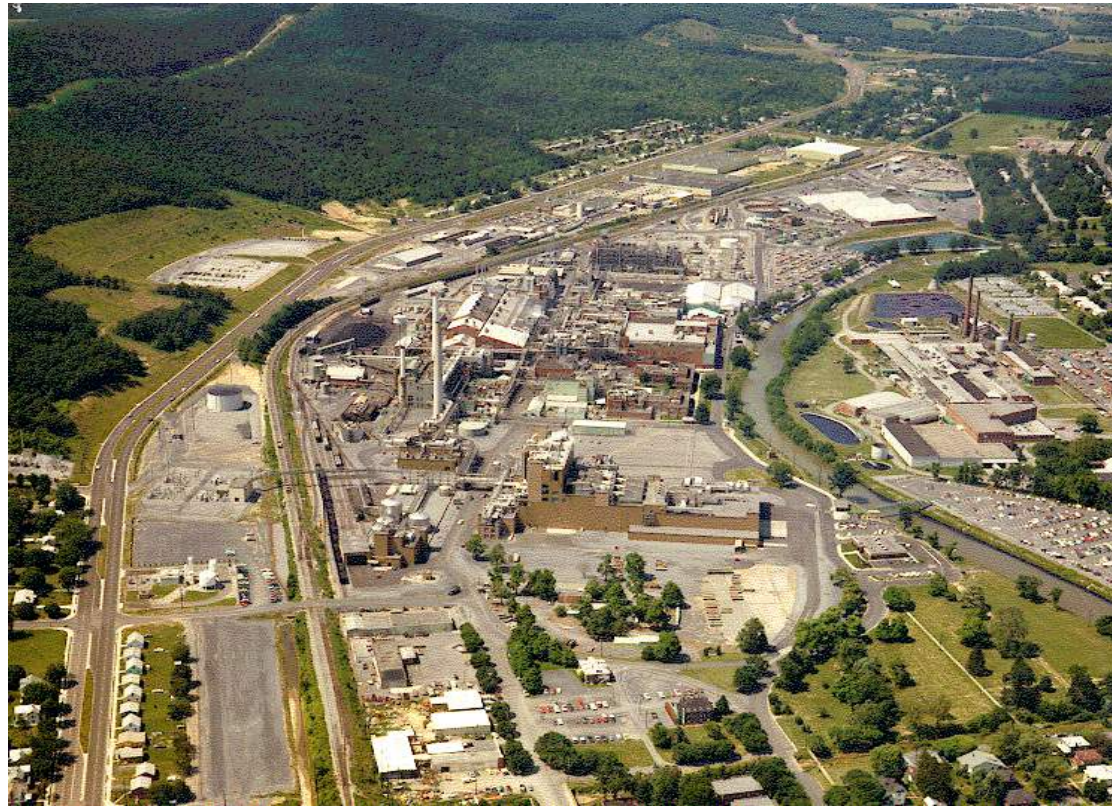


Corrective Action Program Review Waynesboro Invista Plant

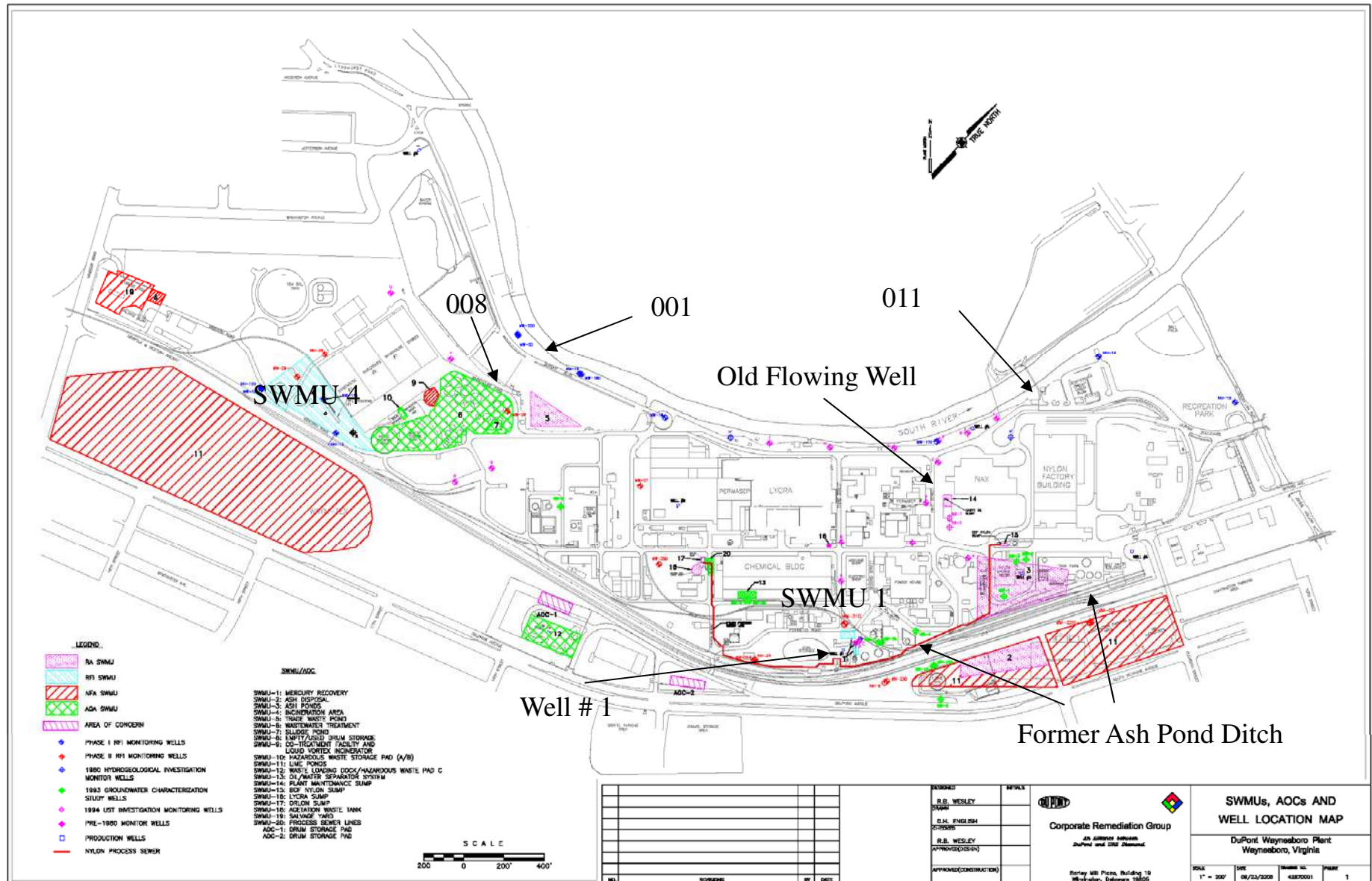


April 21, 2009

Background

- Plant operations began in 1929
 - Acetate flake and yarn operations 1929-1977
 - Mercury used from 1929-1950
 - Orlon, Permasep, Lycra and BCF Nylon
- RCRA Corrective Action Permit in 1998
- Plant assets sold to Koch Industries (Invista) in 2003
- Property (land) transfer upon the completion of the Corrective Action Program

Site Layout



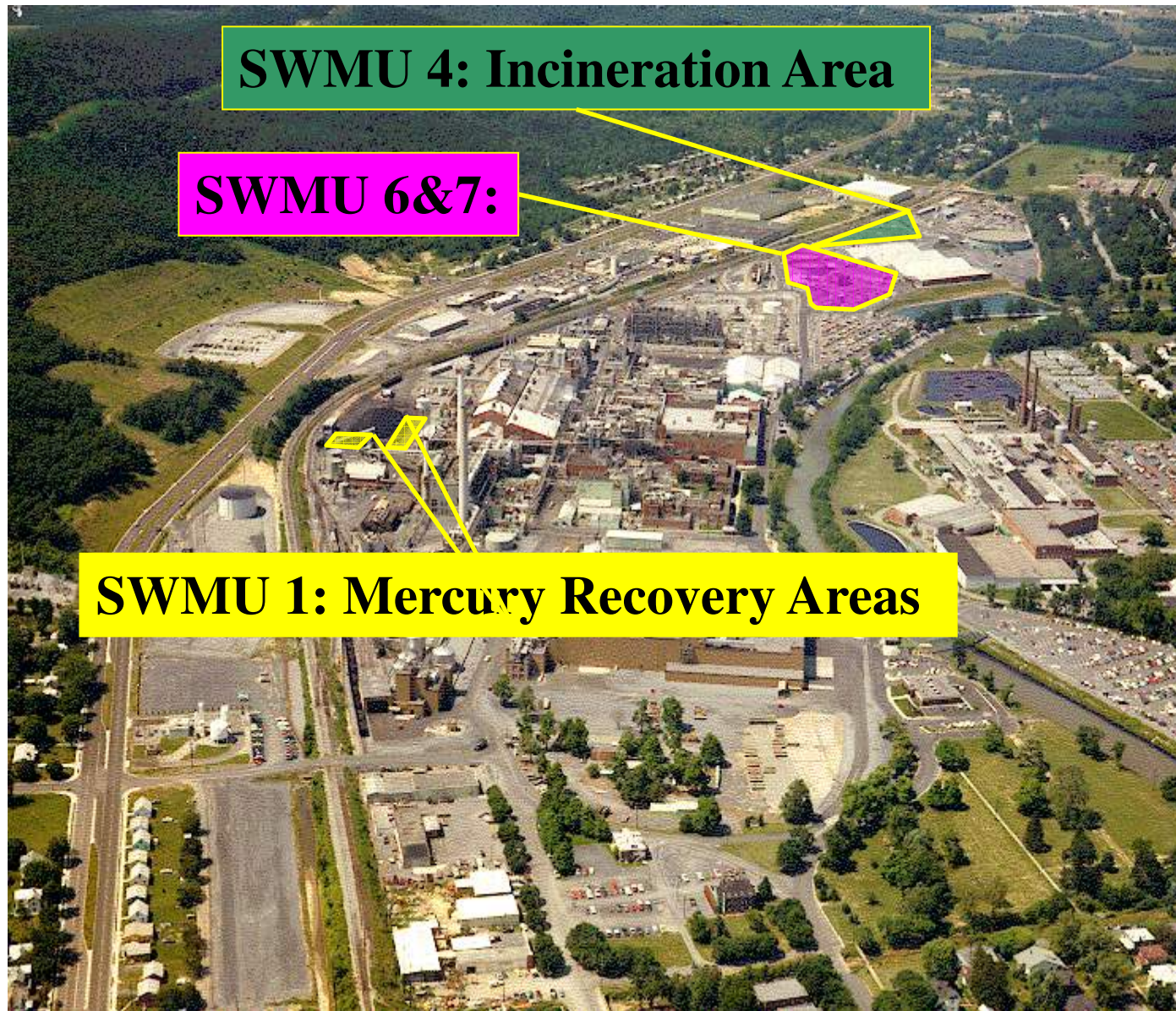
RCRA Corrective Action Programs

- Plant RCRA Facility Investigation (RFI)
- Corrective Measures Study (CMS) and
- Groundwater Monitoring Program
- Stormwater (Outfall) Monitoring
- Sewer Investigation
- Hg Inspection and Abatement Program

RFI

- Three phases of investigation
 - Final phase completed in 4Q08
 - 20 SWMUs, 2 AOC's
 - Soil, groundwater, surface water
- Remedial Investigation (RI) / Risk Assessment (RA) Report
 - Submittal in 3Q09
- SWMUs Identified for Corrective Measures Study (CMS)
 - SWMU 1 – Former Mercury Recovery Area
 - SWMU 4 – Former Incinerator Area

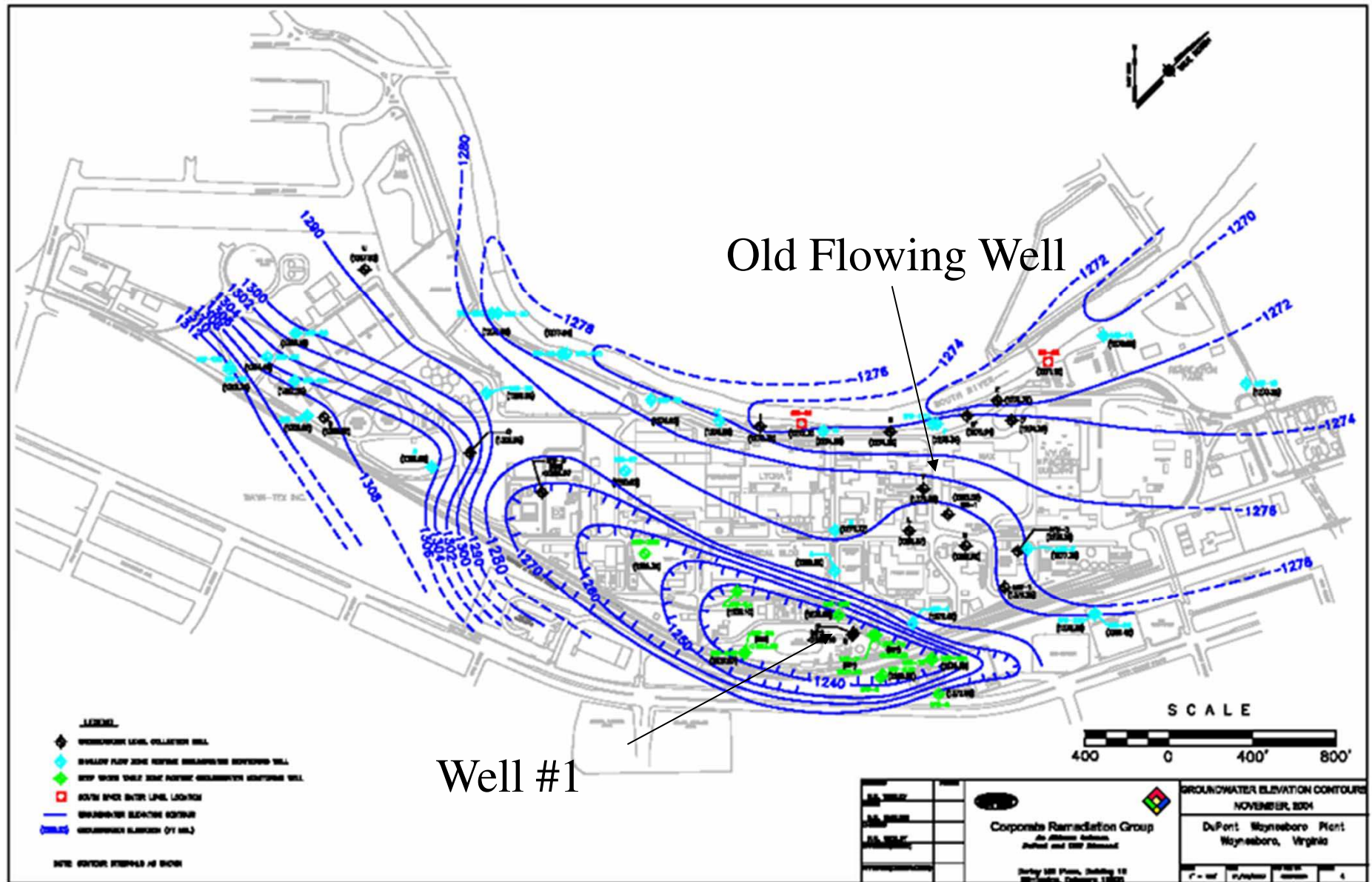
RFI



Groundwater Monitoring Program

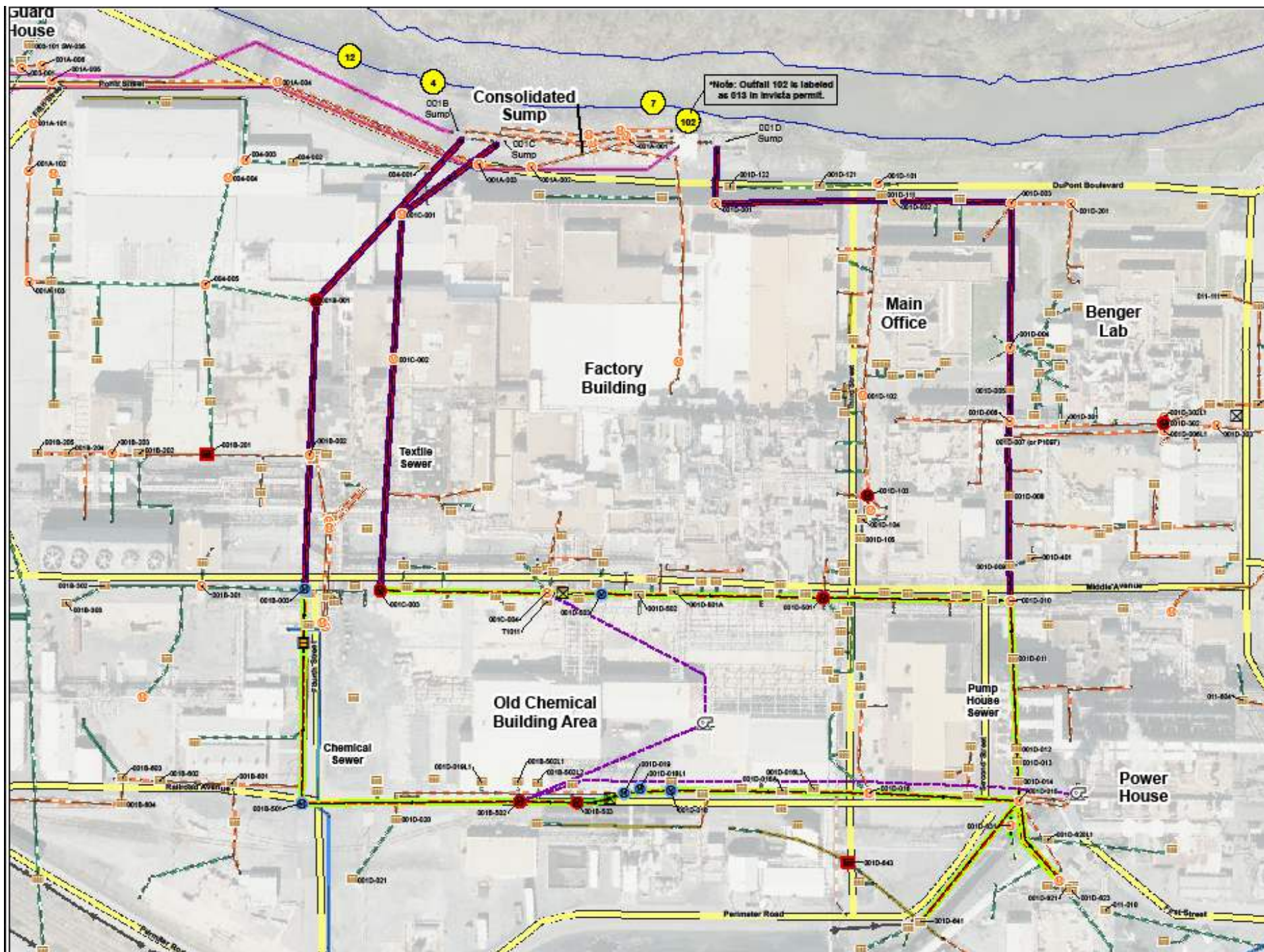
- Semiannual monitoring program recommended after the Phase I RFI
- Monitoring Plan submitted in 2004 (38 wells, 55 water levels)
- Four years (9 events) of sampling completed to date
- Findings
 - Hg concentrations localized at SWMU-1, SWMU-4 and SWMU 7
 - Deep Water Table Zone water levels (Northeast Area) fluctuate significantly
 - Downgradient perimeter wells are below VGS criteria

Groundwater Monitoring Program



Sewer Investigation

- Phase I (Completed in January 2007)
- Phase II (Completed in June 2008)
 - Closed circuit television (CCTV) inspection in the vicinity of the Former Chemical Building
 - Notable amounts of sediment and debris present
 - Cracks observed, some showing groundwater infiltration
- Additional work proposed for 2009
 - Complete inspection of sewer at Former Chemical Building
 - Characterization of Outfall 011 system



Potential Interim Measures (IMs)

The map illustrates the layout of an industrial facility with various buildings and sewer infrastructure. Key features include:

- Buildings:** Consolidated Sump, Main Office, Benger Lab, Factory Building, L-50 Bldg, Old Chemical Building Area, and Power House.
- Sewer Lines:** Textile Sewer, Chemical Sewer, and Pump House Sewer.
- Flow Indicators:** Red arrows showing the direction of flow in the sewer lines.
- Monitoring Points:** Two green boxes labeled "Proposed Monitoring Point" are located near the Chemical Sewer and the Pump House Sewer.
- Other Labels:** OuPort Boulevard, Middle Avenue, Perimeter Road, and various numerical identifiers (e.g., 001A-101, 001D-101).

Potential Interim Measures (IMs)

Objective: Prevent source areas from impacting sewers

- Former trenches in L-50 impacted with Hg
- Trenches connected to roof drains

Solution: Eliminate rainwater from flushing through trenches

- Disconnect and Re-route roof drains
- Seal off connections of trenches to sewer
- Monitor sewer water at downstream locations

Corrective Measures Study (CMS)

- SWMUs identified in RFI for active remediation
 - SWMU 1 - Former Hg Recovery Area / L-50 / Sewers
 - SWMU-4 – Former Incineration Area
- Initial efforts started in January 2009
 - Technology screening
 - Treatability samples collected
- Next steps
 - Pilot testing (possible Hg segregation technologies)

Stormwater (Outfall) Monitoring

- Four Phases of Monitoring (2003-2008)
 - Monitoring for Hg at 11 outfalls plus other upstream locations
 - 38 baseflow and 12 storm events
 - Greatest loading at Outfalls 001 and 011
- Proposed Monitoring activities
 - Continued monitoring of Outfalls 001,010 and 011
 - Upstream monitoring at Consolidated Sump

Hg Inspection and Abatement

- Mercury originally observed at drainage feature near Chemical Building
- Beads removed and disposed with Hg Vacuum
- Mercury recovered during test pit excavations
- Monthly inspections conducted at sewer features near Chemical Building

Minuteman MRS 2
Hg Vacuum



Summary

- RFI Field Investigation complete, report to be submitted in 2009
- Mercury-impacted groundwater and soils localized at SWMUs 1, 4, and 7
- Outfall discharges to the South River will continue to be monitored
- Interim Measures proposed to eliminate impact of Hg on sewers
- Corrective Measures Study underway

Questions?