

Morris Run TCE HSCA Site

Hilltown & Bedminster Townships
Bucks County

Public Hearing – May 5, 2010

Meeting Objectives

- Site background and history
- Response alternatives and associated costs
- Provide a proposed response and solicit comments from the public

Site Background and History

Site Location

- Hilltown and Bedminster Townships,
Bucks County, PA
- The Site area is defined by a cluster of private wells contaminated with Trichloroethylene (TCE): the highest levels are on properties on Route 313 where it crosses a tributary of Morris Run.

Contaminant of Concern

Trichloroethylene (TCE)

Used as a degreaser in many industries, and formerly used to clear clogged septic systems.

TCE Results

The highest concentration found at the Site was 126 ppb, in one well in 1986. The concentration in 2010 was 47.1 ppb.

The highest concentration found in 2010 was in a neighboring well at 65.6 ppb: this well was not sampled in 1986.

The Safe Drinking Water Standard is 5 ppb, promulgated by the United States Environmental Protection Agency, and adopted by the Commonwealth of Pennsylvania as its standard.

Morris Run TCE Site Background

- TCE was discovered in the aquifer underlying the Morris Run area by the Bucks County Health Department (BCHD).
- In 1986 the BCHD was sampling residential wells in the area to determine the lateral limits of a groundwater plume containing methyl tertiary butyl ether (MTBE).
- BCHD found TCE in samples from several private water supply wells.

Morris Run TCE Site Background

Continued

- Following the recommendation of the Department's Hazardous Sites Cleanup Program (HSCP), the BCHD proceeded to collect additional groundwater samples from neighboring residential wells.
- The investigation performed by the BCHD identified 13 wells containing TCE in the Morris Run area. Based on these results, the BCHD turned the investigation of the TCE groundwater plume over to the Department in 2001.

Morris Run TCE Site Background

Continued

- The Department assigned a contractor, Michael Baker Jr., Inc. (Baker), to further investigate the site, and to supply bottled water to owners of private water supplies that have site-related contamination exceeding drinking water standards.

Morris Run TCE Site Background

Continued

- The Department, through Baker, installed monitoring wells at six locations in 2005 for the purpose of characterizing groundwater flow in the Site area.
- The Department has conducted multiple rounds of residential well sampling and monitoring well sampling from 2000 through the present, using both its own personnel and Baker.

Other Related Contaminants Found in Trace Amounts

- 1,1-Dichloroethylene (1,1-DCE)
- Cis-1,2-Dichloroethylene
- Trans-1,2-Dichloroethylene
- 1,1,1-Trichloroethane
- Tetrachloroethene (PCE)

Site Extent

- Approximately thirty-five (35) private wells are known to be affected.
- Fourteen (14) of these have TCE contamination above the drinking water standard.
- None of the wells sampled was found to have any other compound above a drinking water standard.

Department's Actions

- The Department has sampled approximately 60 private wells and 6 monitoring wells.
- Providing bottled water to 13 residences. One resident has installed and maintains a carbon filter that functions to remove the TCE from his water supply.

Department's Objectives:

- Provide a permanent source of potable water.
- Continue to monitor the groundwater plume.

Response Alternatives and Associated Costs

Evaluation Factors

- Overall protection of human health and the environment
- Compliance with applicable or relevant and appropriate requirements
- Must meet cleanup standards from PA Act 2, the Land Recycling and Environmental Remediation Standards Act of 1995
- Short-term effectiveness
- Long-term effectiveness and permanence
- Implementability
- Community acceptance
- Cost

Alternatives

- No Action (Baseline)
- Bottled Water Delivery and Covenant
- Whole-House Carbon Filters and Covenant
- Connection to a Public Water Supply System and Covenant

Alternative 1: No Action (Baseline Alternative)

PROS

- Easily implemented.

CONS

- Discontinue bottled water supply
- Not protective of human health
- Not a permanent solution

Alternative 2: Bottled Water Delivery & Covenant

PROS

- Implementable
- Protects against the ingestion pathway

CONS

- Does not protect against the inhalation pathway.
- Not a permanent solution
- Sampling and analysis is required.
- Inconvenience to residents

Alternative 3: Carbon Filters & Covenant

PROS

- Implementable
- Protects against ingestion pathway
- Protects against inhalation pathway.
- Permanent Solution

CONS

- Periodic sampling and analysis is required by the resident.
- Regular maintenance by the resident is required.

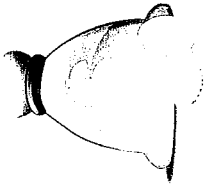
Alternative 4: Connection to a Public Water Supply System & Covenant

PROS

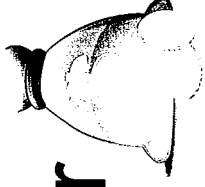
- Implementable
- Protects against ingestion and inhalation pathways
- Supplier has mandated monitoring requirements.
- Permanent solution

CONS

- Residents would need to pay a water bill.
- May encourage unwanted development
- Inconvenience to residents, and traffic disruption during construction of main and laterals
- High construction cost
- Additional time would be required to negotiate inter-municipal agreements.



Department's 30 Year Cost Summary



	Alternative 1 No Action	Alternative 2 Bottled Water	Alternative 3 Carbon Units	Alternative 4 Waterline
Water	\$0	\$220,000.00	\$0	\$0
Sampling	\$0	\$180,000.00	\$34,000.00*	\$0
Installation	\$0	\$0	\$70,000.00	\$2,200,000.00**
Maintenance	\$0	\$0	\$52,500.00*	\$0
Total	\$0.00	\$400,000.00	\$156,500.00	\$2,200,000.00

*The Department would only sample for two years with this alternative, and incur costs for the first carbon unit change-out.

**Waterline installation may require additional costs for booster pump stations, permits and additional time to negotiate inter-municipal agreements.

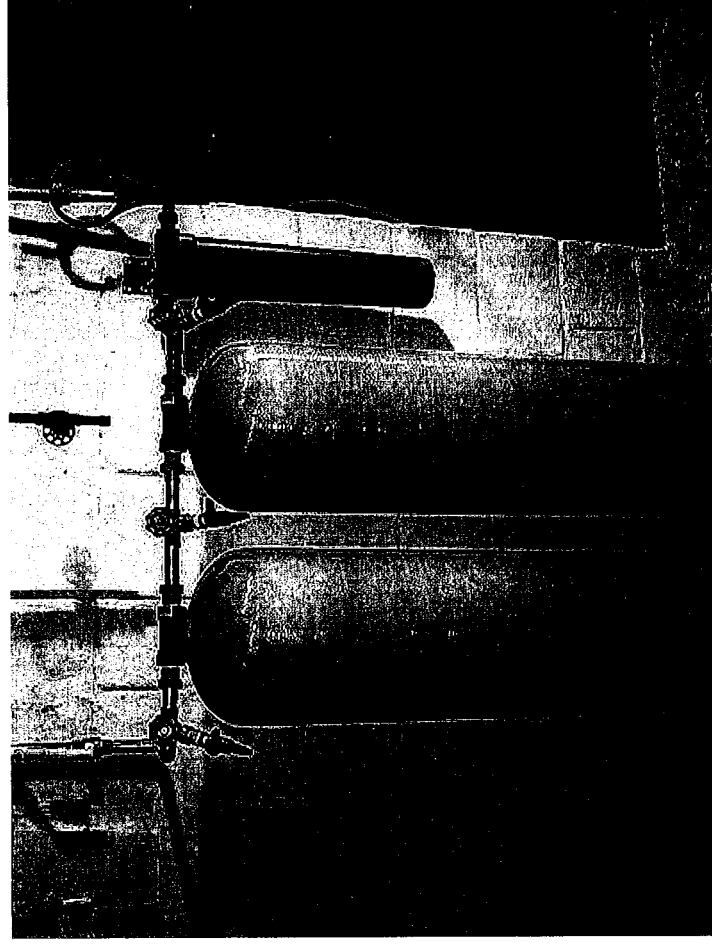
Proposed Response

- **Alternative 3: Installation of Individual Carbon Filters and Covenant**
 - Protective of human health
 - Complies with drinking water standards
 - Most Cost-Effective
 - Permanent solution, if maintained properly. The Department will take semiannual samples for the first two years, and pay for the first carbon changeout. The Department will then recommend to each resident a carbon changeout schedule, and ongoing maintenance and sampling would become the responsibility of the resident.

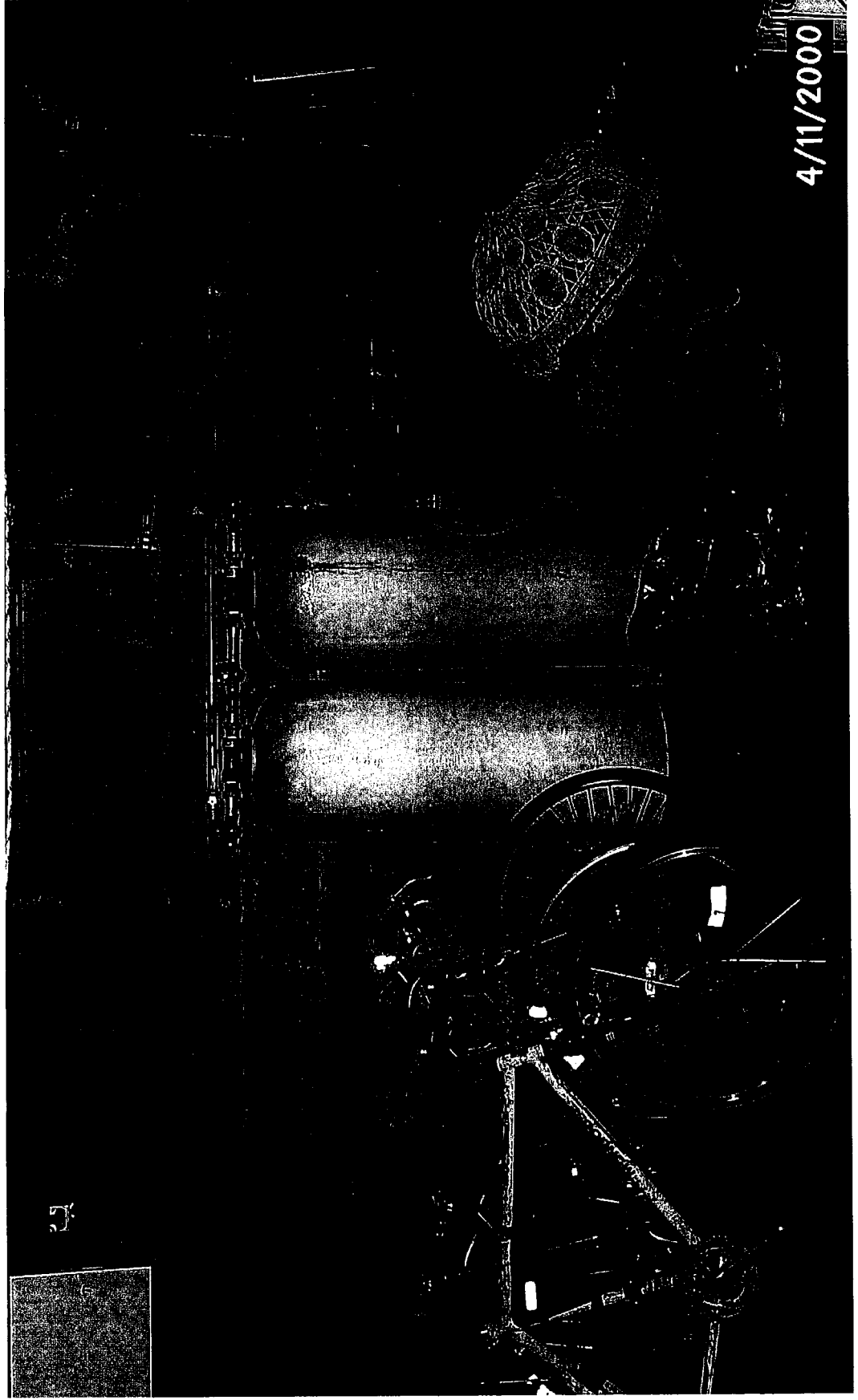
Proposed Response

Covenant and Installation of Carbon Filters

- Two carbon canisters and a sediment filter
- Three sampling ports
- Non-freezing location required
- Residents would sign a covenant for maintenance of a carbon filter and notice of contaminated ground water on their property.



Another Carbon Filter



Submit Written Questions/Comments to:

David Ewald

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2 East Main Street

Norristown, PA 19401

Email: dewald@state.pa.us

Telephone: (484) 250-5725

DEADLINE FOR COMMENTS:

June 18, 2010