



UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY  
REGION III

STATEMENT OF BASIS

FORMER BLUE RIDGE TALC COMPANY, INC.  
HENRY, VIRGINIA 24102

EPA ID NO. VAD 003124625

Prepared by  
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Figure 1: Map of Facility

Figure 2: Map of USTs

Figure 3: BFA, SFA and Seep

## List of Acronyms

AOC	Areas of Concern
AR	Administrative Record
AST	Above Ground Storage Tank
CAO	Corrective Action Objectives
EPA	Environmental Protection Agency
GPRA	Government Performance and Results Act
IC	Institutional Control
LUST	Leaking Underground Storage Tank
MCL	Maximum Contaminant Level
RCRA	Resource Conservation and Recovery Act
RSL	Regional Screening Level
SB	Statement of Basis
SVOC	Semi-Volatile Organic Compounds
SWMU	Solid Waste Management Unit
TOC	Total Organic Carbon
UECA	Uniform Environmental Covenant Act
USACE	U.S. Army Corps of Engineers
UST	Underground Storage Tank
VDEQ	Virginia Department of Environmental Quality
VOC	Volatile Organic Compound

## Section 1: Introduction

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The United States Environmental Protection Agency (EPA) has prepared this Statement of Basis (SB) to solicit public comment on its proposed remedy for the former Blue Ridge Talc Company, Inc. (Blue Ridge Talc) facility located on Route 606 in Henry County, Virginia (hereinafter referred to as the Facility or Site). EPA's proposed remedy for the Facility consists of compliance with and maintenance of land and groundwater use restrictions to be implemented through institutional controls. This SB highlights key information relied upon by EPA in proposing its remedy for the Facility.

The Facility is subject to EPA's Corrective Action program under the Solid Waste Disposal Act, as amended, commonly referred to as the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Sections 6901 *et seq.* The Corrective Action program requires that facilities subject to certain provisions of RCRA investigate and address releases of hazardous waste and hazardous constituents, usually in the form of soil or groundwater contamination, that have occurred at or from their property.

EPA is providing a 30-day public comment period on this SB. EPA may modify its proposed remedy based on comments received during this period. EPA will announce its selection of a final remedy for the Facility in a Final Decision and Response to Comments (Final Decision) after the public comment period has ended.

Information on the Corrective Action program as well as a fact sheet for the Facility can be found by navigating <http://www3.epa.gov/reg3wcmd/ca/correctiveaction.htm>. The Administrative Record (AR) for the Facility contains all documents, including data and quality assurance information, on which EPA's proposed remedy is based. See Section 9, Public Participation, for information on how you may review the AR.

## Section 2: Facility Background

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### 2.1 Introduction

The Facility is located on Route 606, straddling the border of Henry and Franklin Counties, Virginia (Figure 1). The Facility was owned and operated from the late 1800's until approximately 2002 by the Kitson family. The Kitson family used the Facility to manufacture paints in the production area and process pigments in the "Dry Color" area. The Facility is located on approximately 20 acres in rural Henry and Franklin Counties. It is bordered by commercial, residential, and rural property.

The Kitson family has been involved in the operations of the Facility since the early 1880's. Robert K. Kitson was president of the corporation from 1961 until his death in 1990. He was succeeded by his wife, Alta Kitson until 2005.



In 2002, the Facility was shut down. In 2003, the Kitson family sold approximately 9.67 acres, which included the production area, to Blue Ridge Solvents and Coatings, Inc. (BRSC Parcel). The Kitson family retained ownership of two parcels: the “Dry Color” building and associated 8.3 acres of land (Dry Color Building), and the Mill Building and associated two acres of land (Mill Building). The “Dry Color” building is still referred to as the Blue Ridge Talc property. In 2014, the Mill Building and the two acres of land were put up for auction by Henry County due to unpaid taxes. It was sold to Mr. Harry Prillaman in 2015. All three parcels, the Blue Ridge Solvents and Coatings, Inc., the Dry Color Building and the Mill Building, are zoned “Industrial District I-1”. As defined in the Henry County Zoning Board plan, a parcel with the Industrial District I-1 designation is intended to provide spaces for manufacturing, industrial, and general wholesale and warehousing uses while simultaneously imposing minimum provisions to protect and foster environmental compatibility and desirability.

Blue Ridge Solvents and Coatings, Inc. currently manufactures industrial chemicals, paints, lacquers, thinners, and powder coatings on the BRSC Parcel. It also is a supplier of water treatment chemicals, and a solvent reclamation processor. In its operations, Blue Ridge Solvents and Coatings, Inc. uses a variety of tank storage, mixing, and solvent recovery equipment.

The Site is bordered to the east and south by Town Creek, to the north by a commercial lot and State Route 605, and to the west by State Route 606. The Site slopes gently to the east towards Town Creek.

## **2.2 Geology**

The Facility is located in the Piedmont physiographic province of Virginia Geology. This province is characterized as an easterly dipping mass of deeply weathered metamorphic and igneous rocks. The terrain slopes gently to the east towards Town Creek. The average elevation varies from 875 feet to 895 feet above mean sea level.

The Facility is located above an area of quaternary age alluvial deposits that originate from the bedrock. These unconsolidated water-borne deposits consist primarily of gray micaceous silts and reddish clays. The bottom of these deposits is typically defined by a layer of gravel and cobbles that overlies weathered bedrock (saprolite).

Depth to bedrock varies depending on elevation and the amount of anthropogenic modifications to the surface. The Facility drilling logs indicate that bedrock was encountered at depths of 15 to 18 feet below grade. The bedrock mapped as part of the Lynchburg formation consists of a Muscovite-sericite schist, Muscovite-biotite schist, and phyllite.

## **2.3 Local Hydrogeology**

Based upon monitoring of onsite wells, an aquifer is located at 3 to 15 feet (ft) below the soil surface. At Monitoring Well-1, located in close proximity to the warehouse, depth to groundwater measurements ranged from 3 to 5 feet below the soil surface. At monitoring wells located in the vicinity of the surface impoundment, the depths to groundwater were in the range of 9 to 14 feet below the soil surface. Recorded measurements of static water levels indicate that

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the groundwater in the upper-most aquifer flows to the southeast towards Town Creek at a gradient of 0.09 ft/ft. Also based on field measurements, the calculated hydraulic conductivity was determined to flow at approximately  $1 \times 10^{-4}$  centimeter/second. Combined with the effective porosity of 40% of the aquifer, the average linear groundwater velocity was reported to be an average of 13 ft/year, or 0.036 ft/day.

## **2.4 Areas of Investigation**

The following 13 Solid Waste Management Units (SWMUs) were identified during the file reviews at the EPA Region III and Virginia Department of Environmental Quality (VDEQ) offices in coordination with an August 16, 2007, Site visit. The Site visit was documented in a Final RCRA Corrective Action Site Visit Report dated July 24, 2008 (Final Report) by EPA contractor Tetra Tech, Inc.

- SWMU 1 Back Fenceline Area (BFA)
- SWMU 2 Southeastern Fenced Area (SFA)
- SWMU 3 Surface Impoundment- Seep Area
- SWMU 4 Settling Pond
- SWMU 5 Former Underground Storage Tank
- SWMU 6 Three Underground Septic Tanks
- SWMU 7 Quad 1 Drum Storage Area and Hazardous Waste Accumulation Area No. 1
- SWMU 8 Quad 2 Drum Storage Area and Hazardous Waste Accumulation Area No. 2
- SWMU 9 Former Drum Storage Area
- SWMU 10 Satellite Accumulation Areas in Laboratory
- SWMU 11 Dumpster (outside Quad 2 Drum Storage Area)
- SWMU 12 Boneyard
- SWMU 13 Temporary Hazardous Waste Storage Area (Drums of Soil)

Of the 13 SWMUs identified during the file review, only SWMUs 1 through 3 were deemed to have had a release. SWMUs 1 through 3 were previously investigated and details are provided in Section 3, below. No further action is required for SWMUs 4 through 13.

The Final Report did not discuss the remediation work being conducted under the VDEQ Petroleum/Remediation Program. VDEQ investigated 3 underground storage tanks (USTs) and determined that petroleum products had been released to soil and groundwater (Figure 2) at the Facility. For the purpose of identification in this SB, these three USTs are designated SWMU 14 -Three Underground Storage Tanks.

## **Section 3: Summary of Environmental Investigations**

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### **3.1 Environmental Investigations**

For all environmental investigations, groundwater concentrations were screened against federal Maximum Contaminant Levels (MCLs) promulgated pursuant to Section 42 U.S.C. §§ 300f et

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seq. of the Safe Drinking Water Act and codified at 40 CFR Part 141, or EPA Region III Screening Levels (RSL) for tap water for chemicals for which there are no applicable MCL. Soil concentrations were screened against EPA RSLs for residential soil and industrial soil. EPA also has soil RSLs to protect groundwater from contaminant migration, and soil concentrations were also screened against these RSLs.

### **Initial Investigation**

In April 1993, a fire occurred at the Facility as a result of a spark from drum-cutting operations. Plant personnel extinguished the fire using plant fire extinguishers. Subsequent investigations by VDEQ into past waste management practices at the Facility determined that paint-related materials were most likely introduced into several locations. Those locations were identified by the Facility as the Back Fenceline Area (BFA), Southeastern Fenced Area (SFA) and Seep Area (Figure 3).

On June 7, 1993, VDEQ approved a workplan from Blue Ridge Talc to sample the soil in the BFA, SFA and Seep Area. Soil sampling was conducted on June 25, 1993 and submitted for analysis. Based on results of soil sampling and under VDEQ oversight, Blue Ridge Talc installed three monitoring wells in December 1993 and sampled the wells in January 1994. The ground water samples were analyzed for the following constituents: total xylenes, toluene, and ethylbenzene. The three aromatic hydrocarbons (xylene, toluene and ethylbenzene) were selected as target analytes because they were detected during the soil sampling in June 1993. However, the three aromatic hydrocarbons were not detected in any of the groundwater sampling.

On May 16, 1996, VDEQ and Blue Ridge Talc entered into a Voluntary Remediation Agreement to address the Seep Area. VDEQ entered into a Consent Enforcement Order with Blue Ridge Talc and Alta T. Kitson Farm, effective on July 8, 1996, to address the BFA and SFA. The Alta T. Kitson Farm is a separate property which was included in the Consent Enforcement Order, since drums containing paint waste from Blue Ridge Talc Company were dumped in a ditch at the farm. That ditch subsequently was closed pursuant to RCRA under VDEQ oversight. VDEQ issued a letter approving clean closure for the ditch on July 19, 2002. The Consent Enforcement Order required Blue Ridge Talc to manage the BFA and SFA as surface impoundments under RCRA. As surface impoundments, each unit is required to have groundwater monitoring and go through closure.

### **3.1.1 VDEQ and BRTC Consent Enforcement Order 1996:**

#### **SWMU 1- Back Fenceline Area, and SWMU 2- Southeastern Fenced Area**

The BFA is a linear tract that borders the eastern side of a northeast southwest trending Facility fence line. The fence is 8 feet high and is located along the back border of the Facility. The fence is adjacent to and runs parallel to Town Creek, which flows in a southwesterly direction. The BFA is approximately 6 feet wide and 480 feet long. Contamination apparently resulted from weed killing activities consisting of the surface disposal of paint solvents to soils at the base of the fence.

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The SFA is approximately 60-feet by 95-feet and located in the corner between the Dry Color Warehouse and Mill Building. The SFA was used as a former staging area for deheading and crushing old drums in preparation for offsite disposal. There are three known discrete disposal sites within the SFA. They consist of three shallow pits that were made with the blade of a bulldozer. The approximate dimensions of each pit are 6 feet wide, 3 feet long, and 3 feet deep.

To fulfill the requirements of the 1996 Consent Enforcement Order, Blue Ridge Talc submitted a Closure Plan to VDEQ for the BFA and SFA. The Closure Plan was approved by VDEQ on July 31, 1998. The Closure Plan specified that the BFA was to be subject to random location soil sampling. Samples were collected for comparison to background and risk-based standards. Overlying the random sampling protocol was an alternating selection of borings from each side of the fence line (e.g. random samples were evenly distributed on both sides of the fence line: three from the north side, two from the south side). For the SFA, the Closure Plan required that the three pits be subject to a systematic sampling protocol and sampled at 2-foot vertical intervals from the surface to bedrock and/or ground water. Discrete soil samples were collected for analysis. In addition to soil samples, the Closure Plan required that five additional groundwater wells (MW-4, MW-5, MW-6, MW-7 and MW-8) be installed on site to supplement the original three groundwater wells (MW-1, MW-2, MW-3) in determining the nature and extent of contamination.

While total xylenes, toluene, ethylbenzene were detected in soil samples, Blue Ridge Talc demonstrated that no risk was associated with those contaminants. By letter dated January 29, 2004 to Ms. Alta Kitson, VDEQ concurred that clean closure for both SFA and BSA had been achieved. VDEQ had determined that clean closure had been achieved based on the Closure Report dated March 26, 1999, the associated closure certifications dated June 30, 2003, and a VDEQ closure verification inspection on January 20, 2004.

Because naphthalene and benzene had been detected in groundwater at wells at the BFA, Blue Ridge Talc went through an Alternate Source Demonstration which identified a source other than the BFA as the source for benzene and naphthalene in groundwater. VDEQ determined that the source of benzene and naphthalene was the onsite leaking USTs that have been designated as SWMU 14.

By letter dated June 5, 2007 to Blue Ridge Talc, VDEQ terminated the requirements under the 1996 Consent Enforcement Order associated with SWMU 14.

### **3.1.2 VDEQ and Blue Ridge Talc Company Voluntary Remediation Agreement 1996**

#### **SWMU 3 – Surface Impoundment-Seep Area**

VDEQ noted an area of distressed vegetation located in the south-southeast area of the Facility between the fence-line and the creek during an April 1993 Site inspection. This area had been used as a staging/storage area for paint solvents. Soil samples were collected on April 22 and June 18, 1993 and were found to contain volatile organic compounds; ethyl benzene, toluene and

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xylenes (mixed isomers). The analytical results, and an investigation into the history of the Site, led to the conclusion that paint-related materials were most likely introduced into the Seep Area soils as a result of management practices that ceased in late 1970's.

Under the 1996 Voluntary Remediation Agreement, Blue Ridge Talc conducted soil and stream bank sampling. A Site Characterization/Remedial Action Plan for the Seep Area dated June 1, 1999 was submitted to VDEQ documenting the results of the soil and stream bank sampling. The Site Characterization/Remedial Action Plan concluded that concentrations of toluene, ethyl benzene and xylene in soil were protective of human health and the environment and the constituents would continue to degrade over time through natural processes.

Because of the ongoing work at SWMUs 1 and 2 and the financial troubles of Blue Ridge Talc, which closed in 2002, the Seep Area was never closed out under the 1996 Voluntary Remediation Agreement.

In September 2014, EPA in coordination with VDEQ, contracted with the Norfolk District, U.S. Army Corps of Engineers (USACE) to conduct a Site visit to collect soil and groundwater samples at the Facility. Soil samples from the Seep Area, groundwater samples from existing wells, and one surface water sample were taken and sent to lab for analysis. In the Seep Area, two soil boring locations were selected. Within each location, a shallow and deep sample were analyzed for Semi-Volatile Organic Compounds (SVOCs) and Volatile Organic Compounds (VOCs). Toluene was not detected in any of the soil samples; ethyl benzene was detected in one deep sample (SB-2, 6 – 6.5 feet deep) at 0.0894 milligrams (mg)/kilogram (kg), which is well below the RSL for residential soil of 5.8 mg/kg. Xylene was detected in the same deep sample, SB-2, at 0.450 mg/kg, which is well below the RSL for residential soil of 650 mg/kg. The analytical results for groundwater from the down gradient well MW-3 for the Seep Area were non-detect for SVOCs and VOCs.

### **3.1.3 Leaking Underground Storage Tanks (LUST), Pollution Complaint (PC)**

#### **SWMU 14 – Underground Storage Tanks**

Blue Ridge Talc had conducted closure activities at the BFA and SFA under the 1996 Consent Enforcement Order. Constituents of concern that had been present in groundwater above the RCRA closure level consisted of petroleum based products, specifically benzene and naphthalene. These constituents would not be associated with paints or paint coatings that were placed at SFA or BFA. Therefore, an alternate source demonstration (ASD) was completed in 2002. The ASD showed that the source of the petroleum constituents was associated with the Facility USTs. The investigation was then transferred to the VDEQ Petroleum/Remediation Program, and assigned a pollution complaint (PC) No. 03-2062N. In a letter dated December 23, 2002, VDEQ notified Blue Ridge Solvents and Coatings that, as the current owner of the USTs, it was a Responsible Person determined by VDEQ to be responsible for the environmental corrective action activities associated with the releases as set forth in the PC. The USTs consisted of three 2,000-gallon heating oil tanks located in three different basins at the Facility (See Figure 2).

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In October 2002, Blue Ridge Talc installed 9 borings (B1 through B-9) to take soil and groundwater samples around the three USTs. Soil and groundwater sampling results showed that there had been petroleum releases to both soil and groundwater. Free-product (petroleum) was found in several of the groundwater samples. The USTs were removed on January 27, 2003. In addition to the removal of the USTs a total of 259.16 tons of petroleum saturated soils were excavated and taken offsite for disposal. Ten additional groundwater monitoring wells were also installed (MW-9 through MW-18) to supplement the existing groundwater network.

During the UST investigation, VDEQ determined that the Facility water supply well (used for drinking and process) was impacted. A carbon filtration was installed by VDEQ on the existing supply until a new supply well was eventually located and installed. A new drinking water well was installed in 2005 in the northern corner of the BRSC Parcel. The old supply well is still being used for process water only. Both the new supply well and old process water well are used only by Blue Ridge Solvents and Coatings, Inc.

In February 2007, removal of free-product from piezometer BP-2 was attempted using Aggressive Fluid Vapor Recovery (AFVR). Piezometer BP-2 had very thin occurrence of free-phase product, while no other monitoring well indicated free-phase product. Groundwater and product were removed from BP-2 for eight hours using a vacuum trunk equipped with a HydroVac series 2000 blower. After the event, BP-2 was checked for free phase oil product and none was detected.

In a VDEQ letter to Blue Ridge Solvents and Coatings, Inc. dated March 6, 2007, VDEQ provisionally closed the Pollution Complaint No. 03-2062N pending verification that the groundwater monitoring wells and piezometers were properly abandoned and the replacement water supply well had been brought online for use at the Facility. VDEQ also commented that while the vast majority of petroleum saturated soils were removed along with the USTs, there are some remaining pockets of petroleum saturated soil that are not accessible for further excavation. However the results from the waste-load allocation (WLA) analysis for the upper-most water-bearing zone beneath the Site indicated there is insignificant potential for impact to surface waters (Town Creek) based on the dissolved phase petroleum concentrations in the groundwater. VDEQ also concluded that installation of the new drinking water well in a deeper and different aquifer would eliminate any risk to human health and the environment.

### **3.1.4 RCRA Corrective Action Investigation 2014 and 2015**

#### **September 2014 Sampling Event**

In September 2014, EPA in coordination with VDEQ, contracted with the U.S. Army Corps of Engineers (USACE) to conduct a Site visit to collect environmental samples from the Facility. The Site contained approximately 18 groundwater monitoring wells but only 16 monitoring wells were operational. Nine of the monitoring wells were sampled by purging groundwater at a low flow rate, one creek sample was collected, and two holes were hand augured in the Seep Area to collect soil samples at approximate depths of 0.5 to 1 foot below ground surface and 6.0 to 8.0

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feet below ground surface. The groundwater samples from the nine monitoring wells, the one surface water sample from Town Creek, and soil samples from the Seep Area were analyzed for VOCs and SVOCs.

Groundwater purged from monitoring well MW-13 contained a strong odor and sheen with a black, spotty oil-like substance floating on the surface of the groundwater collected in the bucket. Groundwater wells MW2, MW-7, MW-11 and MW-14 all had exceedances of the RSLs for tap water for either naphthalene, or 1-methylnaphthalene. Well MW-14 had exceedances of both naphthalene and 1-methylnaphthalene. Analytical results showed well MW-13 having five SVOCs (acenaphthene, fluorene, 1-methylnaphthalene, 2-methylnaphthalene and pyrene) exceeding the RBCs for tap water, as well as the highest concentrations for any well. All the constituents listed above for having exceeded their respective RBCs for tap water are related to the three former USTs.

Analytical results from soil samples taken in the Seep Area are reported under SWMU 3 above.

One surface water sample was collected in Town Creek downgradient of the former USTs. The sample result showed no detections of Site-related contaminants.

### **February 2015 Sampling**

In February 2015, EPA in coordination with VDEQ, contracted with the USACE to conduct a second Site visit to collect additional groundwater samples. The groundwater sampling event for February 2015 was initially planned to sample nine groundwater monitoring wells, however groundwater monitoring wells MW-11 and MW-14 were encountered to be dry, and MW-13 contained product and was not sampled for laboratory analysis. A stream water sample (SW-1) was collected from Town Creek to replace one of the dry well samples for laboratory analysis. The existing supply well, which provides water for the process only, was sampled before the filtration system and there were no detections of Site-related contaminants. Groundwater and surface water samples were analyzed for SVOCs and VOCs.

Analytical results from the groundwater wells showed no exceedances of MCLs or RBCs for tap water. Well MW-13, which had the most MCL and RBC exceedances in September 2014, could not be sampled because there was floating product in the well.

### **August 2015 Sampling**

In August 2015, EPA, in coordination with VDEQ, contracted with the USACE to conduct a third Site visit to collect groundwater samples and one surface water sample. A total of nine (9) groundwater monitoring wells, including the supply well, were sampled for VOCs and SVOCs. No product was detected in MW-13 or any other well.

Analytical results from the groundwater wells showed exceedances of the RBC for tap water for 1-methylnaphthalene in wells MW-11, MW-13, and MW-14. However, the results are within the acceptable risk range of  $1 \times 10^{-4}$  to  $1 \times 10^{-6}$  for this carcinogenic constituent.

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### **November 2015 Sampling**

In November 2015, EPA in coordination with VDEQ, contracted with the USACE to conduct a fourth Site visit to collect groundwater samples from the Facility. A total of five groundwater monitoring wells (MW-7, 11, 13, 14 and 16) were sampled for SVOCs. No product was detected in MW-13 or any other of the sampled wells.

Analytical results from the groundwater wells showed exceedances of the RBCs for tap water for 1-methylnaphthalene in wells MW-11, MW-13, and MW-14. However, the results are within the acceptable risk range of  $1 \times 10^{-4}$  to  $1 \times 10^{-6}$  for this carcinogenic constituent.

Analytical results from groundwater wells for August 2015 and November 2015 indicate that natural degradation is occurring to the oil product over time. Microbial activity in the groundwater is causing chemical reactions to the petroleum hydrocarbons, reducing the toxicity of those constituents. By restricting the use of the aquifer, the microbial activity can continue without interference and the remaining oil and oil-related constituents can degrade naturally without disruption.

### **3.1.5 Leaking Underground Storage Tanks, Pollution Complaint Update**

The results of the February 2015 sampling event, including the oil present in MW-13, were submitted to the VDEQ Petroleum/Remediation Program in the Blue Ridge Regional Office, who had administered the pollution complaint No. 03-2062N. Even though the PC was closed in 2007, the Petroleum/Remediation Program re-examined the February 2015 results. In a letter dated April 14, 2015, VDEQ re-examined previous findings along with the February 2015 results, and concluded that the data does not support re-opening the closed Pollution Complaint. VDEQ acknowledged that free product detected in MW-13 is not without precedence. It has been detected in that well in the past. Because groundwater levels were lower in February 2015 than what was measured prior to the Pollution Complaint closure, more of the saturated zone is exposed which allows free product to accumulate in the well.

EPA concurs with VDEQ's findings that the vast majority of petroleum saturated soils were removed along with the USTs, and that there are some remaining pockets of petroleum saturated soil that are not accessible for further excavation. The lowering of groundwater levels has the effect of exposing the saturated zone, releasing oil to the water table. Based on the presence of oil in MW-13 and the inability to locate the remaining pockets of petroleum saturated soil, EPA agrees with VDEQ that the shallow aquifer should not be used.

## **3.2 Environmental Indicators**

Under the Government Performance and Results Act (GPRA), EPA has set national goals to address RCRA corrective action facilities. Under GPRA, EPA evaluates two key environmental clean-up indicators for each facility: (1) Current Human Exposures Under Control, and (2) Migration of Contaminated Groundwater Under Control. The Facility met both of these

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indicators on May 29, 2015.

## **Section 4: Corrective Action Objectives**

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EPA's Corrective Action Objectives (CAOs) for the specific environmental media at the Facility are the following:

### **1. Groundwater**

EPA expects final remedies to return groundwater to its maximum beneficial use within a timeframe that is reasonable given the particular circumstances of the project. For projects where aquifers are either currently used for water supply or have the potential to be used for water supply, EPA will use the National Primary Drinking Water Standard Maximum Contaminant Levels promulgated pursuant to Section 42 U.S.C. §§ 300f et seq. of the Safe Drinking Water Act and codified at 40 C.F.R. Part 141.

Analytical results from the groundwater sampling since February 2015 show no exceedances of MCLs or RBCs for tap water except for 1-methylnaphthalene which was within the acceptable risk range of  $1 \times 10^{-4}$  to  $1 \times 10^{-6}$ . However, given that there are some remaining pockets of petroleum saturated soil that are not accessible for further excavation, there is the potential that those pockets of petroleum saturated soil could impact groundwater. Therefore, EPA's objective is to control potential human exposure to the hazardous constituents remaining in the groundwater by requiring compliance with and maintenance of groundwater use restrictions at the Facility.

### **2. Soils**

EPA's Corrective Action Objective for Facility soils is to prevent exposure to oil and/or dissolved phase oil contaminants remaining in the subsurface soils.

## **Section 5: Proposed Remedy**

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The Facility is comprised of three parcels. The proposed remedy for the BRSC Parcel and the Mill Building is as follows:

### **A. BRSC Parcel and the Mill Building**

Because contaminants remain in the soil and groundwater at the BRSC Parcel and the Mill Building above levels appropriate for residential use, EPA's proposed remedy requires land use restrictions to restrict activities that may result in exposure to those contaminants. EPA proposes that the restrictions be implemented and maintained through institutional controls (ICs). ICs are non-engineered instruments such as administrative and/or legal controls that minimize

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the potential for human exposure to contamination and/or protect the integrity of the remedy by limiting land or resource use.

EPA is proposing the following land and groundwater use restrictions be implemented at the BRSC Parcel and the Mill Building:

### **1. Soils**

- a) The property shall be restricted to commercial and/or industrial purposes and shall not be used for residential purposes unless it is demonstrated to EPA that such use will not pose a threat to human health or the environment or adversely affect or interfere with the final remedy and EPA provides prior written approval for such use.
- b) The then current owner shall notify the VDEQ Petroleum/Remediation Program of any subsurface excavations at the parcel that result in the discovery of oil or oil saturated soil. The then current owner shall notify VDEQ within twenty (24) hours of the discovery.

### **2. Groundwater**

- a) The shallow overburden aquifer at the property shall not be used for any purpose other than the operation, maintenance, and monitoring activities required by VDEQ and/or EPA, unless it is demonstrated to EPA in consultation with VDEQ, that such use will not pose a threat to human health or the environment or adversely affect or interfere with the final remedy, and EPA provides prior written approval for such use.
- b) No new wells shall be installed on the property in the shallow overburden aquifer unless it is demonstrated to EPA in consultation with VDEQ, that such wells are necessary to implement the final remedy and EPA provides prior written approval to install such wells.

### **3. Additional Requirements**

- a) Every three years and whenever requested by VDEQ and EPA, the then current owner(s) shall submit to VDEQ and EPA a written certification stating whether or not the groundwater use restrictions are in place and being complied with.
- b) Within one month after any of the following events, the then current owner of the parcel shall submit to VDEQ and EPA written documentation describing the

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following: observed noncompliance with the groundwater use restrictions; transfer of the parcel; changes in use of the parcel; or filing of applications for building permits for the parcel and any proposals for any Site work, if such building or proposed work will affect the groundwater contamination on the Facility.

- c) The parcel owner shall provide VDEQ and EPA with a coordinate survey and a metes and bounds survey of the parcel property boundary, mapping the extent of the land use restrictions which will allow for presentation in a publicly accessible mapping program such as Google Earth or Google Maps.

#### **B. Dry Color Building (AKA Blue Ridge Talc Property)**

EPA has determined that there is no unacceptable risk associated with this parcel, therefore no further investigation or cleanup is required. EPA proposes corrective action complete without controls as the final remedy for the Dry Color Building.

### **Section 6: Implementation**

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EPA proposes to implement land and groundwater use restrictions necessary to prevent human exposure to contaminants at the BRSC Parcel and the Mill Building through an enforceable mechanism such as an order, permit and/or an Environmental Covenant pursuant to the Virginia Uniform Environmental Covenants Act (UECA), Title 10.1, Chapter 12.2, §§10.1-1238 - 10.1-1250 of the Code of Virginia. If an Environmental Covenant is selected, it will be recorded in the chain of title for the property.

In addition, the Commonwealth of Virginia State Board of Health Private Well Regulations, 12 VAC 5-630-10 et seq. (Regulations) and its implementing statute set forth at the Code of Virginia, Title 32.1 (Health), Chapter 6 (Environmental Health Services), Va. Code §32.1 is an institutional control mechanism that will reduce potential human exposure to contaminated groundwater attributable to the Facility. Pursuant to Section 12 VAC 5-630-30, the purpose of these Regulations is to “ensure that all private wells are located, constructed and maintained in a manner which does not adversely affect ground water resources, or the public welfare, safety and health.”

Accordingly, Sections 12 VAC 5-630-230 through 12 VAC 5-630-270 of the Regulations prescribe the process by which construction permits for the installation of private wells are received and issued. Pursuant to the Regulations, if a private well is installed or modified without a permit, Section 12 VAC 5-630-150 sets forth an enforcement mechanism which provides for the notification of violations of the Regulations, the issuance of orders requiring cessation and correction of violations, appropriate remedial action to ensure that the violation does not recur, and any appropriate corrective action to ensure compliance with the Regulations.

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## Section 7: Evaluation of Proposed Remedy

This section provides a description of the criteria EPA used to evaluate the proposed remedy consistent with EPA guidance. The criteria are applied in two phases. In the first phase, EPA evaluates three decision threshold criteria as general goals. In the second phase, for those remedies which meet the threshold criteria, EPA then evaluates seven balancing criteria.

Threshold Criteria	Evaluation
1) Protect human health and the environment	<p>EPA's proposed remedy meets this criterion because there is no current potable use of the shallow aquifer. Moreover, while there is residual oil in the subsurface that has appeared as a separate phase at MW-13, the contaminant levels in the dissolved phase fraction have been analyzed and found to be within an acceptable risk range for unlimited use. EPA is proposing groundwater use restrictions to restrict the use of the shallow overburden aquifer, while the occasional remaining oil pockets release to the shallow water table. When contaminants are detected in the groundwater beneath the BRSC Parcel and Mill Building, the contaminants are contained in the aquifer and appear to be decreasing through attenuation at the Facility as shown by groundwater monitoring results (August 2015 and November 2105).</p> <p>In addition to the groundwater restrictions for the BRSC Parcel and Mill Building, EPA is proposing to restrict the future land use to industrial use as it is currently zoned. While pockets of oil remain in the subsurface near the water table, restricting land use to industrial will prevent potential exposure under a residential land use scenario.</p>
2) Achieve media cleanup objectives	<p>Groundwater results from August 2015 and November 2015 show contaminants in the dissolved phase fraction are below MCLs and RSL (tap water). Biodegradation of the petroleum hydrocarbons in groundwater have been effective in reduce the toxicity of those constituents. In addition, EPA's proposed remedy requires the implementation and maintenance of institutional controls to ensure that groundwater beneath both the BRSC Parcel and Mill Building is not used for any purpose except to conduct the operation, maintenance, and monitoring activities required by VDEQ and EPA.</p>
3) Remediating the Source of Releases	<p>In all proposed remedies, EPA seeks to eliminate or reduce further releases of hazardous wastes and hazardous constituents that may pose a threat to human health and the environment. The proposed</p>

Statement of Basis

	<p>remedy for both the BRSC Parcel and Mill Building meets this objective.</p> <p>Blue Ridge Talc removed the three USTs and surrounding soil from the Facility, thereby eliminating, to the extent practicable, further releases of hazardous constituents from on-site soils as well as the source of the groundwater contamination. While the vast majority of petroleum saturated soil was removed, there are small pockets of oil saturated soil as evidenced by oil detected in groundwater well MW-13 in February 2015. When the water table reacts with petroleum saturated soils, contaminants will migrate in groundwater. However, the petroleum constituents naturally degrade with time as evidenced by groundwater sampling results and the lack of oil in well MW-13 in August and November 2015. There are no remaining large, discrete sources of waste from which constituents would be released to the environment.</p>
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Balancing Criteria	Evaluation
4) Long-term effectiveness	Shallow groundwater is not used on the BRSC Parcel or the Mill Building for drinking water or process water. A deep (500 feet) drinking water well was installed in 2005 for the BRSC Parcel. There is also a deep groundwater well for use as process water at the BRSC Parcel. Therefore, the proposed long term effectiveness of the remedy for the Facility will be maintained by the groundwater use restriction.
5) Reduction of toxicity, mobility, or volume of the Hazardous Constituents	The reduction of toxicity, mobility and volume of hazardous constituents will continue by attenuation at the BRSC Parcel and Mill Building. Reduction of the dissolved phase constituents has already been achieved, as demonstrated by the data from the groundwater monitoring.
6) Short-term effectiveness	EPA's proposed remedy does not involve any activities, such as construction or excavation that would pose short-term risks to workers, residents, and the environment. EPA anticipates that the groundwater use restrictions will be fully implemented shortly after the issuance of the Final Decision and Response to Comments.

Statement of Basis



7) Implementability	EPA's proposed remedy is readily implementable. EPA does not anticipate any regulatory constraints in implementing its proposed remedy. EPA proposes to implement the institutional controls through an enforceable mechanism such as an Environmental Covenant.
8) Cost	EPA's proposed remedy is cost effective. The costs associated with this proposed remedy are minimal. The costs to record an environmental covenant in the chain of title to the Facility property are minimal. The costs associated with issuing an order are also minimal.
9) Community Acceptance	EPA will evaluate community acceptance of the proposed remedy during the public comment period, and it will be described in the Final Decision and Response to Comments.
10) State/Support Agency Acceptance	VDEQ has reviewed and concurred with the proposed remedy for the Facility.

## Section 8: Financial Assurance

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EPA has evaluated whether financial assurance for corrective action is necessary to implement EPA's proposed remedy at the Facility. Given that EPA's proposed remedy does not require any further engineering actions to remediate soil, groundwater or indoor air contamination at this time and given that the costs of implementing institutional controls at both the BRSC Parcel and Mill Building will be de minimis, EPA is proposing that no financial assurance be required.

## Section 9: Public Participation

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Interested persons are invited to comment on EPA's proposed remedy. The public comment period will last 30 calendar days from the date that notice is published in a local newspaper. Comments may be submitted by mail, fax, e-mail, or phone to Mr. Michael Jacobi at the address listed below.

A public meeting will be held upon request. Requests for a public meeting should be made to Mr. Michael Jacobi at the address listed below. A meeting will not be scheduled unless one is requested.

The Administrative Record contains all the information considered by EPA for the proposed remedy for the Facility. The Administrative Record is available at the following location:

U.S. EPA Region III  
1650 Arch Street  
Philadelphia, PA 19103  
Contact: Mr. Michael Jacobi (3LC20)  
Phone: (215) 814-3435  
Fax: (215) 814 - 3113  
Email: [jacobi.mike@epa.gov](mailto:jacobi.mike@epa.gov)

Date: \_\_\_\_\_

4.13.16



John A. Armstead, Director  
Land and Chemicals Division  
US EPA, Region III

Statement of Basis

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Former Blue Ridge Talc

April 2016  
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## **Section 10: Index to Administrative Record**

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Former Blue Ridge Talc Company, November 2015 Trip Report and analytical results from USACE Norfolk Division, dated December 2015

Former Blue Ridge Talc Company, August 2015 Trip Report and analytical results from USACE Norfolk Division, dated October 29, 2015

Former Blue Ridge Talc Company, February 2015 Trip report and analytical results from USACE Norfolk Division, dated February 2015

Former Blue Ridge Talc Company, September 2014 Trip report from USACE Norfolk Division, dated September 12, 2014

Former Blue Ridge Talc Company, Analytical Results from September 2014 Sampling Event, dated September 26, 2014

VDEQ Letter from Blue Ridge Regional Office to Brett Fisher, dated April 14, 2015, concerning the former pollution complaint 2003-2062.

EPA Final RCRA Site Visit Report on BRTC, dated July 24, 2008

VDEQ Letter to Blue Ridge Talc Company concerning termination of the 1996 Consent Enforcement Order, dated June 5, 2007.

Quarterly Monitoring Results and AFVR results from ECS Consulting to Mr. George Quinlan, dated February 26, 2007

VDEQ Letter to Mr. George Quinlan, Quarterly Monitoring Report Review and PC Close-out, dated March 6, 2007.

Corrective Action Plan Addendum for USTs prepared by ECS Consulting to Mr. George Quinlan, received August 3, 2005.

Corrective Action Plan (CAP) for USTs prepared by ECS Consulting to Mr. George Quinlan, dated September 13, 2004.

VDEQ Letter, Closure Verification at Blue Ridge Talc Site to Ms. Kitson, dated January 29, 2004.

VDEQ Letter to Mr. George Quinlan, LUST Pollution Control No. 03-2062N assigned to Blue Ridge Solvents and Coatings, dated December 23, 2002.

Statement of Basis

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VDEQ Letter to Mr. Jim Ward, Operations Manager at Blue Ridge Talc Company, concerning VDEQ approval of the initial investigative workplan, dated June 7, 1993.

OLVER, Inc. letter to VDEQ, Progress report on activities during June 1993, including the initial soil sampling at three locations on Blue Ridge Talc Company property, dated June 25, 1993.

VDEQ NCAPS Report for Blue Ridge Talc Company dated August 26, 1998.

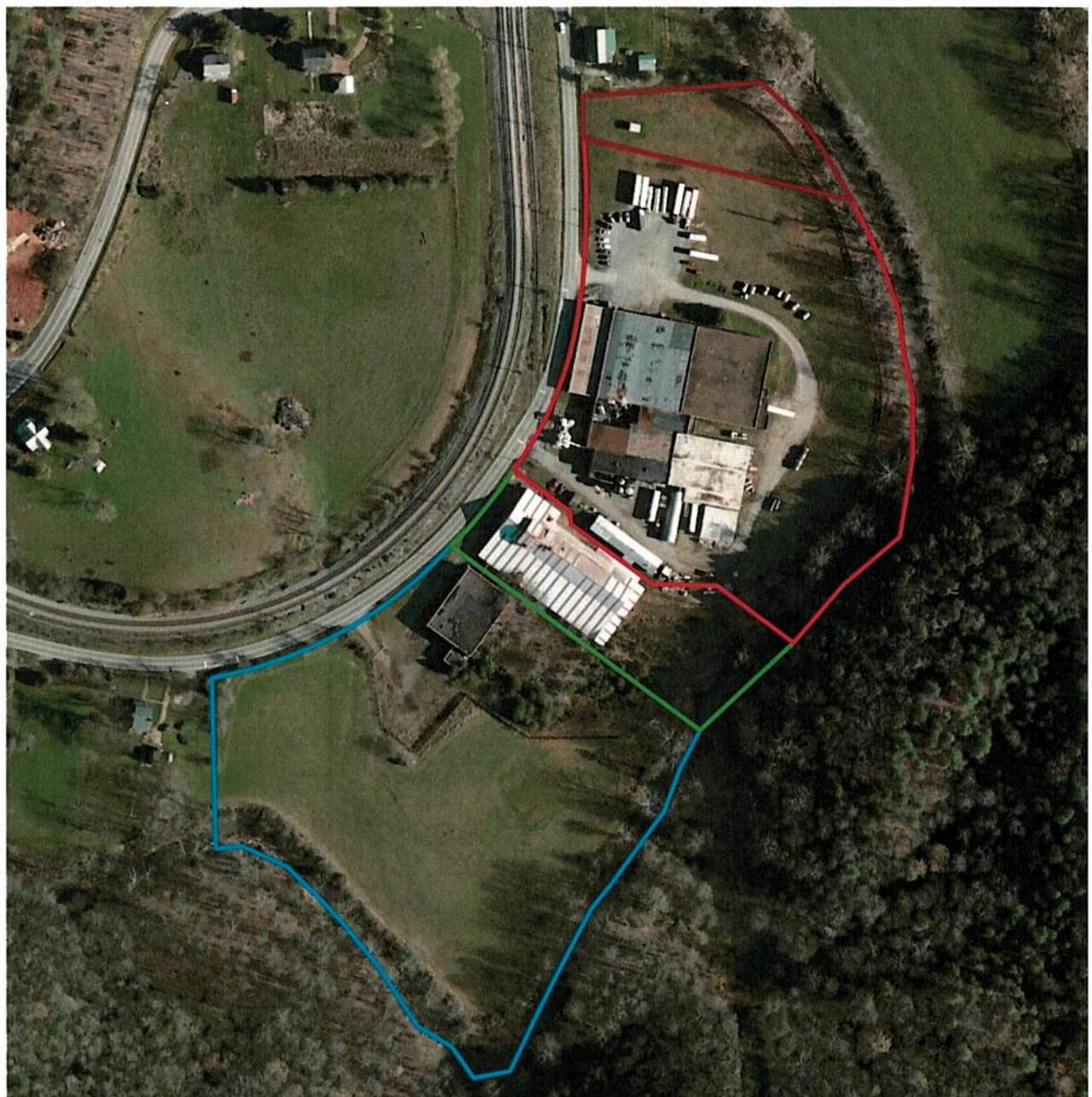
OLVER, Inc. Letter to VDEQ, concerning the installation and sampling of three wells on Blue Ridge Talc Company property, dated January 4, 1994.



## Attachments







**Blue Ridge Talc Co.**  
**EPA# VAD003124625**  
**3800 Original Henry Road**  
**Henry, VA 24102**



- Blue Ridge Talc Co (Franklin County)
- Blue Ridge Talc Co (Henry County)
- Mr. Harry Prillaman
- Kitson Family

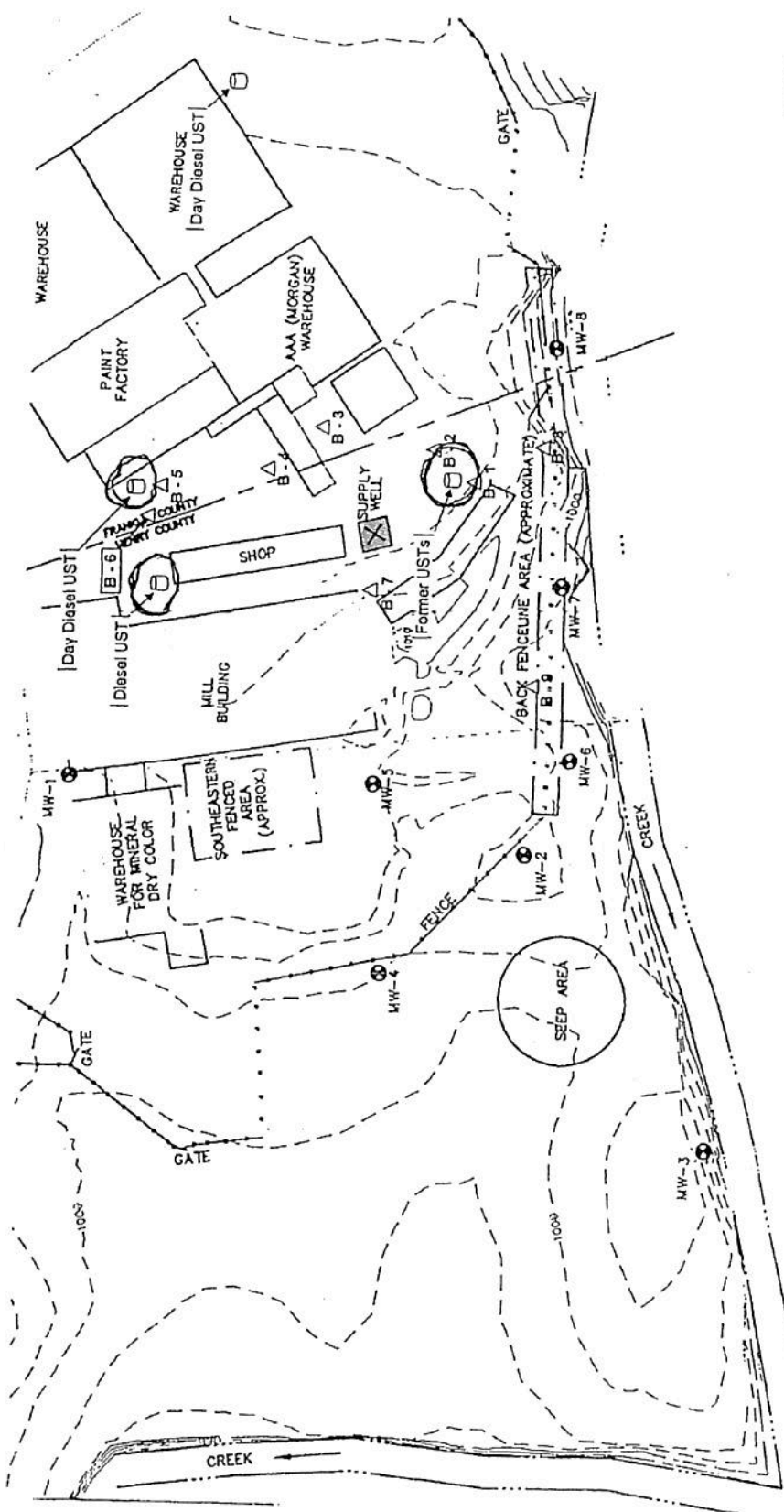
**FIGURE 1**

0 90 180 360 540 720  
Feet

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community







**LEGEND**  
 ● - Groundwater Monitoring Well  
 △ - Geoprobe Boring Location

**FIGURE 2**  
 UST, BORING, AND WELL LOCATION MAP (NOVEMBER 2002)  
 BLUE RIDGE SOLVENTS AND COATINGS  
 3800 ORIGINAL HENRY ROAD  
 HENRY, VIRGINIA  
 ECS PROJECT NO. 2198D

**ENGINEERING CONSULTING SERVICES, LTD.**  
 5320 Peters Creek Road, Suite F  
 Roanoke, Virginia 24019  
 (540) 362-2000/fax: (540) 362-1202

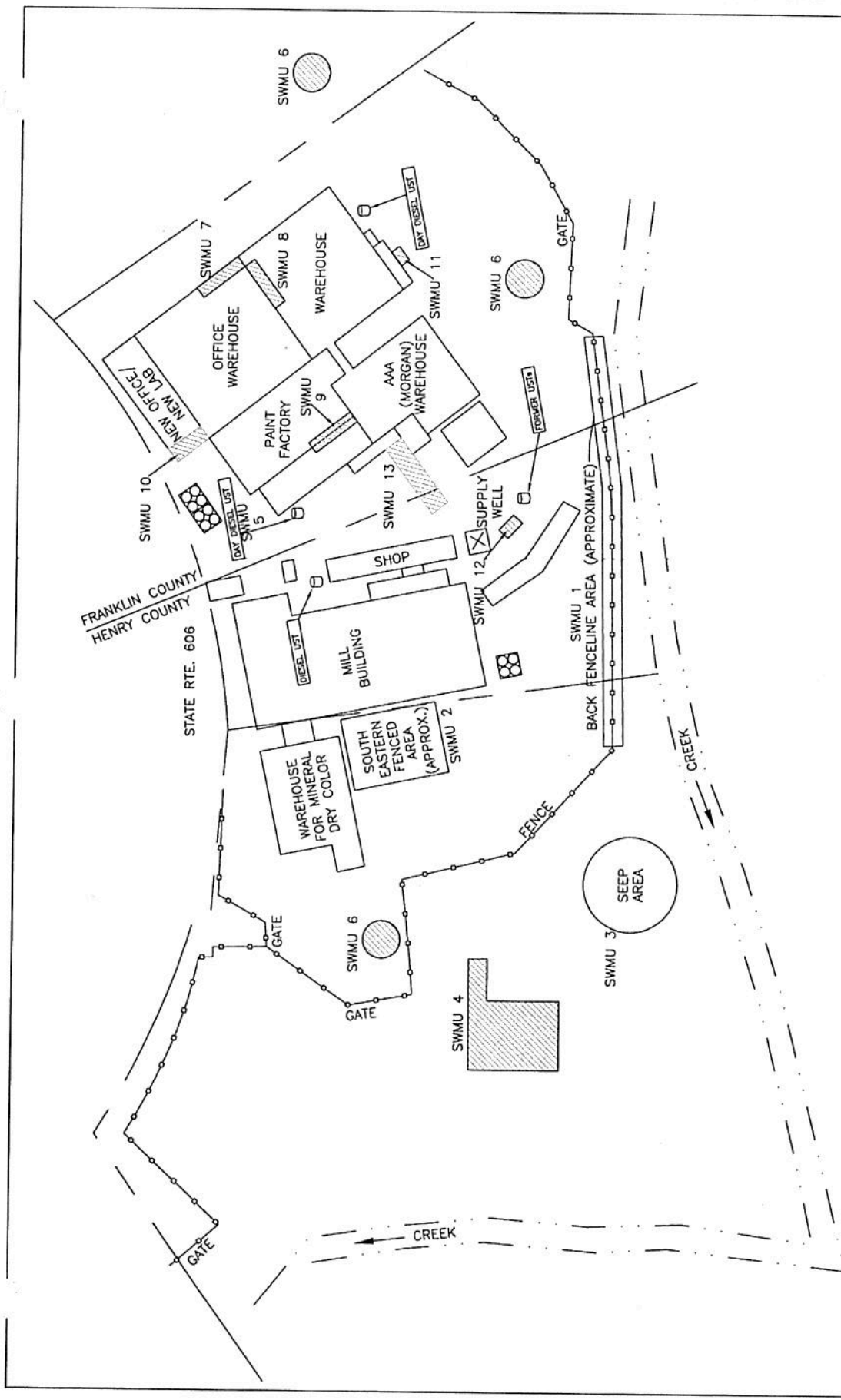


**SOURCE:**  
 OLIVER INCORPORATED  
 MONITORING WELL LOCATION PLAN  
 DATED DECEMBER 15, 1997









SCALE  
N.T.S.

LEGEND:  
FENCE LINE  
CREEK BOUNDARY  
PROPERTY BOUNDARY

United States Environmental  
Protection Agency

BLUE RIDGE TALC COMPANY  
Henry, Virginia

FIGURE 3  
SITE LAYOUT MAP

**TETRA TECH EC, INC.**

