

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Stony Hill Road TCE Site - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region IV

**Subject:** POLREP #3  
Stony Hill Road TCE Site  
B4S8  
Wake Forest, NC  
Latitude: 35.9970790 Longitude: -78.6058000

**To:**  
**From:** Kenneth Rhame, OSC  
**Date:** 9/25/2012  
**Reporting Period:**

## 1. Introduction

### 1.1 Background

<b>Site Number:</b>	B4S8	<b>Contract Number:</b>	
<b>D.O. Number:</b>		<b>Action Memo Date:</b>	
<b>Response Authority:</b>	CERCLA	<b>Response Type:</b>	Emergency
<b>Response Lead:</b>	EPA	<b>Incident Category:</b>	Removal Action
<b>NPL Status:</b>	Non NPL	<b>Operable Unit:</b>	
<b>Mobilization Date:</b>	7/11/2012	<b>Start Date:</b>	7/11/2012
<b>Demob Date:</b>		<b>Completion Date:</b>	
<b>CERCLIS ID:</b>		<b>RCRIS ID:</b>	
<b>ERNS No.:</b>		<b>State Notification:</b>	NC DENR Superfund Section
<b>FPN#:</b>		<b>Reimbursable Account #:</b>	

#### 1.1.1 Incident Category

CERCLA - Emergency Response

#### 1.1.2 Site Description

July 10th 2012, NC DENR referred Stony Hill Road TCE Site. Based on sampling results from a sampling event that was conducted by NC DENR in June, a house located on Stony Hill Rd had elevated concentrations of TCE above the Removal Management Level (RML). The RML for TCE is 8 parts per billion (ppb), the Maximum Contaminant Level (MCL) for TCE is 5 ppb. The residential well had TCE levels at 22 ppb.

July 11th, US EPA delivered bottled water to the resident that was identified as having a contaminated well with TCE above the RML. EPA obtained access agreements to conduct well sampling at additional residential properties in the area.

July 12th, US EPA sampled seven (7) residential wells along Stony Hill Rd.

July 13th, US EPA received preliminary data from the lab indicating that three properties; four homes (two homes share one well) have TCE above the RML. US EPA notified residents of results and advised them to not use the water for drinking, cooking, and to limit bathing/showering times to a minimum using a exhaust fan or open window for ventilation to reduce exposure. US EPA had START deliver bottled water to all the impacted homes.

##### 1.1.2.1 Location

Stony Hill Road, Wake Forest, Wake County NC

##### 1.1.2.2 Description of Threat

Residential wells contaminated with TCE above the RML. TCE is a carcinogen; risks of exposure via consumption from drinking water and cooking; risk of exposure via inhalation from showering/bathing.

#### 1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

On July 10th, NC DENR referred the Stony Hill Road TCE Site to US EPA based on results from a June 2012 sampling event that indicated one resident having a contaminated well with TCE (22 ppb) exceeding the RML.

USEPA sampled homes in the area on July 12th and discovered TCE exceeding RML at three residential properties with four homes (one property has two homes). TCE was detected up to 66 ppb.

## 2. Current Activities

## 2.1 Operations Section

### 2.1.1 Narrative

In August 2005 a resident at 7305 Stony Hill Rd complained of a petroleum odor in his water to Wake County Health Dept. Wake County sampled the well and discovered chlorinated solvents present. Wake County referred the site to NC DENR DWQ's Aquifer Protection Section (APS). The well at 7305 Stony Hill Rd. was abandoned and a neighboring well was utilized to provide water to the resident at 7305 Stony Hill Rd.

NC DENR DWQ transferred the site to NC DENR Inactive Hazardous Waste Section in 2007. Inactive Hazardous Waste Section sampled the area in June 2012 and discovered elevated TCE present at a residence located at 7333 Stony Hill Rd and referred the site to US EPA July 10th 2012.

EPA delivered bottled water to the impacted resident on July 11th 2012 and sampled additional residential wells on July 12th. July 13th, based on sample results from the previous day samples; EPA provided bottled water to three additional homes.

On July 16, 2012, the EPA returned to the Site to obtain additional access agreements to expand the sampling area. From July 16 through July 18, 2012 the EPA continued to obtain access agreements from residents in the area. On July 19, 2012, a second round of samples was collected from 11 residences in the area. Of the 11 wells sampled, one well was contaminated above the MCL. Sample results were received on July 20, 2012. One well was found to contain TCE at 7.7 ppb. Bottled water was delivered to the resident immediately upon receipt of the preliminary sample results on July 20, 2012. Two other residences in close proximity had detects of TCE and PCE but were below the MCL. On July 26, 2012 EPA sampled 15 additional wells at the request of the homeowners. EPA received results on July 27, 2012. Of the 15 wells sampled 1 well contained TCE at 4.9 ppb. Because the well was very close to the MCL EPA delivered bottled water. Two additional well samples contained TCE. One well was at 4.9 pre-filter and 2.0 post-filter, the owner was advised that the carbon in his filtration system should be changed to ensure continued efficacy. The other detect was well below MCL at 3.6 ppb. One residence had a trace amount of MTBE at .69 ppb. On August 1, 2012 the remaining 7 residences in the Stone Walls neighborhood were sampled. There was only one detect at .78 TCE in one residential well sample. One additional sample was taken from the Stony Hill Baptist Church community building on Stony Hill Road and August 2, 2012.

On August 14, 2012 EPA held a public meeting at Stony Hill Baptist Church. NC DENR and Wake County attended the meeting along with approximately 30-40 residents from the area. NCDENR gave a brief history of the site and EPA informed the residents of the response actions that EPA has taken and that are being planned including the installation of temporary carbon filters on residences with TCE contamination at or exceeding the RML and with sensitive populations including children or women of childbearing age and the extension of a waterline from a nearby Aqua America operated system down Stony Hill Road to serve the seven homes that are known to be contaminated. EPA answered residents questions regarding the response and NC DENR answered questions regarding the history of the site. On August 17, 2012 EPA installed two chamber activated carbon filtration systems on the only two residences that had TCE at or above RML and sensitive populations.

On August 22, 2012 EPA collected confirmation samples from the wells where the carbon filtration systems were installed. The confirmation samples indicated that the filter were removing all detectable TCE. 2 properties on Bent Road and 1 property on Bud Morris Road were also sampled at the owner's request. EPA received sample results on August 23. All samples were ND with the exception of the sample taken on Bud Morris Road which contained TCE at 6.5 ppb. Two residences are served by the well. ERRS delivered bottled water to both residences and put them on a water dispensing service.

On August 29, 2012 EPA collected samples from 9 wells on Stony Hill Road, Bud Morris Road, Bent Road and Churchill Road. EPA received sample results on August 31, 2012. TCE was detected in 3 wells at concentrations of 100 ppb, 86 ppb and 20 ppb. Trace concentrations of 1,1,1-TCE and 1,1 DCE were also detected in the well with 86 ppb. EPA also resampled the well on Bud Morris Road that contained 6.5 ppb on the previous sample event and detected 8 ppb. One trace detect of 1.3 ppb Methylene Chloride was obtained at a well on Bud Morris Road that was ND for all other VOCs analyzed for. ERRS delivered bottled water to the 3 new wells with TCE above the MCL. EPA will install carbon filtration systems on 2 of these properties which house sensitive populations. The third residence is located within 100 feet of a water line operated by Aqua America and at the suggestion of the homeowner EPA is inquiring with Aqua to determine if the water line can be extended in an expeditiously. The residents will be kept on bottled water until the filters are installed and are confirmed to be working or the water line is extended. Filters are scheduled to be installed on September 11, 2012.

On September 4, 2012 EPA collected samples from 6 wells on Bud Morris Road and the surrounding area. On September 5 EPA received preliminary sample results. All samples were ND with the exception of one well on Bud Morris Road which contained TCE at 350 ppb. The result was above the instruments calibration range and was diluted and reanalyzed overnight. ERRS delivered bottled water to the property on September 5, 2012 as soon as the preliminary results were received. The owner of the property was offered a filter but he did not accept because EPA is planning to extent a nearby waterline from the Kenwood Estates subdivision and connect the residence. Bottled water will continue to be delivered until the waterline is extended. Final sample results were received on September 6, 2012 and indicated that the sample result was 340 ppb. All other samples were ND.

On September 11, 2012 EPA collected samples for VOC, SVOC, pesticide and metals analysis from 6 community wells that will serve waterline extensions along Stony Hill Road and Bud Morris Road. VOC samples were also collected from 3 residential wells. 2 filtration systems were also installed. VOC results were received on 9/13/2012, all samples were ND. Results for the community wells sampled for SVOCs, pesticides and metals were received on 9/18/2012. All samples were ND for pesticides. All samples contained concentrations of metals below their respective MCL. Two community well samples contained trace amounts of the SVOC Bis(2-ethylhexyl)phthalate (BEHP) at 7.0 and 7.5 ppb. One community well contained BEHP at 1.7 ppb. The MCL is 6.0 ppb and the RML is 7.0 ppb. BEHP is a plasticizer that is found in common plastics. BEHP can easily leach from any source of plastic that comes into contact with a sample. BEHP is also a common lab contaminant. Given the small concentrations in the samples and

the fact that BEHP is a common lab contaminant the detects of BEHP are not believed to be legitimate detects. EPA resampled the wells with BEHP detects above the MCL on 9/20/2012 for SVOCs. A sample was taken directly from the wellhead and a sample was taken after treatment at each community well. Aqua also took samples at each well for SVOC analysis. These sample results were received on 9/24/2012. All of the community well resamples were ND for BEHP.

On September 12, 2012 EPA collected samples for VOC analysis from 21 residential wells. Sample results were received on 9-14-2012. One sample contained TCE at 0.64 ppb which is well below the MCL. Another sample contained 2-Butanone at 63 ppb and Acetone at 55 ppb neither of which have MCLs. The RML of each respective compound is 4900 and 12000 ppb. Acetone and 2-Butanone (also known as methyl ethyl ketone) are commonly used in plumbing work. All other samples were ND for all VOC analyzed for. Residents with detects were informed.

On September 13, 2012 EPA collected VOC samples from 10 residential wells. Results were received on 9-17-2012. All samples were ND with the exception of one trace detect of methyl-tert-butyl-ether (MTBE) at 0.47 ppb, below the RML of 1200 ppb. There is no MCL for MTBE.

On September 14, 2012 EPA collected samples for VOC analysis from 2 residential wells and 5 additional community wells. Sample results were received on 9-17-2012. All samples were ND for all compounds analyzed with the exceptions of two community wells that have not been put into service yet. One of the community wells contained chloroform at 3.4 ppb, MTBE at 1.1 ppb and toluene at 17 ppb. The second community well contained chloroform at 23 ppb, MTBE at 2.4 ppb and toluene at 27 ppb. The MCL for chloroform is 80 ppb. Small amounts of chloroform can be produced by the chlorination of drinking water. The RML for MTBE is 1200 ppb and the MCL for toluene is 1000 ppb.

From September 17 through September 21 EPA rented a community building from Stony Hill Baptist Church so that residents could stop by and ask questions. EPA also attended a community meeting hosted by the Stonewalls neighborhood HOA on 9/19/2012.

On September 17, 2012 EPA collected samples from 3 residential wells and took carbon filter confirmation samples from one residence. Sample results were received. All samples were ND with the exception of one trace detect of MTBE at 0.49 ppb. A filtration system was also installed.

On September 20, 2012 EPA sampled 3 residential wells and collected carbon filter confirmation samples from three residences. All samples were ND. On September 21, 2012 EPA installed filtration systems at the residences with 100 and 340 ppb TCE. The owners of these properties decided that they did want filters until the water could be extended.

On September 25, 2012 5 more residential wells were sampled. All samples were ND for all VOCs analyzed for. On September 27, 2012 1 more residential well was sampled, it was also ND for all VOCs analyzed for. All 7 filtration systems have been sampled to ensure that they are operating correctly. All post filtration samples were ND. Construction on waterline extension along Stony Hill Road and along Bud Morris Road began construction on September 26, 2012.

#### **2.1.2 Response Actions to Date**

EPA Obtained Access Agreements

EPA Sampled 106 residential wells

EPA Provided Bottled Water to Impacted Residents

EPA installed carbon filtration systems on 7 homes with sensitive populations

EPA negotiated with Aqua America and NC DENR to extend a waterline from a nearby community water system down Stony Hill Road to serve 7 impacted residences and to extend a waterline down Bud Morris Road to serve 2 highly impacted residences

EPA held a public meeting

EPA attended a public meeting hosted by Stonewalls Neighborhood HOA

EPA set up temporary office space on site to meet with concerned residents.

#### **2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)**

NC DENR Inactive Hazardous Waste Section suspects the source of contamination is a vapor degreaser that was allegedly used for a short time by Circuit Board Assemblers (CBA) located at 7303 Stony Hill Rd. There was a drain pipe discovered by NC DENR at a cinder block shed located at the rear of the property. EPA is continuing to investigate to identify responsible parties.

#### **2.1.4 Progress Metrics**

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>

## **2.2 Planning Section**

### **2.2.1 Anticipated Activities**

Sample additional wells within .5 mile radius at owners request.

#### **2.2.1.1 Planned Response Activities**

Begin Stony Hill Road and Bud Morris Road waterline extension at 9/26/2012 at 0900.

#### **2.2.1.2 Next Steps**

Analyze feasibility of extending the water line into the Stone Walls neighborhood.

#### **2.2.2 Issues**

### **2.3 Logistics Section**

No information available at this time.

### **2.4 Finance Section**

No information available at this time.

### **2.5 Other Command Staff**

No information available at this time.

## **3. Participating Entities**

### **3.1 Unified Command**

#### **3.2 Cooperating Agencies**

Wake County Health Department

NC DENR Inactive Hazardous Waste Section

NC DENR Superfund Section

US EPA ERRB

## **4. Personnel On Site**

No information available at this time.

## **5. Definition of Terms**

No information available at this time.

## **6. Additional sources of information**

No information available at this time.

## **7. Situational Reference Materials**

No information available at this time.