

U.S.EPA AGENDA

(7PM to 9PM)

Introduction of attendees

Explanation of the comment process

Discussion of the proposed plan and four alternatives

Questions

Discussion of the on going removal action

Questions





United States Environmental Protection Agency Region III





UGI Columbia Gas Plant Superfund Site Columbia Borough, PA

U.S. EPA
Proposed Plan
Public Participation Meeting
July 19, 2007





EPAContacts



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The public has 30 days to submit comments on EPA's Proposed Plan. Comments will be accepted from:

June 27 to July 26, 2007



Please mail comments to:

U.S. ENVIRONMENTAL PROTECTION AGENCY

Region III

1650 Arch Street

Philadelphia, PA

ATTN: David Turner 3HS22

**You may also send them via e-mail, to:
turner.david@epa.gov**





Evaluation of Alternatives “The Nine Criteria”

Threshold

- 1- Overall Protection of Human Health and the Environment
- 2- Compliance with ARARs
(**A**pplicable or **R**elevant and **A**ppropriate **R**equirements)
(Or Provide a Basis of Waiver)

Balancing

- 3- Long-term Effectiveness and Permanence
- 4- Reduction of Toxicity, Mobility or Volume
- 5- Short-Term Effectiveness
- 6- Implementability
- 7- Cost

Modifying

- 8- State Acceptance (PADEP)
- 9- Community Acceptance

(40 CFR § 300.430 (e)(9)(iii))





EPA's Preferred Groundwater Alternative

GW-2: Monitored Natural Gradient Flushing and Institutional Controls

- **Technical Impracticability (TI) Waiver for Groundwater Cleanup ARARs**
 - Coal Tar DNAPL and its 27 contaminants ,TI Waiver applied in “DNAPL ZONE”
- **Natural Gradient Flushing**
- **Groundwater Monitoring** (12 wells) (includes 4 new wells)
- **Institutional Controls (ICs)** : Restriction on future well placement / use
- **Cost: \$796,000**
- **Time to Implement: Weeks-Months**
- **EPA will Conduct 5 Year Reviews**



Restoration of Groundwater and Technical Impracticability



Primary Objective of Superfund

- ☐ “EPA expects to return usable groundwaters to their beneficial uses wherever practicable, within a timeframe that is reasonable given the particular circumstance of the Site”
- Generally, restoration cleanup levels in Superfund established by Applicable or Relevant and Appropriate Requirements (ARARs)
 - ☐ Federal or State standards for drinking water quality (i.e. MCLs)
 - ☐ Where no standard exists for a specific contaminant, EPA establishes a level protective of human health and the environment
- Technical Impracticability (TI) Waiver for Groundwater Cleanup ARARs
 - ☐ ARARs can not be met at the Site due to the nature of the contaminant and the physical conditions (Fractured bedrock) of the Site
 - ☐ Technology Does Not Exist to Effectively Extract the Coal Tar DNAPL from Fractured Bedrock and Source Remains trapped in bedrock



ArialView UGIColumbia Site



5 Year Reviews Conducted by EPA

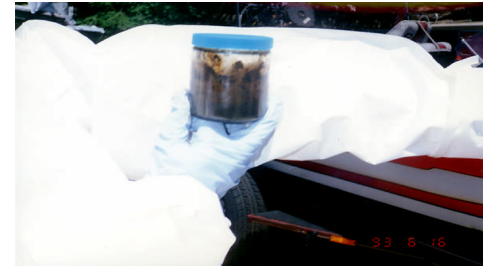


 = 4 new wells installed

 = 8 existing wells




Main Contaminant: MGP Waste Liquid Coal Tar



- Coal Tar is Viscous and Heavier Than Water
- Forms a DNAPL trapped in the Site's Fractured Bedrock
 - Insoluble in Water
- **Technically Impracticable** to restore site groundwater
- MGP Waste: Coal Tar (Mix of Chemicals such as):
 - VOCs : BTEX (benzene, toluene, ethyl benzene, xylene)
 - Semi-Volatile Compounds (SVOCs): such as PAHs
 - Poly Aromatic Hydrocarbons (PAHs)
 - Inorganics: metals and cyanide
 - Carcinogenics in Coal Tar





TI ARAR Waiver: 27 Contaminants

VOCs

- Benzene
- Ethylbenzene
- Tetrachloroethene
- Toluene
- Trichloroethene
- 1,2,4-Trimethylbenzene
- Xylenes (Total)

INORGANICS

- Aluminum
- Barium
- Cyanide
- Iron
- Lead
- Manganese

SVOCs (PAHs)

- Acenaphthene
- Acenaphthylene
- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(b)fluoranthene
- Chrysene
- Fluoranthene
- 1-MethylNaphthalene
- 2-Methyl Naphthalene
- Naphthalene
- Phenanthrene
- Pyrene

SVOCs (OTHER)

- Bis(2-ethylhexyl phthalate -also called- di(2-ethylhexyl)phthalate or DEHP
- Dibenzofuran

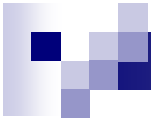




Remedial Action Objectives (RAOs) Groundwater

- The Presence of Coal Tar DNAPL in fractured bedrock prevents restoration of aquifer
- Groundwater Remedial Action Objectives (RAOs)
 - Prevent human exposure
 - Prevent further migration of dissolved phase plume
 - Implement ICs to prevent use / future use
 - (i.e. Deed Notices)





Other Groundwater Alternatives Considered in the Proposed Plan

- GW-1

- No Action

- Cost: \$0
 - Time to Implement: Immediate
 - Not Protective of Human Health the Environment

- GW-3:

- Groundwater Extraction and Treatment

- Dissolved Phase Treatment, TI waiver for DNAPL

- Cost: \$10,700,000
 - Time to Implement: 1-2 years
 - Treatment and Monitoring Time: Indefinitely
 - 5 year Reviews conducted

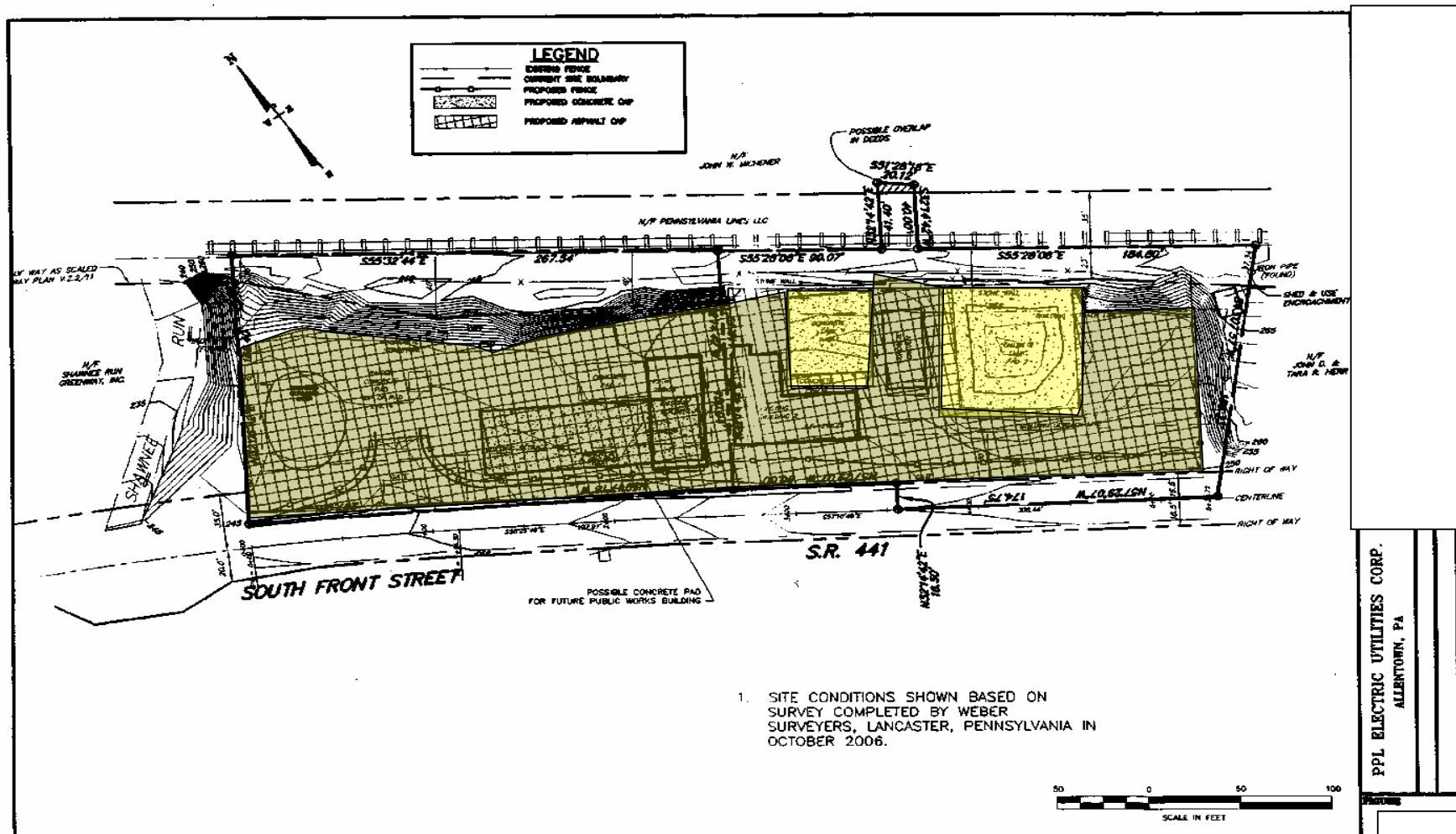




EPA's Preferred Soil Alternative

- Soil (S-2) No Further Action with ICs
 - Institutional Controls (ICs) to protect the integrity of the Concrete and Asphalt Caps being installed at Site by the in-progress Removal Action,
 - ICs prohibiting current / future Site property owners from using Site property for future residential
 - Time to Implement: weeks to months
 - Cost: \$167,522
 - EPA will perform 5-year Reviews - Waste remains at Site
 - Allows for Potential re-use of the MGP Site







Other Soil Alternative Considered

■ (S-1) No Action

- ☐ Cost \$0
- ☐ Time to Implement: Immediate
- ☐ This Alternative is Not Protective of Human Health and the Environment





UGI Columbia Gas Plant Superfund Site

Removal Action



Removal Action Components

- Demolition Buildings and Proper Disposal of wastes
- Grading Site
- Installation of Concrete Cap Holder Area
- Asphalt Cap on remainder of site
- Storm water management system
- Installation of 4 new deep wells around DNAPL Zone
- Property Reuse potential
- Operation Requirements - The concrete pads and asphalt will be periodically inspected and maintained
- August 2007 Completion





What Happens Next?

- The public comments will be addressed in a document called the Responsiveness Summary, which is part of the Record of Decision (ROD)





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For More Information



On the Internet:

www.epa.gov/arweb

To find the Site documents, select 'PA' for State, 'UGI Columbia' for Site Name. Click on 'Search' and then 'Search Results.' The PRAP is listed near the end

Public Repository:

Columbia Public Library
24 South Sixth Street
Columbia PA 17512-1599





U.S. Environmental Protection Agency

EPA Administrative Records Room

1650 Arch Street

ATTN: (3HS42)

Philadelphia, PA 19103

US EPA OSC Web Site (Removal Action)

www.epaosc.net/ugicolumbia

