"Real-Time" Remediation Demonstration Project

for

Sediment and Soil

at the

Paducah Gaseous Diffusion Plant
Paducah, Kentucky

May 31, 2006

"Real-Time" SW Remedial Demo

Objectives

1. Demonstration of the application of real-time in-situ and ex-situ on site instrumentation to accomplish the characterization and cleanup of contaminated soils and sediments at PGDP
2. Demonstration of 100% coverage approach for characterization that serves as basis for remedial activities (vs. statistically based, random, or arbitrary approaches)
3. Demonstration of Dynamic Planning Process(es) to determine the technical approach for implementing remedial activities.
4. Demonstration of startup and completion of characterization/remediation activities in a single, short-term, field mobilization.
5. Demonstration of approach that will require removal only of contaminated material and limit generation of waste
6. Demonstration of the time and cost savings to DOE, DOE contractors, regulatory community, stakeholders

"Real-Time" SW Remedial Demo

Impacts/Benefits:

1. Gain acceptance of regulatory community, contractors, and stakeholders thru Project Team utilization of Dynamic Planning Processes developed by DOE (Adaptive Sampling and Analysis – ASAP) and EPA (TRIAD) that develops and implements activities.
2. Gain acceptance of regulatory community, contractors, and stakeholders thru their participation in Project Team which will determine the technical approach for activities.
3. Gain acceptance of real-time remedial approach from DOE contractors, regulators, and stakeholders based on project performance
4. Reduced time/cost for remediation relative to currently employed technologies.

"Real-Time" SW Remedial Demo

Status

1. Background materials provided to DOE, KDWM, and Project Team
2. Principal Contracts in place (Argonne, Tricord)
3. Project team scoping June 2006
4. Fieldwork late summer/fall 2006
5. Evaluation of three potential locations completed
6. Project Team scoping CC Monday, May 5

"Real-Time" SW Remedial Demo

Site & Demonstration Needs

1. Presence of metal, radionuclide & organic contaminants
2. Applicability of "Real-Time" methods to contaminants
3. Implementation without additional SW-control actions to conduct demonstration
4. Implementation with minimum ingress & egress restrictions additional actions to minimize impact on the ditch during the project.
5. Accessibility for large number of project contractors & field personnel
6. Ease of access for Project field activities
7. Access for project observation
8. Potential for "final" action when completed

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SITE ASSESSMENT

Evaluated data and implementation at three (3) Outfalls.

1. Down gradient of KPDES Outfall 011 to Little Bayou Creek.
2. NSDD Section 3 from Security Fence to Ogden Landing Road.
3. Outfall 010 Exposure Unit 10; Inside security fence.

RESULTS

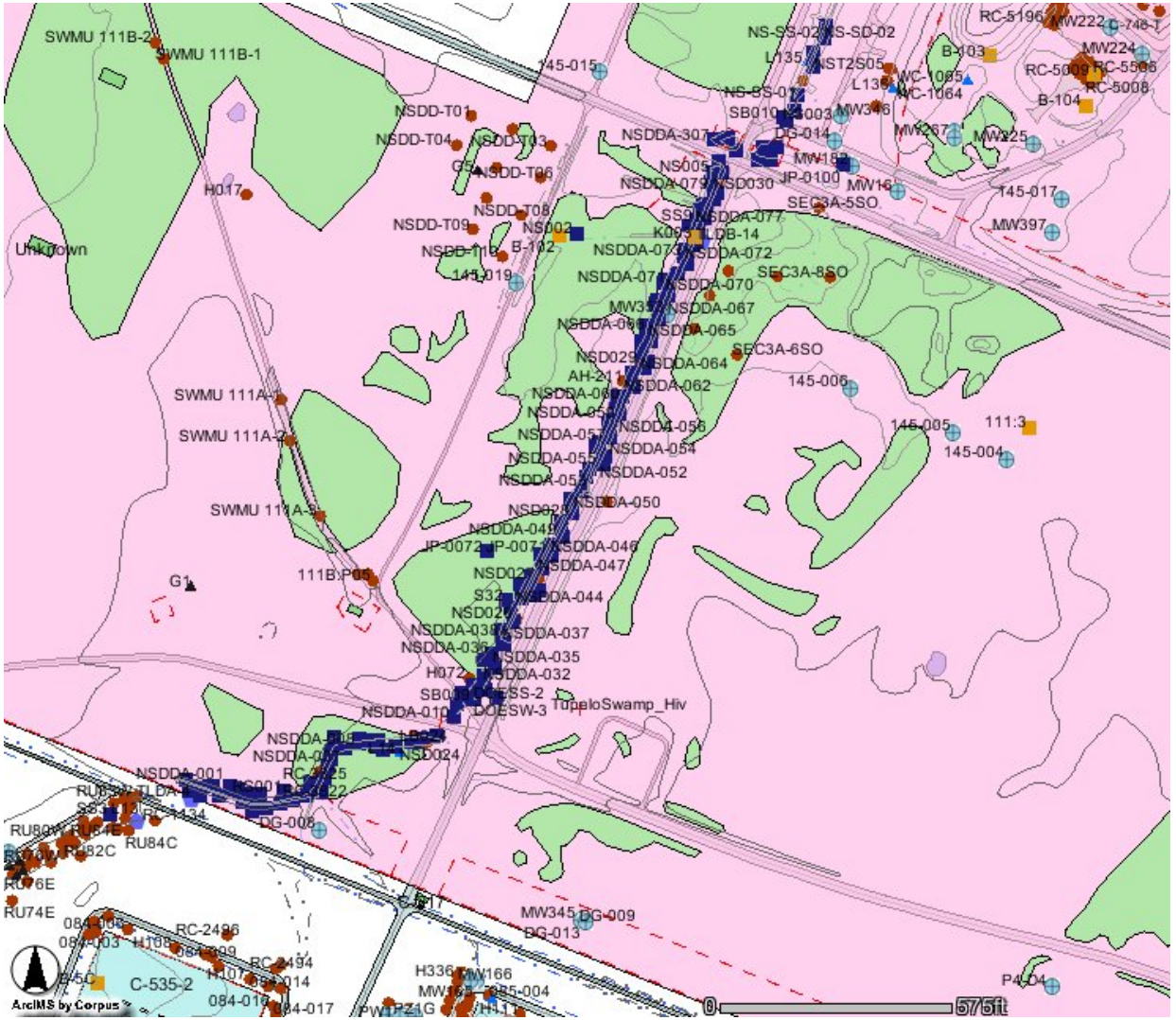
NSDDSection 3 meets project needs

Real-Time" SW Remedial Demo

NSDD Section 3 – Information

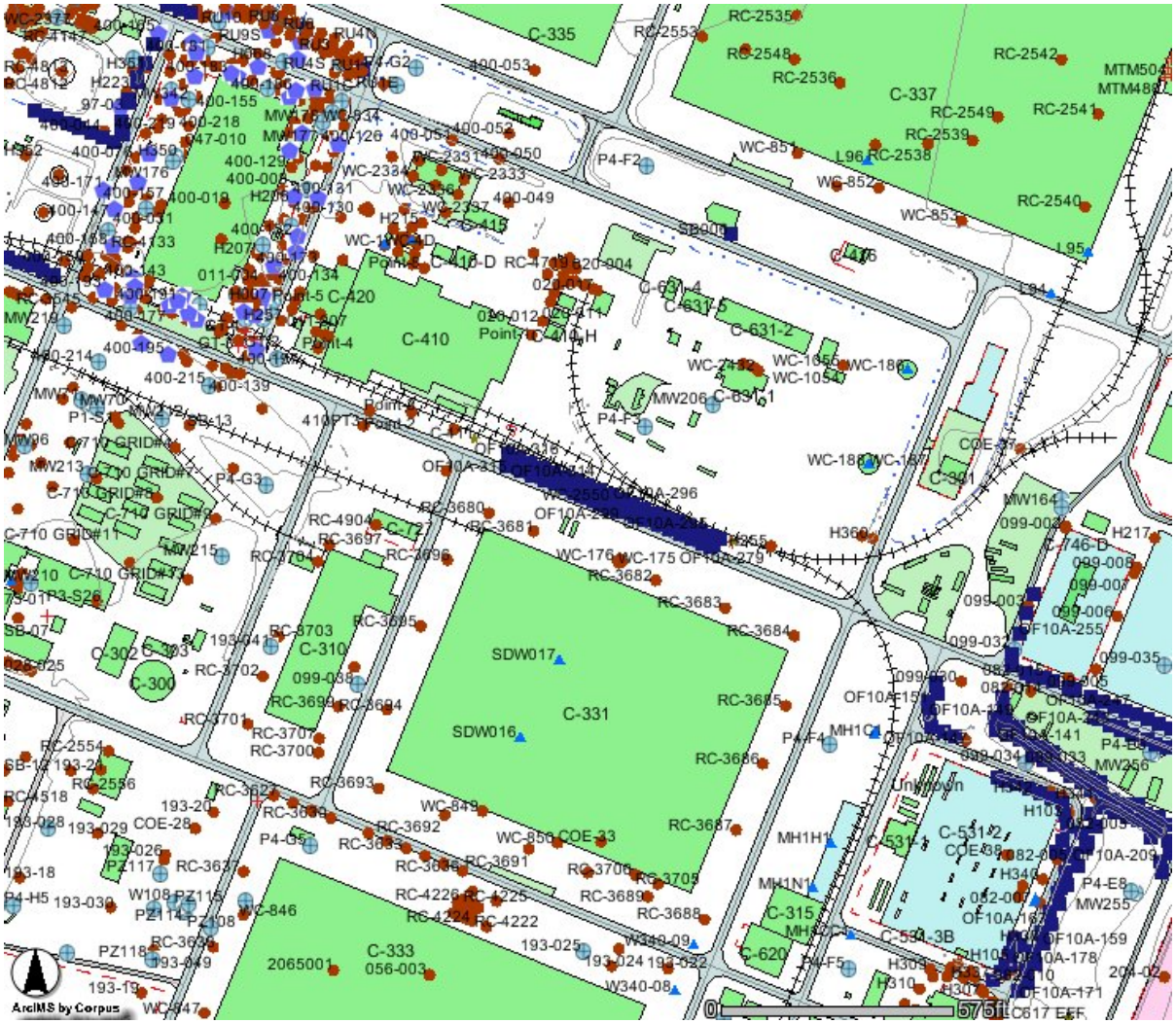
1. Location – outside of security fence on DOE property
2. Current Status – Investigated during SWOU FS
3. Will be addressed with removal action per SMP
4. EE/CA to be completed
5. Cleanup Goals – TBD with Project Team
6. Ability to meet cleanup goals TBD based on pairing of field technologies with contaminants/contaminant levels
7. Waste volumes and contaminant levels in waste TBD with Project Team

NSDD Section 3

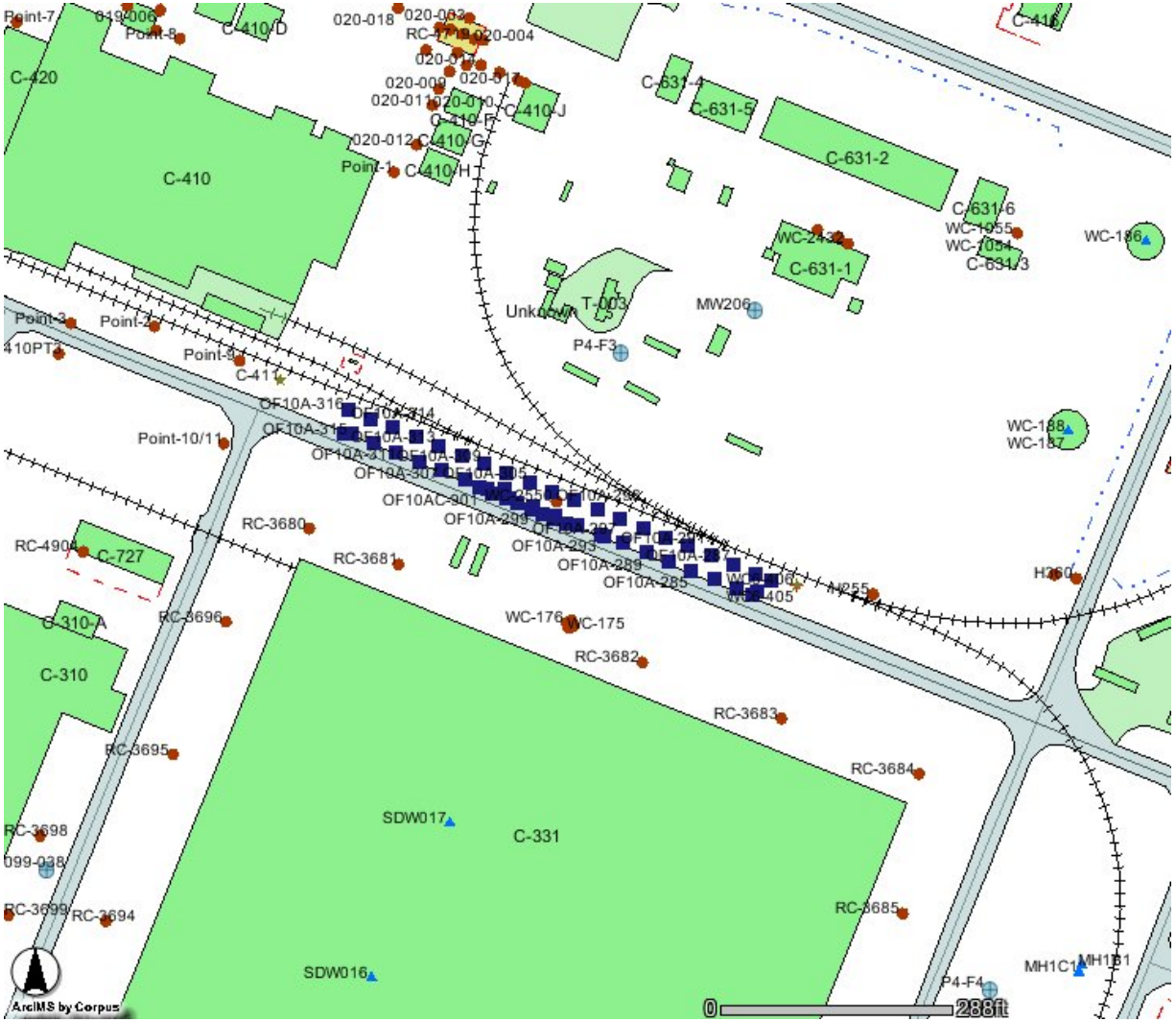


KRCEE

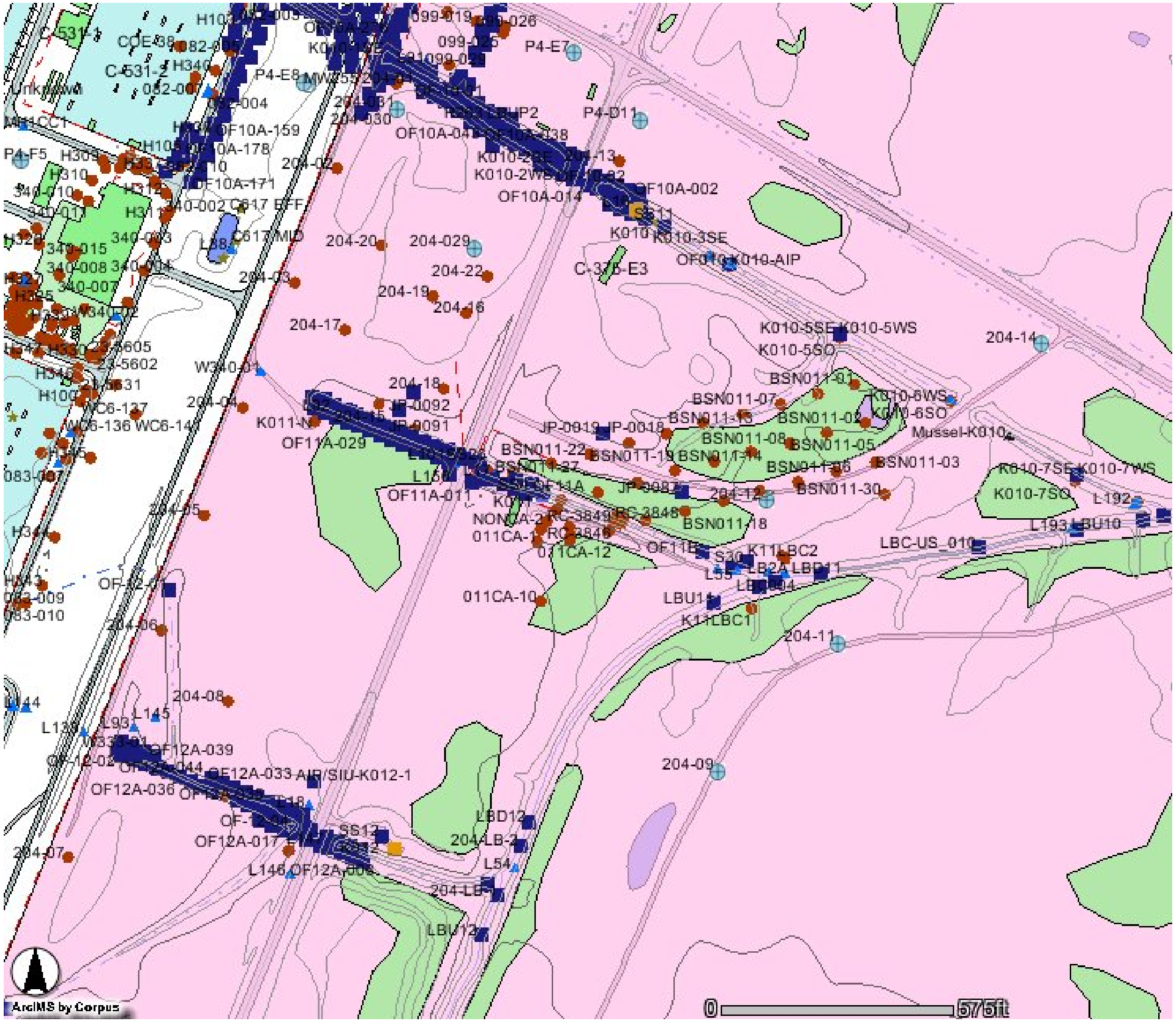
Outfall 010, Exposure Unit 10



Outfall 010, Exposure Unit 10



Outfall 011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P4-F5
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340-011
H312
340-002
C617 EFF
C617 MID
L88
340-003
340-015
340-008
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H325
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H346
H100
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K11LBC1
LB2A
LBD11
LBU11
204-11
204-09
ArcIMS by Corpus
0
575ft

Outfall 011, Weir to BBC