

# Proposed Remedial Action Plans

## Photocircuits and Pall Sites

### Operable Unit(s) 2

Public Meeting  
Glen Cove City Hall  
9-13 Glen Street  
Glen Cove, NY

February 28, 2013  
7 - 9 p.m.



# Meeting Agenda

- Introduction – Bill Fonda
- RI/FS Summary – Joseph Jones
- Human Exposure Pathways –  
Sharon McLelland
- Proposed Remedial Action Plans –  
Joseph Jones
- Question & Answer Moderator –  
Bill Fonda



# Photocircuits and Pall Sites

Photocircuits Corporation

Site No. 130009

45 Sea Cliff Ave

City of Glen Cove

Nassau County

New York

Pall Corporation

Site No. 130053B

30-36 Sea Cliff Ave

City of Glen Cove

Nassau County

New York



# Photocircuits and Pall Operable Unit Definitions

- Each site is divided into two operable units
- Operable Unit 1 for each site addresses on-site soils and shallower on- and off-site groundwater
- Operable Unit 2 for each site addresses deeper on- and off-site groundwater



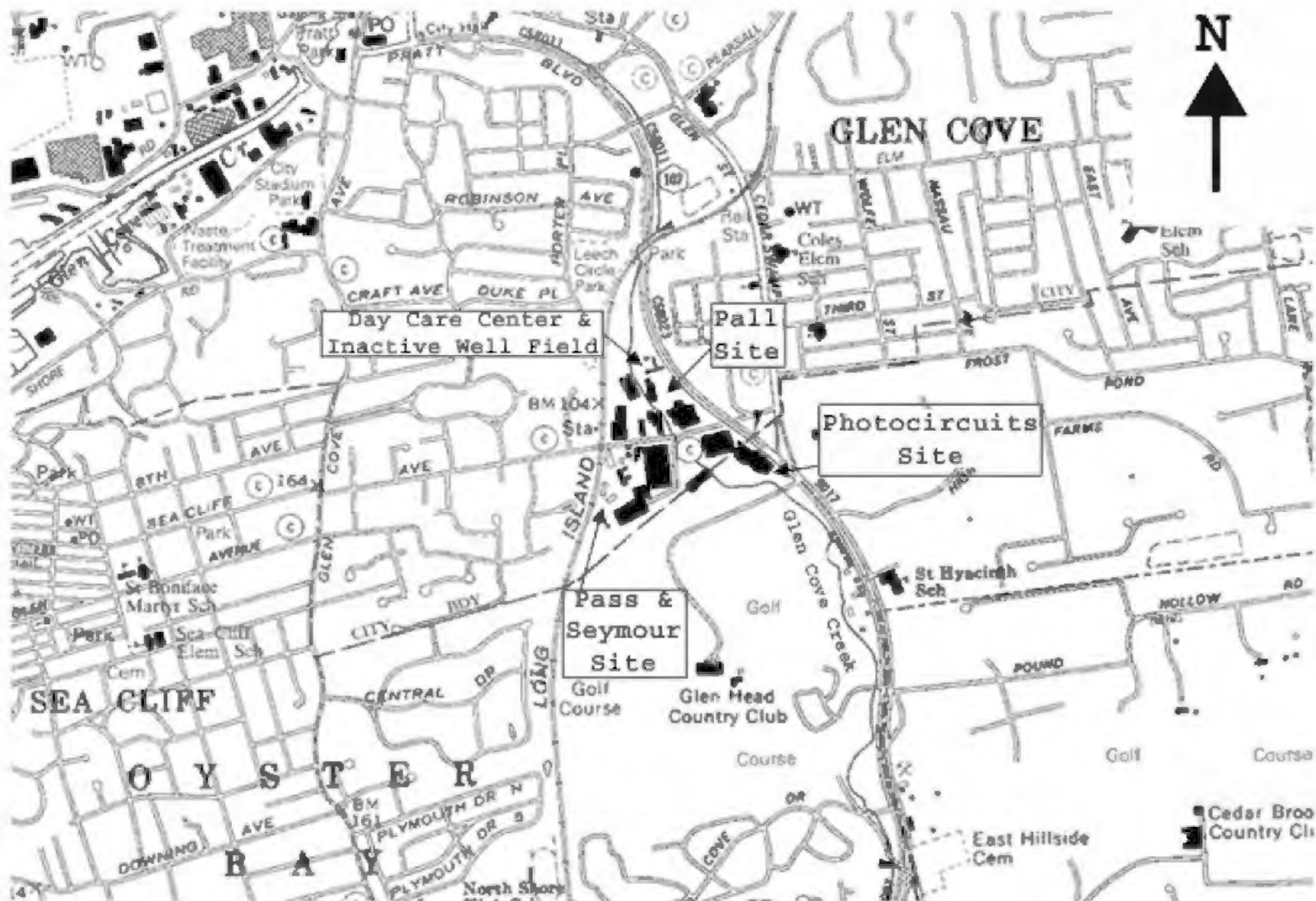


Figure 1: Site Location Map

# Photocircuits Site Description

- 45 Sea Cliff Avenue, Glen Cove, Nassau County, in the Seacliff Avenue Industrial Area
- Contains several abandoned buildings and is about 10 acres
- Pall site located north (downgradient) across Sea Cliff Avenue. Pass and Seymour site located west of Photocircuits. Photocircuits is bounded by Glen Cove Arterial on the east, and by a golf course to the south

# Photocircuits Site History

- Site developed in 1955, and used in the manufacture of printed circuit boards starting in 1971
- Previous tenants include Powers Chemco and Kollmorgen Corp
- Site listed as Class 2 on Registry of Inactive Hazardous Waste Disposal Sites in 1995
- Site currently unoccupied with buildings in disrepair



# Pall Site Description

- 30-36 Sea Cliff Avenue, Glen Cove, Nassau County, in the Seacliff Avenue Industrial Area
- Contains one large and several small single story buildings, and is about 4 ½ acres
- Photocircuits site located south (upgradient) across Sea Cliff Avenue. Carney Street Well Field and daycare center located north of Pall. Pall is bounded by Glen Cove Arterial on the east and Glen Cove Creek to the west





# Pall Site History

- Pall manufactured filtration products and stored solvents at the site
- 30 Sea Cliff Ave built 1918, used by Pall from 1953 to 1999, 36 Sea Cliff Ave used by Pall between 1958 and 1971
- Site listed as Class 2 on Registry of Inactive Hazardous Waste Disposal Sites in 1996
- 30 Sea Cliff Ave now unoccupied, 36 Sea Cliff Ave occupied



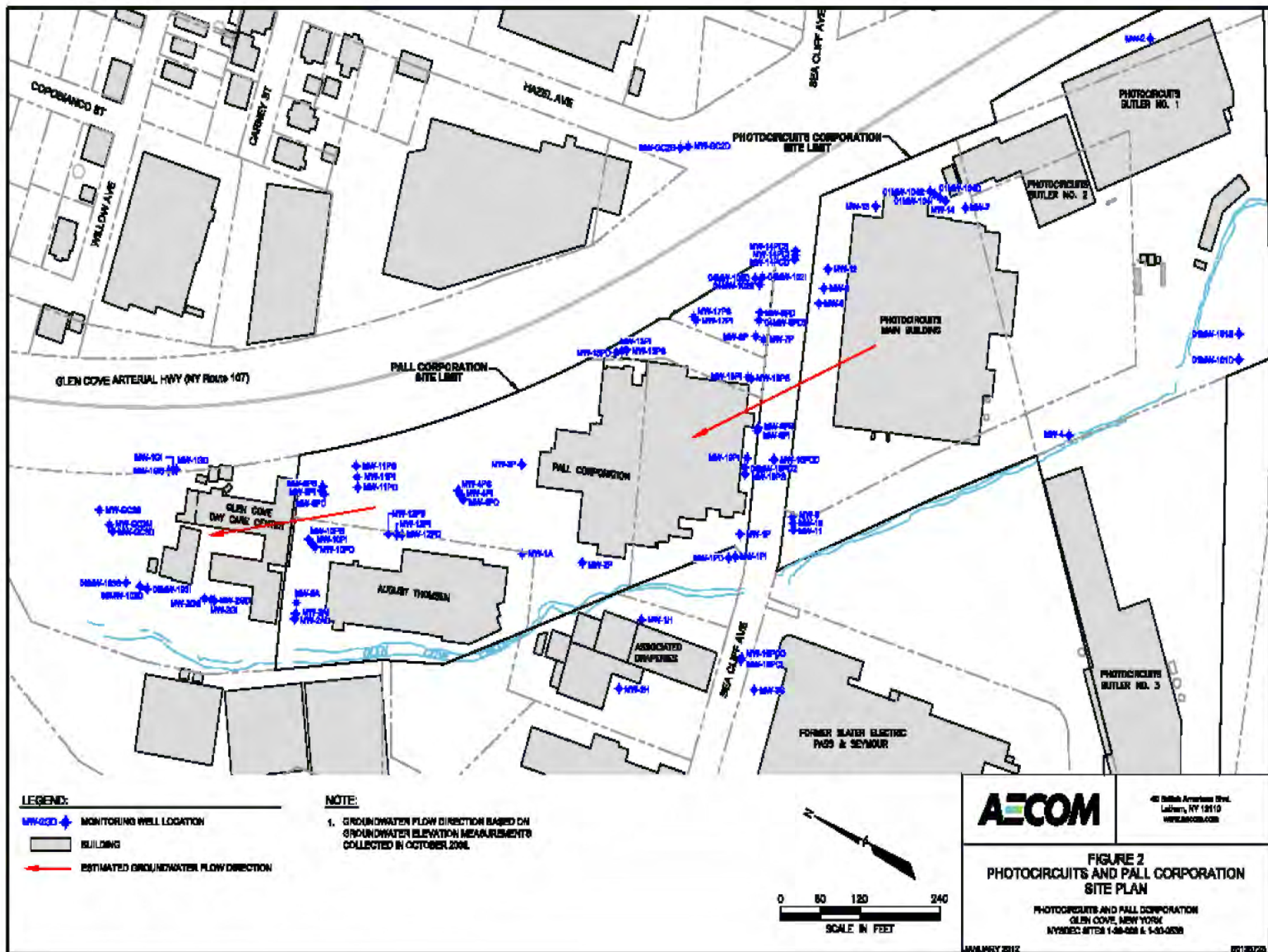
# Area Geology and Hydrogeology

- Upper Glacial Aquifer composed of stratified beds of fine to coarse sand and gravel with some lenses of silt and clay extending to depth of about 200 ft bgs
- Port Washington Confining Unit extends about 100 ft below the Upper Glacial Aquifer
- Magothy (intermediate) and Lloyd (deep) aquifers underlie the Port Washington Confining Unit
- Groundwater flow generally NNW, and water table about 4 ft bgs



# Photocircuits and Pall OU2 Remedial Investigation





# Photocircuits Site

## Previous Investigations

- Focused Remedial Investigation finished 1998 for the Photocircuits site
- Site divided into two operable units
- Operable Unit 1 ROD was issued in March 2008, requiring bioremediation and a downgradient air sparging curtain



# Pall Site

## Previous Investigations

- Remedial Investigation/Feasibility Study done between February 1998 and July 2000 for the Pall site
- Site divided into two operable units
- Operable Unit 1 ROD was issued in March 2004, requiring in-situ chemical oxidation



# Photocircuits and Pall Sites OU2 Remedial Investigation

- OU2 RI conducted between April 2008 and November 2008
- 19 new and 51 existing groundwater monitoring wells sampled in two events
- Groundwater samples collected, during April thru June 2008, and October thru November 2008, and analyzed for VOCs





# Photocircuits and Pall Sites

## OU2 Remedial Investigation (cont)

- Shallow interval defined as samples from wells screened 5 to 15 ft bgs
- Showed VOC concentrations between
  - 100 and 800 ppb on Photocircuits site
  - ND to 100 ppb on Pall site





# Photocircuits and Pall Sites

## OU2 Remedial Investigation (cont)

- Intermediate interval defined as samples from wells screened about 45 to 60 ft bgs
- Showed VOC concentrations in excess of 100 ppb in almost every intermediate well
- Showed VOC concentrations in excess of 10,000 ppb near a source area on the Photocircuits property



# Photocircuits and Pall Sites

## OU2 Remedial Investigation (cont)

- Deep groundwater defined as samples from wells screened about 80 to 130 ft bgs
- Showed VOC contaminants greater than 5,000 ppb observed in the central and eastern part of the Pall site

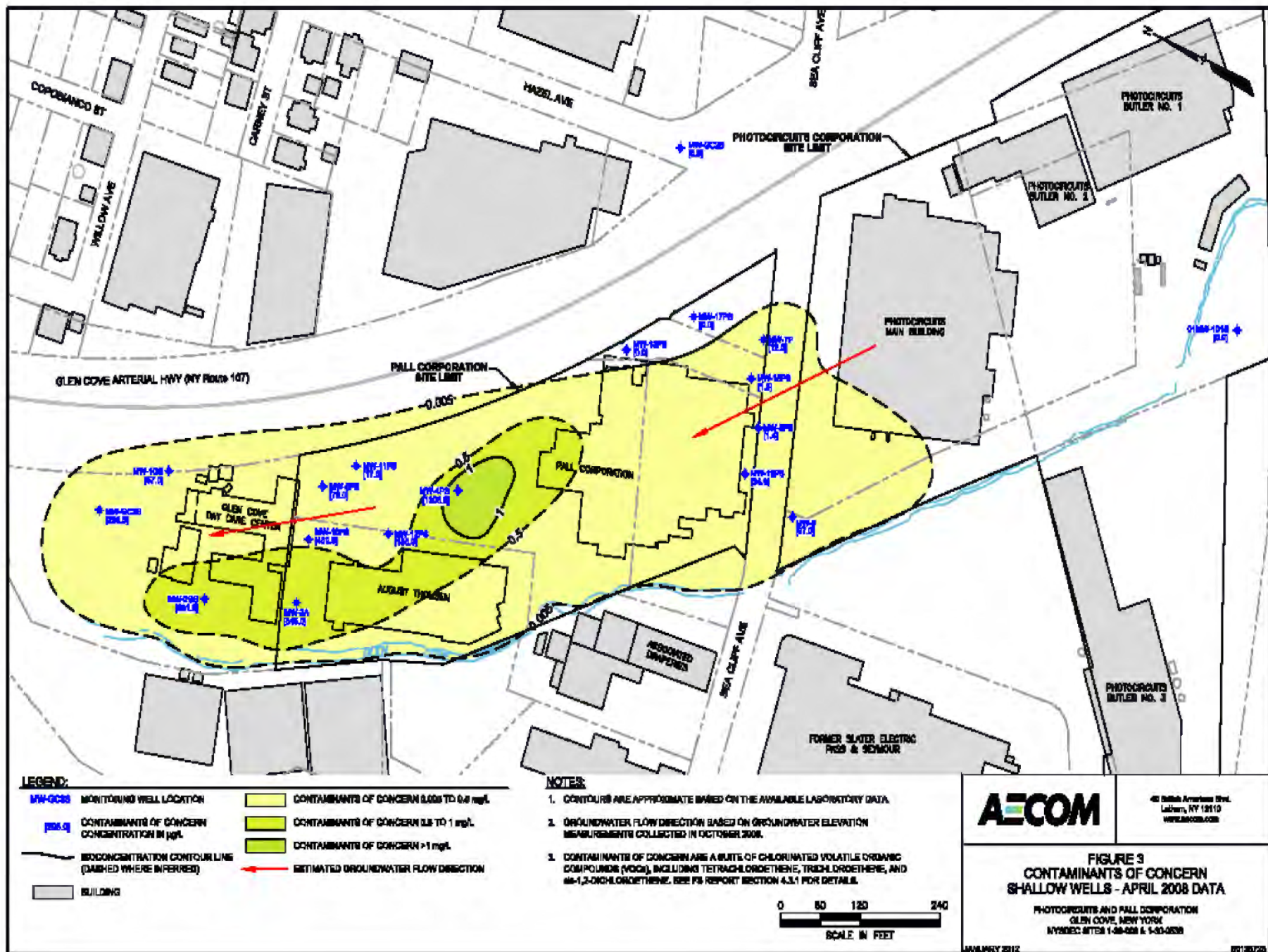


# Photocircuits and Pall Sites

## OU2 Remedial Investigation (cont)

- Very deep interval defined as samples from wells screened greater than 140 ft bgs
- Showed VOC contamination exceeded SCGs only north of the Pall site near Carney Street Well Field



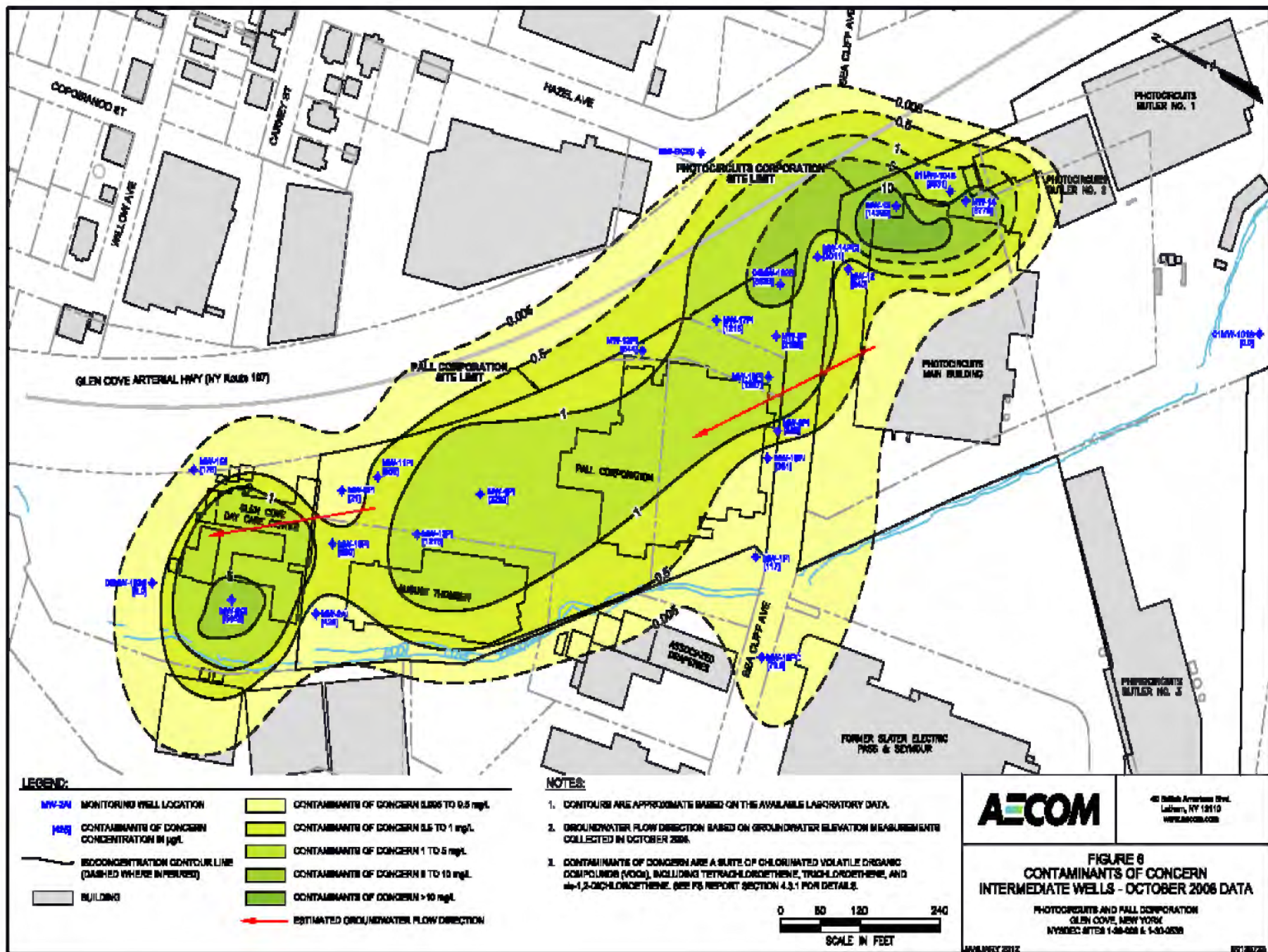










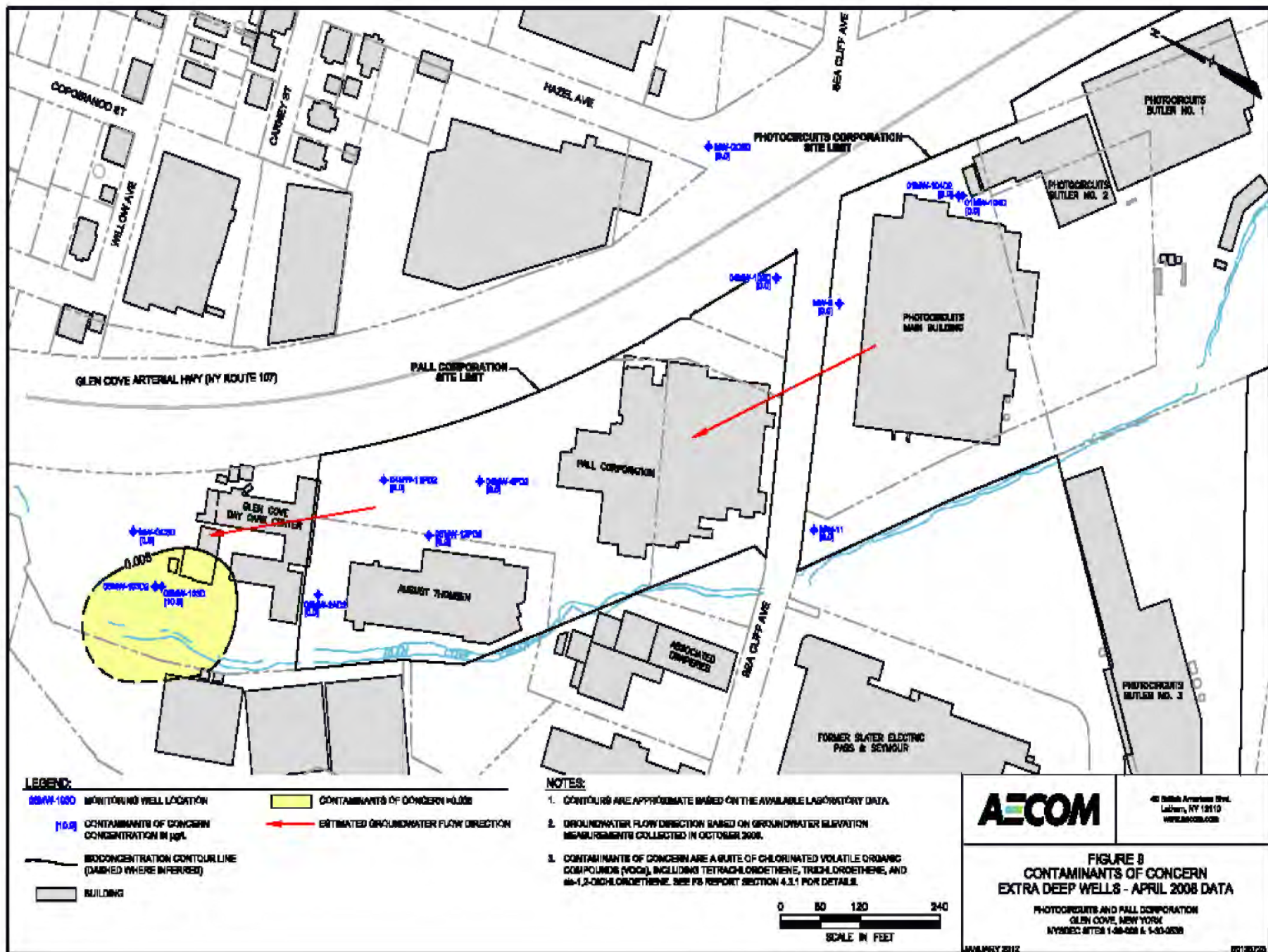












# Photocircuits and Pall OU2 Feasibility Study





# Photocircuits and Pall Feasibility Study Objective

Develop Cleanup Alternatives  
That Achieve  
Remedial Action Objectives



# Photocircuits and Pall Remedial Action Objectives

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards
- Prevent contact with or inhalation of volatiles from contaminated groundwater
- Restore groundwater aquifer to pre-disposal conditions, to the extent practicable



# Cleanup Alternatives

- 1: No Action (no cost)
- 2: Groundwater Monitoring
  - Capital Costs: \$29,000
  - Annual Costs: \$39,000
  - Total Cost: \$620,000
- 3: Groundwater Extraction and Treatment by Air Stripping
  - Capital Costs: \$644,000
  - Annual Costs: \$234,000
  - Total Cost: \$4,243,000



# Cleanup Alternatives (Continued)

- 4: In-Situ Chemical Oxidation (ISCO)
  - Capital Costs: \$3,578,000
  - Annual Costs Yr. 1-3: \$28,000
  - Annual Costs Yr. 4-15: \$94,000
  - Total Cost: \$4,130,000
- 5: ISCO and Pump and Treat
  - Capital Costs: \$3,866,500
  - Annual Costs Yr. 1-3: \$188,000
  - Annual Costs Yr. 4-10: \$132,500
  - Total Cost: \$5,057,000



# Cleanup Alternatives (Continued)

- 6: ISCO and Groundwater Extraction with Recirculation without Ex-Situ Treatment
  - Capital Costs: \$4,024,000
  - Annual Costs Yr. 1-3: \$176,000
  - Annual Costs Yr. 4-12: \$82,000
  - Present Worth: \$4,901,000





# Evaluation of Alternatives

NYSDEC evaluates alternatives on nine criteria:

1. Protection of human health and the environment
2. Compliance with standards, criteria and guidance
3. Short-term impacts and effectiveness
4. Long-term effectiveness and permanence
5. Reduction in toxicity, mobility and volume of contaminants
6. Implementability
7. Cost effectiveness
8. Land use
9. Community Acceptance



# NYSDOH EXPOSURE EVALUATION



Microsoft Office  
Word 97-2003 Pr

NYS Department of Environmental Conservation



# Photocircuits and Pall

## Proposed Remedial Action Plan(s)

- NYSDEC proposes same remedy to remediate the OU2 regime at each site
- Proposed Remedy:

ISCO INJECTION AND GROUNDWATER  
EXTRACTION (RECIRCULATION)  
WITHOUT EX-SITU TREATMENT



# Elements of the Proposed Remedy

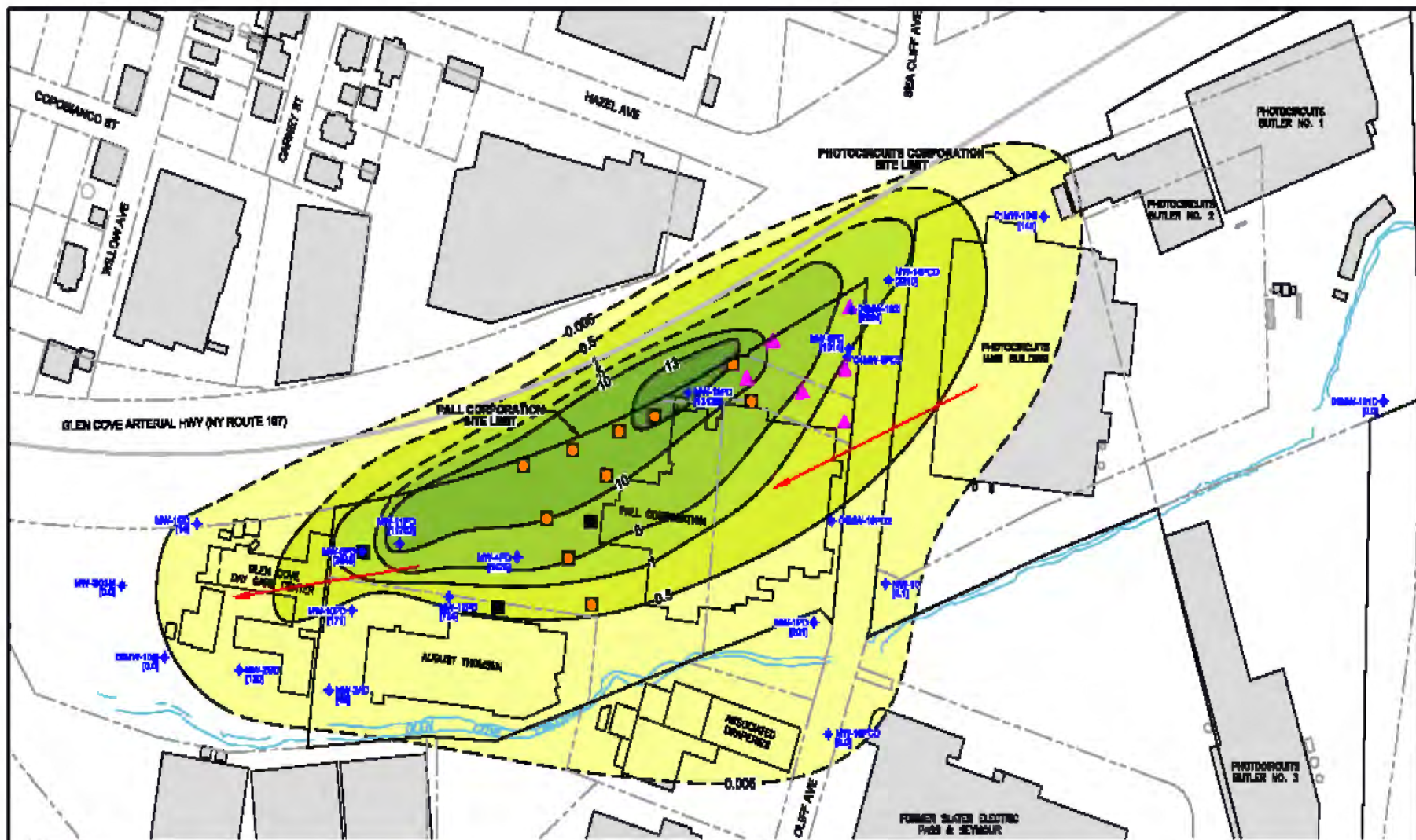
- In Situ Chemical Oxidation/Groundwater Extraction and Recirculation
  - chemical oxidant injected via injection wells
  - groundwater extraction so contaminated groundwater collected, then re-injected upgradient of the Chemical Oxidation treatment area, recirculating contaminated groundwater through treatment area



# Elements of the Proposed Remedy (cont)

- Remedial Design Program
  - Including ISCO Pilot Test
- Institutional Controls
  - Including Environmental Easement
- Site Management Plan
  - Including Monitoring Plan
  - Including Operation and Maintenance Plan





#### LEGEND:

- ▲ PROPOSED INJECTION WELL LOCATION
- PROPOSED EXTRACTION WELL LOCATION
- PROPOSED ISCO INJECTION WELL LOCATION
- ◆ MW-1000 MONITORING WELL LOCATION
- ◆ [120] CONTAMINANTS OF CONCERN CONCENTRATION IN µg/L
- ISOCONCENTRATION CONTOUR LINE (DASHED WHERE IMPERFECT)
- ESTIMATED GROUNDWATER FLOW DIRECTION

- CONTAMINANTS OF CONCERN 0.005 TO 0.5 mg/L
- CONTAMINANTS OF CONCERN 0.5 TO 1 mg/L
- CONTAMINANTS OF CONCERN 1 TO 5 mg/L
- CONTAMINANTS OF CONCERN 5 TO 10 mg/L
- CONTAMINANTS OF CONCERN 10 TO 13 mg/L
- CONTAMINANTS OF CONCERN >13 mg/L
- BUILDING

#### NOTES:

1. CONTOURS ARE APPROXIMATE BASED ON THE AVAILABLE LABORATORY DATA.
2. QMW-1002E AND QMW-1003E NOT CONSIDERED FOR ISOCONCENTRATION CONTOURS.
3. GROUNDWATER FLOW DIRECTION BASED ON GROUNDWATER ELEVATION MEASUREMENTS COLLECTED IN OCTOBER 2006.

0 50 120 240  
SCALE IN FEET

**AECOM**

40 South Avenue Blvd.  
Latham, NY 12110  
www.aecom.com

**FIGURE 14**  
**ALTERNATIVE 0**  
**ISCO INJECTION AND GROUNDWATER EXTRACTION**  
**(RECIRCULATION) WITHOUT EX SITU TREATMENT**  
GLEN COVE, NEW YORK  
REVISED DATES 1-28-2008 & 5-30-2008

1/28/2008

1/28/2008

# Questions? Comments?

Bill Fonda, Moderator  
Citizen Participation Specialist



# Proposed Remedial Action Plans Photocircuits and Pall Sites Operable Unit(s) 2

Comment Period Ends March 14, 2013

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