Welcome to the W.R. Grace Superfund Site Information Session

May 18, 2011

Agenda

- Introductions
  - Sarah White, Community Involvement, USEPA
- Presentation
  - Derrick Golden, Project Manager, USEPA
- Question & Answer
- Poster Board & Stakeholders will be available until 8:30 p.m.

Stakeholders Involved in the W.R. Grace Project

- Doug Halley - Acton Board of Health
- Matthew Mostoller – Acton Water District
- Jane Ceraso – Former Acton Water District
- Chris Allen – Acton Water District
- Mary Michelman – ACES
- Carol Holley – ACES

Stakeholders Involved in the W.R. Grace Project Continued...

- Derrick Golden – EPA Remedial Project Manager
- Sarah White – EPA/Community Involvement
- Jenifer McWeeney – MassDEP
- William Sweet - ATSDR
- Barbara Weir & Warren Diesl – AECOM - EPA's technical oversight contractors
- Thor Helgason – De Maximis/W.R. Grace

Presentation Outline

- Brief Site History
- Previous soil clean up activities
- Remedial Design Process & Stakeholders Involvement
- Four Areas that will be cleaned up (figure 1)
- Groundwater Plume & Groundwater Treatment Areas

Presentation Outline Continued…

- Northeast Area Groundwater Treatment
- Landfill Area Groundwater Treatment
- Sinking Pond Sediment Removal
- North Lagoon Wetland Sediment Removal
- Health & Safety Measures During Sediment Removal Activities
- Truck Traffic

Brief Site History

- WR Grace Manufactured
  - Rubber, Latexes & Sealers
  - Battery Separators
  - Organic chemicals
- Wastewater from manufacturing process flowed into former unlined onsite lagoons
- Water also contained dissolved Volatile Organic Compounds (VOCs)
- VOCs migrated into groundwater
- 1978 Assabet 1 & 2 were contaminated with vinylidene chloride (VDC) and shut down
- 1984 Aquifer Restoration System installed

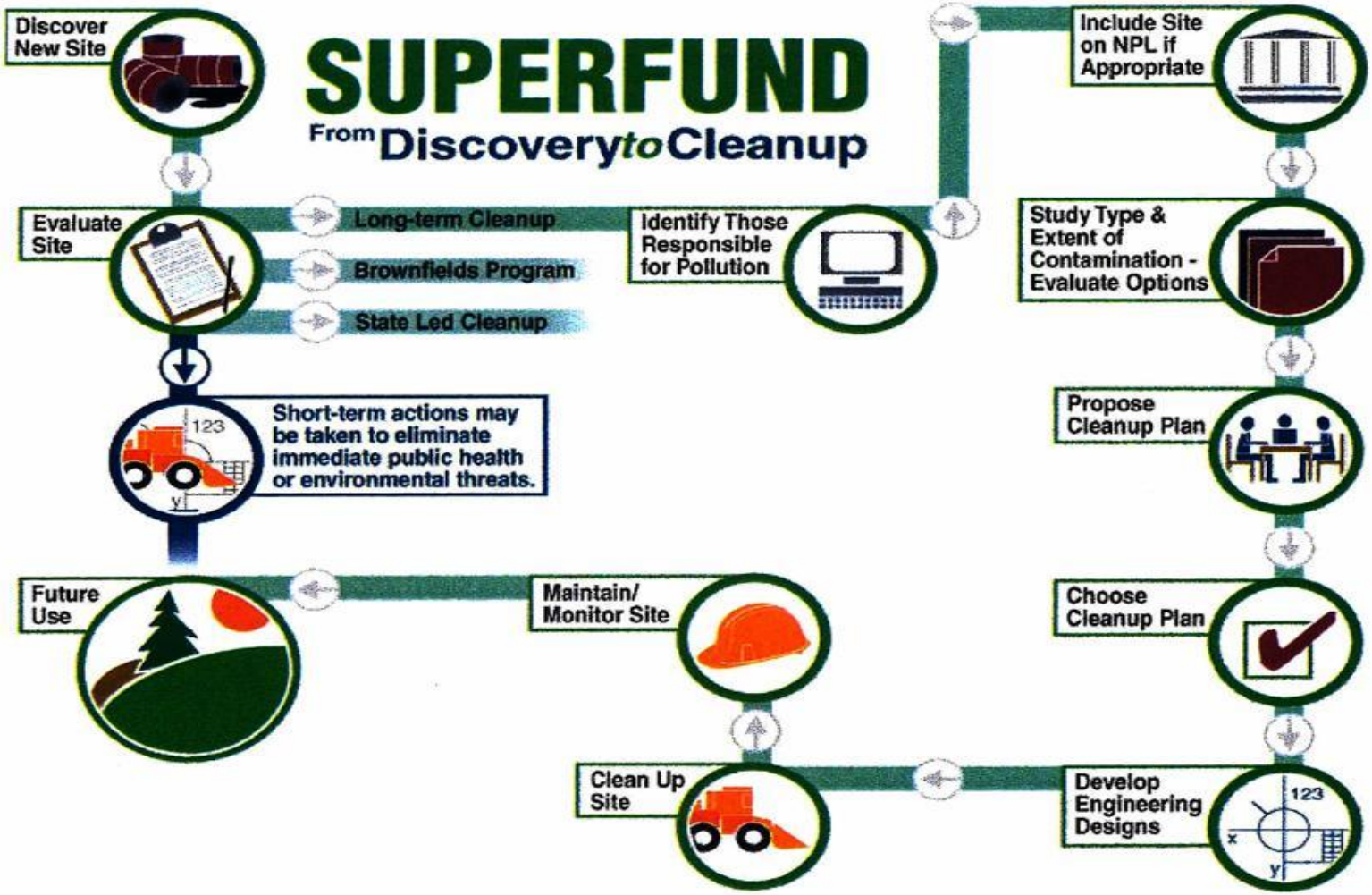
Brief Site History Continued…

- Previous Soil Clean up activities (OU1)
  - Soil & sludge excavated from former wastewater lagoons
  - 170,000 cubic yards, thermally treated, placed, then covered/capped, in Industrial Landfill - 1997

Timeline

- 1983 WR Grace site place on the National Priority List (NPL)
- Remedial Investigation – 1999 thru 2005 determined nature & extent of remaining contamination
- Record of Decision – 2005 – EPA legal document, identifies:
  - Unacceptable risks to human health and/or environment
  - Areas to be cleaned up
  - Protective clean up levels
- Remedial Design and Remedial Action Statement of Work– approved 2006 – EPA legal document
- Northeast Area Design approved April 24, 2009
- Landfill Design – approved February 14, 2011
- Sediment Design approved September 20, 2010

Where we are in the Superfund Process

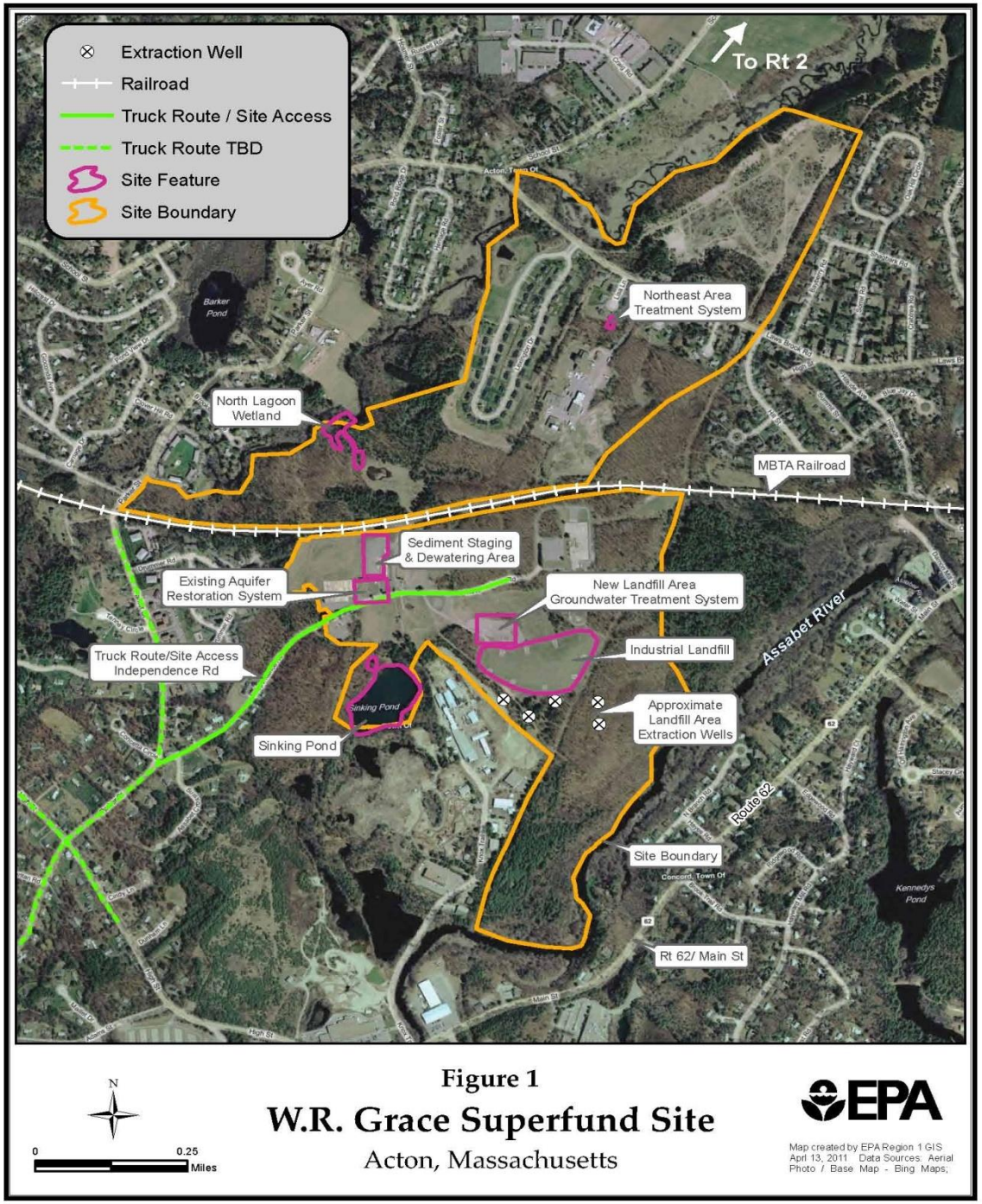


Community Involvement in the Remedial Design Process

- Technical Reports provided to all stakeholders
- Stakeholders provided review, comments & consensus
- Held regular stakeholder conference calls & meetings
- All comments were consolidated into a final EPA & MassDEP approval/comment letter to WR Grace

Areas of Remediation

- Northeast
- North Lagoon Wetlands
- Sinking Pond
- Landfill Area



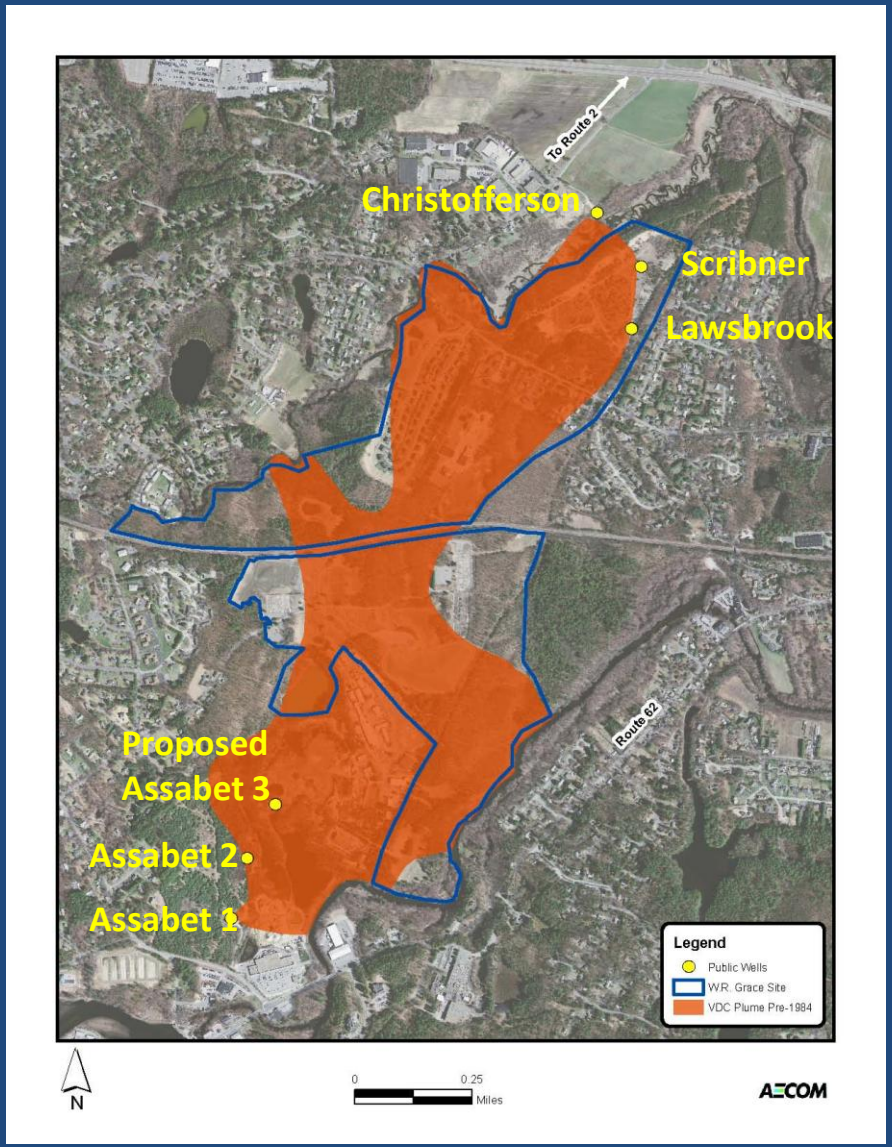
Contaminant Information

- Site Contaminants
  - vinylidene chloride (VDC)
    - (aka) 1, 1-Dichloroethene (1,1 DCE)
  - Benzene
  - Vinyl chloride (VC)
  - Trichloroethylene (TCE)
  - 1,4 Dioxane
  - Arsenic
  - Manganese

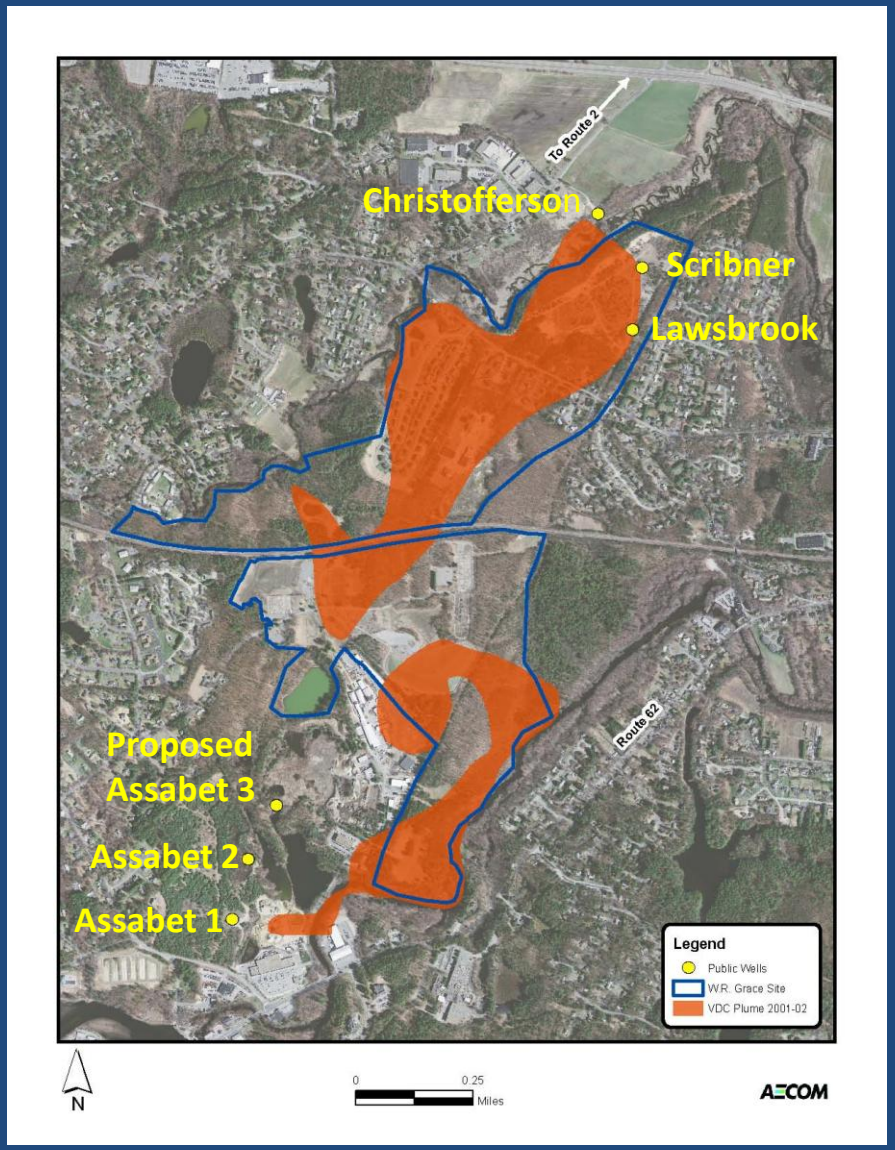
Contaminant Information Continued…

- Approximately 5959 pounds of total VOCs removed to date
- Over 4839 million gallons of contaminated groundwater pumped
- Reductions in groundwater contamination due to:
  - Operation of an aquifer restoration system since 1984
  - Clean up of former source areas/lagoons
  - Operation of the Northeast Area Treatment system
  - Monitored Natural Attenuation

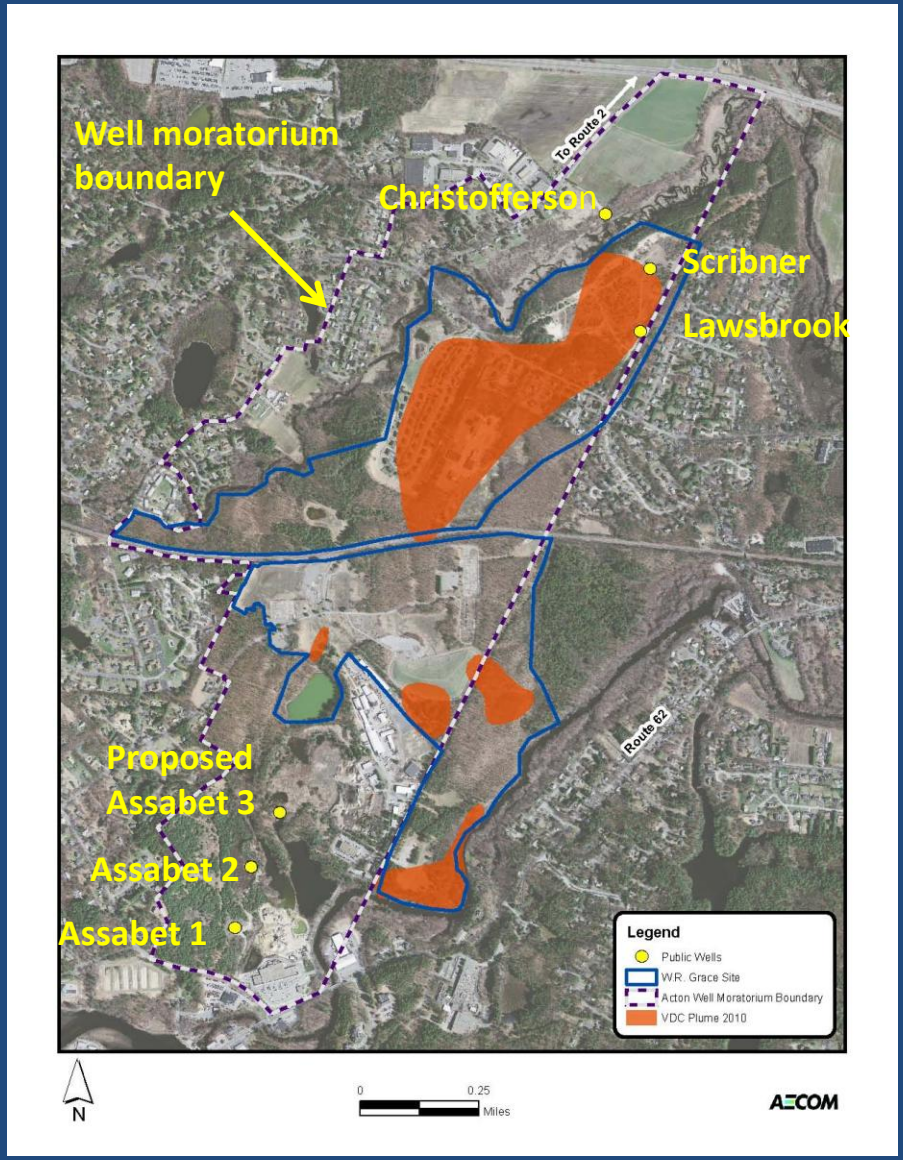
Pre-1984 VDC Plume



2001 – 2002 VDC Plume



2010 VDC Plume



Location of Northeast Area Treatment System

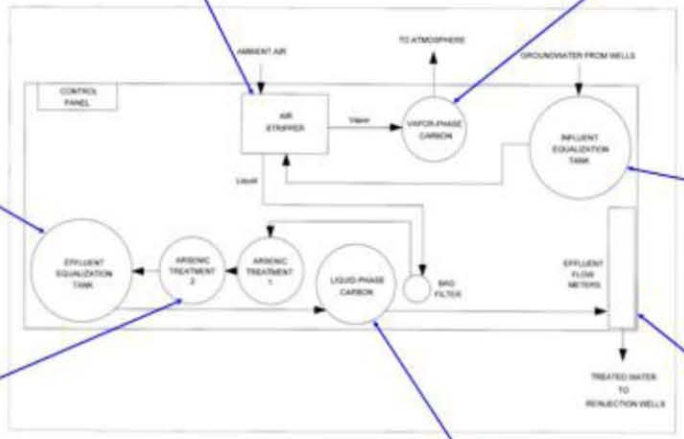
Photograph of Northeast Area Groundwater Treatment Building

Northeast Area Equipment

Low-Profile Air Stripper Unit

Vapor Phase Carbon

Effluent Equalization Tank



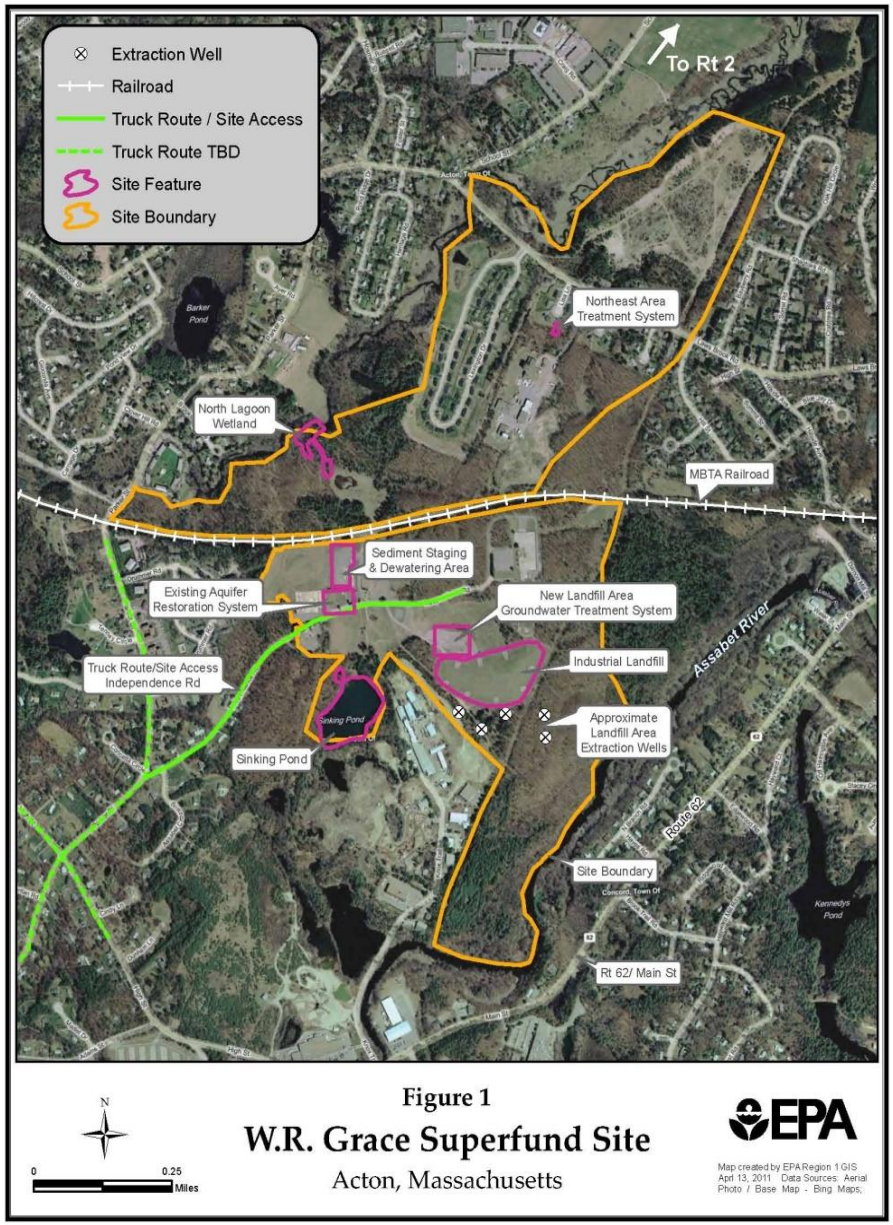
Influent Equalization Tank

Arsenic Treatment System

Liquid-Phase Carbon Unit (2 views)

Effluent Flow Meters

Location of Landfill Area Treatment System



Photograph of Landfill Area Groundwater Treatment Building

Landfill Area

Equipment

Filtrate Collection Tank

Concentration Tank

Membrane
Microfiltration System
And Control Box

Sludge Thickener

Effluent Collection Tank

Air Compressor System

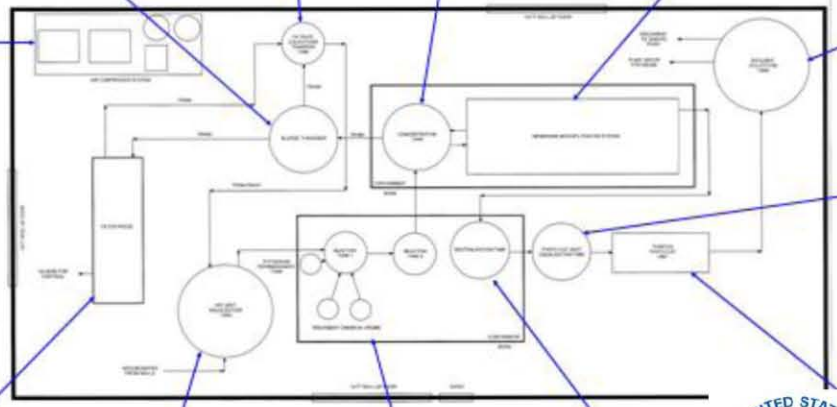


Photo-Catalytic Inlet Tank

Filter Press

Influent Equalization Tank

Reaction Tanks (2)

Neutralization Tank

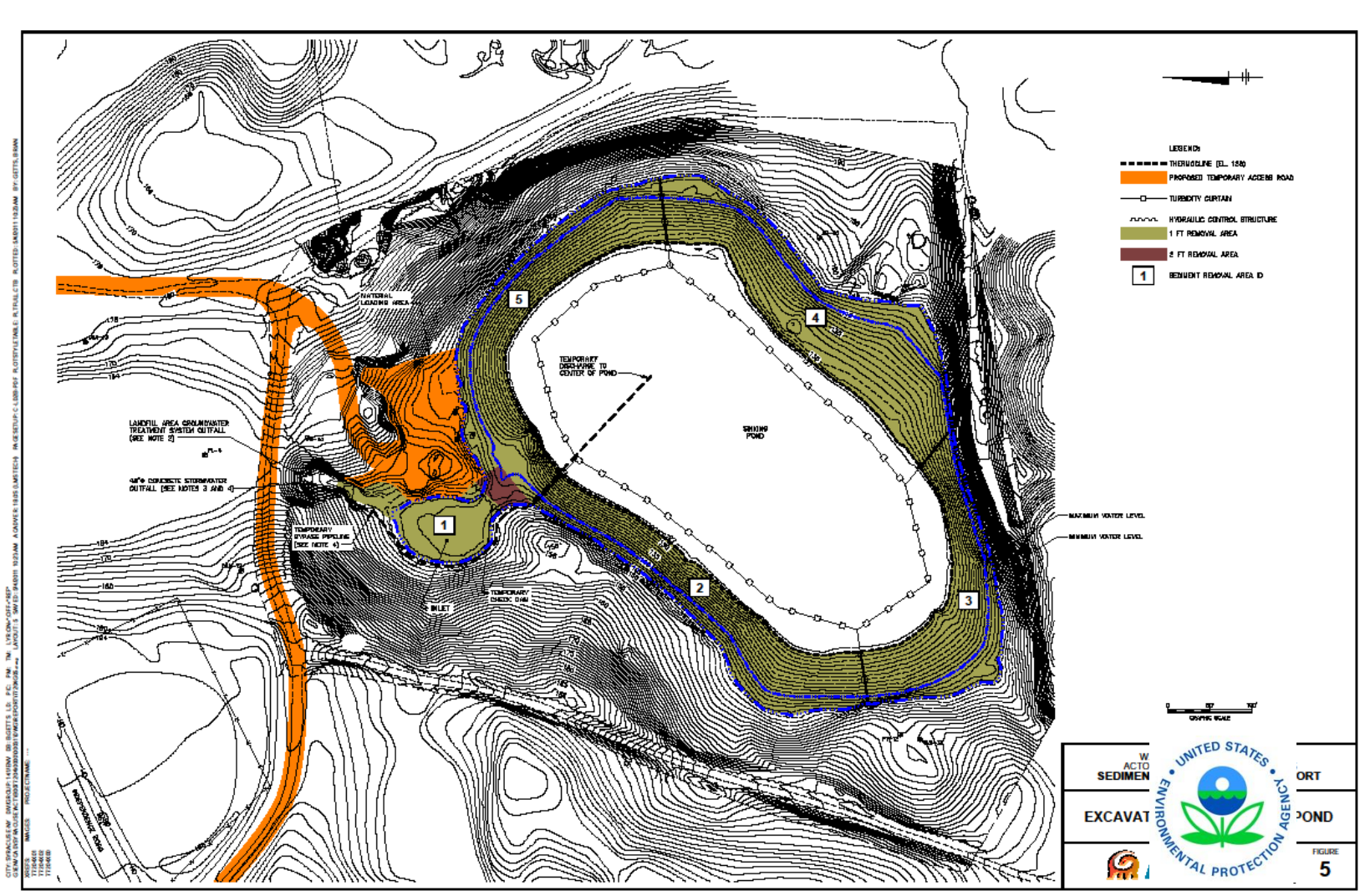
Purifics
Photo-Catalytic
Unit
And
Control Panel

Location of Sinking Pond

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph of Sinking Pond

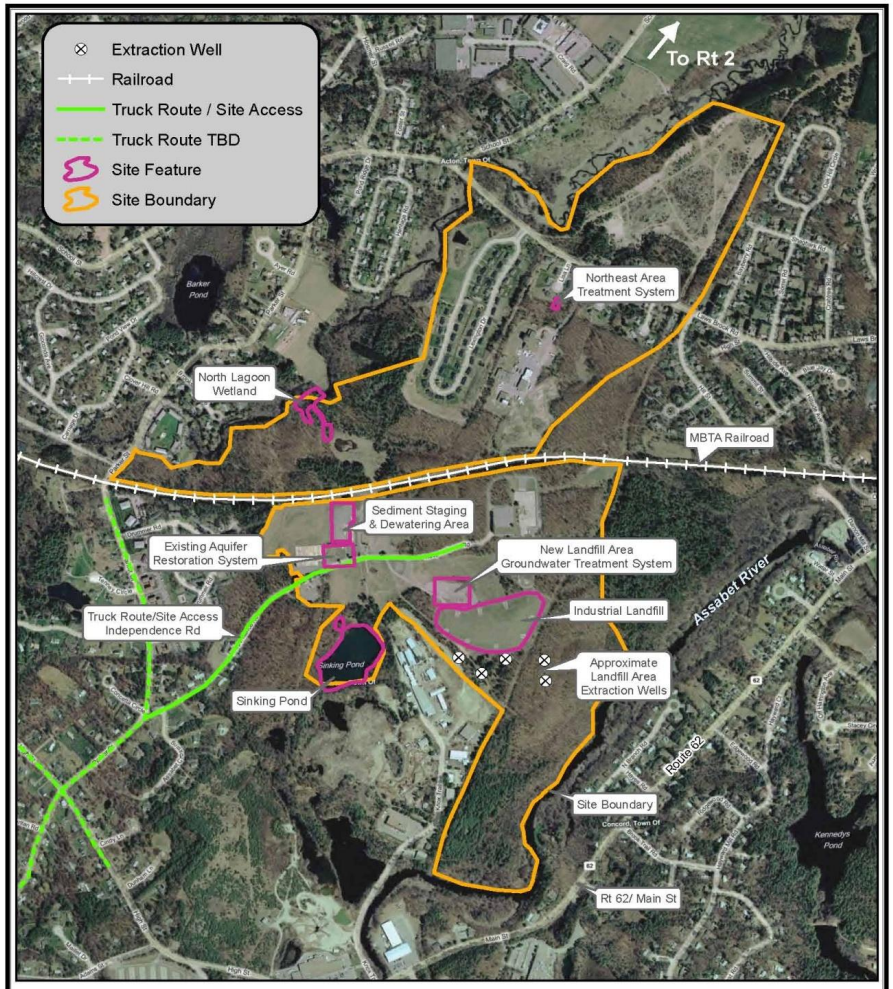
Sinking Pond – Limits of Excavation



Type of Contaminants in Sinking Pond

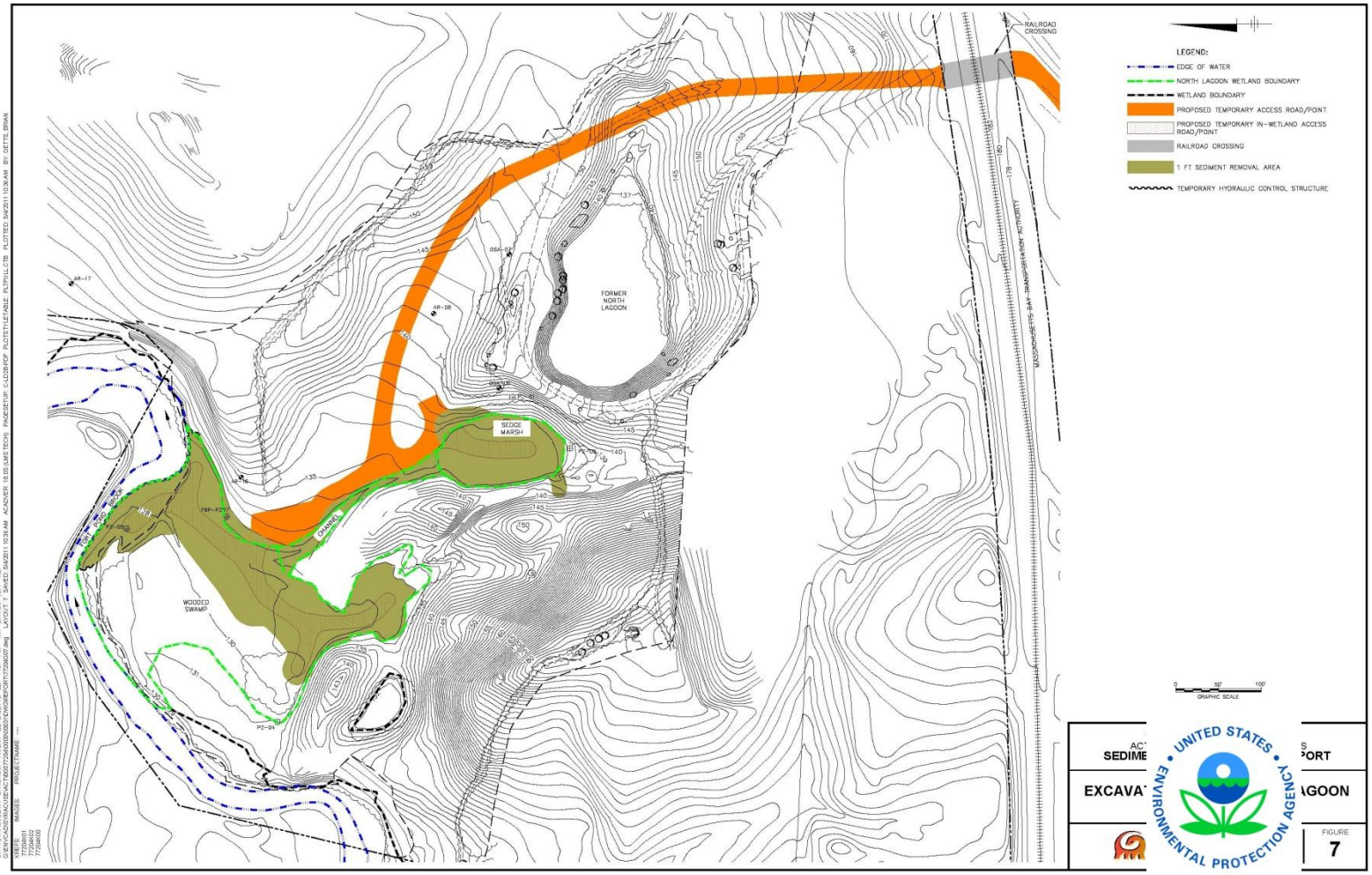
- Arsenic
- Manganese
  - 1984 Aquifer Restoration System (ARS) not designed for metals/inorganic removal
  - Metals/Inorganic built up in Sinking Pond over years of discharge from the operation of ARS

Location of North Lagoon Wetland



Photographs of North Lagoon Wetland

North Lagoon Wetlands-Limits of Excavation



Type of Contaminant in North Lagoon Wetlands

- Arsenic and Manganese
  - Naturally Occurring Inorganics/metal

- Likely mobilized from soil by VOC contamination in the former North Lagoon area

Dredging Process

- Wet dredging process for sediments from Sinking Pond
  - Removed via clam shell bucket on barge
- After removed, sediments placed in temporary staging area to dewater
  - Reduces water/weight
  - Makes materials solid for offsite transport
- Water from dewatering sent for treatment to new landfill area treatment system
- Dried sediments/cake material shipped offsite for proper disposal (late June-August)

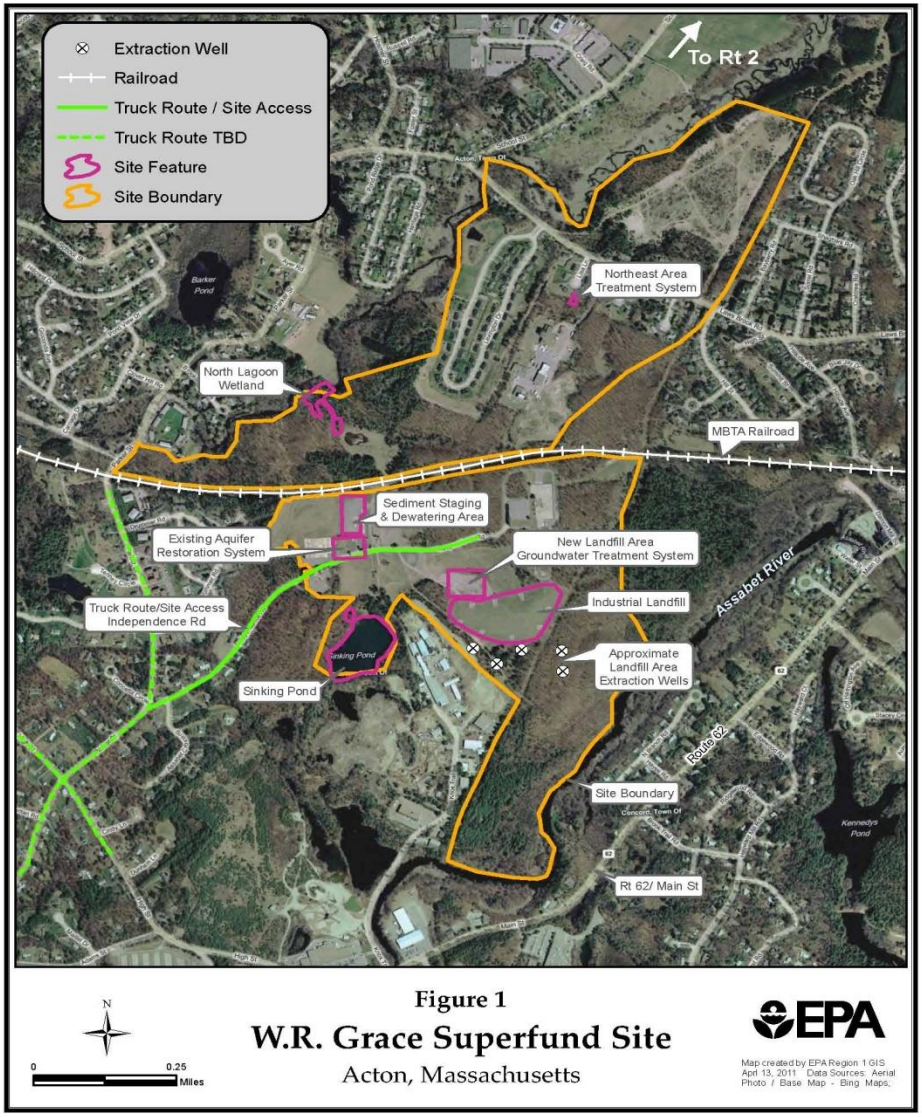
Heath & Safety Precautions During Sediment Activities

- Dust Control Measures
  - Plastic liner inside and draped over sides of truck
    - Plastic prevents dust accumulation on outside of truck
    - Sediments then completely wrapped in plastic
    - Dried sediments then covered with a tarp for transport
  - Sediments excavated wet
  - Onsite dust suppression using water truck

Heath & Safety Precautions During Sediment Activities Continued...

- Air (particulate) monitoring in temporary staging area on Grace site
  - Work ceases if excessive amount of dust
- Resident Engineer
  - Supervise sediment activities
- EPA, MassDEP & our oversight consultants will monitor work
  - Perform field oversight
  - Observe confirmatory sampling efforts

Truck Route


Extraction Well
Railroad
Truck Route / Site Access
Truck Route TBD
Site Feature
Site Boundary
To Rt 2
Barker Pond
Northeast Area Treatment System
North Lagoon Wetland
MBTA Railroad
Sediment Staging & Dewatering Area
Existing Aquifer Restoration System
New Landfill Area Groundwater Treatment System
Assabet River
Industrial Landfill
Truck Route/Site Access Independence Rd
Sinking Pond
Approximate Landfill Area Extraction Wells
Route 62
Site Boundary
Kennedys Pond
Rt 62/ Main St
N
0
0.25
Miles
Figure 1
W.R. Grace Superfund Site
Acton, Massachusetts
EPA
Map created by EPA Region 1 GIS
April 13, 2011 Data Sources: Aerial Photo / Base Map - Bing Maps.

Additional Truck Information

- Sediment activities expected to last 14 weeks
- Operation Schedule
  - Monday through Friday
  - during the hours of 7:00 am – 6:00 pm
- Expect 15 trucks per day, making 2 round trips each
  - Beginning in late June and will be completed by the end of August (not every day, will vary)

Public Involvement During Construction

- Continue stakeholder conference calls during sediment work
- Provide stakeholders with monthly construction updates

Conclusion of Presentation

- Question & Answer
- Breakout back into Poster Board Session
- Stakeholders available at tables
- Wrap up poster boards by 8:30 – 8:45
- Library Closes at 9:00

Contact Information

- Derrick Golden – USEPA – 617-918-1448
- Sarah White – USEPA – 617-918-1026
- William Sweet – ATSDR – 617-918-1490
- Jennifer McWeeny – MassDEP – 617-654-6560
- Doug Halley – BOH – 978-264-9634
- Matthew Mostoller – AWD – 978-263-9107
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