

Corrective Action Program Review Waynesboro Invista Plant



October 21, 2008

Background

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

LEGEND

SWMU/AOC

RA SWMU
RFI SWMU
NFA SWMU
ADA SWMU
AREA OF CONCERN

PHASE I RFI MONITORING WELLS
PHASE II RFI MONITORING WELLS
1980 HYDROGEOLOGICAL INVESTIGATION MONITOR WELLS
1983 GROUNDWATER CHARACTERIZATION STUDY WELLS
1994 LIST INVESTIGATION MONITORING WELLS
PRE-1980 MONITOR WELLS
PRODUCTION WELLS
NYLON PROCESS SEWER

SWMU/AOC

SWMU-1: MERCURY RECOVERY
SWMU-2: ASH DISPOSAL
SWMU-3: ASH POND
SWMU-4: INCINERATION AREA
SWMU-5: TRASH WASTE POND
SWMU-6: WASTEWATER TREATMENT
SWMU-7: SLUDGE POND
SWMU-8: LIQUID/SLUDGE DRUM STORAGE
SWMU-9: CO-TREATMENT FACILITY AND LIQUID WASTE INCINERATOR
SWMU-10: HAZARDOUS WASTE STORAGE PAD (A/B)
SWMU-11: LIQUID POND
SWMU-12: WASTE LOADING DOCK/HAZARDOUS WASTE PAD C
SWMU-13: DI/WATER SEPARATOR SYSTEM
SWMU-14: PLANT MAINTENANCE SUMP
SWMU-15: BOY NYLON SUMP
SWMU-16: LYCRA SUMP
SWMU-17: DRYLON SUMP
SWMU-18: ACTIVATION WASTE TANK
SWMU-19: SALVAGE YARD
SWMU-20: PROCESS SEWER LINES
AOC-1: DRUM STORAGE PAD
AOC-2: DRUM STORAGE PAD

SCALE

200 0 200' 400'

PERSONNEL

NAME	DESIGNATION	DATE
R.S. WESLEY	PROJECT MANAGER	
R.H. ENGLISH	PROJECT MANAGER	
R.S. WESLEY	PROJECT MANAGER	
APPROVED (CONSTRUCTION)		

Corporate Remediation Group

AN AMEREN COMPANY

Wayneboro Plant, Building 18

Wayneboro, Virginia 22605

SWMUs, AOCs AND WELL LOCATION MAP

DuPont Wayneboro Plant

Wayneboro, Virginia

Scale

1" = 200'

DATE

06/23/2009

PROJECT NO.

43870001

PAGE

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NEL	NOVATIONS	DY	GATE

	R.B. WESLEY
DRAWN	
	E.H. ENGLISH
CHECKED	
	R.B. WESLEY
APPROVED(DSIGN)	
APPROVED(CONSTRUCTION)	

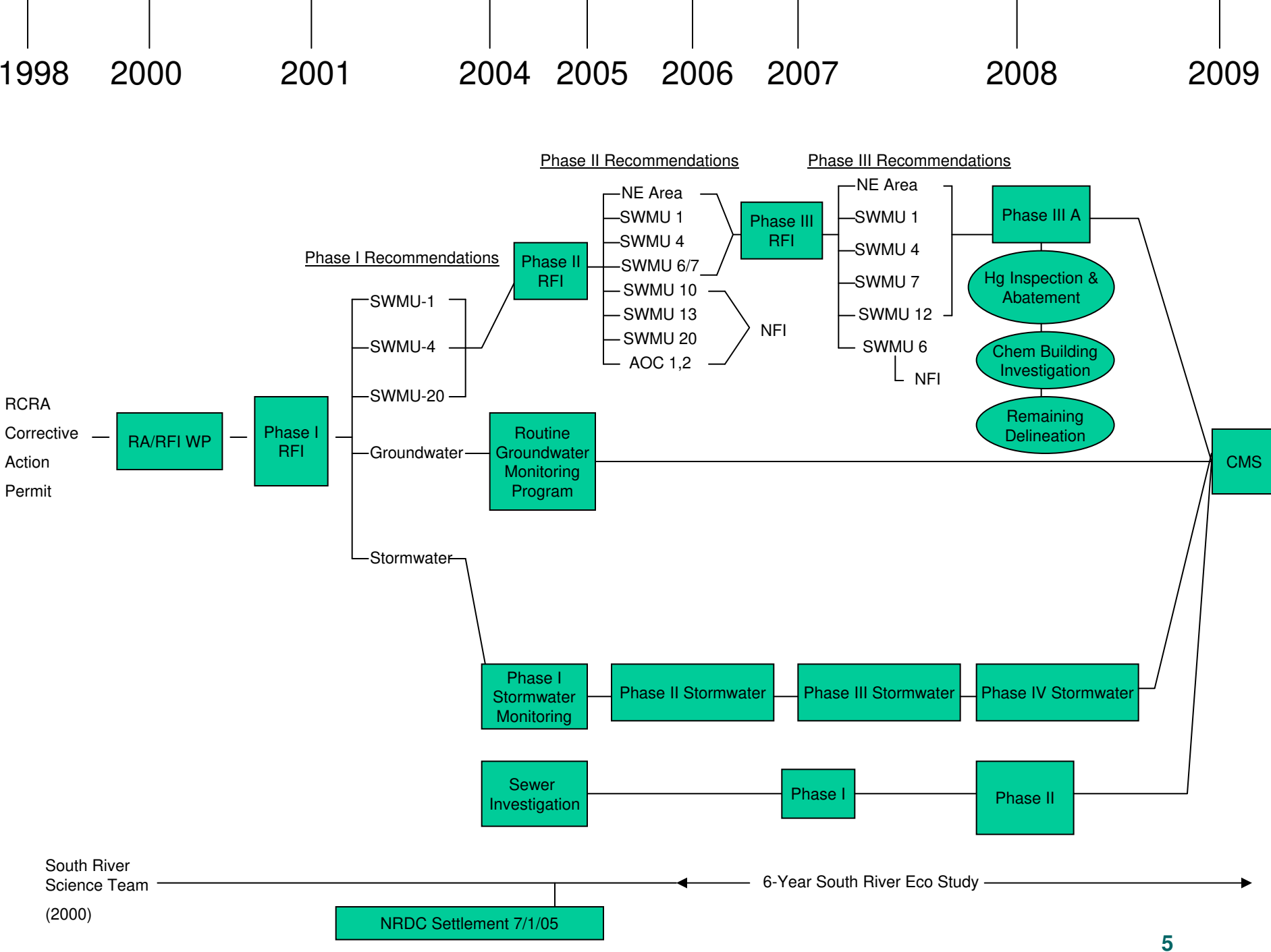
Corporate Remediation Group
AN ALLIANCE BETWEEN
DuPont and CRI Chemical

Forney Mill Plaza, Building 10
Wilmington, Delaware 19806

SWMUs, AOCs AND WELL LOCATION MAP			
DuPont Waynesboro Plant Waynesboro, Virginia			
SCALE 1" = 200'	DATE 08/22/2008	Worksheet No. 43870001	PAGE 1

RCRA Corrective Action Programs

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



RFI

- Phase III A (currently underway)
 - Investigation of Hg in Chemical Building area and SWMU 1
 - To be accelerated
 - Interviews, test pits, soil and soil gas sampling
 - Former Ash Pond Ditch
 - Northeast Area Investigation
 - Sample Well #1, additional water level study
 - SWMU 4
 - Additional delineation of Hg, sampling of seeps
 - SWMU 7
 - Investigate groundwater downgradient of SWMU
 - Additional Delineation of mercury in soil













Hg Inspection and Abatement

- Mercury beads observed at drainage feature near Chemical Building
- Beads removed and disposed with Hg Vacuum
- Mercury recovered during test pit excavations
- Bi-weekly inspection and abatement program implemented

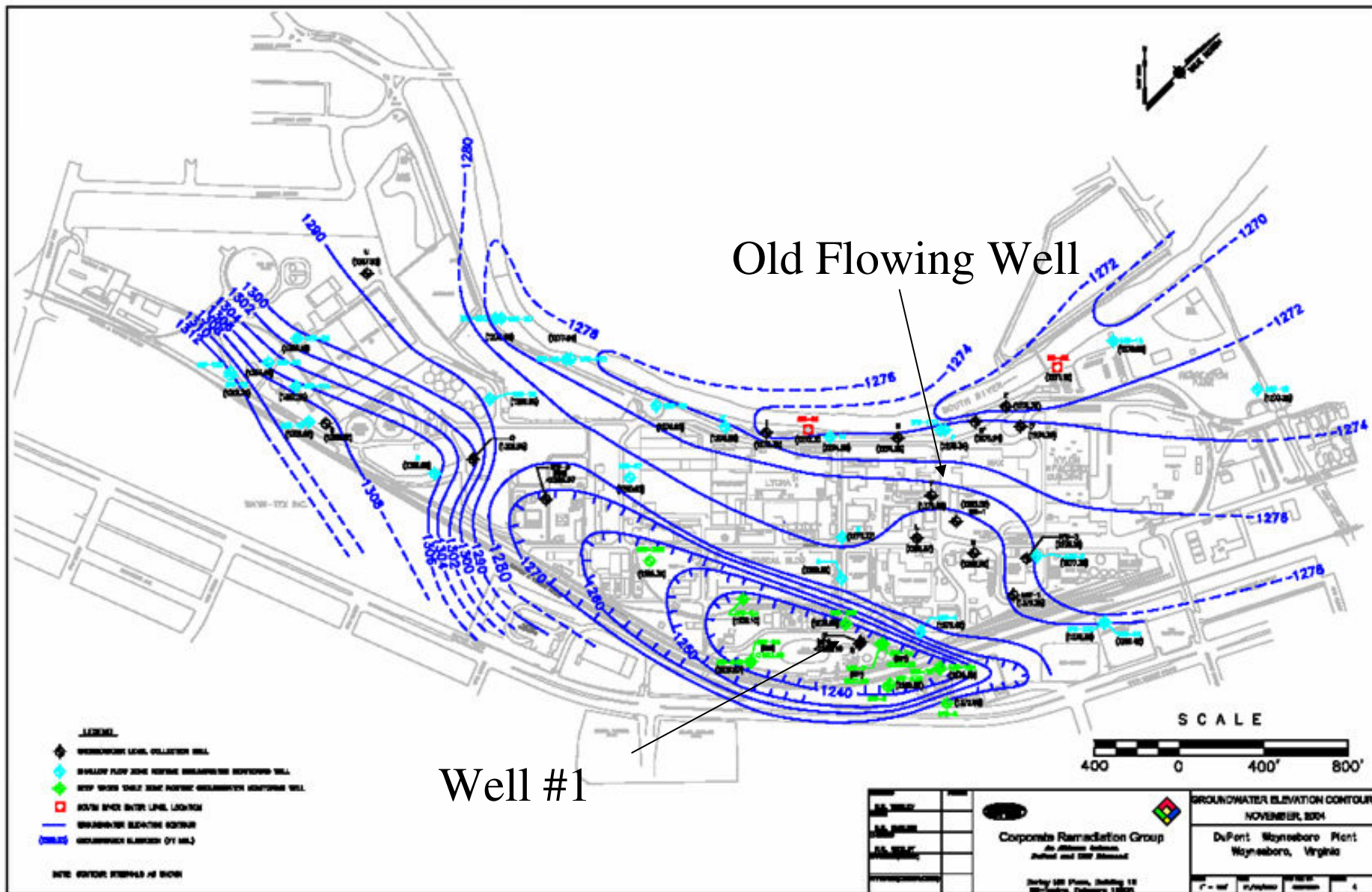
Minuteman MRS 2
Hg Vacuum



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 (cont.)

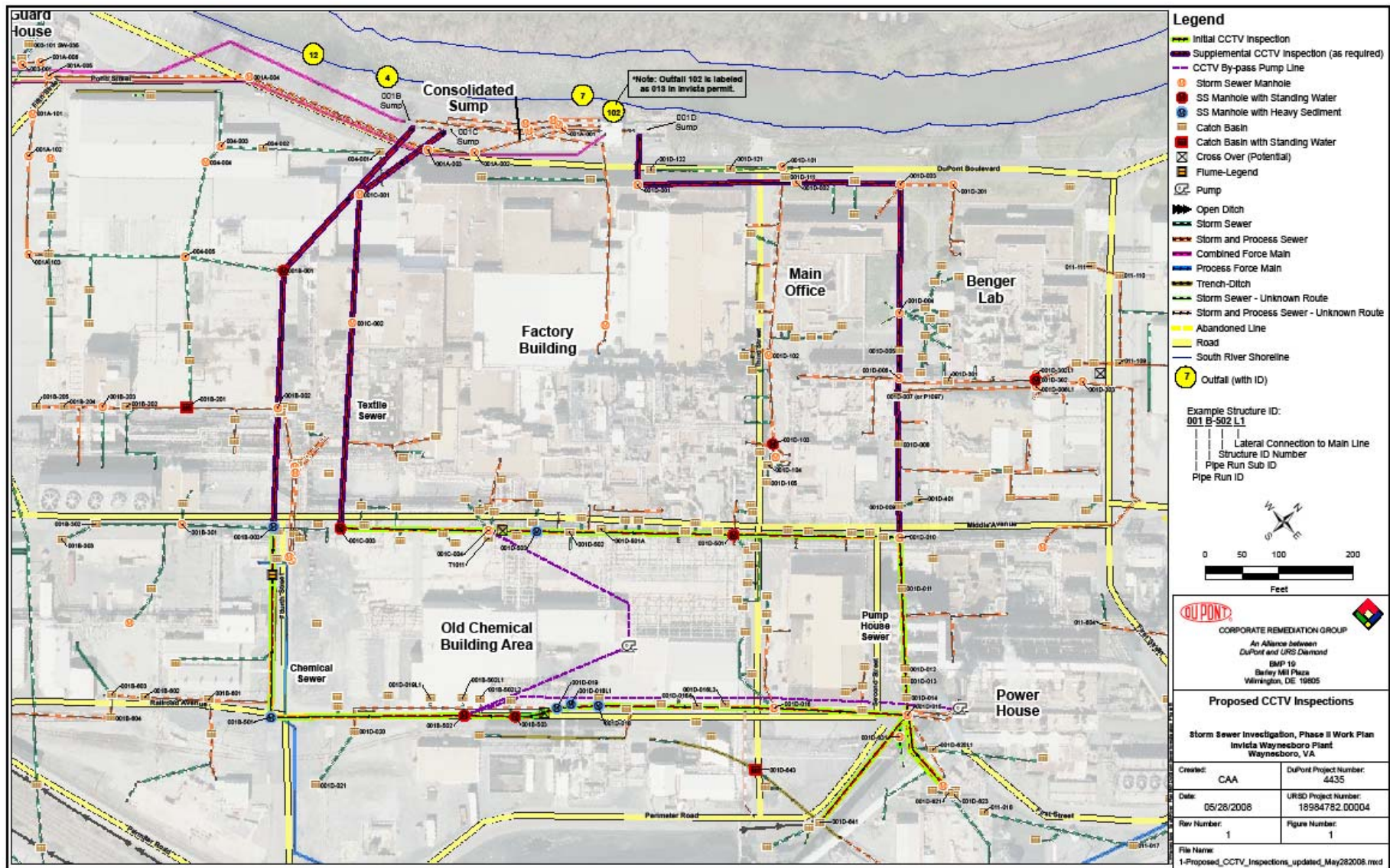


Stormwater (Outfall) Monitoring

- Phases I – III (2003-2007)
 - Sampled 19 baseflow and 8 storm events
- Phase IV (Started June 2007)
 - Continue to Sample 9 outfall locations + Consolidated Sump
 - Monthly baseflow samples at 4 outfalls and Consolidated Sump
 - Storm Samples to be collected twice per year at 9 outfalls and the Consolidated Sump.
 - 011 to be sampled for concentration only, no flow readings
 - EDDs to be submitted quarterly

Sewer Investigation

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



The focus was on the sewers around the Old Chemical Building and Powerhouse.

Bringing It All Together

- Soil mercury concentrations are localized
- Mercury-impacted groundwater does not interact with surface water
- Outfall discharges contribute to mercury loading in the South River
- Mercury is present in soils and in structures adjacent to the Pump House Sewer
- Future work will focus on inputs to sewer that result in mercury in outfall discharges

Next Steps

- Complete the RFI (1Q09)
- Continue Groundwater Monitoring Program
- Possible Pilot Testing
 - Clean and inspect blocked lines
 - Sump cleanout, sampling
- Outfall 011
- Revised Outfall Monitoring Program
- Corrective Measures Study (2009)

