



COMMUNITY UPDATE INFORMATION SHEET

CTS of Asheville, Inc. Superfund Site

Asheville, Buncombe County, North Carolina

September 30, 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).

NAPL INVESTIGATION UNDERWAY

Sampling activities for the Non-Aqueous Phase Liquids (NAPL) Investigation began on **September 23, 2013**. The work includes a multi-step process to better understand how deep and wide the highest concentrated contamination exists on and adjacent to the former plant property.

Task 1 – Measure Depth to Water in Monitoring Wells



AMEC measuring water level in monitoring well MW-11A

On September 23rd, AMEC measured the depth from ground surface to the water level in monitoring wells. One of the wells is considered “flowing artesian”, which means that the ground water is under pressure and pushes upward to above the soil level. In this case, AMEC connected a pipe above the well in order to measure how high the water would rise above ground. The water rose 1’7” in the pipe above the ground surface level.

Task 2 – Gauge Monitoring Wells and sample if NAPL is found

On September 23rd, AMEC gauged ground water monitoring wells to see if NAPL was present in the wells. 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. 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. Two of the wells gauged had LNAPL floating on top of the ground water.



LNAPL being collected from PZ-2 for analysis

LNAPL was found in PZ-2 and MW-3. On September 24th, AMEC collected samples of LNAPL from those two wells. The samples were sent to Pace Analytical Laboratories for analysis of volatile and semi-volatile organic compounds.

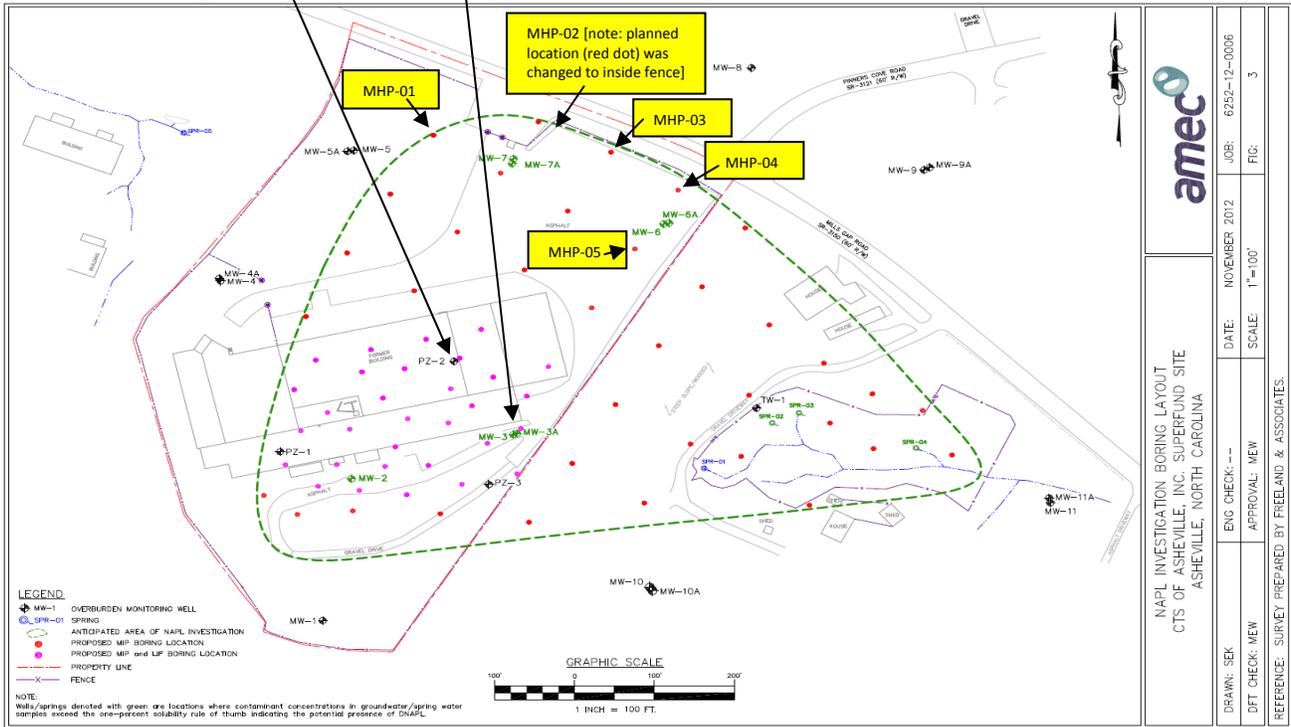
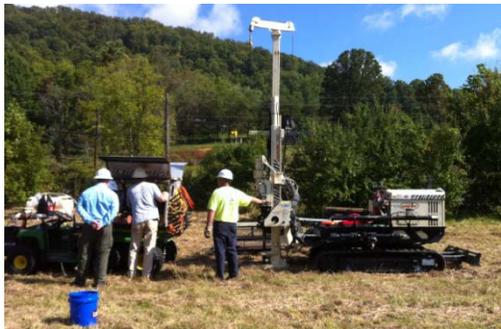


Figure 3 from NAPL work plan edited to include names of completed borings

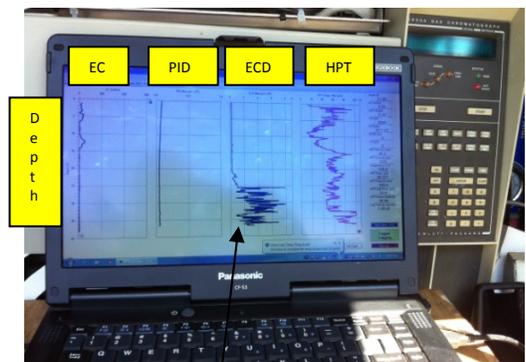
Tasks 3 and 5 – Conduct MIP and HPT Investigation



Data collection and boring at location MHP-01
The equipment on the right is the Geoprobe®. A gator utility vehicle (left) is used to carry the analyzers, computer, generator, etc.

The NAPL Investigation work plan included separate tasks for the using a Membrane Interface Probe (MIP) and a hydraulic profiling tool (HPT), which meant that separate borings would be needed in the same location, but using the two different tools. However, Geoprobe® has a new tool that combines these two functions into a single direct push tool called a MiHpt. Therefore, these tasks can be combined which will save time and effort to complete the work for this investigation. More information about MiHpt can be found at: <http://geoprobe.com/mihpt>.

On September 24th, Zebra Environmental began boring through the soil with a Geoprobe®, which is a track mounted piece of equipment that pushes sampling rods through the soil. Attached to the tip of the first rod for these tasks is a detecting device called a MiHpt. As the probe travels through the soil it detects volatile compounds with a MIP, measures soil electrical conductivity (EC), and measures HPT injection pressure. Computer software estimates hydraulic conductivity and water table elevation, as well as prepare graphical outputs of the log data. The detectors used include a photoionization detector (PID), electron capture detector (ECD), flame ionization detector (FID) and a pressure sensor.



Data generated as the MiHpt travels down location MHP-01. The third column (ECD) indicates responses to volatile compounds as the tool travels down through the soil. In this case, the peaks start increasing in height at about 22 feet below ground surface.

The PID and FID respond to volatile organic compounds (VOCs). The ECD responds only to chlorinated VOCs, such as TCE. The PID/FID responses, in combination with the ECD response, are relative to the concentration of the VOC(s) encountered. However, they cannot identify the specific VOCs or actual concentration values.

The HPT measures the formation's relative permeability. That is, a high pressure reading indicates low permeability, such as a clay lens, and a low pressure indicates high permeability, such as a quartz seam. The equipment used also measures electrical conductivity of the formation (soil and groundwater), which provides lithology information. The lithology information, in combination with the MIP results, can be used to potentially identify preferential pathways for contaminants.

Boring ID	Total Depth (feet)
MHP-01	55
MHP-02	53
MHP-03	49.75
MHP-04	47.70
MHP-05	54.15

As of yesterday, five borings have been completed: MHP-01 through MHP-05. Work began at the planned boring on the grid at the northwest end of the site and proceeded eastward just inside the fence line along Mills Gap Road. The locations are shown on the figure on page 2.

In boring location MHP-01, sensing equipment was pushed to 55 feet below the surface. As shown in the third column of the computer screen photo on page 2, the sensors indicated chlorinated volatile compound responses began to increase at about 22 feet below the surface and extended to the bottom of the boring. Where PID readings were above 100, AMEC collected soil from the boring tool and used a field screening test kit called Oil-in-Soil™ to determine if NAPL was present. The results of the Oil-in-Soil™ testing did not indicate NAPL in the soil sample that was used in the test kit.



AMEC personnel using a PID to get measurements from soil collected between 50 and 55 feet below land surface at MHP-01



Boring at MHP-02

Boring MHP-02 was moved from outside of the fence to a few feet inside of the fence near the gate along Mills Gap Road. The boring extended to 53 feet below the surface.

Bore holes are filled with a bentonite/cement mixture after data collection is completed.

EPA staff and contractor provided oversight of the activities last week. A representative of NCDENR was also present. The sampling schedule is on a rotation of 10 continuous days sampling and then a 4 day break, which will be repeated until work is completed. For example, this first work period will run from September 23rd through October 9th, and will resume again on October 14th.



Oil-in-Soil™ testing



soil in a macro-core sample tubes from borehole MHP-01



soil removed from boreholes placed in drums for future disposal

DRINKING WATER WELL SAMPLING

The fourth quarterly drinking water sampling event of 2013 is planned to occur during the week of October 14th. EPA staff will begin scheduling appointments with homeowners in early October.

For homes with Culligan installed whole house water filtration systems, AMEC will collect two samples. One sample will be collected from water before it enters the filtration system in order to evaluate the quality of the unfiltered ground water and a second sample will be 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 will be collected to evaluate the quality of the unfiltered ground water.



Preparing to collect pre-filter water sample at a spigot on a well head in July 2013

All samples will be 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. No VOCs have been detected from the prior three quarterly sampling events of 2013.

BUNCOMBE COUNTY WATER LINE EXTENSION UPDATE

Before the loan can be approved for the extension of the city water supply lines to residents within a one mile radius of the CTS Site, the project has to be considered “ready to construct”. This includes completion of the design and acquiring all needed easements. The County has had difficulty acquiring all of the easements that are needed and therefore, there will be a delay in the originally planned construction start date. The current estimate is that construction may begin in early 2014.

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

Several factors 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, the project is put out for bid and awarded to a contractor, and funding is received.

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

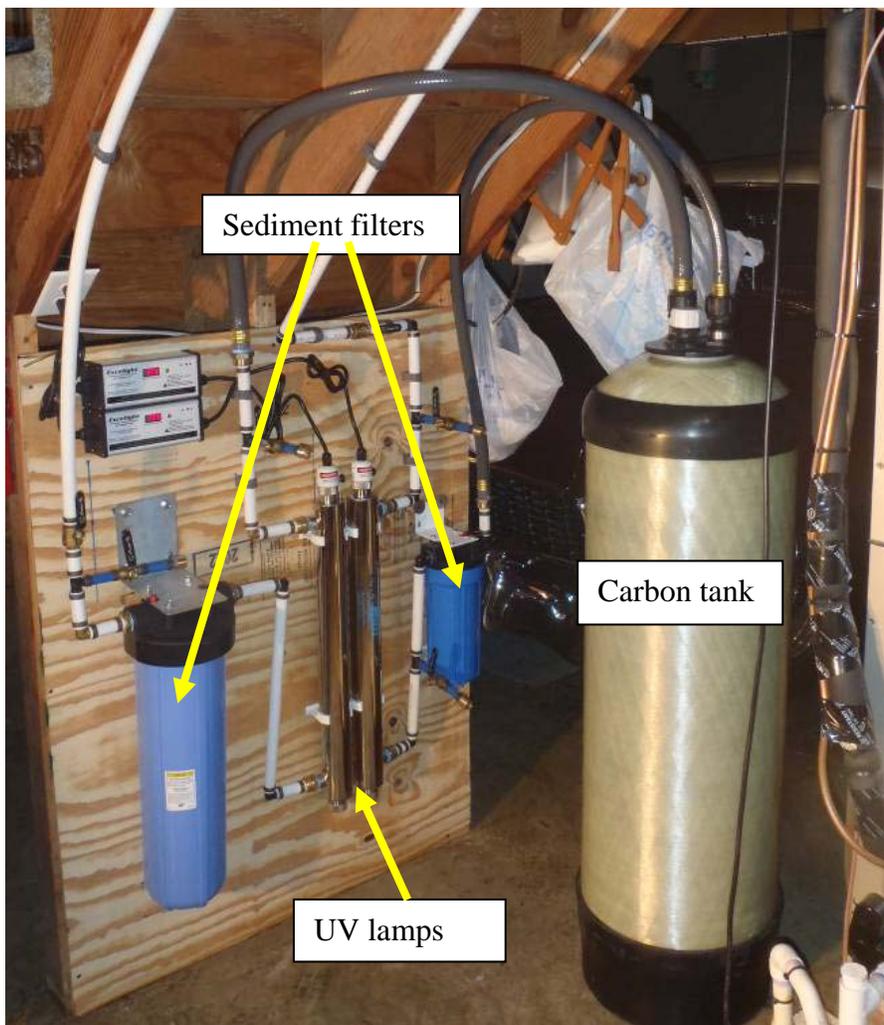
WHOLE HOUSE WATER FILTRATION SYSTEM UPDATE

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 September 30, 2013, filtration systems have been installed to protect the drinking water of 92 homes. EPA, AMEC and Culligan completed filtration system design appointments for three additional homes on September 26th. It is not too late; if you have not accepted the offer for the filtration system yet but would like to, please contact Samantha or Angela. Our contact information is included on the last page.



Filtration system installed by Culligan at a home within a mile radius of the CTS site

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. Carbon tanks and UV lights are replaced annually. 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.

QUESTION OF THE MONTH

To help better educate the community on topics related to the CTS Site, we created this segment in the community update. If you have concerns or questions that you would like more information on, please let us know.

The NAPL work plan seems incomplete. Why aren't there planned sample locations for properties to the west (along the Dingle Creek watershed portion of the Site)?

The NAPL work plan has a narrow objective of finding the extent of NAPL, not define the extent of the dissolved phase ground water contamination. 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. 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. Based on a review of historical sampling data, the NAPL work plan does not include pre-determined sampling locations on properties to the west. However, the NAPL investigation work plan has flexibility and if NAPL is found along the set of sample locations closest to Southside Village, then additional boring locations will be added to define the extent of NAPL.

The NAPL investigation is a stepping stone in the process to complete the Remedial Investigation (RI) and is not the final work planned to fully evaluate the site. After the current investigations are completed, a more comprehensive Remedial Investigation work plan will be created to fill in data gaps and determine the extent of ground water contamination from the site. EPA anticipates that ground water monitoring wells will be installed on some properties to the west of the site, and other areas, during the RI. The community will be provided with an opportunity to review and provide comments on the future RI work plan.

We are using a TRIAD approach for the Remedial Investigation of this Site. The Triad approach is described in the *Technical and Regulatory Guidance for the Triad Approach: A New Paradigm for Environmental Project Management*, December 2003, as follows.

"The concepts embodied in the three legs of the Triad approach are (1) systematic project planning, (2) dynamic work strategies, and (3) real-time measurement technologies. The Triad approach can be thought of as an initiative to update the environmental restoration process by providing a better union of scientific and societal factors involved in the resolution of contamination issues. It does this by emphasizing better investigation preparation (systematic project planning), greater flexibility while performing field work (dynamic work strategies), and advocacy of real-time measurement technologies, including field-generated data. The central concept that joins all of these ideas is the need to understand and manage uncertainties that affect decision making. The Triad approach consists of ideas that have been formulated previously but are now united to form a new paradigm for environmental project management.

The Triad approach relies on technological, scientific, and process advances that offer the potential for improvements in both quality and cost savings."

COMMUNITY GROUPS

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>

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

UPTHISHILL@BELLSOUTH.NET

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
13. July 29, 2013
14. September 6, 2013