



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
EMERGENCY RESPONSE BRANCH 1  
25089 CENTER RIDGE ROAD  
WESTLAKE, OH 44145  
JUL 27 2010

EPA Region 5 Records Ctr.



370428

**MEMORANDUM**

**SUBJECT:** Approval and Funding for a Removal Action at the Sterling Cleaners Site, Appleton, Outagamie County, Wisconsin (Site ID# B5VH)

**FROM:** Kathy Clayton, On-Scene Coordinator  
Response Section 1, Emergency Response Branch 1

**THRU:** Jason H. El-Zein  
Emergency Response Branch 1

**TO:** Richard C. Karl, Director  
Superfund Division

**I. PURPOSE**

The purpose of this memorandum is to request and document approval to expend up to \$370,200 to conduct a time-critical removal action at the Sterling Cleaners Site (the Site) located at 304 W. Wisconsin Avenue, in Appleton, Outagamie County, Wisconsin 54911. This removal action is necessary to mitigate the immediate threat to human health and the environment posed by the presence of elevated levels of chlorinated volatile organic compounds (VOCs), tetrachloroethylene (PCE) and its degradation products in the air, soil, and groundwater on Site and downgradient of the Site. PCE and its degradation products are defined as hazardous substances under Section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), and its implementing regulations at 40 C.F.R. Part 302. Concentrations of the hazardous substances at the Site exceed federal Maximum Contaminant Levels (MCLs), U.S. EPA Preliminary Remediation Goals (PRGs), Wisconsin Groundwater Quality Standards (Chapter NR 140), and Vapor Intrusion Action Levels established by the Wisconsin Department of Health.

The response action proposed herein will mitigate Site conditions by installing vapor abatement systems in structures impacted by PCE subsurface migration and by excavating and disposing of contaminated soil off-site. Because hazardous substances exist in substantial quantities and are uncontrolled, this removal should be classified as time critical. If the source area soil contamination is not addressed through a removal action, continued migration of soil contaminants to groundwater in the shallow aquifer will occur, resulting in additional vapor intrusion impacts to neighboring properties.

The project will require an estimated 45 working days to complete. This Site does not set any precedents and is not considered nationally significant. This Site is not on the National Priorities List (NPL).

## **II. SITE CONDITIONS AND BACKGROUND**

CERCLIS ID #: WIN000510415

### **A. Physical Location and Site Description**

The Sterling Cleaners Site is located at 304 W. Wisconsin Avenue, Appleton, Wisconsin 54911. The Site is in the SE ¼ of the SW ¼ of Section 23, T21N, R17E, Outagamie County, Wisconsin. It lies at the northwest corner of the intersection of Wisconsin Avenue and Superior Street. The Site coordinates are 44.2730 N latitude and 88.4091 W longitude. The parcel number is 316093900. It is 0.23 acres of land.

The building on-site houses an active dry cleaning operation (Sterling Enterprises of Wisconsin, Inc.). The property is immediately bordered on the east and north by residences. Commercial facilities are located across the street to the east and south. The surrounding area contains mixed commercial and residential properties.

Soil cores collected during EPA's Site Assessment in March, 2010 indicate that the underlying soil at the Site is generally comprised of moderately plastic clay and silty or gravelly clay in the upper five feet, and almost entirely moderately plastic clay below five feet.

Groundwater is very shallow at this Site. During EPA's sampling in March 2010, the depth to groundwater ranged from 2.60-8.45 feet below grade at the Site and the neighboring property. Records indicate that the groundwater flow in the immediate area of the Site is westerly, south-southwesterly, and north-northeasterly. Drinking water in this area is provided by the City of Appleton, supplied by Lake Winnebago. The Fox River lies approximately 1 mile to the south. A large north-south trending buried ravine lies approximately 0.25 miles to the west.

### **B. Environmental Justice Analysis**

The area surrounding the Sterling Cleaners Site was screened for Environmental Justice (EJ) concerns using Region 5's EJ Assist Tool (which applies the interim version of the national EJ Strategic Enforcement Assessment Tool (EJSEAT)). Census tracts with a score of 1, 2, or 3 are considered to be high-priority potential EJ areas of concern according to EPA Region 5. The Sterling Cleaners Site is in a census tract with scores of 4 and 5 (Attachment 2). Therefore, Region 5 does not consider this site to be a high-priority potential EJ area of concern. Please refer to the attached analysis for additional information.

### C. Site Background

The building on-site was built in 1954 as a dry cleaning facility, and operated under the name Avenue Dry Cleaners until 1977. From 1977 to 1990, the property was owned by Dale M. Scharine and his wife, Beverly J. Scharine. In 1990 Mr. Scharine sold the property to So Man Chu and his wife, Sun Hee Chu. The Appleton City Directories show that Mr. and Mrs. Chu began dry cleaning operations in 1990 under the name So's Custom Tailors & Dry Cleaning. Mr. and Mrs. Chu owned and operated So's Custom Tailors & Dry Cleaning until it caught fire on January 4, 1998.

It was determined that arson caused the January 1998 fire at the facility. The building sustained substantial damage as a result of the fire. An Action for Foreclosure on the property was filed by F & M Bank in September 1998 against Mr. and Mrs. Chu.

F & M Bank retained OMNI Associates to conduct a Preliminary Soil and Groundwater Investigation (PSI) at the Site in May 1999. Four soil geoprobe borings and temporary groundwater monitoring wells were installed in order to determine possible contamination. OMNI identified PCE contamination in the soil (20,000 µg/kg) and in the groundwater (13,000 µg/L) at the Site. PCE degradation products were also detected in the soil and groundwater. WDNR was not notified of the contamination and did not receive the PSI Report until August 2008.

The property was sold to Mr. Young Kim via Sheriff's auction in May 1999. Mr. Kim signed the property deed on June 11, 1999. He then executed a Quit Claim Deed, transferring his interest in the property to Sterling Enterprises of Wisconsin, Inc. (Sterling Enterprises) on June 18, 1999. Mr. Kim began reconstruction activities at the Site in order to begin operating a dry cleaning business.

The Appleton Fire Department responded to a spill of PCE at the Site on June 16, 1999. A construction contractor hired by Mr. Kim was working on post-fire building reconstruction when he discovered an overturned 55 gallon drum near the back door of the facility and reported the spill to the Fire Department. Three fifty-five gallon steel drums were filled with surface soils in the area where the spilled drum was located. Despite over excavation of the soil in the area of the spill, clearance samples indicated high concentrations of PCE remaining in the soil (15,000,000 µg/kg). The analysis of contamination at the Site indicates that PCE and its degradation products were released into the environment in greater quantities than the spill from the 55 gallon drum.

Mr. Kim operated Sterling Enterprises from 1999 until December 2007, when Jae Cho purchased the business. In July 2008, Mr. Cho contacted WDNR regarding the June 1999 spill. Based on the spill report and the PSI investigation conducted by OMNI, WDNR sent a Responsible Party letter to Mr. Cho requiring him to perform a site investigation. On May 21, 2009, WDNR sent a letter to Mr. Cho stating it had determined that Mr. Cho was financially unable to proceed with the necessary investigation and remediation of the property. On July 27, 2009, WDNR filed a notice of contamination Deed Affidavit on the property.

In January 2010, WDNR requested that U.S. EPA conduct a removal assessment at the Site. During the week of March 8, 2010, U.S. EPA collected air, soil, and groundwater samples at the Site and neighboring properties. PCE and its degradation products were found on and off Site in soil, groundwater, and air (via subsurface migration).

PCE was detected by EPA at a maximum concentration of 463,000  $\mu\text{g}/\text{kg}$  (463  $\text{mg}/\text{kg}$ ) in the soil. The Preliminary Remediation Goal (PRG) established by U.S. EPA for PCE is 0.48  $\text{mg}/\text{kg}$  in residential soil and 1.3  $\text{mg}/\text{kg}$  in industrial soil (<http://www.epa.gov/region9/superfund/prg/index.html>). The saturation limit for PCE is 240  $\text{mg}/\text{kg}$  (WDNR publication PUB-RR-682). Concentrations greater than this limit were detected at the Site and are indicative of free residual product. Soil from grade level to basement depth present a direct contact risk to the public.

PCE was detected at a maximum concentration of 36,600  $\mu\text{g}/\text{L}$  in the groundwater during U.S. EPA's site assessment. These concentrations are significantly higher than 5  $\mu\text{g}/\text{L}$ , the MCL and Wisconsin NR 140 Groundwater Quality Enforcement Standard for PCE. PCE levels above 70  $\mu\text{g}/\text{L}$  in water are considered a direct contact risk for skin exposure.

Vapor intrusion of PCE contaminated air was detected in residential properties adjacent to the Site at levels three times the action level recommended by the Wisconsin Department of Health. Wisconsin Statutes Section 292.11 provides that action be taken to restore the environment and to minimize the harmful effects from discharges of hazardous substances to the air. The most common and immediate method to interrupt the vapor pathway at existing structures is to install a sub-slab depressurization system (SSDS), which actively maintains a negative pressure gradient between the sub-slab and indoor air.

Based on the results of U.S. EPA's Site Assessment, WDNR requested that U.S. EPA conduct an expanded assessment to determine all neighboring properties impacted by the historic PCE releases, pursue enforcement against potentially responsible parties (PRPs), and conduct a Removal Action at the Site. Because the PCE contamination identified at this Site is a direct contact and inhalation risk to the public and the contamination continues to migrate off-site, U.S. EPA seeks to conduct a more extensive investigation, to remove and dispose of the hazardous material in the soil, and to install vapor abatement systems in impacted neighboring structures.

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

The conditions present at the Sterling Cleaners Site present a substantial threat to the public health or welfare, and the environment, and meet the criteria for a time-critical removal action as provided for in the National Oil and Hazardous Substances Pollution

Contingency Plan (NCP), 40 CFR 300.415(b)(2). These criteria include, but are not limited to, the following:

- 1) *Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants.*

Human populations and animals face ongoing exposure to hazardous substances on and near the Sterling Cleaners Site. Contamination of PCE and its degradation products were found in hazardous concentrations by U.S. EPA in the soil, groundwater, and air (via subsurface migration) at the Site and at the neighboring property. Detected PCE concentrations in the soils at the Site are approximately 400 times U.S. EPA's PRGs, the groundwater concentrations of PCE are more than 7,000 times the state regulatory limit, and air concentrations of PCE in neighboring structures are more than three times the level recommended by the Wisconsin Department of Health. There is unrestricted access to the contaminated soil, the contaminated groundwater is present in a very shallow aquifer (less than three feet below grade), and the vapors are infiltrating neighboring residences. Additionally, the full extent of the off-site migration of the contaminated groundwater has not been established.

Humans exposed to intermediate to high levels of PCE in air experience eye and respiratory irritation, dizziness, lack of coordination and unconsciousness. Animal studies indicate PCE adversely affects the central nervous system and the liver, and that PCE causes cancer by both inhalation and ingestion exposures in rats and mice (U.S. EPA 1984). Research also indicates that PCE leaches readily to groundwater. In saturated deep soils (such as at this Site), 26% of the chemical leaches to groundwater (U.S. Air Force 1989). PCE's degradation products (TCE and cis-1,2-Dichloroethene) are known to cause nausea, dizziness, and sleepiness.

- 2) *High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate.*

Hazardous concentrations of chlorinated solvents have been detected in the Site soils and in the neighboring property's soils from near the surface to at least ten feet below grade. The soil meets the definition of F002 "listed" hazardous waste under RCRA and its implementing regulations at 40 CFR § 261.30. The depth of the contamination, as well as the presence of the contamination in soils off-site and in the groundwater, demonstrates that the contaminants on Site are migrating downgradient from the initial spill location. If no action is taken, the contaminant migration is expected to continue, potentially further increasing the risk to the downgradient receptor populations.

- 3) *Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.*

Rain water and snow melt, as they percolate through Site soil to the water table, can mobilize contaminants toward the water table. The water table is very shallow at this

Site, less than three feet below grade. Elevated concentrations of PCE and its degradation products have been detected in the groundwater, indicating that precipitation is causing the spilled material to migrate. Additionally, it is probable that snow melt has caused historic surface spills to migrate off the property via runoff onto the adjacent down gradient properties. Dry conditions also pose a risk at this Site. In dry conditions, the contaminated soil is likely to become airborne, affecting visitors to the Site (e.g., Sterling Enterprises' customers) as well as neighboring businesses and residences.

- 4) *The availability of other appropriate federal or state response mechanisms to respond to the release;*

There are no other Federal or State agencies that have the capacity to respond to the immediate threats at the Site. WDNR requested U.S. EPA assistance in fully defining and mitigating the threat at this Site. Please refer to the Administrative Record for WDNR's Request for Assistance.

- 5) *Other situations or factors that may pose threats to public health or welfare of the United States or the environment;*

Numerous residences and small businesses are located downgradient of the Site. U.S. EPA's initial Site Assessment demonstrated that the health of the neighbors is at risk from vapors volatilizing from groundwater and permeating the soil beneath the buildings.

#### **IV. ENDANGERMENT DETERMINATION**

Given the Site conditions, the nature of the contamination on Site, and the potential exposure pathways described in Sections II and III above, actual releases of hazardous substances from this Site, if not addressed by implementing the response actions selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

#### **V. PROPOSED ACTIONS AND ESTIMATED COSTS**

The On-Scene Coordinator (OSC) proposes the following actions to address immediate threats posed by the presence of hazardous substances at the Sterling Cleaners Site:

1. Develop and implement a Site Health and Safety plan, including an Air Monitoring Plan and a Site Emergency Contingency Plan;
2. Develop and implement a Site Security Plan;
3. Conduct extent of contamination sampling utilizing groundwater, soil, soil gas, sub-slab, indoor air, and ambient air sampling;

4. In addition to the vapor intrusion impacts that have been previously detected, where the vapor intrusion investigation indicates the potential for a complete exposure pathway at concentrations exceeding ATSDR or State of Wisconsin screening values for PCE (or PCE degradation products), proceed with the design and installation of interior vapor abatement systems in structures impacted by PCE subsurface migration. Abatement systems will include installation of a sub-slab depressurization system, sealing cracks in walls and floors of basements, and sealing or fixing drains that could be a pathway;
5. Identify, characterize, remove, and properly dispose of contaminated soil located at the Site in accordance with U.S. EPA's Off-Site Rule (40 CFR § 300.440);
6. Develop and implement a post excavation sampling plan to verify cleanup;
7. Backfill excavated areas with clean material and topsoil; and
8. Restore excavated areas to pre-removal conditions.

This removal action will be conducted in a manner not inconsistent with the NCP. The OSC has initiated planning for provision of post-removal Site control consistent with the provisions of Section 300.415(1) of the NCP. Operation and maintenance (O&M) of the residential vapor abatement systems will be the responsibility of the property owner following installation and performance monitoring by the U.S. EPA.

The detailed cleanup contractor cost estimate is presented in Attachment 3. The estimated project costs are summarized below. The project will require an estimated 45 working days to complete.

**REMOVAL PROJECT CEILING ESTIMATE**

**EXTRAMURAL COSTS:**

Regional Removal Allowance Costs:

Total Cleanup Contractor (ERRS) (includes 15% contingency)	\$218,500
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Other Extramural Costs Not Funded from the Regional Allowance:

ERT (SERAS) Additional Site Investigation*	\$ 60,000
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Total START	\$ 30,000
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SUBTOTAL EXTRAMURAL	\$308,500
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Extramural Contingency (20%)	\$ 61,700
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<b>TOTAL REMOVAL ACTION PROJECT CEILING</b>	<b>\$370,200</b>
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The response actions described in this memorandum directly address actual or threatened releases of hazardous substances, pollutants or contaminants at the facility which may pose an imminent and substantial endangerment to public health and safety, and to the environment. These response actions do not impose a burden on affected property disproportionate to the extent to which the property contributes to the conditions being addressed.

#### Applicable or Relevant and Appropriate Requirements

All applicable and relevant and appropriate requirements (ARARs) of Federal and State law will be complied with to the extent practicable. The OSC sent a letter requesting State ARARs to Ms. Roxanne Chronert, Green Bay, WI, on June 15, 2010. Any State ARARs identified in a timely manner will be complied with to the extent practicable.

All hazardous substances, pollutants or contaminants removed off-site pursuant to this removal action for treatment, storage and disposal shall be treated, stored, or disposed of at a facility in compliance, as determined by U.S. EPA, with the U.S. EPA Off-Site Rule, 40 CFR 300.440.

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

Continued release of PCE into the environment will result if no action or delayed action ensues at this Site.

#### **VII. OUTSTANDING POLICY ISSUES**

None

#### **VIII. ENFORCEMENT**

For administrative purposes, information concerning the enforcement strategy for this Site is contained in the Enforcement Confidential Addendum.

The total EPA costs for this removal action based on full-cost accounting practices that will be eligible for cost recovery are estimated to be \$646,963.<sup>1</sup>

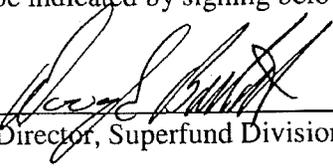
$$(\$370,200 + \$30,000) + (61.66\% \times \$400,200) = \$646,963$$

<sup>1</sup>Direct Costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. 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.

**IX. RECOMMENDATION**

This decision document represents the selected removal action for the Sterling Cleaners Site, Appleton, Outagamie County, Wisconsin. This document has been developed in accordance with CERCLA as amended, and is not inconsistent with the NCP. This decision is based on the Administrative Record for the Site (see Attachment 2).

Because conditions at the Site meet the NCP criteria for a Time-Critical Removal Action in 40 CFR 300.415 (b)(2), I recommend the approval of the removal action proposed in this Action Memorandum. The total project ceiling if approved will be \$370,200 of which an estimated \$280,200 may be used for cleanup contractor costs. Approval may be indicated by signing below.

APPROVE:  DATE: 7/27/10  
for Director, Superfund Division

DISAPPROVE: \_\_\_\_\_ DATE: \_\_\_\_\_  
Director, Superfund Division

Enforcement Addendum

Attachments:

1. Detailed Cleanup Contractor Costs
2. Administrative Record
3. Environmental Justice Analysis
4. Independent Government Cost Estimate

cc: D. Chung, U.S. EPA, 5202-G  
M. Chezik, U.S. DOI, w/o Enf. Addendum  
M. Giesfeldt, WDNR, w/o Enf. Addendum  
J.B. Van Hollen, WI Attorney General, w/o Enf. Addendum  
J. Borski, WDNR, w/o Enf. Addendum  
R. Chronert, WDNR, w/o Enf. Addendum

# ATTACHMENT 1

## U.S. ENVIRONMENTAL PROTECTION AGENCY REMOVAL ACTION

### ADMINISTRATIVE RECORD FOR STERLING CLEANERS SITE APPLETON, OUTAGAMIE COUNTY, WISCONSIN

ORIGINAL  
JUNE 2010

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	05/14/99	OMNNI Associates	File	Preliminary Soil and Groundwater Investigation at the So's Dry Cleaning Site	
2	06/16/99	Chronert, R., WDNR	File	State of Wisconsin Substance Release Notification Form, WDNR Spill Report 04-45-255919 w/Attachments	
3	08/14/08	Hansen, D., WDNR	Cho, J., Sterling Enterprises	Letter re: Reported Contamination at the Former So's Dry Cleaners Facility	
4	05/21/09	Borski, J., WDNR	Cho, J., Sterling Enterprises	Letter re: Deed Affidavit Process for the Former So's Dry Cleaners Facility	
5	07/27/09	Borski, J., WDNR	File	Outagamie County Deed Affidavit re: Sterling Enterprises of Wisconsin	
6	04/12/10	Chronert, R., WDNR	Crosetto, T., U.S. EPA et al	E-mail Message re: WDNR Request to U.S. EPA for Additional Assistance at the Sterling Cleaners Site W/Reply History	
7	05/07/10	Lockheed Martin	U.S.EPA	Site Assessment Report for the Sterling Cleaners Site	
8	05/28/10	El-Zein, J., U.S. EPA	So Man Chu, Young Kim, Jae Cho, Appleton, WI	Letters re: General Notice of Potential Liability and Request for Information for the Sterling Cleaners Site	
9	06/15/10	Clayton, K., U.S. EPA	Chronert, R., WDNR	Letter re: U.S. EPA Request that WDNR Identify any Applicable State ARARS for the Sterling Cleaners Site	
10	00/00/00	Clayton, K., U.S. EPA	Karl, R., U.S. EPA	Action Memorandum: Approval and Funding for a Removal Action at the Sterling Cleaners Site <b>(PENDING)</b>	

11	00/00/00	El-Zein, J., U.S. EPA	Sun Hee Chu, Appleton, WI	Letter re: General Notice of Potential Liability and Request for Information for the Sterling Cleaners Site <b>(PENDING)</b>
12	00/00/00	El-Zein, J., U.S. EPA	Jae Cho, Young Kim, Appleton, WI	Letter re: Request for Information re Ability to Pay <b>(PENDING)</b>