



COMMUNITY UPDATE INFORMATION SHEET

CTS of Asheville, Inc. Superfund Site

Asheville, Buncombe County, North Carolina

July 29, 2013

EPA is committed to keeping the community informed about activities related to the CTS of Asheville, Inc. Superfund Site. Community Update Information Sheets will be published approximately monthly and will summarize the present status, future activities, and community involvement opportunities. Historical information has been presented in previous editions.

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The CTS of Asheville, Inc. Superfund Site (CTS Site) is approximately nine acres located on Mills Gap Road in Asheville, Buncombe County, North Carolina, and also includes the areal extent of contamination. It is in an area known as Skyland, which is approximately 5 miles south of Asheville. The former facility is bordered by Mills Gap Road to the north, and residences and undeveloped land to the east, south, and west. The primary contaminant associated with the CTS Site is trichloroethene (TCE).

DRINKING WATER WELL SAMPLING

The third quarterly sampling event of 2013 took place during the week of July 8th.

Preliminary results received from the laboratory show no detections of volatile organic compounds (VOCs). After final laboratory results are received, EPA will issue letters to



AMEC personnel collecting a well water sample in July 2013

the property owners whose wells were sampled in July. The next quarterly sampling event will occur in October.

For homes with Culligan installed whole house water filtration systems, AMEC collected two samples: one sample was collected from water before it enters the filtration system in order to evaluate the quality of the unfiltered ground water and a second sample was collected after the water flows through the filtration system to evaluate the quality of the filtered water entering the home. For homes that have not had the filtration system installed, only one sample was collected to evaluate the quality of the unfiltered ground water. All samples were analyzed by Pace Analytical Services, Inc. for VOCs that are associated with the CTS Site. These VOCs include: 1,1-dichloroethene, cis-1,2-dichloroethene, trans-1,2-dichloroethene, tetrachloroethene, toluene, 1,1,1-trichloroethane, TCE, and vinyl chloride.

There were no detections of VOCs in any of the water samples collected in January or April, and preliminary results show no detections in any of the water samples collected in July.

BUNCOMBE COUNTY WATER LINE EXTENSION UPDATE

McGill Associates and Buncombe County are continuing to obtain easements for the extension of the municipal water lines for homes that are located within a one-mile radius of the CTS Site. McGill Associates is putting the finishing touches on the bid documents for the project. There are four locations that will need pump lift stations due to their elevation from the main water line. EPA is in the process of calling those property owners to determine if they wish to connect to the municipal water line so the contractor can determine the number of lift stations to include in the bid design documents.

Before the loan can be approved, the project has to be considered ready to construct. This includes completion of the design and acquiring all needed easements. Several factors may affect the timeline for completion of all water line connections. McGill Associates estimates it will take one year to complete the project after all easements are obtained and the project is put out for bid and awarded to a contractor. The current estimate is that construction may begin in the Fall of 2013, and be completed in 2014.

For residents that connect to the municipal water system during this project, the City will waive the normal service connection fees.

If you have questions about the municipal water supply line project, please contact:

Mandy Stone

Assistant County Manager

828-250-5587

or

Mike Dowd

McGill Associates

828-232-6127

WHOLE HOUSE WATER FILTRATION SYSTEM UPDATE

Culligan will provide standard/routine servicing and maintenance at no cost to the homeowner. Culligan is responsible for repairing malfunctions of the filtration system as a result of ordinary use and operation. If an issue arises, please notify Culligan immediately by calling their local office:

828-251-2420

In 2012, CTS Corporation offered to install, monitor and maintain whole house water filtration systems for homes that are located within a one mile radius of the CTS Site that rely on well or spring water as their drinking water source **at no cost to the home owners**. The filtration design includes two sediment filters, a carbon filter tank, and an ultraviolet light, at a minimum.

Culligan began installing filtration systems on September 11, 2012. As of July 29, 2013, filtration systems have been installed in 88 homes.

The sediment filters are on a 6-month maintenance schedule. For homes that needed a softener in addition to the standard system, the softeners are on a 4-month maintenance schedule. Culligan

will contact home owners/tenants to schedule appointments for maintenance.

The standard filtration systems will filter out some metals that are attached to sediment, remove organic chemicals that could possibly enter your well water, and kill bacteria that may be in your water. Accepting the filter system offer does not prevent home owners from connecting to the municipal water supply later, if it becomes available. This is being offered as a preventative/safety measure to protect your water until the Remedial Investigation is completed and a final remedy selected, and/or you connect to the municipal water supply, whichever occurs first.



SOIL AND SHALLOW WATER SAMPLING

Sampling is planned to begin on the main plant property within the next two months. The work will include collecting samples of soils and water to better understand how deep and wide the highest concentrated contamination exists on and near the CTS Site. Specialized equipment will be used and the sampling area may be expanded as data is collected. Photographs of examples of the types of equipment that are typical for this kind of sampling event are attached at the end of this update.

The sampling event will include work outlined in the Soil Vapor Extraction (SVE) Confirmation Sampling and Analysis Plan in addition to work outlined in the Non-Aqueous Phase Liquid (NAPL) Investigation Work Plan. The NAPL Work Plan requires that samples also be collected on adjacent properties to the east of the Site. The neighboring property owners had not yet agreed to allow the sampling to be conducted on their properties. If the access issues are not resolved, the extent of the contaminated area may not be able to be defined. This work is essential to determine the best cleanup plan for the Site.

EPA recently prepared a Frequently Asked Questions document for Congressman McHenry and Congressman Meadows regarding the NAPL Investigation. We are including it at the back of this community update in case you are interested in learning more.

QUESTION OF THE MONTH

Why doesn't the NAPL Work Plan include sample locations on Southside Village properties or the property that is for sale on the west side of the CTS Site?

The intent of the NAPL Investigation is to find the extent of source contamination and will begin at the former manufacturing facility and work outward until the edges of NAPL pool(s) are defined. The extent of the ground water contamination considered to be dissolved phase rather than NAPL will be addressed in the future Remedial Investigation (RI) Work Plan. This is best illustrated by considering a glass of oil and water. The oil floats on top of the water (most concentrated), while some less concentrated tiny droplets may mix with the water (dissolved phase).

The figure attached at the back of this update shows some of the historical concentrations of TCE in spring and shallow well water. Although the concentration of TCE in the spring on the west

side of the property (330 micrograms per liter ($\mu\text{g/L}$) in SPR-05) exceeds regulatory standards for drinking water, they are indicative of dissolved phase rather than NAPL. In contrast, the concentration of TCE in the spring on the east side of the property (10,000 $\mu\text{g/L}$ in SPR-02, SPR-03, and SPR-04), is at a concentration that indicates the potential that NAPL is present. If NAPL is identified on the western edge of the CTS property, EPA will request that the adjacent property owners allow the sampling to proceed onto their property. The dissolved phase extent of contamination will be addressed during future RI work.



Information Repository

EPA has established an information repository for the public to review some of the documents related to the Site and the Superfund program. The local repository does not include all documents related to the Site. Additional documents may be made available by EPA upon request. The local information repository is located at the:

Pack Memorial Library
67 Haywood Street
Asheville, North Carolina 28801-2834

EPA Website

EPA has a website specifically for the CTS of Asheville, Inc. Superfund Site. The website address is:

<http://www.epa.gov/region4/superfund/sites/npl/northcarolina/millsgapnc.html>

Websites created by community members

- Clean Asheville: <http://cleanasheville.info>
- POWER Action Group: <http://poweractiongroup.org>

COMMUNITY GROUPS

EPA is aware of two community groups that have formed regarding the CTS of Asheville, Inc. Superfund Site. The original community group, Concerned Citizens for Mills Gap Cleanup, is led by Glen Horecky. If you are interested in learning more about or joining this group please contact Mr. Horecky at geh4@msn.com.

POWER Action Group was established in August 2012 and is led by Lee Ann Smith. POWER stands for Protecting Our Water and Environmental Resources. POWER meets monthly, communicates with EPA regularly, and maintains a Facebook page <https://www.facebook.com/CTSAshville> and a website: <http://poweractiongroup.org>. If you are interested in learning more about or joining this community group please contact Ms. Smith at upthishill@bellsouth.net.

The EPA encourages community members to come together as a group and apply to receive funds to hire an independent technical adviser. POWER Action Group submitted an application for a Technical Assistance Grant (TAG). A TAG provides money for activities that help your community participate in decision making at eligible Superfund sites. An initial grant up to \$50,000 is available to qualified community groups so they can contract with independent technical advisors to interpret and help the community understand technical information about their site. EPA is currently processing POWER Action Group's TAG application. More information about TAGs can be found at <http://www.epa.gov/superfund/community/tag>.

Contact Information

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Community Groups

Concerned Citizens for Mills Gap Cleanup

Glen Horecky

GEH4@MSN.COM

POWER Action Group

(Protecting Our Water and Environmental Resources)

Lee Ann Smith

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REMEDIAL PROCESS

The EPA and North Carolina Department of Environment and Natural Resources (NCDENR) have performed numerous investigations related to the Site over the years. In March 2011, the Site was proposed to the National Priorities List (NPL), making it eligible to enter into EPA's remedial process. More information about the superfund cleanup process can be found at the following website:

<http://www.epa.gov/superfund/cleanup/index.htm>.

The Site was finalized on the NPL in March 2012. In January 2012, CTS Corporation entered into an agreement with EPA for them to conduct the Remedial Investigation and Feasibility Study (RI/FS) under EPA oversight. The RI determines the nature and extent of contamination. The FS assesses the treatability of site contamination and evaluates the potential performance and cost of treatment technologies. More information about the RI/FS process can be found at the following website:

<http://www.epa.gov/superfund/cleanup/rifs.htm>

The CTS of Asheville, Inc. Superfund Site is complex. Work is planned to occur in several phases. The highest priorities were mentioned on the previous pages of this update, and the vapor intrusion assessment has been completed for property owners that gave permission for sampling. In the future, another work plan will be prepared to extend the investigation, as needed, in order to gather enough information to select and design the most appropriate cleanup options.

QUESTIONS?

Please call or email either Angela or Samantha if you have any questions. We are still building our email distribution list. If you'd like to be added or deleted from our email list, let us know.

Previous Community Updates include historical information. The following updates are available upon request:

1. May 23, 2012
2. May 31, 2012
3. July 10, 2012
4. August 24, 2012
5. September 14, 2012
6. October 18, 2012
7. November 29, 2012
8. January 18, 2013
9. February 21, 2013
10. April 8, 2013
11. May 15, 2013
12. June 27, 2013

**ADDITIONAL INFORMATION ATTACHED REGARDING
NAPL INVESTIGATION**



CTS of Asheville, Inc. Superfund Site NAPL Investigation Plan Questions and Answers

What is the sequence of events that can be expected in CTS Investigation action plan?

- Non-Aqueous Phase Liquid (NAPL) Investigation
 - Field Sampling – anticipate beginning in September 2013 and taking 3 months to complete
 - Laboratory Analysis – anticipate data within 21 days of sample receipt by laboratory
- Vapor Intrusion – the only remaining air sampling anticipated is on the Rice family properties and will be initiated after the Rice family grants access.
- Remedial Investigation/Feasibility Study and Risk Assessments – ground water investigation and data collection to fill in data gaps to complete the risk assessments and develop the cleanup plan options. Anticipate completing within two to three years.
- After the investigation, EPA will use the results of the investigations to determine which cleanup strategy will be most effective at the site in removing existing pollution and preventing the further spread of contamination. EPA will publish a proposed determination for comment by the public.

What is NAPL?

Non-Aqueous Phase Liquid (NAPL) is a chemical compound or mixture of compounds that is liquid in its pure concentrated form that does not readily mix with water, but slowly dissolves in water. At the CTS Site, NAPL is believed to include petroleum products and chlorinated solvents, including, but not limited to trichloroethylene (TCE). Dense non-aqueous phase liquid (DNAPL) such as TCE, sinks in water and can pool in crevices and other places in bedrock located underneath ground water. Light non-aqueous phase liquid (LNAPL) such as petroleum products, floats on top of ground water. When released into the environment, both DNAPL and LNAPL are sources of contamination to ground water. An example can be found at www.epa.gov/ada/gw/napl.html.

Why not remove the soils at the source rather than conduct the NAPL Investigation at the CTS Site and adjacent properties?

Based on information from previous sampling events, the EPA's geologists and engineers believe that there may be a pool, or multiple pools, of NAPL (source contamination) under the former plant facility that has migrated by ground water, primarily toward properties east of the Site. Given that the contaminant sources may be traveling on top of the water table, at the bottom of the water table and dissolved within the water column, contamination is not in an isolated geographic area that could be readily removed with heavy equipment. Therefore, defining the vertical and horizontal extent of this NAPL is essential to the design of a technically sound long-term clean up strategy.

Why doesn't the NAPL Work Plan include sample locations on Southside Village properties or the property that is for sale on the west side of the CTS Site?

The intent of the NAPL Investigation is to find the extent of source contamination and will begin at the former manufacturing facility and work outward until the edges of NAPL pool(s) are defined. The extent of the ground water contamination considered to be dissolved phase rather than NAPL will be addressed in the future Remedial Investigation (RI) Work Plan. This is best illustrated by considering a glass of oil and water. The oil floats on top of the water (most concentrated), while some less concentrated tiny droplets may mix with the water (dissolved phase).



The enclosed figure shows some of the historical concentrations of TCE in spring and shallow well water. Although the concentration of TCE in the spring on the west side of the property (330 micrograms per liter ($\mu\text{g/L}$) in SPR-05) exceeds regulatory standards for drinking water, they are indicative of dissolved phase rather than NAPL. In contrast, the concentration of TCE in the spring on the east side of the property (10,000 $\mu\text{g/L}$ in SPR-02, SPR-03, and SPR-04), is at a concentration that indicates the potential that NAPL is present. If NAPL is identified on the western edge of the CTS property, EPA will request that the adjacent property owners allow the sampling to proceed onto their property. And again, the dissolved phase extent of contamination will be addressed during future RI work.

Why are Access Authorization forms needed and from whom?

EPA seeks authorization from property owners before conducting work on their property. The current owner of the former CTS manufacturing facility property has granted access. Five property owners on the west side of the Site in Southside Village and the property that is currently for sale gave written permission to perform air sampling that occurred in October 2012. Sampling for the Vapor Intrusion Assessment and NAPL Investigation is also needed on property owned by the Rice family. In March 2012, the Rice family revoked their permission for sampling to be done on their property. Since then, CTS Corporation and EPA have been working to obtain access for sampling activities, but to date, the Rice family has not provided this access. Although EPA does not anticipate that the NAPL investigation will extend to properties west of the Site, the EPA will request access authorization forms from those properties in the event that sampling is needed.

How will the NAPL Investigation work be done?

The contractor will drill holes into the ground using track mounted direct push technology (DPT) drilling equipment and/or a small hollow stem auger with specialized chemical sensing equipment attached. The bore holes will be approximately 2 to 6 inches in diameter and will go down to bedrock, which ranges from approximately 25 to 80 feet deep. The boring locations will be spaced about 50 to 100 feet apart. Data will be collected by the sensing equipment as the probe proceeds down the bore hole. In addition to data collected by the sensing equipment, soil and ground water samples will also be sent to a laboratory for analyses. We estimate that approximately 1 to 2 bore holes will be drilled, data collected, and backfilled each work day. However, this may change for areas that the boring is easy or if challenges are encountered during drilling. Photographs of the type of equipment that is typically used for this type of investigation are enclosed.

How many bore holes are planned?

The approved work plan includes 67 soil boring locations, with 18 of the locations on the property owned by the Rice family. The majority of the samples, approximately 75%, are planned for the former CTS manufacturing facility. However, the exact number of locations may change as information is gathered during sampling activities. An aerial view of the approximate sampling locations is enclosed.

What will be done with the soil that is removed from each hole?

The soil removed during the borings will be put into labeled drums and will not be returned to the bore hole. The drums will be temporarily stored inside the locked fenced area on the former CTS manufacturing facility. Within 90 days, the drums will be transported off the Site for disposal at an approved disposal facility based on the laboratory analytical results of the submitted soil and ground water samples. The holes created by the borings will be filled with a clay and cement mixture, which is standard practice for the work being conducted.

Will the properties be damaged or trees removed?

The use of the DPT and/or track-mounted drill rig to conduct the sampling will make it minimally invasive and should avoid the need for removal of any trees. The properties will be restored to as close to pre-existing conditions as possible, including filling any bore holes, repair of any ruts caused by the activities, and re-seeding any grass areas that may be damaged during the activities.

How long will the field work take?

The NAPL Investigation is estimated to take approximately three months of field work, but may take longer if challenges are encountered in the field or if the planned sampling boundaries need to be extended due to the presence of NAPL.

Can members of the community observe the sampling activities?

The work will be done on private property. Community members can observe the sampling activities from a distance. If the property owner grants permission for a person to enter their property, for safety reasons, the visitor must stay a safe distance away from drill rigs, etc. in order to comply with the Occupational Safety and Health Administration's (OSHA) health and safety requirements. The contractor will establish what is called an exclusion zone and only authorized personnel with appropriate training completed, will be allowed into the work zone.

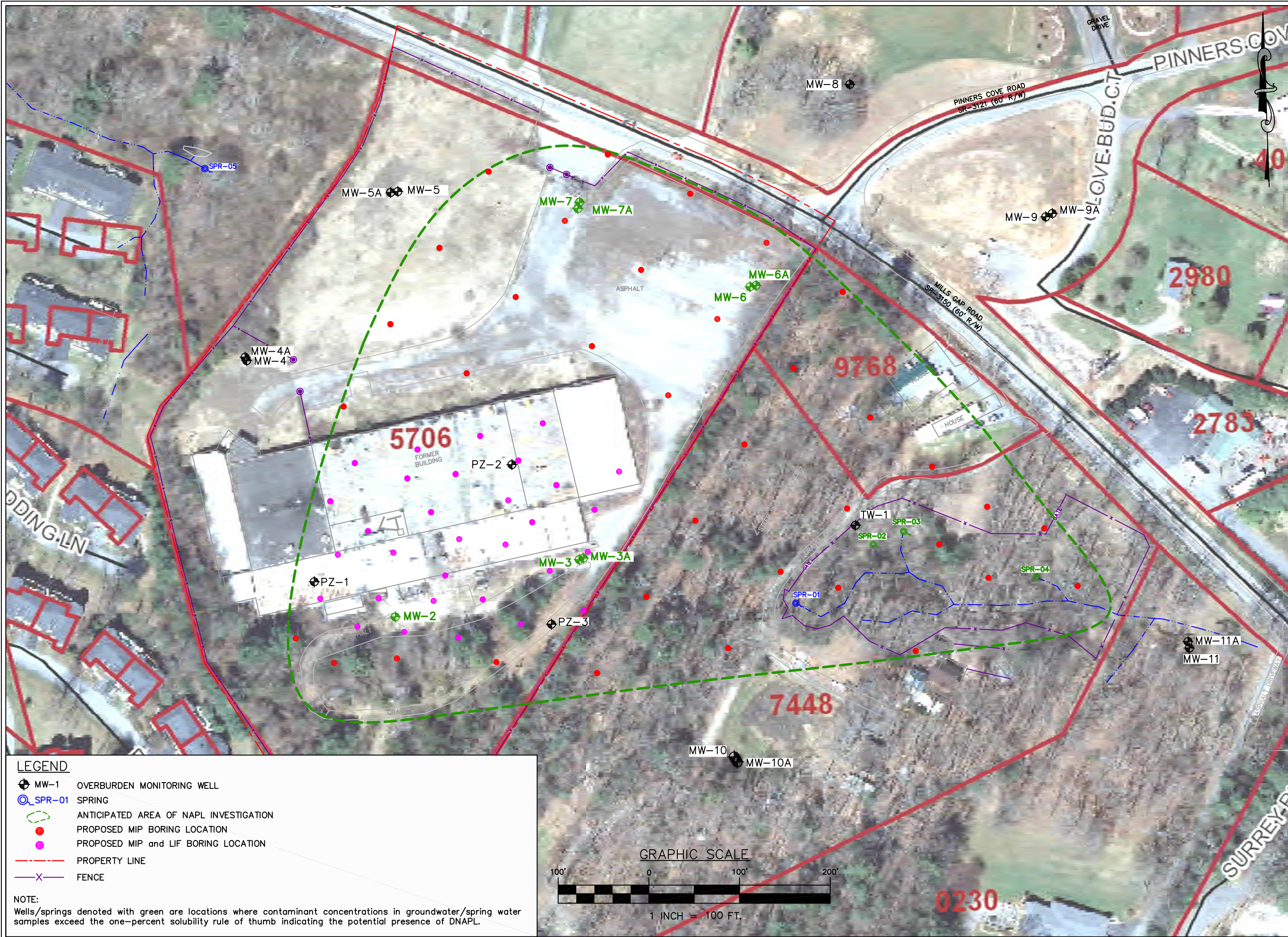
Can NAPL result in air contamination or vapor intrusion?

At the CTS Site, the high concentrations of chemicals in shallow ground water and springs can contribute to outside and indoor air contamination. In 2007 and 2008, the EPA conducted air sampling at residences on properties on both sides of the Site as well as across the street. The results were within acceptable risk ranges at that time. In October 2012, the contractors collected outside and indoor air samples from five properties to the west of the site (i.e. Southside Village and the vacant property that is currently for sale). The results indicated that although TCE and a few other compounds were detected, the concentrations were within acceptable risk based ranges for residential property use. This was also consistent with results from the 2007 and 2008 air sampling events. Based on the 2011 changes to toxicity values for TCE and concentrations detected in 2007 and 2008 from the Rice family's property, EPA is still concerned about air concentrations on their property. However, the Rice family refused to allow the sampling to be conducted in October. If the Rice family decides to allow the air sampling, EPA will direct contractors to complete the Vapor Intrusion Assessment on their properties.

What follows the NAPL Investigation?

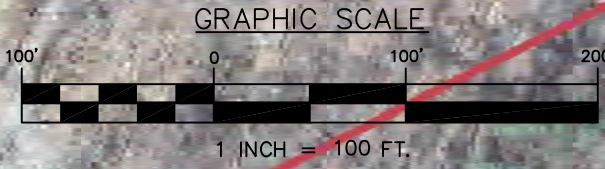
The results from the NAPL Investigation will be evaluated to determine future cleanup actions for the primary source of contamination. In addition, after the NAPL Investigation is complete, the information collected will be used to develop the Remedial Investigation Work Plan to delineate the extent of the dissolved phase ground water contamination and address any data gaps. After the RI field work has been completed, all data will be evaluated and a Feasibility Study will be performed to determine the best cleanup plan for the Site. The RI/FS will take approximately two to three years to complete. At the conclusion of the RI/FS, EPA will publish its proposed cleanup plan for comment by the public.

Before EPA selects a site wide remedy, EPA may take limited actions to prevent exposure, such as these we have already taken to ensure the safety of drinking water to nearby homes on private wells. Similarly, we would take action to mitigate vapor intrusion if we found unacceptable levels of contaminants in indoor air. Early action could also be deemed appropriate to address a source of ongoing contamination, such as the suspected NAPL contamination described above.



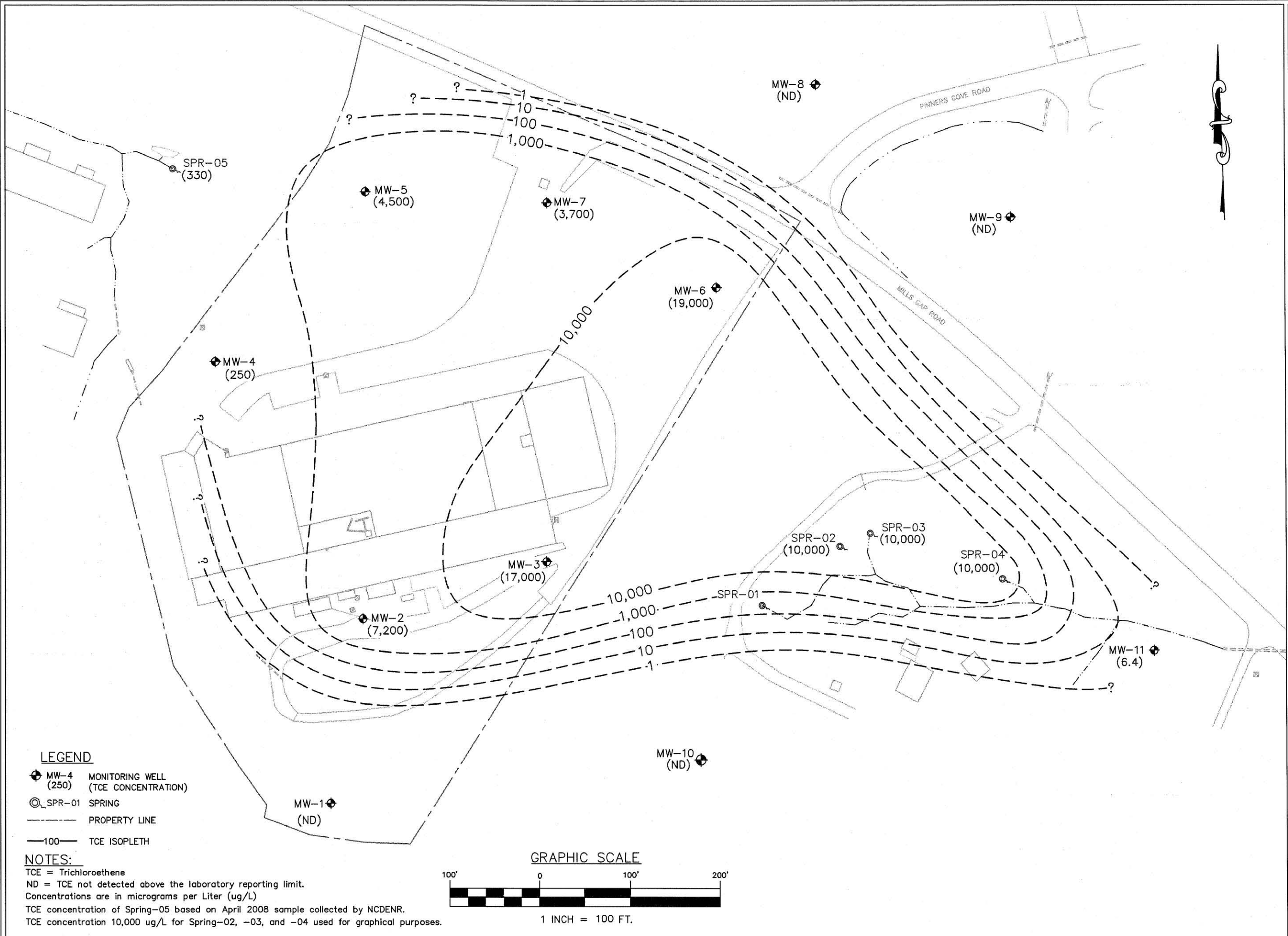
- LEGEND**
- ⊕ MW-1 OVERBURDEN MONITORING WELL
 - ⊕ SPR-01 SPRING
 - ANTICIPATED AREA OF NAPL INVESTIGATION
 - PROPOSED MIP BORING LOCATION
 - PROPOSED MIP and LIF BORING LOCATION
 - PROPERTY LINE
 - FENCE

NOTE:
Wells/springs denoted with green are locations where contaminant concentrations in groundwater/spring water samples exceed the one-percent solubility rule of thumb indicating the potential presence of DNAPL.



NAPL INVESTIGATION BORING LAYOUT
 CTS OF ASHEVILLE, INC. SUPERFUND SITE
 ASHEVILLE, NORTH CAROLINA

| | | | |
|--|---------------|---------------------|-------------------|
| DRAWN: SEK | ENG CHECK: -- | DATE: NOVEMBER 2012 | JOB: 6252-12-0006 |
| DFT CHECK: MEW | APPROVAL: MEW | SCALE: 1"=100' | FIG: 3 |
| REFERENCE: SURVEY PREPARED BY FREELAND & ASSOCIATES. | | | |



LEGEND

- ◆ MW-4 (250) MONITORING WELL (TCE CONCENTRATION)
- SPR-01 SPRING
- PROPERTY LINE
- 100— TCE ISOPLETH

NOTES:

TCE = Trichloroethene
 ND = TCE not detected above the laboratory reporting limit.
 Concentrations are in micrograms per Liter (ug/L)
 TCE concentration of Spring-05 based on April 2008 sample collected by NCDENR.
 TCE concentration 10,000 ug/L for Spring-02, -03, and -04 used for graphical purposes.

GRAPHIC SCALE



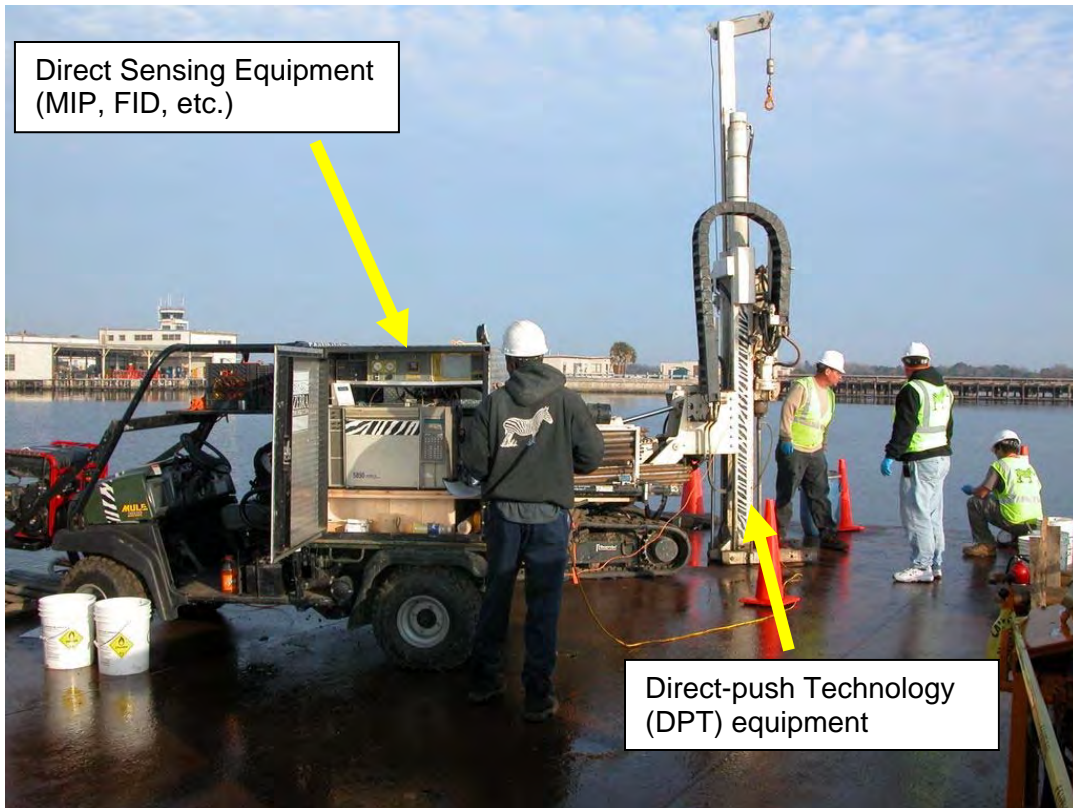
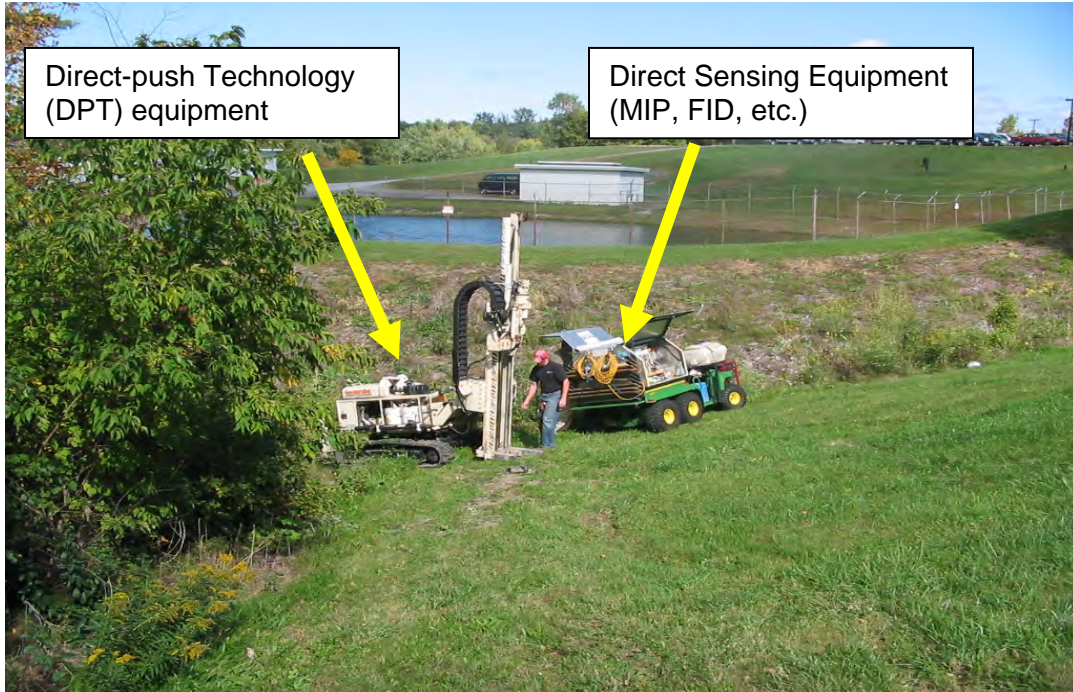
1 INCH = 100 FT.



TCE ISOPLETH MAP - SHALLOW OVERBURDEN GROUNDWATER
 MILLS GAP ROAD SITE
 SKYLAND, NORTH CAROLINA

| | | | |
|--|---------------------|-----------------|-------------------|
| DRAWN: <i>SEK</i> | ENG CHECK: - | DATE: JULY 2009 | JOB: 6686-08-1744 |
| DFT CHECK: <i>LUT</i> | APPROVAL: <i>MW</i> | SCALE: 1"=100' | FIG: 10 |
| REFERENCE: SURVEY PREPARED BY FREELAND & ASSOCIATES. | | | |

Photographs of NAPL Investigation Equipment



Photographs of NAPL Investigation Equipment

