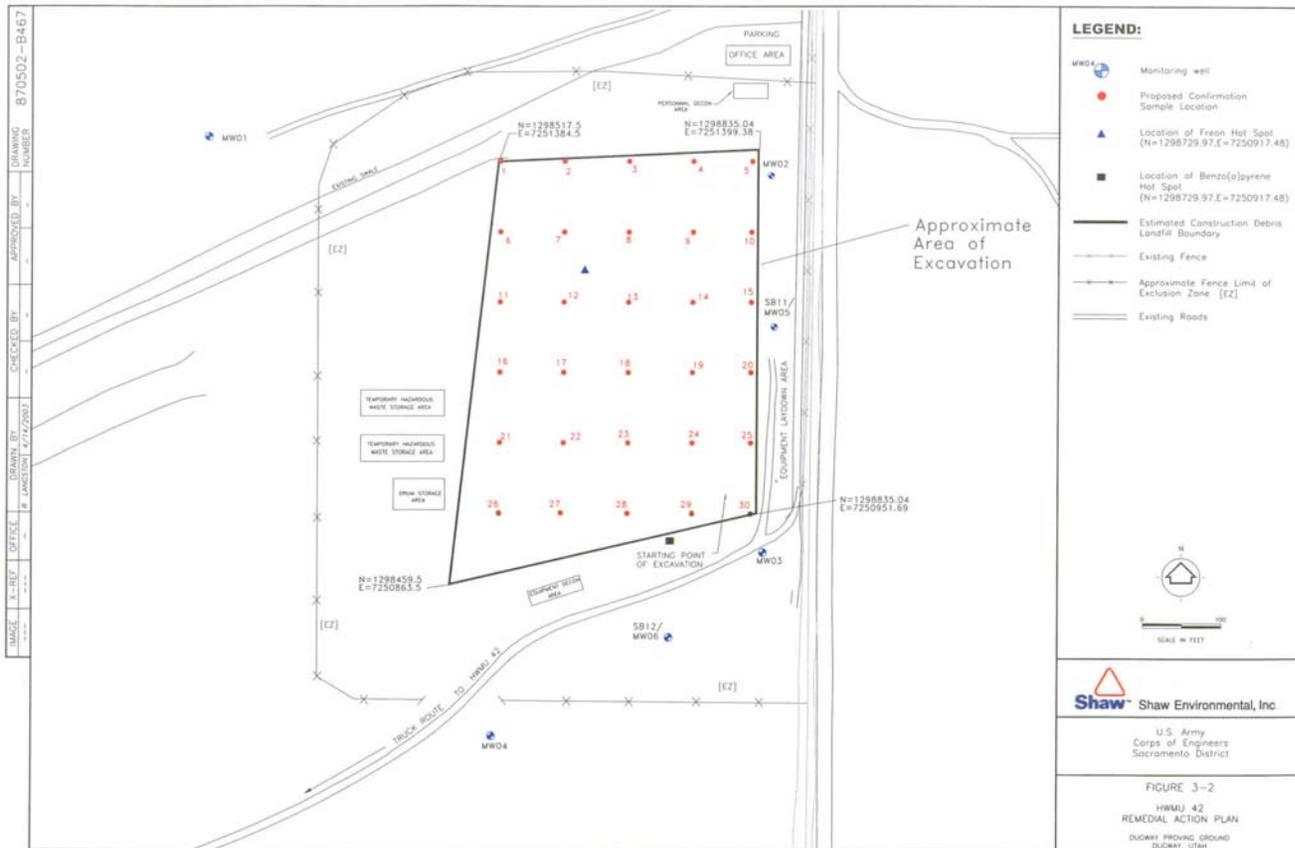
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HWMU 42 – Contractor's Landfill

- **Remedial Action: September 2003**
 - Excavated and screened landfill contents.
 - Hauled inert construction and demolition (C&D) debris to HWMU 43.
 - Excavated burial trench at HWMU 43 to dispose of C&D debris.
 - Stored screened soil at HWMU 43 for future use as subgrade material.
 - Performed confirmation soil sample to justify clean closure.
 - Backfilled and graded site.
 - Hydroseed site (work pending).



HWMU 42 – Site Layout



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HWMU 42 – Preparing the Site for Remedial Action



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HWMU 42 – Excavation and Screening Activities



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HWMU 42 – Loading C&D Debris into Screen Plant



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HWMU 42 – Applying Dust Suppressant to Temporary Haul Roads



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HWMU 42 – Debris (Tires) at HWMU 42 to be Picked Up and Recycled



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HWMU 42 – Landfill Contents Being Excavated



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HWMU 42 – Site Backfilled and Graded



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HWMU 43 – Old English Village Landfill

- **Biosolids Solids Storage: September 2003**
 - Biosolids from HWMU 47 stored at HWMU 43 for future use.
- **Subgrade Material Storage: October 2003**
 - Subgrade material screened from HWMU 42 and stored at HWMU 43 for future use.
- **C&D Debris from HWMU 42 Buried at HWMU 43: October 2003**
- **Screening and Debris Pickup: January 2004**
- **Geophysical Investigations to Finalize Trench Locations to Support Design: March 2003**



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HWMU 43 – Excavation of Disposal Trench for HMWU 42 C&D Debris



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HWMU 43 – Disposal Trench at HWMU 43



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HWMU 43 – Partially Filled Disposal Trench



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HWMU 43 – Covered Disposal Trench



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HWMU 163 – Fire Training Area

- **Potholing in Located Contamination**
 - Previous potholing by other contractors could not locate fire pit area.
 - Shaw’s previous sampling, based on assumed location of fire pit, did not locate fire pit.
- **Additional Potholing in November 2003 to Determine Nature and Extent of Contamination**



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HWMU 163 – Excavation



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HWMU 163 – Excavation



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Groundwater Monitoring

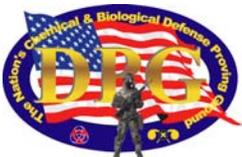
- **Annual Groundwater Monitoring Event: November 2003**
 - Groundwater water level measurements
 - Groundwater samples from HWMUs 42, 43, and 58
- **Annual Report for Fiscal Year 2003 Submitted February 2004**
 - Results consistent with previous year
 - Recommendation to maintain the same sampling



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Approved Site Closures

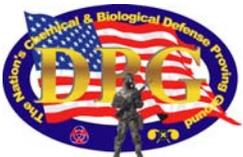
- **Closure Reports Approved By DSHW (last 6 months)**
 - HWMU 99
 - HWMU 124
 - HWMU 130
 - HWMU 165
- **Closure Reports in Approval Process**
 - HWMU 38
 - HWMU 40
 - HWMU 162
 - HWMU 167
 - HWMU 190



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Approved Site Closures

- **Closure Reports Being Reviewed by DSHW**
 - HWMU 36
 - HMWU 37
 - HWMU 46
 - HWMU 63-1 and 63-1
 - HWMU 128
 - HWMU 169



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Future Field Work (next 6 months)

- **Supplemental Soil and Groundwater Investigation at HMWU 55 (May 2004)**
- **Sub-grade Installation at HWMU 43 (May 2004)**
- **Debris Pickup at HWMU 38 (May 2004)**
- **Complete Supplemental Investigations at HWMUs 51 and 58 (Apr 2004)**



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HWMU 55 – Carr 3X Disposal Site

- **Site Background**
- **Hydrogeology**
- **Current Investigation Results (preliminary)**
- **Follow-on Sampling: proposed to determine vertical extent of groundwater contamination**



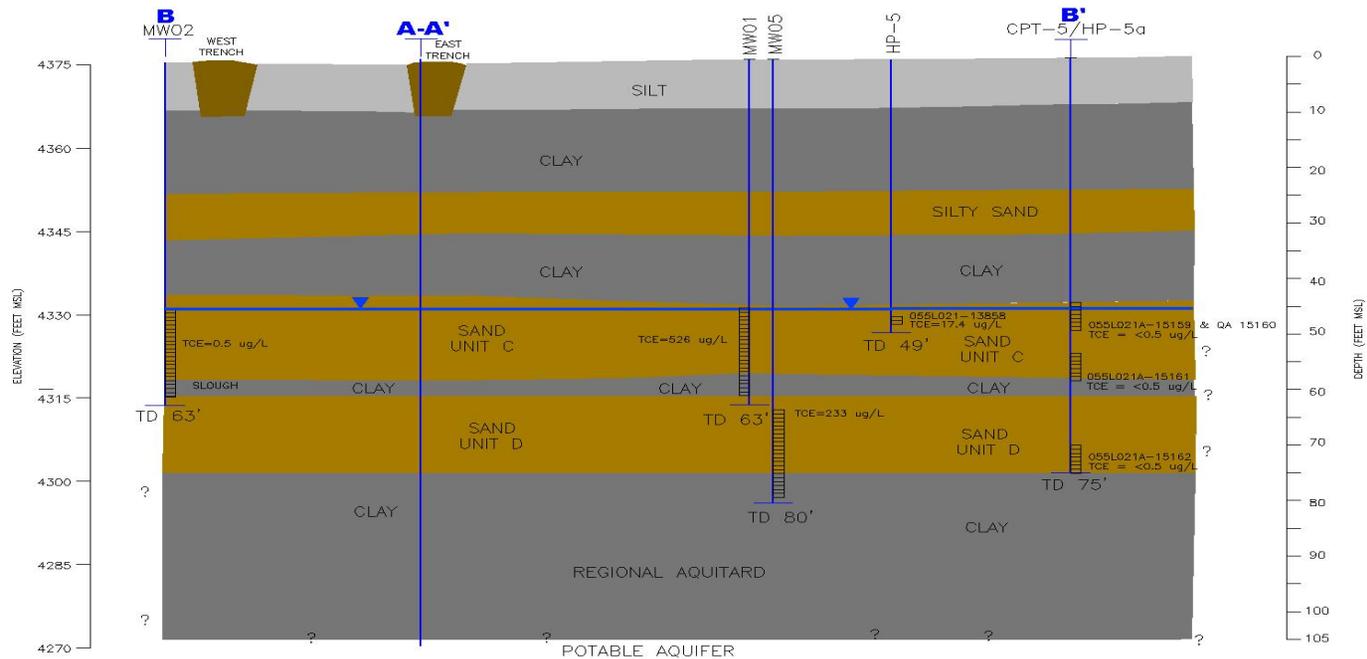
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HWMU 55 – Carr 3X Disposal Site



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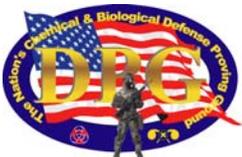
HWMU 55 – Carr 3X Disposal Site Hydrogeology



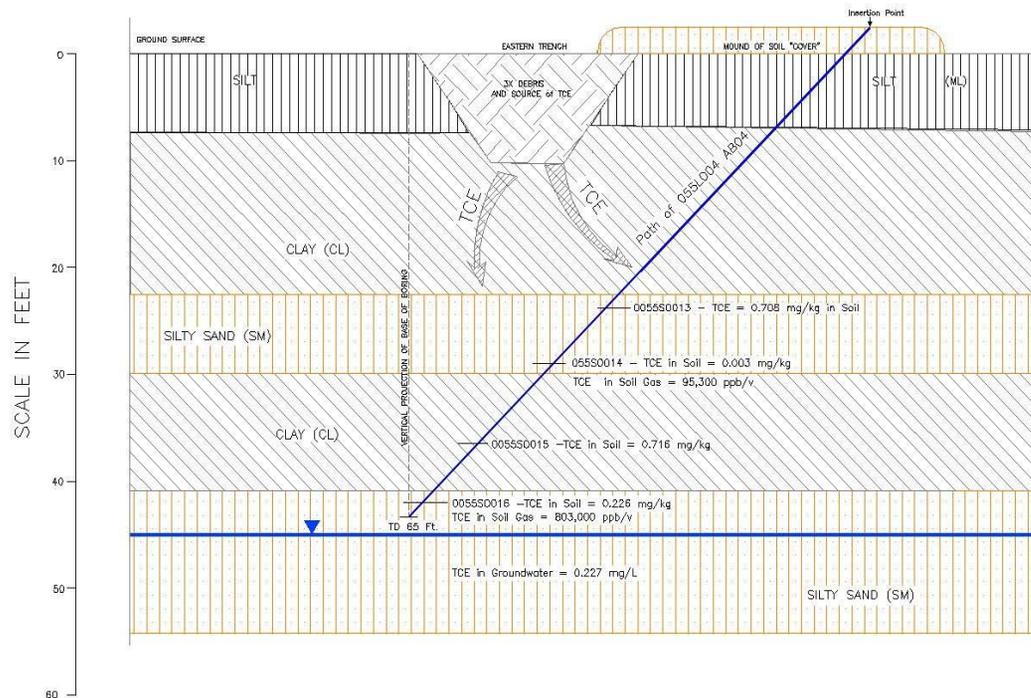
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HWMU 55 – Carr 3X Disposal Site

- **Current Investigation Results**
 - TCE detected in soil, soil gas, and groundwater.
 - Maximum TCE in soil detected under the eastern trench.
 - No detections of agent breakdown product.
 - Maximum soil gas TCE collected under eastern trench.
 - Both the deep and shallow soil gas results indicate a source in the eastern trench.

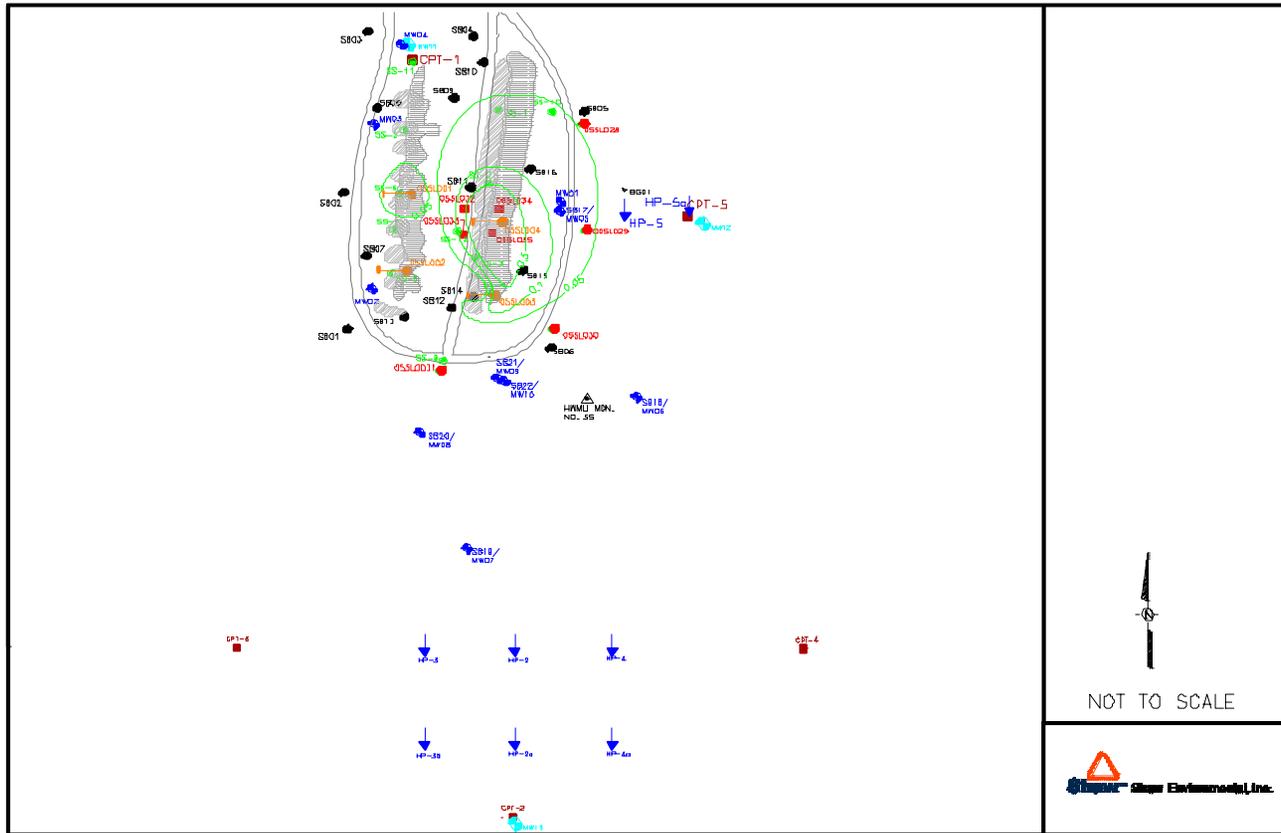


HWMU 55 – Carr 3X Disposal Site



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HWMU 55 – Soil Contamination

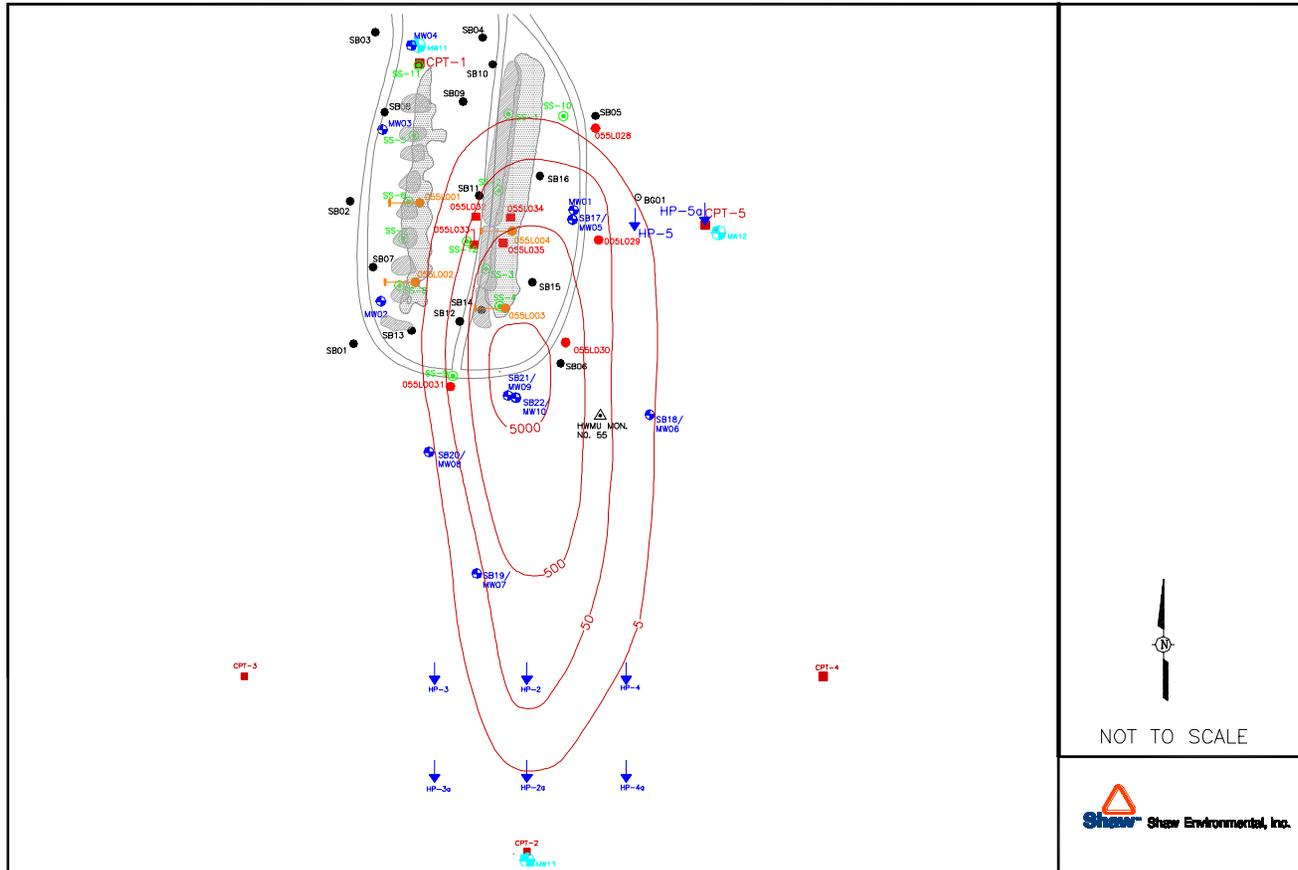


Preliminary



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HWMU 55 – Groundwater Contamination



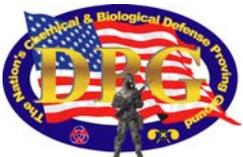
Preliminary



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HWMU 55 – Carr 3X Disposal Site

- **Follow-on Sampling**
 - Additional sampling to determine vertical extent of TCE contamination



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Questions?



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