UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE – SUITE 100
BOSTON, MASSACHUSETTS 02109-3912

MEMORANDUM

DATE: July 24, 2020

SUBJ: Request for a Removal Action at the Ried Cleaners Site Great Barrington, Berkshire County, Massachusetts - **Action Memorandum**

FROM: Michael Cofsky, On-Scene Coordinator
Emergency Response and Removal Section II

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TO: Bryan Olson, Director
Superfund and Emergency Management Division

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval of the proposed removal action at the Ried Cleaners Site (the Site), which is located at 218 Main Street in Great Barrington, Berkshire County, Massachusetts. Hazardous substances present in soil at the Site, if not addressed by implementing the response actions selected in this Action Memorandum, will continue to pose a threat to human health and the environment. There are no nationally significant or precedent-setting issues associated with this Site, and there has been no use of the OSC's $200,000 warrant authority.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID#: MAD019384320
SITE ID#: 01QA
CATEGORY: Time-Critical

A. Site Description

1. Removal site evaluation

On November 6, 2019, EPA, Weston Solutions, Inc. Superfund Technical Assessment and Response Team (START), Massachusetts Department of Environmental Protection (MassDEP), and Town of Great Barrington Assistant Town Manager met to conduct a site reconnaissance. START conducted a safety and operations meeting and signed the Site-specific Health and Safety Plan (HASP). All personnel viewed and discussed the contamination at the rear (western) portion of the property where the former dry-cleaning building and tetrachloroethylene (PCE) and oil tanks were removed. All personnel also discussed possible future sampling activities and START photo documented and marked the property for DigSafe. No readings above background were noted on the air monitoring instruments.

On December 9, 2019, EPA and START personnel mobilized and began the preliminary assessment and site investigation (PA/SI). START personnel conducted a tailgate safety meeting and reviewed and signed the HASP, and then established a support zone and calibrated a MultiRAE instrument for air monitoring. Background levels were recorded in the HASP as follows: Volatile Organic Compounds (VOCs) = 0.0 parts per million (ppm); Lower Explosive Limit (LEL) = 0%; Oxygen (O2) = 20.9%; and Carbon monoxide (CO) = 0.0 ppm. START also verified DigSafe markings for underground utilities.

START personnel advanced six borings to a maximum depth of 6 feet below ground surface (bgs). Prior to boring, each location was screened with a magnetic pipe locator to identify any unmarked utilities or structures. Soil from the borings was classified using the Burmister soil classification system, and samples were collected from each foot interval (A through F) in most cases; one combined sample (0-2 foot, “AB” interval) was collected from one boring (SB-02). Soil was collected in pre-preserved methanol vials for VOC analysis. A total of 36 samples were collected, including one duplicate. All boring locations were recorded using a Global Positioning System (GPS) unit and were photo documented.

On December 10, 2019, EPA and START personnel located groundwater monitoring wells, using a magnetic pipe locator to find metal wellheads below snow, soil, and debris. START personnel then conducted low-flow groundwater parameter recordings at 12 monitoring wells located on the Site and adjacent properties. Personnel accessed each well, screened the headspace with the MultiRAE, and measured the depth to groundwater and total depth. Groundwater was then purged from the wells into the flow cell of a YSI water quality parameter instrument. Water quality parameters were recorded at 5-minute intervals until the readings stabilized. Groundwater samples were then collected for VOC analysis. Due to slow recharge rates, two monitoring wells were allowed to recharge prior to sampling (samples GW-06 and GW-12). One monitoring well (sample GW-04) was allowed to recharge overnight due to extremely slow recharge.

On December 11, 2019, START personnel returned and collected one groundwater sample (GW-04), and documented recharge depth of one well. EPA and START personnel then documented samples on chain-of-custody records and prepared the samples for delivery to the laboratory.

A total of 51 samples, including 13 groundwater samples from temporary wells, 37 soil boring samples, and one rinsate blank, were collected during this investigation. All samples were delivered and submitted to the EPA New England Regional Laboratory (NERL) for VOC analysis.

On January 6, 2020, START received the analytical data results from NERL. There were six compounds detected in soil samples collected on site; maximum contaminant levels and sample locations are noted in parentheses:

- cis-1,2-dichloroethylene (3,122 micrograms per kilogram [µg/kg] in SB-02C);
- TCE (3,003 µg/kg in SB-02C);
- PCE (311,636 µg/kg in SB-02C);
- 1,2,4-5 trimethylbenzene (301 µg/kg in SB-02F);
- sec-butylbenzene (81 µg/kg in SB-02F); and
- nbutylbenzene (180 µg/kg in SB-02F).

One compound, PCE, was detected at concentrations greater than the Massachusetts Contingency Plan Soil Category 2 (MCP-S2) standard.

There were six compounds detected in groundwater samples collected on site; maximum contaminant levels and sample locations are noted in parentheses:

- 2-propanone (240 micrograms per Liter [µg/L] in GW-03;
- carbon disulfide (21 µg/L in GW-02);
- methyl-t-butyl ether (7.7 µg/L in GW-09);
- cis-1,2-dichloroethylene (6,100 µg/L in GW-04);
- TCE (2,600 µg/L in GW-04); and
- PCE (130,000 µg/L in GW-06).

One compound, cis-1,2-dichloroethylene, was detected at concentrations greater than the Massachusetts Contingency Plan Groundwater Category 2 (MCPGW2) standard. Two compounds, trichloroethylene (TCE) and PCE, were detected at concentrations greater than the MCP-GW2 standard and the EPA Vapor Intrusion Screening Level (VISL).

Based on the results of the PA/SI, the June 15, 2020 Closure Memorandum concluded that a time critical removal action is warranted.

2. Physical location

The Ried Cleaners Site (the Site) is located at 218 Main Street in Great Barrington, Berkshire County, Massachusetts (MA) and is identified on Town of Great Barrington Tax Assessor's Map number (No.) 14 as Lot No. 202. The geographical coordinates from the approximate center of the property are 42° 11' 47.9" north latitude and 73° 21' 41.2" west longitude.

3. Site characteristics

The Site, occupying approximately 0.29 acres is in historic downtown commercial area and is bordered to the north by a savings bank and Rosseter Street; to the west by residential and commercial properties; to the south by a United States Postal Service (USPS) facility and commercial properties; and to the east by Main Street.

A dry-cleaning and laundromat business operated on the Site for approximately 54 years until it ceased operations in 2006. A one-story building, built in 1930, located in the southeast corner is approximately 7,890 square feet and is now vacant and boarded up. A second one-story building constructed in 1900 in the southwest portion of the property totaled 1,056 square feet; it was demolished in 2008. Currently, in addition to the vacant boarded up building, the remainder of the Site is mostly paved and covered with crushed gravel and sand and is occasionally used for overflow parking by the neighboring bank.

Within a half mile radius of the Site the daytime population is 2,367 and the sensitive receptors include multiple residences, churches, the post office, a neighboring bank, the public library, a masonic lodge, businesses and the Housatonic River.

Based on information in EPA's EJSCREEN environmental justice screening tool, zero out of 11 Environmental Justice Indexes for the area within a one-mile radius of the Site exceed the 80th percentile on a national basis.

4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant

The PA/SI sampling event has documented the presence of chlorinated volatile organic compounds, including PCE, at levels exceeding the MCP-S2 Standard indicating that a release of chlorinated contaminants to the environment has occurred. **Table 1** below summarizes the soil sample locations and depths that have analytical results showing the presence of PCE and other chlorinated contaminants.

Concentrations of Chlorinated Contaminants in Soil at the Ried Cleaners Site

	SAMPLE LOCATION:		SB-01A	SB-01B	SB-01C	SB-01D	SB-01E	SB-01F	SB-02AB
	SAMPLE NUMBER:		0346-0003	0346-0004	0346-0005	0346-0006	0346-0007	0346-0008	0346-0009
	SAMPLE DEPTH:		0-6 Inches	6-12 Inches	12-24 Inches	24-26 Inches	36-48 Inches	48-60 Inches	0-12 Inches
	REPORTING UNITS:		µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
	MCP-S2 Standard	EPA RML-Ind							
VOLATILE ORGANIC COMPOUNDS (VOCs)	µg/kg								
Cis-1,2-Dichloroethylene	500,000	7,000,000	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	60,000	56,000	ND	ND	ND	562	1,032	ND	ND
Tetrachloroethylene	200,000	1,200,000	ND	2,241	6,551	34,491	75,603	20,685	20,149
1,2,4-Trimethylbenzene	200,000	5,300,000	ND	ND	ND	ND	ND	ND	ND
Sec-Butylbenzene	200,000	350,000,000	ND	ND	ND	ND	ND	ND	ND
N-Butylbenzene	200,000	180,000,000	ND	ND	ND	ND	ND	ND	ND

	SAMPLE LOCATION:		SB-02C	SB-02D	SB-102D	SB-02E	SB-02F	SB-03A	SB-03B
	SAMPLE NUMBER:		0346-0010	0346-0011	0346-0012	0346-0013	0346-0014	0346-0015	0346-0016
	SAMPLE DEPTH:		12-24 Inches	24-26 Inches	24-26 Inches	36-48 Inches	48-60 Inches	0-6 Inches	6-12 Inches
	REPORTING UNITS:		µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
	MCP-S2 Standard	EPA RML-Ind							
VOLATILE ORGANIC COMPOUNDS (VOCs)	µg/kg								
Cis-1,2-Dichloroethylene	500,000	7,000,000	3,122	ND	ND	581	1,176	ND	ND
Trichloroethylene	60,000	56,000	3,003	ND	ND	ND	272	ND	ND
Tetrachloroethylene	200,000	1,200,000	311,636	8,922	12,295	19,817	138	ND	ND
1,2,4-Trimethylbenzene	200,000	5,300,000	ND	ND	ND	ND	301	ND	ND
Sec-Butylbenzene	200,000	350,000,000	ND	ND	ND	ND	81	ND	ND
N-Butylbenzene	200,000	180,000,000	ND	ND	ND	ND	180	ND	ND

	SAMPLE LOCATION:		SB-03C	SB-03D	SB-03E	SB-03F	SB-04A	SB-04B	SB-04C
	SAMPLE NUMBER:		0346-0017	0346-0018	0346-0019	0346-0020	0346-0021	0346-0022	0346-0023
	SAMPLE DEPTH:		12-24 Inches	24-26 Inches	36-48 Inches	48-60 Inches	0-6 Inches	6-12 Inches	12-24 Inches
	REPORTING UNITS:		µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
	MCP-S2 Standard	EPA RML-Ind							
VOLATILE ORGANIC COMPOUNDS (VOCs)	µg/kg								
Cis-1,2-Dichloroethylene	500,000	7,000,000	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	60,000	56,000	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	200,000	1,200,000	312	188	ND	ND	159	492	538
1,2,4-Trimethylbenzene	200,000	5,300,000	ND	ND	ND	ND	ND	ND	ND
Sec-Butylbenzene	200,000	350,000,000	ND	ND	ND	ND	ND	ND	ND
N-Butylbenzene	200,000	180,000,000	ND	ND	ND	ND	ND	ND	ND

	SAMPLE LOCATION:		SB-04D	SB-04E	SB-04F	SB-05A	SB-05B	SB-05C	SB-05D
	SAMPLE NUMBER:		0346-0024	0346-0025	0346-0026	0346-0027	0346-0028	0346-0029	0346-0030
	SAMPLE DEPTH:		24-26 Inches	36-48 Inches	48-60 Inches	0-6 Inches	6-12 Inches	12-24 Inches	24-26 Inches
	REPORTING UNITS:		µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
	MCP-S2 Standard	EPA RML-Ind							
VOLATILE ORGANIC COMPOUNDS (VOCs)	µg/kg								
Cis-1,2-Dichloroethylene	500,000	7,000,000	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	60,000	56,000	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	200,000	1,200,000	462	ND	ND	171	422	657	565
1,2,4-Trimethylbenzene	200,000	5,300,000	ND	ND	ND	ND	ND	ND	ND
Sec-Butylbenzene	200,000	350,000,000	ND	ND	ND	ND	ND	ND	ND
N-Butylbenzene	200,000	180,000,000	ND	ND	ND	ND	ND	ND	ND

	SAMPLE LOCATION:		SB-05E	SB-05F	SB-06A	SB-06B	SB-06C	SB-06D	SB-06E
	SAMPLE NUMBER:		0346-0031	0346-0032	0346-0033	0346-0034	0346-0035	0346-0036	0346-0037
	SAMPLE DEPTH:		36-48 Inches	48-60 Inches	0-6 Inches	6-12 Inches	12-24 Inches	24-26 Inches	36-48 Inches
	REPORTING UNITS:		µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
	MCP-S2 Standard	EPA RML-Ind							
VOLATILE ORGANIC COMPOUNDS (VOCs)	µg/kg								
Cis-1,2-Dichloroethylene	500,000	7,000,000	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	60,000	56,000	ND	ND	ND	562	136	1,081	ND
Tetrachloroethylene	200,000	1,200,000	64	ND	1,182	13,734	2,530	30,387	1,519
1,2,4-Trimethylbenzene	200,000	5,300,000	ND	ND	ND	ND	ND	ND	ND
Sec-Butylbenzene	200,000	350,000,000	ND	ND	ND	ND	ND	ND	ND
N-Butylbenzene	200,000	180,000,000	ND	ND	ND	ND	ND	ND	ND

	SAMPLE LOCATION:		SB-06F	SB-106F
	SAMPLE NUMBER:		0346-0038	0346-0039
	SAMPLE DEPTH:		48-60 Inches	48-60 Inches
	REPORTING UNITS:		µg/kg	µg/kg
	MCP-S2 Standard	EPA RML-Ind		
VOLATILE ORGANIC COMPOUNDS (VOCs)	µg/kg			
Cis-1,2-Dichloroethylene	500,000	7,000,000	ND	73
Trichloroethylene	60,000	56,000	ND	93
Tetrachloroethylene	200,000	1,200,000	324	1,061
1,2,4-Trimethylbenzene	200,000	5,300,000	ND	ND
Sec-Butylbenzene	200,000	350,000,000	ND	ND
N-Butylbenzene	200,000	180,000,000	ND	ND

Table 1. *Sample location, depths and analytical results are compared to the MCP-S2 Soil Standard and EPA Industrial RML in soils for samples collected during the Ried Cleaners PA/SI.*

PCE is a hazardous substance as defined by Section 101(14) of CERCLA, 42 U.S.C. 9601 (14).

Historical research has shown that PCE was used as part of the dry-cleaning process for 54 years while the Site operated as a dry-cleaning business. Based on the concentration distribution it is apparent that PCE, which was stored in underground storage tanks, leaked from those tanks and contaminated the soils beneath. This determination is supported by the documented tank description when they were removed in 2008, which indicated that holes were present in the tanks. The presence of floor drains in the former onsite building also align with high levels of contamination, indicating that PCE from the dry-cleaning process may have migrated into the soils via the floor drain pathway.

The presence of chlorinated contaminants in the soils at and below the ground surface make it possible for the contamination to spread from human or animal traffic, adverse weather, or vapor intrusion into nearby buildings. The Site is not secured, and the public has unrestricted access to the contaminated soils.

5. NPL status

The Site is not currently on the National Priorities List and has not received a Hazardous Ranking System rating.

6. Maps, pictures and other graphic representations

For a more detailed picture of the contamination onsite please refer to the “Tetrachloroethylene (PCE) Concentration Site Model in Surface and Subsurface Soil” in Attachment 1.

B. Other Actions to Date

1. Previous actions

On September 12, 2008, preliminary excavation work was conducted by the former owner to determine the location of underground storage tanks (USTs) on the south side of the property, in the vicinity of the demolished building. Four USTs were uncovered: two were reportedly used for storing PCE, and were oriented vertically, each with a cone-shaped bottom; and two were used to store heating oil. At least one aboveground storage tank (AST), previously located in the vicinity of the USTs, was also used to store PCE. Prior to September 12, 2008, a 10,000-gallon UST was removed from the northwest corner of the property.

Also on September 12, 2008, four floor drains were found in the footprint of the former building, and soil samples were collected from beneath the former floor drains at the points of discharge. The soil samples were analyzed for VOCs, volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), polychlorinated biphenyls (PCBs), and total metals including arsenic, cadmium, chromium, lead, and mercury. Elevated concentrations of PCE (maximum of 181,000 milligrams per kilogram [mg/kg]) were detected in the soil samples. TCE was also detected, at a maximum concentration of 11.2 mg/kg.

On September 15, 2008, the four USTs were removed from the vicinity of the demolished building. Photoionization detector (PID) headspace screening of soil from the UST grave indicated 120 ppm, which constituted a reportable release as listed in the Massachusetts Contingency Plan (MCP). MassDEP was notified of the release and assigned release tracking number 1-17142. On September 24, 2008, MassDEP issued a Notice of Responsibility (NOR) for the release.

In December 2008, indoor air samples were collected from the remaining site building. PCE was detected in the indoor air samples at up to 0.0445 ppm or 0.302 milligrams per cubic meter (mg/m3).

In April 2009, Eco-Genesis advanced soil borings on the property, collected soil samples from the borings, and installed and sampled three groundwater monitoring wells. In addition, soil gas vent points were installed in nine boring locations. Groundwater was encountered between 3 and 6 feet below ground surface (bgs). Groundwater flow is suspected to flow from northwest to the southeast. PCE was detected at maximum concentrations of 89.7 mg/kg in soil and 108 milligrams per Liter (mg/L) in groundwater.

In February 2010, Eco-Genesis installed an additional three wells (MW-4 through MW-6) on the Site and the adjacent church property to the northwest. Groundwater samples were collected from the new and existing monitoring wells. Results indicated maximum concentrations of PCE

at 119,000 micrograms per Liter (µg/L); TCE at 970 µg/L; and cis-1,2-dichloroethylene (cis-1,2-DCE) at 26,300 µg/L.

In November 2010, on behalf of MassDEP, Shaw Environmental, Inc. (Shaw) installed monitoring wells MW-7 and MW-8 to the south on the USPS property; MW-9 and MW-10 on the Masonic Temple property, south of the USPS facility; and MW-11 and MW-12 on the Ried Cleaners Site. Soil samples were collected from the borings during well installation. Shaw collected groundwater samples from the existing wells, newly installed wells, and monitoring wells on adjacent properties. PCE was detected in groundwater samples at a maximum concentration of 94,000 µg/L.

Shaw also conducted test-pit excavation in the area of the former western building. Volatile odors were noted during excavation, and elevated PID readings were recorded. Increasing PID readings during one excavation were cause for concern, and the excavation was stopped due to safety considerations. PID screening results for Test Pit 1 (TP-1) ranged from 398 ppm to 1,000 ppm, with the highest detection occurring within the former UST area. PID screening results from TP-2 and TP-3 were consistently greater than 9,999 ppm, and a strong chlorinated solvent odor was detected while performing the test-pit excavations. The highest PID screening result detected from TP-4 was 26 ppm, but no solvent odor was detected while excavating the test pit. One soil sample was collected from each of the test pits, and the soil samples were submitted for VOC, VPH, and EPH laboratory analysis.

Analytical results of the samples collected from the test-pits indicated that the following VOCs were detected in soil (maximum concentration and sample location in parentheses): PCE (5,600 mg/kg in TP-3); cis-1,2-DCE (0.011 mg/kg in TP-4); and TCE (0.044 mg/kg in TP-4). In addition, the following seven petroleum-related VOCs were detected above their respective reporting limits: 1,2,4-trimethybenzene; 1,3,5-trimethylbenzene; 4-isopropyltoluene; 4-methyl-2-pentanone; nbutylbenzene; n-propylbenzene; and sec-butylbenzene.

Chlorinated solvent detections from samples TP-2 and TP-3 exceeded the MCP Method 1 soil category S-1, S-2, and S-3 soil standards.

The property was claimed by the Town of Great Barrington for back taxes. The town subsequently obtained an EPA Brownfields Assessment Grant and was recently awarded a Brownfields Cleanup Grant.

In July and September 2019, TRC Environmental Corporation conducted a limited inspection for hazardous materials (hazardous materials inventory). Activities included an asbestos survey of the remaining building; collection and analysis of debris/building material samples for asbestos; sampling and field analysis of paint chips for lead; sampling and analysis of caulking and glazing building components for PCBs; and documentation of other hazardous materials, such as mercury-containing items (electrical switches, thermostats, etc). Analytical results revealed that

five types of building materials sampled contained ≥1% asbestos. The X-Ray Fluorescence (XRF) field testing results indicated that levels of lead on surfaces ranged between 0.01 milligrams per cubic centimeter (mg/cm2) (lower limit of quantification of the XRF) and 15.4 mg/cm2. Laboratory results of the analysis of the caulking bulk samples did not identify the presence of PCBs above 50 ppm, indicating the sampled materials are not considered a PCB Bulk Product Waste. Two of the three samples had detectable concentrations of PCBs: 1.1 ppm in one sample of exterior door caulking, and 4.2 ppm in one sample of exterior window caulking. The remaining sample did not have detections of PCBs above the laboratory reporting limits.

2. Current actions

Currently, the Site is inactive. The remaining building is vacant and boarded up. The property is not fenced, and the neighboring bank occasionally uses the Site for additional parking. The Town has conducted site investigation activities using EPA Brownfields grant money.

C. State and Local Authorities' Roles

1. State and local actions to date

The previous owner, the state, and the town have spent considerable time and resources investigating the existing historical contamination. MassDEP requested EPA assistance in a letter from Michael Gorski, Regional Director of the Western Regional Office of MassDEP, dated September 23, 2019.

2. Potential for continued State/local response

As previously mentioned, the Town has been awarded both EPA Brownfields assessment and cleanup grant money for the Site. After the proposed EPA removal action has been completed, MassDEP will continue to work with the Town of Great Barrington to address any remaining environmental issues.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

As described below, the conditions at the Site meet the general criteria for a removal action, as set forth in 40 C.F.R. §300.415(b)(1), in that "there is a threat to public health or welfare of the United States or the environment," and in consideration of the factors set forth in 40 C.F.R. §300.415(b)(2) as described below.

Tetrachloroethylene (PCE) – Please see the Agency for Toxic Substances and Disease Registry (ATSDR), US Department of Health and Human Services *ToxFAQ Fact Sheet for Tetrachloroethylene, June 2019* in Attachment 2.

PCE, among other chlorinated dry-cleaning compounds found on site, is a hazardous substance as defined by Section 101(14) of CERCLA, 42 U.S.C.9601 (14). Soils at the Site that were sampled are contaminated with PCE, indicating a release of a hazardous substance with potential to threaten public health or welfare or the environment. Unrestricted access to the Site creates potential public exposure through incidental ingestion or inhalation of contaminated soils. Furthermore, contaminated surface soils at the Site have the potential to migrate due to inclement weather and pose a risk of contaminating the nearby Housatonic River.

Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants; [§300.415(b)(2)(i)];

> The Site has active businesses operating in close proximity to the existing contamination. No fencing to prevent unauthorized access to the Site leaves the potential for unsuspecting members of the public or visitors to the nearby businesses to be exposed to the contaminated soils. The receptors could be potentially exposed to the contaminated soils through dermal contact or incidental inhalation or ingestion. The presence of the contaminated soils also presents a pathway for vapor intrusion of the contaminants to nearby buildings.

Actual or potential contamination of drinking water supplies or sensitive ecosystems [§300.415(b)(2)(ii)];

> The Housatonic River, which is a recreational and fishing resource for the community, is located less than 500 ft northeast of the Site. The Site is technically within a MassDEP-defined zone 2 wellhead protection area (site is 1.64 miles north of a drinking water supply well for the Town).

High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate [§300.415(b)(2)(iv)];

> Chlorinated solvents, including PCE, are present in the soils at the Site. It is estimated that the area of contaminated soils at the surface is approximately 2,400 square feet and to a depth of 6 ft bgs. The contaminated area is mostly made up of sandy soils, as evidenced by the soil borings taken during the site investigation, which have high porosity and hydraulic conductivity allowing water to permeate easily and spread contamination.

Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released [§300.415(b)(2)(v)];

> Adverse weather conditions could potentially cause surface soils containing PCE to further migrate through wind induced erosion or surface water runoff.

The availability of other appropriate Federal or State response mechanisms to respond to the release [§300.415(b)(2)(vii)];

MassDEP requested EPA assistance in a letter from Michael Gorski, Regional Director of the Western Regional Office of MassDEP, dated September 23, 2019.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances or pollutants or contaminants from this Site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, welfare, or the environment. In accordance with OSWER Directive 9360.0-34 (August 19, 1993), an endangerment determination is made based on "appropriate Superfund policy or guidance, or on collaboration with a trained risk assessor," which is outlined and discussed in Section III above. "Appropriate sources include, but are not limited to, relevant action level or clean-up standards, Agency for Toxic Substances and Disease Registry documents or personnel, or staff toxicologists."

EPA evaluated the MCP's cumulative risk approach which compares site-specific information to a Cumulative Cancer Risk Limit (See 310 Code of Massachusetts Regulations (CMR) 40.0000). In addition, MassDEP has, and is continuing to, evaluate the data collected during this PA/SI to determine whether Imminent Hazard and/or Significant Risk conditions, as defined in the MCP, are present at this Site.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

The actions required to mitigate the threats outlined herein, are given below. The proposed actions will protect public health, welfare, and the environment by removing the hazardous substances from the accessible areas of the Site. As outlined below, the proposed action will involve the removal of vegetation and debris, excavation of contaminated soils (approximate 2,400-ft^2 area), transportation and disposal of contaminated soils at an EPA approved off-site facility, and backfilling and regrading the excavated area. It is expected that the specific removal activities will include, among other things, the following:

- Conducting a site walk with the cleanup contractor;
- Developing a site-specific Health and Safety Plan (HASP);

- Mobilizing personnel and equipment;
- Clearing vegetation and debris, as needed;
- Collecting additional samples as necessary to confirm extent of contamination and other samples as needed to develop waste profiles;
- Removing mechanically some or all of the contaminated soils;
- Staging and if needed mixing soils onsite in preparation for transportation and disposal;
- Arranging for transportation and disposal (T&D) of hazardous substances at EPA approved off-site disposal facilities, as needed;
- Conducting post-removal confirmation sampling as necessary;
- Backfilling and regrading areas where soil was removed; and
- Repairing response related damages, if necessary.

2. Community relations

EPA will remain involved with the local community during the course of the removal action through press releases, fact sheets, and public meetings, as necessary. The OSC will receive assistance from the EPA Community Involvement Coordinator to assist with all public relations activities. EPA will work closely with the state, town, government, local businesses, and the community.

3. Contribution to remedial performance

The cleanup proposed in this Action Memorandum is designed to mitigate the threats to human health and the environment posed by the Site. The actions taken would be consistent with and will not impede any future responses. Following the completion of the removal action, regulatory oversight will be returned to MassDEP.

4. Description of innovative technologies and sustainable approaches

In accordance with the December 23, 2013 Memorandum, updated August 2, 2016, issued by Office of Land and Emergency Management as well as the Region 1 Clean and Greener Policy for Contaminated Sites, greener cleanup practices should be considered for all cleanup projects. Greener cleanup is the practice of incorporating practices that minimize the environmental impacts of cleanup actions and maximize environmental and human benefit. Alternative technologies and sustainable approaches will be considered and incorporated, as appropriate, throughout the implementation of the removal action.

5. Applicable or relevant and appropriate requirements (ARARs)

Federal ARARs:

Clean Water Act, 40 CFR Sections 122.26(c)(ii)(C) and 122.44(k): NPDES regulations for storm water control and management.

Clean Air Act, 40 CFR Part 61, 42 U.S.C. Section 112(b)(1): standards for controlling dust. The regulations establish emissions standards for 189 hazardous air pollutants. Standards set for dust and release sources. If the removal of contaminated soils generates regulated air pollutants, then measures will be implemented to meet these standards.

State of Massachusetts ARARs:

40 C.F.R. Parts 260-262 and 264 Resource Conservation and Recovery Act, Subtitle C-Hazardous Waste Identification and Listing Regulations; Generator and Handler Requirements, Closure and Post-Closure - Massachusetts has been delegated the authority to administer these RCRA standards through its state hazardous waste management regulations. Waste generated will be tested to determine whether it exceeds hazardous waste thresholds and, if so, the hazardous waste will be managed on-site and until such time as it is shipped to an EPA-approved off-site disposal location.

310 CMR 30.100: Hazardous Waste Rules for Identification and Listing of Hazardous Wastes.

310 CMR 30.300: Hazardous Waste Management Rules - Requirements for Generators.

310 CMR 7.00: Massachusetts Air Pollution Control Regulations: stipulates that during construction and/or demolition activities, air emissions (i.e., dust, particulates, etc.) must be controlled to prevent air pollution. Construction activities will be managed to meet standards for visible emission (310 CMR Section 7.06): dust, odor, construction, and demolition (310 CMR Section 7.09) and standards for handling, transporting and disposing asbestos (310 CMR Section 7.15). During the removal action, appropriate measures would need to be taken to comply with these regulations.

The OSC will coordinate with state officials to identify additional State ARARs, if any. In accordance with the National Contingency Plan and EPA Guidance Documents, the OSC will determine the applicability and practicability of complying with each ARAR that is identified in a timely manner.

6. Project schedule

Upon approval of the proposed removal action, EPA expects to initiate the time critical removal action by the summer of 2020 and estimates that the removal action will be completed within approximately 12 weeks. Initiation and completion of the removal action may be affected by travel restrictions imposed during the COVID19 pandemic.

B. Estimated Costs

COST CATEGORY		**CEILING**
REGIONAL REMOVAL ALLOWANCE COSTS:		
ERRS Contractor		$600,000.00
Interagency Agreement		$0,000.00
OTHER EXTRAMURAL COSTS NOT FUNDED FROM THE REGIONAL ALLOWANCE:		
START Contractor		$150,000.00
Extramural Subtotal		$750,000.00
Extramural Contingency	10%	$75,000.00
TOTAL, REMOVAL ACTION CEILING		**$825,000.00**

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Delayed action will increase public health risks due to the potential exposure threat posed by the release of chlorinated solvents at and from the Site. The absence of a removal action described herein will cause site conditions to remain unaddressed, and threats associated with the presence of hazardous substances will continue to pose a threat to human health and the environment.

VII. OUTSTANDING POLICY ISSUES

There are no precedent-setting policy issues associated with the Site.

VIII. ENFORCEMENT ... For Internal Distribution Only

See attached Confidential Enforcement Strategy.

The total EPA costs for this removal action that will be eligible for cost recovery are estimated to be $825,000 (extramural costs) + $100,000 (EPA intramural costs) = $925,000 X 1.4104 (regional indirect rate) = **$1,304,620**[1].

IX. RECOMMENDATION

This decision document represents the selected removal action for the Ried Cleaners Site in Great Barrington, MA, developed in accordance with CERCLA, as amended, and is not inconsistent with the National Contingency Plan. The basis for this decision will be documented in the administrative record to be established for the Site.

Conditions at the Site meet the NCP Section 300.415 (b) (2) criteria for a removal action due to the following:

Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants [§300.415(b)(2)(i)];

Actual or potential contamination of drinking water supplies or sensitive ecosystems [§300.415(b)(2)(ii)];

High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate [§300.415(b)(2)(iv)];

Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released [§300.415(b)(2)(v)];

The availability of other appropriate Federal or State response mechanisms to respond to the release [§300.415(b)(2)(vii)];

I recommend that you approve the proposed removal action. The total extramural removal action project ceiling if approved will be $825,000.

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[1]Direct Costs include direct extramural costs $825,000 and direct intramural costs $100,000. Indirect costs are calculated by using regional indirect rate in effect at time cost estimate is prepared and is expressed as a percentage of the direct costs 41.04% x $925,000, consistent with EPA's full cost accounting methodology effective October 01, 2018. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States' right to cost recovery.

APPROVAL: BRYAN OLSON Digitally signed by BRYAN OLSON Date: 2020.08.04 11:51:52 -04'00' DATE: _____

DISAPPROVAL: _____ DATE: _____

Attachment 1

Tetrachloroethylene (PCE) Concentration Site Model in Surface and Subsurface Soil

Tetrachloroethylene (PCE) Concentration Site Model Surface and Subsurface Soil

Ried Cleaners Site
218 Main Street
Great Barrington, Massachusetts

EPA Region I
Superfund Technical Assessment and Response Team (START) IV
Contract No. EP-S3-15-01

TDD Number:	TO1-01-19-10-0003
Created by:	B. Mace
Created on:	17 October 2019
Modified by:	C. Dupree
Modified on:	13 May 2020

Legend

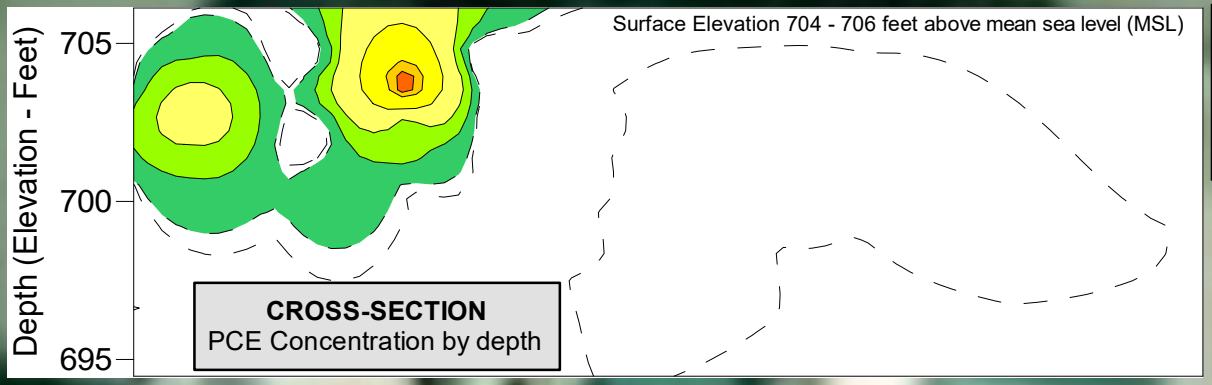
- Property Boundary
- Site Boundary
- Soil Boring Location
- Pre-EPA Soil Boring Location
- Former UST

PCE Concentration (µg/kg)

- >0
- >1,000
- >10,000
- >30,000
- >100,000
- >200,000
- >240,000
- >1,200,000

UST = Underground Storage Tank
GW = Groundwater
MW = Monitoring Well
µg/kg = micrograms per kilogram

0 20 40 Feet



Isopleth data was calculated with a tolerance of approximately 5 feet (easting/northing) and 0.5 feet (depth/elevation), using the highest PCE result within that span.

Data Sources:

Imagery: ESRI, i-cubed, USDA FSA, USGS AEX, GeoEye, Getmapping, Aerogrid, IGP
Topos: MicroPath
All other data: START, MassGIS, TRC Environmental Corporation (TRC)

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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Attachment 2

ToxFAQ Fact Sheet for Tetrachloroethylene, June 2019

Tetrachloroethylene - ToxFAQs™

CAS # 127-18-4

This fact sheet answers the most frequently asked health questions (FAQs) about tetrachloroethylene. For more information, call the ATSDR Information Center at 1-800-232-4636. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It is important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Tetrachloroethylene is a manufactured chemical used for dry cleaning and metal degreasing and in the aerospace industry. Exposure to very high concentrations of tetrachloroethylene can cause dizziness headaches, sleepiness, incoordination confusion, nausea, unconsciousness, and even death. Tetrachloroethylene has been found in at least 949 of the 1,854 National Priorities List sites identified by U.S. Environmental Protection Agency (EPA).

What is tetrachloroethylene?

Tetrachloroethylene is a nonflammable colorless liquid. Other names for tetrachloroethylene include perchloroethylene, PCE, perc, tetrachloroethene, and perchlor. Most people can smell tetrachloroethylene when it is present in the air at a level of 1 part in 1 million parts of air (1 ppm) or more.

Tetrachloroethylene is used as a dry cleaning agent and metal degreasing solvent. It is also used as a starting material (building block) for making other chemicals and is used in some consumer products.

What happens to tetrachloroethylene when it enters the environment?

- Tetrachloroethylene can be released into air, water, and soil at places where it is produced or used.
- Tetrachloroethylene breaks down very slowly in the air and so it can be transported long distances in the air. Half of the amount in the air will degrade in approximately 100 days.
- Tetrachloroethylene evaporates quickly from water into air. It is generally slow to break down in water.
- Tetrachloroethylene may evaporate quickly from shallow soils or may filter through the soil and into the groundwater below. It is generally slow to break down in soil.

How might I be exposed to tetrachloroethylene?

- When you bring clothes from the dry cleaners, they will release small amounts of tetrachloroethylene into the air.
- When you drink water containing tetrachloroethylene, you are exposed to it. You might also be exposed to tetrachloroethylene that is released into the air during showering and bathing.
- People residing near contaminated sites or dry cleaning locations may be exposed to higher levels than the general population.
- People working in the dry cleaning industries or using metal degreasing products may be exposed to elevated levels of tetrachloroethylene.

How can tetrachloroethylene affect my health?

Breathing high levels of tetrachloroethylene for a brief period may cause dizziness or drowsiness, headache, and incoordination; higher levels may cause unconsciousness and even death.

Exposure for longer periods to low levels of tetrachloroethylene may cause changes in mood, memory, attention, reaction time, and vision.

Studies in animals exposed to tetrachloroethylene have shown liver and kidney effects, and changes in brain chemistry, but we do not know what these findings mean for humans.

Tetrachloroethylene

CAS # 127-18-4

How likely is tetrachloroethylene to cause cancer?

Studies in humans suggest that exposure to tetrachloroethylene might lead to a higher risk of getting bladder cancer, multiple myeloma, or non-Hodgkin's lymphoma.

In animals, tetrachloroethylene has been shown to cause cancers of the liver, kidney, and blood system.

The Department of Health and Human Services (DHHS) considers tetrachloroethylene to be reasonably anticipated to be a human carcinogen. EPA considers tetrachloroethylene likely to be carcinogenic to humans by all routes of exposure. The International Agency for Research on Cancer (IARC) considers tetrachloroethylene probably carcinogenic to humans.

How can tetrachloroethylene affect children?

It is not known whether children are more susceptible than adults to the effects of tetrachloroethylene.

A few studies in humans have suggested that exposure to tetrachloroethylene increased the numbers of babies with birth defects, but these studies were not large enough to clearly answer the question. Studies in animals exposed by inhalation or stomach tube have not shown clear evidence of specific birth defects.

How can families reduce the risk of exposure to tetrachloroethylene?

- Tetrachloroethylene has been found in low levels in some food. You can minimize the risk of your family's exposure by peeling and thoroughly washing fruits and vegetables before cooking.
- Use bottled water if you have concerns about the presence of tetrachloroethylene in your tap water. You may also contact local drinking water authorities and follow their advice.
- Prevent children from playing in dirt or eating dirt if you live near a waste site that has tetrachloroethylene.
- Tetrachloroethylene is widely used as a scouring solvent that removes oils from fabrics, as a carrier solvent, as a fabric finish or water repellant, and as a metal degreaser/cleaner. Follow instructions on product labels to minimize exposure to tetrachloroethylene.

Is there a medical test to determine whether I've been exposed to tetrachloroethylene?

Tetrachloroethylene and its breakdown products (metabolites) can be measured in blood and urine. However, the detection of tetrachloroethylene or its metabolites cannot predict the kind of health effects that might develop from that exposure. Because tetrachloroethylene and its metabolites leave the body fairly rapidly, the tests need to be conducted within days after exposure.

Has the federal government made recommendations to protect human health?

The Occupational Safety and Health Administration (OSHA) has set an 8-hour time weighted average permissible exposure limit of 100 ppm, an acceptable ceiling exposure limit of 200 ppm, and a maximum peak of 300 ppm (not to be exceeded for more than 5 minutes of any 3-hour period).

The National Institute for Occupational Safety and Health (NIOSH) recommends that workplace exposure to tetrachloroethylene be minimized due to concerns about its carcinogenicity.

Reference

This ToxFAQs™ information is taken from the 2019 Toxicological Profile for Tetrachloroethylene produced by the Agency for Toxic Substances and Disease Registry, Public Health Service, U.S. Department of Health and Human Services, Public Health Service in Atlanta, GA.

Where can I get more information?

For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology and Human Health Sciences, 1600 Clifton Road NE, Mailstop F-57, Atlanta, GA 30329-4027.

Phone: 1-800-232-4636

ToxFAQs™ on the web: www.atsdr.cdc.gov/ToxFAQs

ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.