

RCRA Corrective Action Program Update

Former DuPont Waynesboro Plant
October 12, 2011



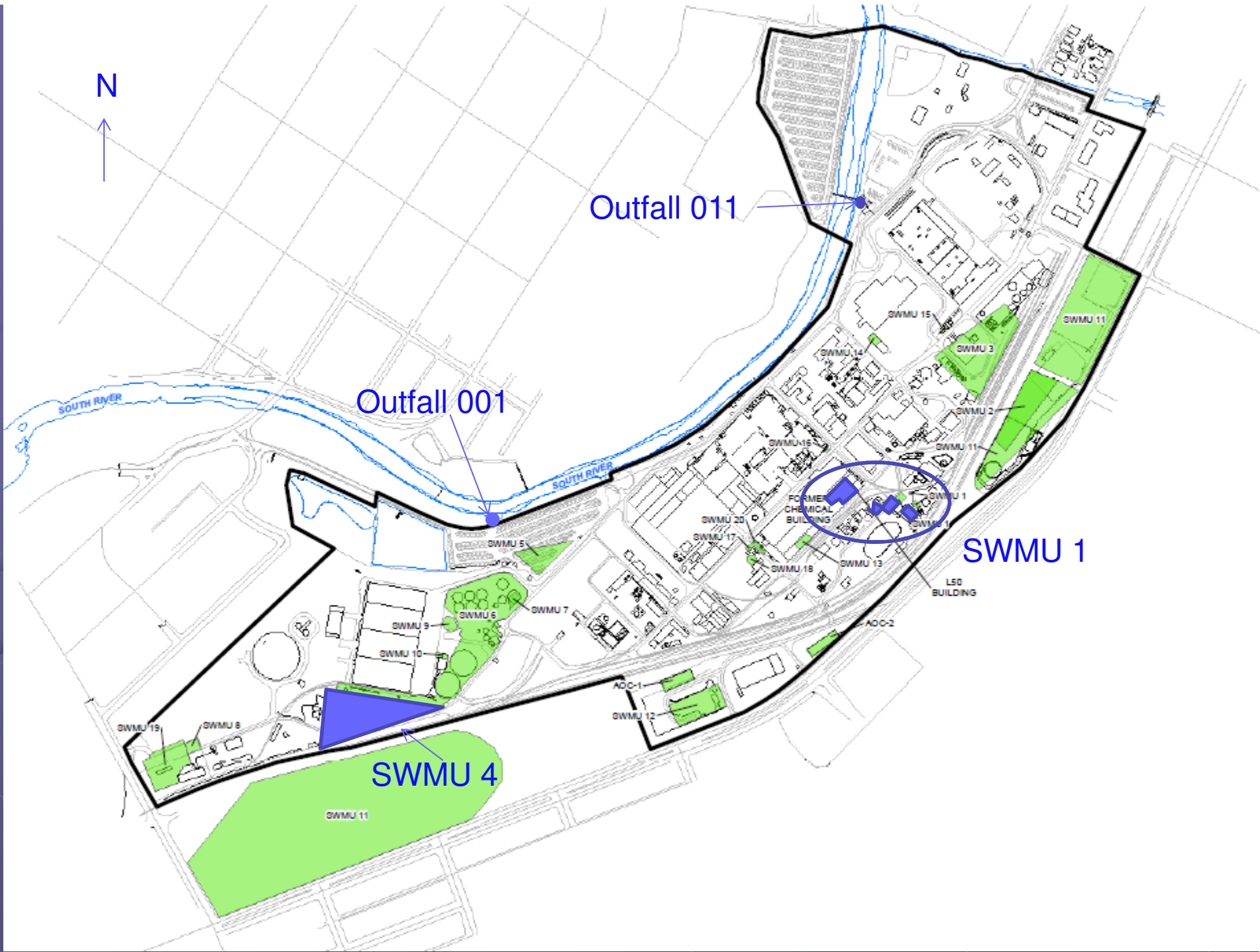
Background

- Plant Operations began in 1929 with manufacturing of acetate flake and yarn
- Mercury used from 1929 to 1950
- Orlon, Permasep, Lycra and BCF Nylon



Background (cont.)

- RCRA Corrective Action Permit issued in 1998
- Assets sold to Koch Industries (Invista) in 2003
- Land will transfer to Invista upon completion of Corrective Actions



N
↑

Outfall 011

Outfall 001

SWMU 1

SWMU 4

FORMER
CHEMICAL
BUILDING

LSD
BUILDING

SOUTH RIVER

SOUTH RIVER

SWMU 19

SWMU 8

SWMU 9

SWMU 10

SWMU 6

SWMU 7

SWMU 20

SWMU 17

SWMU 18

SWMU 13

SWMU 1

SWMU 4

SWMU 1

SWMU 1

SWMU 11

SWMU 14

SWMU 15

SWMU 15

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AOC-1

AOC-2

SWMU 12

SWMU 11

RCRA Corrective Action Programs

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

Recent Activities

● Interim Measures

- Completed in Oct-Nov 2010 to cut off sources of Hg from sewers in former Hg operational area

● Phase III Sewer Investigation

- Conducted from Sep-Dec 2010
- Cleanout and video inspection

Interim Measures

- Sources of free mercury identified in RFI
- Objective:
 - To expedite the cleanup of mercury sources and eliminate the potential for mercury migration to the sewer

Interim Measures - Scope

- Re-route roof drains to prevent flushing of source area
- Excavate and remove impacted steam trap that was connected to the sewer
- Vacuum out and abandon impacted solids pit that also was connected to sewer
- Clean out Pumphouse Sewer along Railroad Avenue

Interim Measures -Results

- Steam Trap Removed, connection to sewer sealed
- Roof drains re-directed to sewer along Middle Avenue via overhead structure
- Solids pits vacuumed, sealed and abandoned
- Pumphouse Sewer cleaned in conjunction with Phase III Sewer Investigation



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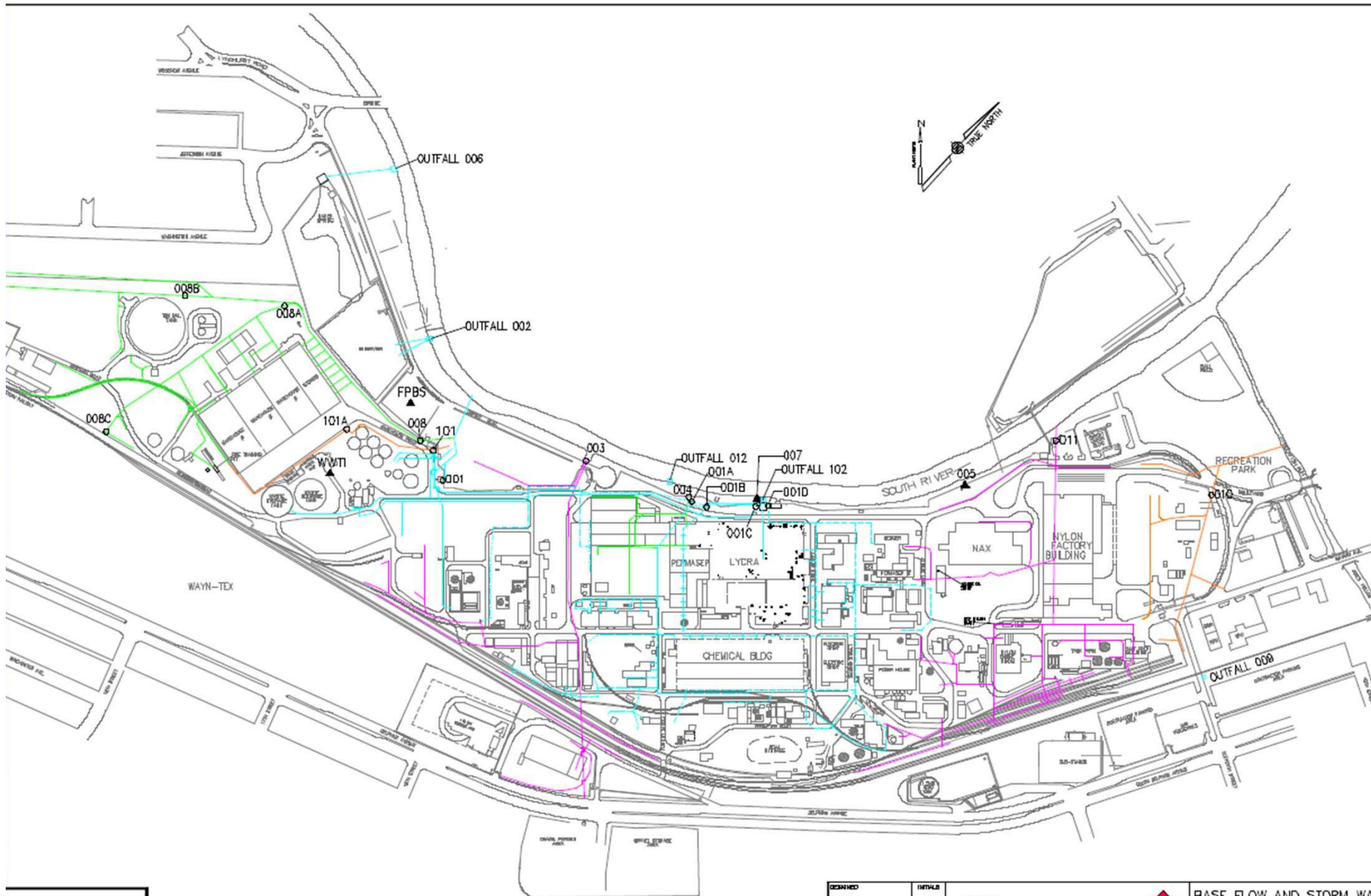
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Phase III Sewer Investigation

- Culmination of three phases of work in former mercury area (SWMU 1)
- Objectives:
 - Remove sediment and debris from sewers impacted by mercury
 - Characterize the sewers in mercury area via video inspection
 - Characterize other sewer systems where mercury has been detected



USE FLOW SAMPLING STATION
 IPIE STATION
 IF OUTFALLS NOT BEING SAMPLED
 AL FOR STORMWATER CONTAMINATION



DATE	DETAILS
1/15/03	
02/11/03	
03/11/03	
04/11/03	
05/11/03	
06/11/03	
07/11/03	
08/11/03	
09/11/03	
10/11/03	
11/11/03	
12/11/03	

Corporate Remediation Group
 An Alliance between
 DuPont and URS Diamond
 Barley Mill Plaza, Building 27
 Wilmington, Delaware 19805

BASE FLOW AND STORM WATER SAMPLING LOCATIONS

DTI Waynesboro Plant
 Waynesboro, Virginia

DATE	REV	BY	CHK	SCALE
12/11/02	01	URS	URS	1

Ph III Sewer Investigation - Scope

- Collect sewer water and sediment samples from drainage basins for Outfalls 003, 010 and 011
- Clean sections of Pump House Sewer (PHS) and Chemical Sewers along RR Ave
- Inspect sewers with CCTV

Ph II Sewer Investigation- Results

- Collected 85 samples from 003, 010 and 011 basins
- Water concentrations up to 286 ug/l
- Sediment concentrations up to 156 mg/kg
- PHS and 011 sumps impacted by Hg
- Free mercury observed in debris jetted out of PHS and Chemical Sewer along Railroad Avenue

Ph III Sewer Investigation- Results (cont.)

- Removed significant mass of Hg from system
- Jetted out approx. 27 cy of sediment and debris
- Post cleaning monitoring shows improvement in Chemical Sewer, temporary increase in PHS which has decreased



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Conclusions

- IM and Sewer Work represent first major remediation effort at the plant
 - IM successful in eliminating specific sources of Hg from impacting the sewer
 - Sewer cleaning removed significant Hg mass from system
- No significant sediment sources of Hg were found in upstream reaches of 003, 010 and 011 basins

Conclusions (cont.)

- PHS and Chemical Sewer most impacted
- Sections of PHS show cracking and deformation
- Numerous unused connections to PHS

Future Activities

- Recommendations from Sewer Investigation to be incorporated in overall site corrective action program
- Corrective Measures Study (CMS)
- NE Area well drilling
- Continue routine groundwater and outfall monitoring



Questions