

The New Jersey Department of Environmental Protection (NJDEP) has contracted Kleinfelder East, Inc. (Kleinfelder) to perform a Remedial Investigation (RI) of the soil and groundwater at the Sunshine Cleaners (PI: 267431), located at 1630 Tilton Road (B: 97, L: 13) in Northfield City, Atlantic County.

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**CHRIS CHRISTIE**  
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**KIM GUADAGNO**  
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Commissioner

## Site History

Sunshine Cleaners is an active dry cleaning establishment that has been in operation since the 1960's. In the 1980's, volatile organic compounds (VOCs) were first detected in New Jersey American Water Company public supply well 4A, located on Mill Road, approximately 1,100 feet southwest and hydrogeologically downgradient of the site. Upon discovery of VOC contamination in this well, an air stripper was installed to treat the contaminated groundwater.

As a result of the detection of VOCs, the Atlantic County Health Department (ACHD) sampled potable wells at residential properties in the area surrounding Well 4A between 1988 and 1991. The results of this sampling indicated numerous residential wells along Argo Lane, Mill Road, Oxford Circle, Steelman Avenue, Surrey Avenue, Cornwall Avenue, Bay Drive, and Yorkshire Avenue were contaminated with tetrachloroethene (PCE) and trichloroethylene (TCE) at concentrations exceeding applicable regulatory standards. Twenty-six residential wells had concentrations of PCE above the drinking water standards and four of those 26 wells also had TCE above the standards. The highest PCE concentration at the time of sampling was reported at 24.7 parts per billion (ppb). Due to the extent of contaminated wells in the area, Northfield City and New Jersey American Water Company extended water lines to the impacted area in 1994.

Between 2004 and 2006, NJDEP collected soil and groundwater samples at the site to characterize the on-site environmental impacts. Groundwater concentrations were compared to the current NJDEP Class II-A Contaminant Quality Standards (GWQS). PCE was detected in on-site groundwater samples at concentrations ranging from non-detect (ND) to 28,000 ppb (GWQS is 1ppb). In the shallow aquifer, Methyl Tertiary Butyl Ether (MTBE) concentrations in the groundwater samples ranged from ND to 57 ppb (GWQS is 70 ppb). The NJDEP attributed the MTBE detections to an upgradient source. No other contaminants were reportedly detected in the groundwater samples.

Concentrations of PCE in the off-site groundwater samples ranged from 0.27 to 169.24 ppb. Based on the results of the site assessment, NJDEP concluded that PCE on- and off-site, including private water supply wells at the Mill Road area and NJAWC public supply well 4A, were attributable to site operations.

Only two on-site soil samples were collected by NJDEP as part of the January, 2006 Site Investigation. Both samples were analyzed for VOCs. No contamination was detected in either soil sample.



## **Remedial Investigation (RI)**

The extent of soil and ground water contamination at the Sunshine Cleaner's site has been partially characterized through previous investigations. The primary objectives of this RI to be performed by Kleinfelder on behalf of the NJDEP include:

- Confirmation of contaminant source area(s)
- Delineation of the horizontal and vertical extent of soil and groundwater impacts at the site and the surrounding properties
- Identification of potential vapor intrusion pathways
- Evaluation of impacts to potential human health and ecological receptors.

## **Field Activities**

A comprehensive assessment of soil, groundwater, and soil vapors will be conducted as part of the RI activities. This assessment will include the following tasks:

- Site building walkthrough
- Receptor Evaluation
- Performing an on- and off-site screening of soil and groundwater
- Performing a follow-up on- and off-site soil and groundwater investigation
- Installation and sampling of permanent monitoring wells at locations where and if warranted by the results of the soil and groundwater samples
- Performing an on-site and off-site soil gas survey and vapor intrusion investigation where warranted by the results of the previous tasks;
- Updating the receptor survey

## **Screening Activities**

Preliminary screening data collected in early 2011 indicates that the ground water contamination is migrating in a south easterly direction. Additional investigations will commence in April 2011 and will continue intermittently over the next several months to further refine the levels and direction of ground water contamination.

All aforementioned activities will be conducted in accordance with the current NJDEP Technical Requirements for Site Remediation.

## **Vapor Intrusion Investigation**

Vapor intrusion is the migration of volatile chemicals from the subsurface into enclosed buildings. Volatile compounds in subsurface soil and groundwater can potentially impact the indoor air quality of a building. The vapor intrusion investigation will evaluate the indoor air quality at each sampled property and identify potential or actual vapor intrusion pathways, as applicable. Subsurface vapor samples may also be collected adjacent to or beneath each property. All samples will be compared to the applicable NJDEP screening levels. Pending the results of the initial vapor intrusion investigation, additional residential and commercial properties may be investigated. All property owners will be notified in advance of sampling activities.

***NJDEP will provide a copy of all approved environmental reports to the City of Northfield upon the request of the municipality.***

\* For more information on vapor intrusion, please visit:  
[http://nj.gov/dep/srp/guidance/vaporintrusion/indoor\\_air.htm](http://nj.gov/dep/srp/guidance/vaporintrusion/indoor_air.htm)

\* For frequently asked questions about specific contaminants, please visit: <http://www.atsdr.cdc.gov/toxfaq.html>

