STATEMENT OF BASIS/FINAL DECISION AND RESPONSE TO COMMENTS SUMMARY

REGION III
ID # 7792

American Color & Chemical Corporation
Lock Haven, Pennsylvania
Signed September 29, 1995

Facility/Unit Type:	**Manufacturer and distributer of various chemicals and dyes used primarily for the color processing of textiles, fibers, paper products, and plastics**
Contaminants:	**Arsenic, lead, benzo(a)anthracene, benzo(a)fluoranthene, benzo(a)pyrene, benzene, chlorobenzene, methylene chloride, toluene, trichloroethene, bis(2-ethythexyl)phthalate, 4-chloroaniline, 1,2-dichlorobenzene, 1,4-dichlorobenzene, 4-methylphenol, 2-nitroaniline, 4-nitroaniline, nitrobenzene, pentachlorophenol, phenol, aluminum, chromium, copper, mercury**
Media:	**Soil and groundwater**
Remedy:	**Remediate the contaminated soil and construct/modify and implement a groundwater pump and treat system in order to pull back, contain and treat the contaminated groundwater plume**

FACILITY DESCRIPTION

The American Color & Chemical Corporation (ACCC) conducted numerous environmental investigations at the Facility starting in approximately 1980. In September 1991, subsequent to the investigations, ACCC entered into an Administrative Consent Order with EPA. Corrective action measures were evaluated under the Order on September 5, 1991, pursuant to Section 3008(h) of the Resource Conservation and Recovery Act (RCRA), as amended, 42 U.S.C. Section 6928. The lateral and vertical distribution of contaminants for on-site soils and in both on-site and off-site groundwater was determined during the RCRA Facility Investigation. Contaminants of concern (COCs) were identified in both the on-site soil and groundwater. The RCRA Facility Investigation Work plan was approved by EPA on September 22, 1992, a Corrective Measure Study (CMS) was conducted, and a CMS Report was approved on May 31, 1995.

The Facility was ordinally operated by Lock Haven Clay Works, which conducted commercial operations manufacturing clay terra-cotta sewer pipes from 1888 to 1900. From 1900 to 1915 the facility stood idle. Between 1915 and the present the Facility had several different owners including Stanley Aniline Chemical Works, American Airline Products, Koppers Company Incorporated, and ACCC. From 1915 to 1982 these owners manufactured and distributed various chemicals and dyes primarily used for the color processing of textiles, fibers, paper products, and plastics. In 1982 all commercial operations were discontinued. As of 1995, the plant production facilities have been demolished, and all wastewater management surface impoundments have either been closed or are in the process of being closed in accordance with approved Pennsylvania Department of Environmental Protection (PADEP) closure plans.

The ACCC Facility is located in Lock Haven, Clinton County, Pennsylvania, approximately ½-mile north of Bald Eagle Creek and approximately 3/4-mile south of the west branch of the Susquehanna River. The facility is in a mixed industrial and residential area with single and multiple family residences lying primarily to the north and west. The Facility is approximately 38 acres in size and contains one aquifer within its boundaries. Groundwater flow is northeast before changing direction to the southeast. The facility is located within the 100 year floodplain of Bald Eagle Creek and the Susquehanna River. It has been flooded 19 times between 1897 and 1975.

CONTAMINATION DETECTED AND CLEANUP GOALS

Media	Estimated Volume	Contaminant	Maximum Concentration	Action Level	Cleanup Goal	Point of Compliance
Surface soil	8,500 cubic yards of soil excavated and 2.5 acres to be capped	Arsenic	442	Back-ground or indus-trial risk based	37	Media cleanup standards
		Lead	2,430		1,000	
		Benzo(a) anthracene	13		3.9	
		Benzo(b) fluoranthene	18		3.9	
		Benzo(a) pyrene	14		.39	
			(mg/kg)		(mg/kg)	
Groundwater	10,512 million gallons	Benzene	2,000	MCL or risk based level	5	Throughout the groundwater contamination plume
		Chlorobenzene	86,000		39	
		Methylene Chloride	2,200		4.1	
		Toluene	2 10,000		1,000	
		Tricloroethene	45		5	
		Bis(2-ethythexyl) phthalatee	38		6	
		4-Chloroaniline	28,000		150	
		1,2-Dichlorobenzene	60,000		600	
		1,4-Dichlorobenzene	2,000		75	
		4-Methylphenol	5,300		180	
		2-Nitroaniline	36,000		2.2	
		4-Nitroaniline	3,100		110	
		Nitroaniline	390,000		3.4	
		Pentachlorophenol	25		1	
		Phenol	9,500,000		22,000	
		Aluminum	3,760,000		37,000	
		Arsenic	8,790		50	
		Chromium	9,740		100	
		Copper	611,000		1,400	
		Lead	62,200		15	
		Mercuryy	765		2	
			(mg/L)		(mg/L)	

Regional precipitation averages 38 inches annually. Mean annual temperature is 51.3 degrees Fahrenheit, typically ranging from 30 degrees in January to 84 degrees in July. There are no endangered species or sensitive environments identified at the Facility.

In July 1993, ACCC initiated Interim Measures consisting of a groundwater pump and treat system. The purpose of this measure is to contain and prevent migration of contaminated groundwater from the ACCC Facility. Groundwater is extracted from two on-site wells, RW-1 and RW-2. The groundwater pump and treat system runs approximately eight hours a day, five days a week, during non-freezing weather and works in conjunction with the PADEP-approved sludge treatment system used for the closure of the on-site

surface impoundments. The recovered groundwater is treated for the removal of metals and organics and the treated groundwater is either recycled as process water for the sludge treatment system or discharged to the sanitary sewer.

EXPOSURE PATHWAYS

The potential exposure pathways for industrial workers via soil include ingestion, absorption through dermal contact, and inhalation. Constituents of concern (COCs) found in the soil include arsenic, polynuclear aromatic hydrocarbons (PAHs), 2-nitroaniline, and nitrobenzene. An assessment, which assumes that the site may be developed for residential use in the future although no plans currently exist, suggests exposure pathways via groundwater and soil including ingestion, inhalation, and dermal contact. The COCs found in the groundwater include aluminum, arsenic, chromium, copper, manganese, mercury, and nickel.

SELECTED REMEDY

The selected remedy proposes the ACCC to remediate the contaminated soil and construct/modify and implement a groundwater pump and treat system in order to pull back, contain and treat the contaminated groundwater plume. It involves the following components:

- Excavate unsaturated soils exceeding the established media cleanup standards in SWMUs 12 and 14.
- Place excavated soil from SWMUs 12 and 14 not exceeding PADEP placement criteria in the impoundments in accordance with the PADEP approved closure plan.
- Treat excavated soils from SWMUs 12 and 14 that exceed PADEP placement criteria in the existing on-site sludge treatment system before placement in the impoundments in accordance with the PADEP approved closure plan.
- Backfill excavated areas with clean soil which is compacted, graded, and vegetated to promote drainage in SWMUs 12 and 14.
- Cap soils that exceed the established media cleanup standards in SWMUs 5 and 15 using capping construction specifications described in the PADEP approved closure plan.
- Install new extraction wells and/or use existing wells for use in groundwater pump and treat system.
- Modify the existing Interim Measures groundwater pump and treat system or construct a new groundwater pump and treat system to allow continuous year round operation.
- Continue operations of the existing Interim Measures groundwater pump and treat system until the existing system is modified or a new groundwater pump and treat system is operational.
- Continue discharge of treated groundwater to the sanitary sewer in accordance with acceptable limits required by the City of Lock Haven publicly owned treatment works (POTW) or if POTW use is discontinued, discharge to Bald Eagle Creek in accordance with the Clean Water Act NPDES regulations and requirements.
- Create and impose institutional controls to support operation and maintenance activities that would include cap maintenance, groundwater pump and treat operations, groundwater quality monitoring, and water level monitoring. Require periodic monitoring and reporting of groundwater data to track compliance with established media cleanup standards.

- Properly decommission the existing on-site sludge treatment system when its use is discontinued.

- Evaluate the high concentration of arsenic found at the one location downstream from the ACCC storm water NPDES discharge outfall in Bald Eagle Creek, to determine if there is any risk to human health or the environment.

The total cost, including capital, operation and maintenance costs, for the selected remedy is approximately $9.5 million.

INNOVATIVE TECHNOLOGIES CONSIDERED

None.

PUBLIC PARTICIPATION

The public comment period will last thirty calendar days.

NEXT STEPS

EPA will prepare a Final Decision Document and Response Alternative. Additional public comments on any proposed revised Corrective Measures Alternative will be solicited and a final remedy will be selected. The final corrective measure alternative will be implemented using the available legal authorities, including, but not limited to, RCRA Section 3008(h).

KEY WORDS:
soil, groundwater; dermal contact, ingestion, inhalation; arsenic, lead, benzo(a)anthracene, benzo(a)fluoranthene, benzo(a)pyrene, benzene, chlorobenzene, methylene chloride, toluene, trichloroethene, bis(2-ethythexyl)phthalate, 4-chloroaniline, 1,2-dichlorobenzene, 1,4-dichlorobenzene, 4-methylphenol, 2-nitroaniline, 4-nitroaniline, nitrobenzene, pentachlorophenol, phenol, aluminum, chromium, copper, mercury; capping, excavation, extraction, filling, institutional controls, groundwater monitoring, offsite discharge, onsite treatment, publicly owned treatment works (POTW), and O&M

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