

# Surface Water On-Site Removal Action Overview

August 16, 2007



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# Surface Water Operable Unit Scope

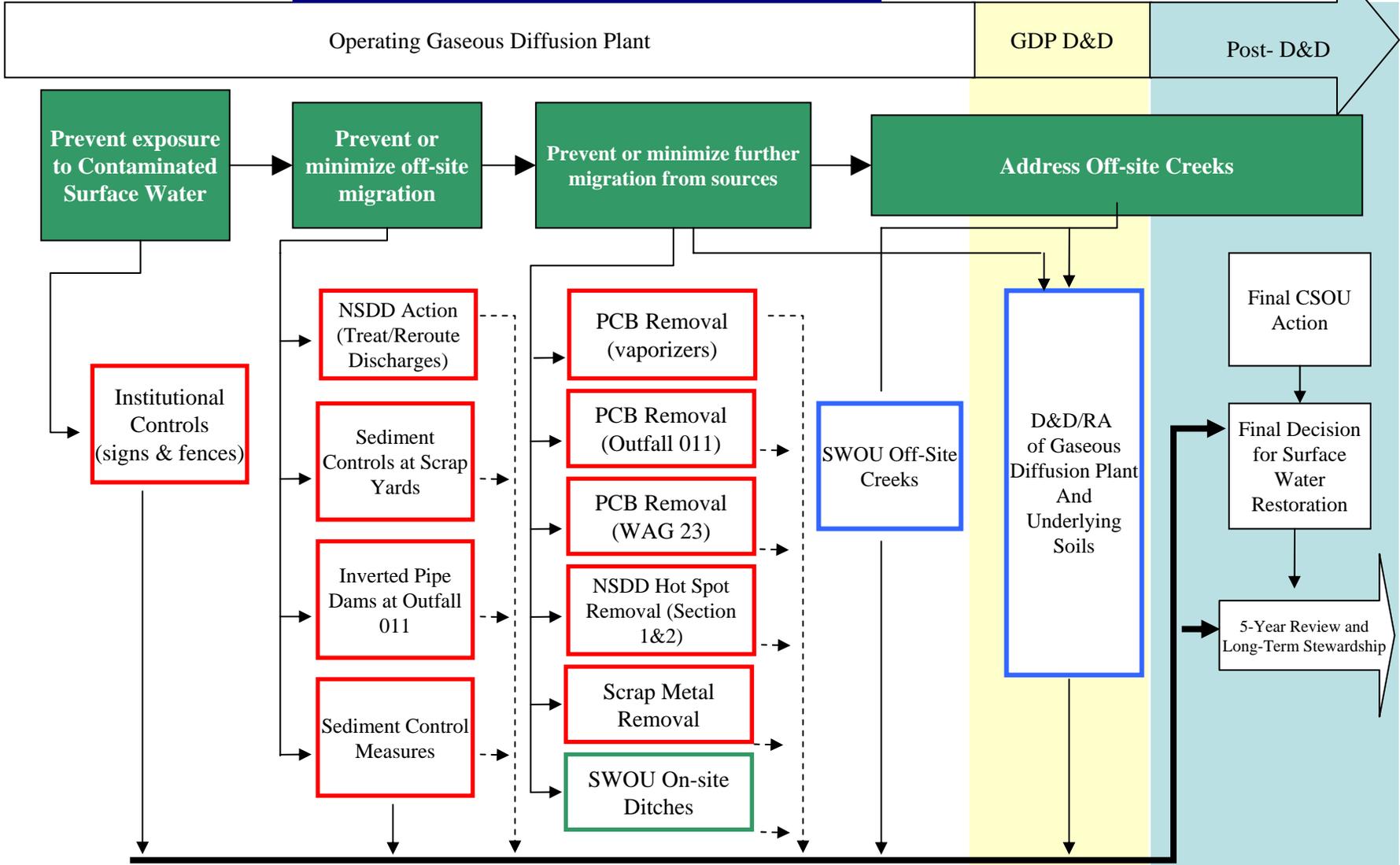
- Overall scope is to remediate ditches, storm sewers, and creeks to agreed-upon cleanup levels
- Site Management Plan divides SWOU into four main projects
  - Two where removal is completed
    - Scrap Metal
    - North-South Diversion Ditch – Sections 1 and 2
  - One Removal Action in process
    - Surface Water (On-site)
  - One Removal Action scheduled (by 2017)
    - Surface Water (Off-site)



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# Paducah Surface Water Strategy



On-Going Environmental Restoration and Performance Monitoring Data Activities

Construction complete
  In process
  Future



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# Scope - Surface Water On-Site

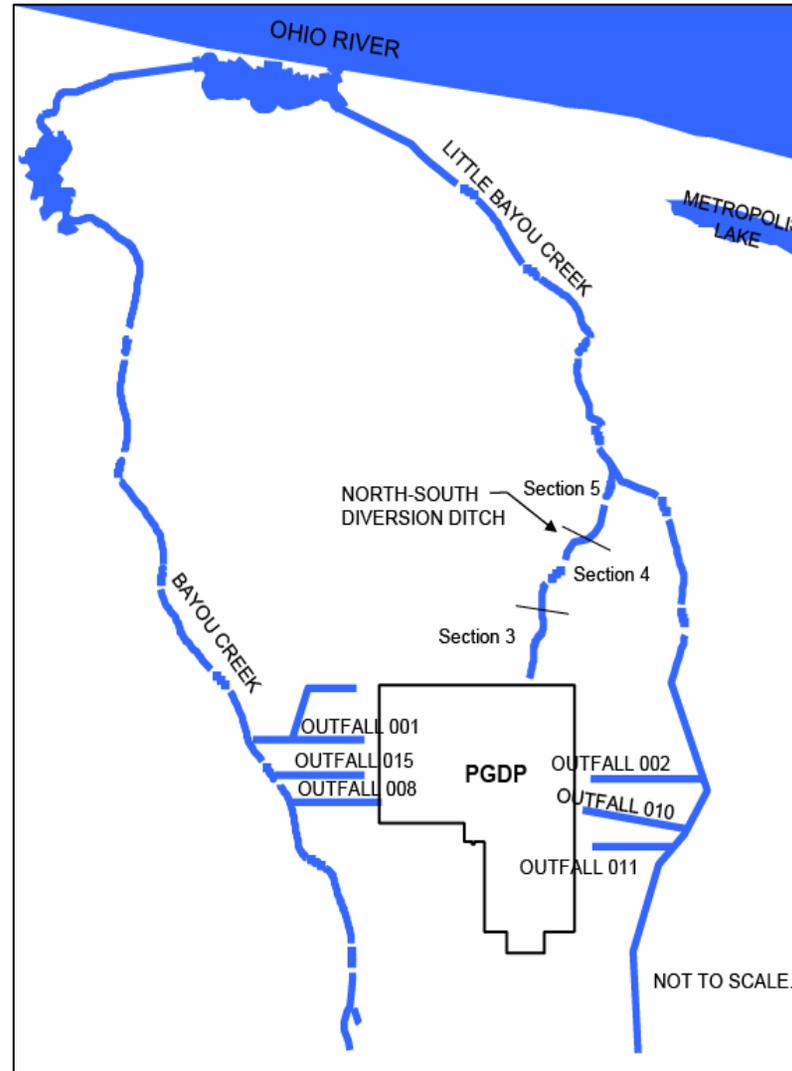
- Conduct a Site Investigation/Baseline Risk Assessment:
  - NSDD Sections 3, 4, and 5
  - PGDP outfalls 001 (those portions not addressed by the Scrap Metal Basin), 002, 008, 010, 011, 012 (those portions downgradient of the storm sewer discharge point), and 015
  - Internal ditches associated with the outfalls at PGDP (including SWMU 92 and SWMU 97)
  - PGDP storm sewers associated with C-333-A, C-337-A, C-340, C-535, and C-537
- Evaluate and select remedies
- Implement actions, as necessary, to address hot spots
- Evaluate need for additional sediment controls
- Engineering Evaluation/Cost Analysis in final development



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# Surface Water Operable Unit Overview



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# Surface Water (On-site) Site Investigation

- The SWOU (On-site) Site Investigation supports
  - Identification of hot spots that may be contributing to off-site migration and risks to human health and the environment
  - Development of source terms to support transport modeling and exposure point concentrations
  - Future evaluation of source actions (e.g., hot spot removal)
  - Future evaluation for additional sediment control measures



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# On-Site Baseline Risk Assessment (BRA)

- Identified potential “hot spot” areas in the NSDD and in on-site ditches and associated areas
- Indicates no off-site migration of contamination from potential “hot spots” at unacceptable levels based upon modeling of Site Investigation (SI) data
- Human health risks greater than the EPA risk range may exist under some scenarios; however, under site specific current scenarios, risk falls within the EPA risk range
- Future evaluations of ecological risk may need to be performed



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# CERCLA Document Schedule

Removal Notification	January 2007
D2 R1 SI/BRA Report	July 2007
D1 EE/CA	August 30, 2007
D2 EE/CA	60 days after D1
D1 Action Memorandum*	February 12, 2008
D1 Removal Action Work Plan*	June 12, 2008

\* Upcoming enforceable milestone dates are currently under review by EPA and Kentucky



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# Surface Water (On-Site) EE/CA

- The Engineering Evaluation/Cost Analysis will:
  - Describe the environmental conditions supporting the need for the removal action
  - Present cleanup goals and cleanup levels based on a risk evaluation
  - Outline and evaluate removal action alternatives
  - Recommend the preferred alternative that best meets the removal action objectives



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# EE/CA Issues – Alternatives Considered

- Alternative 1 - No Action
- Alternative 2 - Interim Institutional Controls
  - Installation of fencing and hazard posting around “hot spots”
  - Inspection and maintenance of fencing and hazard postings
  - Long-term monitoring to ensure that contaminant migration does not occur
- Alternative 3 - Engineering Controls and Interim Institutional Controls
  - Installation of impermeable liner/barrier in “hot spots”
  - Installation of fencing and hazard posting around “hot spots”
  - Inspection and maintenance of fencing and hazard postings
  - Long-term monitoring to ensure that contaminant migration does not occur
- Alternative 4 - Excavation and Interim Institutional Controls
  - “Hot spot” excavation and restoration
  - Verification sampling during excavation
  - No long-term effluent monitoring for contaminant migration
  - Continued inspection and site maintenance



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