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Con 12:15 Albert City SBA
CL 9/23/99

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

CR SEP 1999

REGION VII
901 NORTH 5TH STREET
KANSAS CITY, KANSAS 66101

1999 SEP 20 P 1:45

SEP 17 1999

DEPT. OF
NATURAL RESOURCES

Ms. Susan Dixon
Iowa Department of Natural Resources
Environmental Protection Division
Wallace State Office Building
900 East Grand
Des Moines, IA 50319

Dear Ms. Dixon:

As you may be aware, the Superfund removal program of the Environmental Protection Agency (EPA) is contemplating a removal action at the following location described as the Albert City SBA site, located on Orchard Street in the east-central portion of Albert City, IA.

The EPA plans to excavate contaminated soils which pose an immediate threat to the public and the environment, to relocate a PVC waterline which runs through the contaminated soil and to conduct a pilot study on long term cleanup of the remaining contaminated soil and groundwater. The contaminants of concern are tetrachloroethylene, trichloroethylene and vinyl chloride. A copy of the draft action memorandum is attached to provide you with more site information.

To perform this action, the EPA will attempt to comply, to the extent practicable, with all applicable or relevant and appropriate state requirements (ARARs). This letter formally requests that the State of Iowa identify any potential ARARs for this site.

We request that an appropriate state official identify potential ARARs in the tables provided. To qualify as state ARARs, these requirements must be promulgated. A state requirement is promulgated if it is legally enforceable and of general applicability.

The tables are divided into three sections addressing the following categories: chemical-specific requirements, location-specific requirements, and action-specific requirements. Chemical-specific requirements are health or risk-based numeric values that establish the acceptable amount or concentration of a chemical that may be found in, or discharged to, the ambient environment. Location-specific requirements are restrictions placed on the concentration of hazardous substances or the conduct of activities solely because they occur in special locations. For example, a location-specific requirement demands that hazardous waste storage facilities, if located within 100-year flood plains, must be designed, constructed, operated, and maintained in a manner which avoids washout. Action-specific requirements are technology or activity-based requirements or limitations on actions taken with respect to hazardous waste.

Your timely response will ensure that Iowa requirements will be considered when conducting the removal action. If it is not possible to detail these regulations in writing by September 27, 1999, please call me at (913) 551-7500. It is anticipated the removal action will take place in October with the pilot study following in the Spring of 2000.

Any state policies or guidance will be considered, even if they are not ARARs. Your response will be evaluated to determine whether they are applicable, or relevant and appropriate to the site to the extent practicable. It is important to clarify, however, that all potential state ARARs identified in the tables may not be met during the removal.

Sincerely,

Janice J. Kroone, On-Scene Coordinator
Emergency Response and Removal Branch
Superfund Division

Enclosures

Potential
State ARARs

TABLE 1: CHEMICAL-SPECIFIC REQUIREMENTS

Chemical	Maximum Concentration Allowed	Medium	Reason Why Requirement is an ARAR	Regulatory Citation

Potential
State ARARs

TABLE 2: LOCATION-SPECIFIC REQUIREMENTS

Location Subject to Requirement	Requirement	Reason Why Requirement is an ARAR	Regulatory Citation

Potential
State ARARs

TABLE 3: ACTION-SPECIFIC REQUIREMENTS

Action Subject to Requirement	Requirement	Reason Why Requirement is an ARAR	Regulatory Citation

DRAFT DRAFT DRAFT DRAFT

MEMORANDUM

SUBJECT: Request for a Removal Action at the Albert City SBA Site, Albert City, Iowa

FROM: Janice J. Kroone, On-Scene Coordinator
ER&R/SUPR

THRU: Robert W. Jackson, Chief
ER&R/SUPR

TO: Michael Sanderson, Division Director
Superfund

CERCLIS ID#: IAD984601039

SITE ID#: 07WC

I. PURPOSE

The purpose of this action memorandum is to request approval of the proposed actions and funding for a time critical removal at the Albert City Small Business Association (SBA) site, located in Albert City, IA., in Buena Vista County. The former Superior Manufacturing Company manufactured grease guns on this property from 1924 - 1969.

II. SITE CONDITIONS AND BACKGROUND

A. Site Description

1. Removal Site Evaluation

In September 1991, a property assessment was performed on the former plant property for the Small Business Administration by Environmental Resource Services. Groundwater samples indicated trichloroethylene (TCE) concentrations as high as 25,000 micrograms per liter (ug/l) and cis-1,2-dichloroethylene (cis-1,2-DCE) as high as 2,950 ug/l.

Investigations by the Iowa Department of Natural Resources (IDNR) in October 1992 and August 1994 found TCE concentrations in groundwater at levels up to 570,000 ug/l; vinyl chloride (VC) at 1,400 ug/ l; cis-1,2-DCE at 35,800 ug/l and tetrachloroethylene (PCE) at 124 ug/l.

In October 1995, the EPA conducted an Expanded Site Investigation (ESI) on both the former plant property, waste storage area and other outlying areas. Concentrations of these contaminants in groundwater confirmed IDNR's earlier findings. Soil samples found TCE at 23,000 ug/kg, VC at 1,400 ug/kg, cis-1,2-DCE at 40,000 ug/kg, and PCE at 180 ug/kg. A private drinking water well located 0.75 miles northeast of the site found TCE at 31 ug/l and cis-1,2-DCE at 40 ug/l. A sample taken from the city's municipal well contained TCE at a concentration of 2 ug/l. The fire station water distribution system contained TCE at 38 ug/l.

During EPA's Removal Assessment, completed in 1997, storm water sewer samples were found to contain TCE at 1,000 ug/l, VC at 310 ug/l,cis-1,2-DCE at 3,900 ug/l and trans-1,2-DCE at 130 ug/l. Groundwater and soil samples confirmed results found previously. Results indicated that in certain locations, concentrations of VOCs, particularly TCE increased with depth to at least 15 feet. One sample collected in the northwest portion of the site contained TCE at 1,270,000 ug/kg at 14.5 feet. Air sampling conducted inside a museum annex onsite found: TCE in the air at 450 ug/l ; inside the Albert City Fire Station concentrations were 470 ug/l, the Buena Vista County maintenance shop at 36 ug/l and the school bus barn at 1.1 ug/l.

2. Physical Location

The Site is located on Orchard Street in the east-central portion of Albert City, IA. The former plant and waste storage area boundaries include: Railroad Street to the east; an alley joining Railroad Street and Second Avenue and halfway between Orchard and Main Streets to the south; Second Avenue to the west; and an abandoned alley midway between Grape and Orchard Streets to the north. The Site lies within Township 92N, Range 35W, Section 14 of Buena Vista County, Iowa. The geographic coordinates for the site are: latitude 42 degrees 46' 57.0"N and longitude 94 degrees 56'50.7"W.

The Site is located in a commercial/residential area of Albert City approximately 50 feet east from the nearest resident and 100 feet east of the Albert City School. The site is 150 feet north of Main Street. Commercial businesses are located both south and east of the site.

3. Site Characteristics

The Site consists of two primary areas: the former Superior Manufacturing (SMC) plant property, and the former SMC waste storage area. The former SMC plant property is presently owned by the U.S. Small Business Administration (SBA). The former waste storage area is owned by the Albert City Fire Department, Albert City Historical Association and Buena Vista County The SMC, which was owned by Ed Sundholm, began its operation in 1924. The company initially operated out of a small building, making various items, such as garden tools, vending machines, comb sterilizers for barber shops, and engine governors. In 1935, the SMC began manufacturing grease guns. The product was very successful and the business grew rapidly, which led to several additions to the factory. The SMC grease guns were so successful that they were shipped nationwide and to numerous foreign countries. Grease gun production reached its peak in 1966 and 1967, at a rate of 6,000 guns per day. Sundholm sold the business in 1967 but production continued in Albert City until 1969. In 1969, the operations

were moved to Spencer, Iowa. An estimated 17 million grease guns were manufactured at the SMC Albert City plant.

The SMC plant performed metal working, assembling, polishing, degreasing, painting, plating, and other operations. Various solvents were used in the manufacturing process. Prior to hauling waste metal cuttings off-site by rail and truck, the metal shavings were stacked in tall piles that extended north from Orchard street to the abandoned alley in the center of the block. The oil and solvents were allowed to drain onto the ground saturating the soil. This area is considered the waste storage area and was located approximately 50 feet north of the plant. There is evidence that some of the solvents or waste metal covered with solvents were disposed in the city's landfill.

4. Release or Threatened Release of a Hazardous Substance, or Pollutant, or Contaminant

Contaminants found on the site include: trichloroethylene (TCE); vinyl chloride (VC); tetrachloroethylene (PCE); cis-1,2-dichloroethylene (cis-1,2-DCE), trans-1,2-dichloroethylene (trans-1,2-DCE) and 1,1, dichloroethylene (1,1-DCE). These are hazardous substances as defined by Section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). There are 3- 30' x 30' cells located at 0-2' and 12-30' x 30' at 2-5' which exceeded the Preliminary Removal Goals (PRGs) established by the Iowa Department of Health in a health assessment. These PRGs were reviewed by and concurred with by the Agency for Toxic Substances and Disease Registry (ATSDR). There are an additional 28–30' x 30' cells that are contaminated above the soil screening levels (SSLs). Water discharged from the site exceeds the MCLs for vinyl chloride. Contaminant levels measured in the air in buildings on the site are at a level of concern. Presently the contamination on the site poses an inhalation hazard, dermal exposure for workers who disturb the soil, a threat of contamination to the city drinking water supply and private drinking water wells.

Vinyl chloride, cis-1,2-dichloroethylene and trans-1,2-dichloroethylene are degradation products of trichloroethylene and tetrachloroethylene. These materials will continue to degrade into vinyl chloride, a human carcinogen as long as the soil and groundwater remain contaminated.

Vinyl chloride is a colorless, flammable gas or liquid at room temperature with a sweet, ethereal odor. Other common names for VC include chloroethene and monochloroethylene. VC is used as a vinyl monomer in the manufacture of polyvinyl chloride (PVC) and other resins as a chemical intermediate and solvent, and as a refrigerant. This compound was previously used as a propellant in aerosol sprays.

Vinyl chloride is a known human carcinogen. Its target organs are the brain, lungs, liver, kidneys, and lymph system. The evidence of human carcinogenicity is supported by cancer cases resulting from occupational exposure to relatively high concentrations of vinyl chloride. There is no evidence which indicates that a safe level of exposure to vinyl chloride exists. Vinyl chloride is absorbed via inhalation or by dermal exposure. Non-carcinogenic local exposure effects

include allergic contact dermatitis, severe eye irritation, and frostbite, resulting from the rapid evaporation rate of vinyl chloride from the skin. VC is a central nervous system depressant. Inhalation or ingestion produces symptoms similar to alcohol intoxication, such as light headedness, dulling of visual and auditory responses, fatigue, and nausea. Exposure to acutely high concentrations has resulted in death. Excess birth defects, fetal loss, loss of male libido, and decreased spermatogenesis have been linked with occupational and/or environmental VC exposure, but these effects have not been conclusively confirmed. Therefore, VC is in Class A (unconfirmed human reproductive hazard) for reproductive hazard. The actual human reproductive hazard is unknown. No freshwater Lowest Observed Effect Level (LOEL) has been established for VC. The EPA has set the drinking water MCL for VC at 2.0 ug/L.

Trichloroethylene (TCE) is a volatile liquid with an odor similar to that of chloroform. In the past TCE has been used as an anesthesia; food, spice, leather processing and as a degreaser. TCE is a hazardous substance due primarily to its toxicity. Effects result from both high-level, acute and lower-level, chronic exposures. Protection must be afforded against both dermal contact and inhalation. Exposure to TCE vapor may cause irritation of the eyes, nose and throat. There is limited evidence in humans for the carcinogenicity of TCE. There is sufficient evidence in experimental animals for the carcinogenicity of TCE.

Cis-1,2-Dichloroethylene and trans-1,2-dichloroethylene are colorless liquids with pleasant odors. In high concentrations they are irritating and narcotic. They have been found to produce liver and kidney injury in experimental animals

Tetrachloroethene (PCE), also called perchloroethylene (Perc), is a colorless, nonflammable, chlorinated ethene with an ether-like odor. PCE is used in the dry cleaning industry, for metal degreasing, textile processing, cleaning electronic components, etc. Human exposure to PCE occurs mainly through inhalation as it is readily absorbed through the lungs. PCE exposure depresses the central nervous system causing vertigo, confusion, tremor, numbness, and inebriation-like symptoms. Kidney impairment and hepatotoxic effects also result from exposure to PCE. Experimental evidence indicates that PCE produces liver cancer in mice and is also a mutagen. Human evidence of carcinogenicity is insufficient. The use of PCE is increasing for metal cleaning due to restriction on TCE. Some experimental evidence has shown PCE to bioaccumulate in organisms at levels of up to 100X the concentration in the surrounding water. PCE will biodegrade under anaerobic conditions in the following sequence; PCE to trichloroethene to 1,2,-dichloroethene to vinyl chloride. PCE is more toxic to aquatic life than other chlorinated methanes, ethanes and ethenes. The MCL for PCE in drinking water is 5 ug/L.

5. National Priority List Status

This site is not presently on the National Priorities List (NPL). However, the EPA is in the process of preparing a Hazard Ranking System (HRS) score for the purpose of evaluating the possibility of listing this site on the NPL.

B. Other Actions to Date

1. Previous Actions

The EPA conducted a removal action which began on May 25, 1999, and was completed on May 28, 1999, which removed and disposed one hundred and fifty-five - 55 gallon drums of VOC contaminated soil of investigation derived waste from monitoring well installation and from the site investigation. The cost of this removal was approximately $15,000.

2. Current Actions

There are no current actions occurring at the site.

C. State and Local Authorities' Role

1. The IDNR conducted a Site Screening Inspection (SSI) in 1992 and conducted further sampling in 1994. As they have done during the investigation and assessment phase of this site, the local government is expected to cooperate to the limits of its resources and legal authority.

2. Neither the state of Iowa or other local governments have access to resources to initiate this response action.

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

A. Threat to Public Health or Welfare

The Site conditions pose a significant threat to public health, welfare, and the environment which meet the criteria for response actions under 40 CFR 300.415(b)(2) of the National Contingency Plan (NCP) as follows:

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

40 CFR 300.415(b)(2)(iv) - - High levels of Hazardous Substances, Pollutants, or contaminants in soils largely at or near the surface.

PVC water lines are buried in contaminated soil/ground water under Orchard Street leading to the fire station and at the city's coin-operated water dispensing station located in the southeast corner of the former plant property. The contaminants (i.e. PCE, TCE) in the soil and ground water adjacent to this piping may degrade it and allow contaminants to enter the system. Any backflow of this water due to pressure variations may cause contaminated water from this

area to backflow into the distribution system. A past sampling event found TCE in the drinking water at the fire station at 38 ppb and cis-1,2-DCE at 15 ppb. TCE was detected during one sampling event at the municipal wells at 2 ug/l.

Surface and near surface soil sample results indicated that TCE was found at 262,504 ug/kg; VC at 23,351 ug/kg; PCE at 27,795 ug/kg; cis-1,2-DCE at 164,444 ug/kg and trans-1,2-DCE up to 736 ug/kg. The site properties have unrestricted access by the public. The site is located in an area surrounded by residential and commercial properties and a school. The nearest residence is located within 50 feet of the site and the school property is within 100 feet. Neighborhood children play soccer and other sports on this site. City infrastructure maintenance has caused city workers to dig in heavily contaminated areas near the site, thus exposing them to the VOCs. Therefore, potential for exposure to contaminated soil exists.

Air sampling in site buildings have found TCE in air up to 470 ug/L. Therefore, potential for exposure to contaminated air also exists.

Storm water contaminated with vinyl chloride and TCE is transported through underground perforated concrete drainage piping which flows approximately 3.25 miles south/southeast of the site. Fluctuations in groundwater levels can continue to release these contaminants throughout the path leading to the outfall. There are several private wells along this path. Groundwater has already been found to be heavily contaminated with VOCs. There is a possibility of private drinking water wells being contaminated with these VOCs. During one sampling event, a private well located 0.75 miles northeast of the site was contaminated at a concentration of 31 ug/l of TCE.

IV. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed Action Description

This removal action is proposed to occur in two phases. Phase I will address the 3-30' x 30' grids located at the 0-2 ' level, reroute a water supply line that runs through this area, and run a pilot study to determine a technology to cleanup the remaining contaminated soil and groundwater. Contaminated soil extends under numerous buildings on the site, this combined with contaminated ground water has been found to impact indoor air in the surrounding buildings. The technology selected from the pilot study, if successful, may eliminate disrupting these buildings and should reduce the air contaminant concentrations in these buildings.

Phase II, which is not addressed in this action memorandum, would include installation and operation of the selected treatment technology. During this phase the contaminated storm water that is continuously discharged from the site would also be addressed by a treatment system.

This removal action will address the 3- 30' x 30' grids of highly contaminated soils located at the 0-2' level (surface soils) and reroute a water supply line that runs through heavily contaminated soils at the site. The contaminated soil will be excavated and disposed off-site in accordance with the CERCLA Off-Site Rule, Resource Conservation and Recovery Act (RCRA). The three grids are grids 64 and 73, which are located in the former SMC waste storage area, and which have vinyl chloride concentrations in excess of the cleanup level of 8,900 ppb (which is the cleanup level based on current use of the property as a fire station) and grid 58, which has TCE concentrations which exceed the cleanup level of 28,000 ppb (based on current use of the former plant property as an open lot). A PVC water supply line that runs through these heavily contaminated soils from the water main would be closed off and the line will be rerouted. This will require some excavation and disposal of contaminated soils. Rerouting these lines will impact a city street and repairs will be required to return the street back to its original condition. It is anticipated approximately 500 cubic-yards of contaminated soil will be excavated and disposed off-site.

2. Contribution to Remedial Performance

This is a non-NPL site, although the EPA is evaluating the possibility of listing this site on the NPL. The removal actions described herein will mitigate the short-term threats posed by the conditions at this site. The removal proposed in this action memorandum will, to the extent practicable, contribute to the efficient performance of any long-term remedial action with respect to the release or threatened release concerned.

3. Description of Alternative Technologies

The EPA's Superfund Innovative Technology Evaluation (SITE) Demonstration Program has tentatively agreed to conduct a pilot study that would demonstrate the effectiveness of several innovative treatment technologies to address the soil and groundwater contamination that will remain at the site after the removal is completed. At this time the technologies have not been selected. It is anticipated the pilot study may be conducted in the Fall of 1999 or Spring of 2000.

4. Engineering Evaluation/Cost Assessment

An Engineering Evaluation/Cost Assessment (EE/CA) is not required to be prepared by the EPA for the actions specified in this action memorandum because this is a time-critical removal action.

5. Applicable or Relevant and Appropriate Requirements

The NCP, at 40 CFR 300.415(i), requires that removal actions shall, to the extent practicable considering the exigencies of the situation, attain applicable or relevant and appropriate requirements (ARARs) under federal environmental, state environmental, or facility-citing laws. The following site-specific ARARs have been identified and may be applicable for the actions proposed in this memorandum:

RCRA requirements concerning manifesting, waste packaging, labeling, waste analysis and notification of treatment, storage, and disposal facilities subject to land disposal restrictions (40 CFR 262.20 - 262.23 and 262.30 - 262.32, and 40 CFR 268.7).

The CERCLA Off-Site Rule, promulgated pursuant to CERCLA Section 121(d)(3), 42 U.S.C. 9621(d)(3), and formally entitled "Amendment to the National Oil and Hazardous Substance Pollution Contingency Plan; Procedures for Planning and Implementing Off-Site Response Action: Final Rule.", 58 Fed. Reg. 49200 (September 22, 1993), codified at 40 CFR 300.440.

The requirements of the Hazardous Materials Transportation Act, 49 U.S.C. 801-1813, further defined at 49 CFR Parts 171-179.

The RCRA standards applicable to transporters of hazardous waste found at 40 CFR Part 263.

A copy of the draft action memorandum has been provided to the State of Iowa along with a written request for the identification of potential state ARARs.

6. Project Schedule

Excavation of soils and rerouting the the water line will take approximately 3 weeks. The pilot study is subject to vendor's availability, weather conditions and the site program project schedule.

7. Action Levels

A health assessment of the site was conducted by the Iowa Department of Health to establish cleanup levels for soil that will be protective of public health. The ATSDR concurred with these cleanup levels. PRGs were established for current and future land use. For short-term removal purposes of soil excavation, the PRG cleanup levels established for land use of the properties as commercial will be used. Based on these established cleanup levels there are 15 grids (30 feet by 30 feet) at 0-5' which exceed the PRGs. Three of these grids are located at the 0-2' depth. A carcinogenic risk of 1E-6 and a hazard index of 0.1 were chosen as a point of departure for PRGs calculations.

In addition, the EPA Soil Screening Guidance was used to calculate soil screening levels (SSLs) for migration to the ground water. Twenty eight grids (30 feet by 30 feet) were found to exceed the SSLs. The SSLs will be used for long-term removal/remediation of soil.

SOIL CLEAN-UP LEVELS
ALBERT CITY SBA – ALBERT CITY, IOWA

CONTAMINANT	PRELIMINARY REMOVAL GOALS (PRGs)	SOIL SCREENING LEVELS (SSLs) FOR MIGRATION TO GROUND WATER
Vinyl Chloride	900 ug/kg	175 ug/kg
TCE	7,400 ug/kg	437 ug/kg
PCE	23,800 ug/kg	437 ug/kg
Cis-1,2-DCE	1,260,000 ug/kg	6,124 ug/kg
Trans-1,2-DCE	2,770,000 ug/kg	8,749 ug/kg

B. Estimated Costs

Extramural Costs:

Regional Removal Allowance Costs	$129,059
Contingency	12,906
START Costs	5,000
Subtotal, Extramural Costs	156,965

Intramural Costs:

Intramural Direct Costs	9,000
Intramural Indirect Costs	18,000
Subtotal, Intramural costs	27,000

TOTAL, REMOVAL PROJECT CEILING $183,965

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

Delayed action will increase public health risks to the nearby population through prolonged potential exposure to hazardous substances.

VI. OUTSTANDING POLICY ISSUES

None

VII. ENFORCEMENT

See attached confidential enforcement addendum.

VII. RECOMMENDATION

This decision document represents the recommended removal action for the Albert City SBA site located in Buena Vista County, IA., developed in accordance with CERCLA, as amended, and not inconsistent with the NCP. Conditions at this site meet the NCP Section 300.415(b)(2) criteria for a removal. The total project ceiling for this phase is $183,965. Of this, an estimated $156,965 comes from the Regional Removal Allowance.

Approved:

_____ _____

Michael J. Sanderson, Division Director Date
SUPR