

**FIVE-YEAR REVIEW REPORT**

US EPA RECORDS CENTER REGION 5



460376

**Third Five-Year Review**

**Summit Equipment & Supplies Incorporation Site**

Akron,  
Summit County, Ohio

**2013**

**Prepared By:**

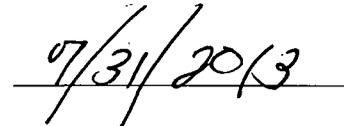


**U.S. Environmental Protection Agency  
Region 5  
Chicago, Illinois**

Approved by:

Date:

  
Richard C. Karl, Director  
Superfund Division  
U.S. EPA Region 5

  
07/31/2013

*for*

[This page intentionally left blank.]

# Table of Contents

I. Introduction .....	1
II. Progress Since the Last Five-Year Review .....	1
Remedy Implementation Activities .....	2
System Operation / Operation and Maintenance Activities.....	2
III. Five-Year Review Process.....	4
Administrative Components .....	4
Community Involvement and Notification .....	4
Document Review.....	4
Data Review.....	4
Groundwater .....	4
Soils .....	6
Site Inspection.....	6
Interviews.....	7
IV. Technical Assessment.....	7
<i>Question A</i> .....	7
· Remedial Action Performance .....	7
· Implementation of Institutional Controls and Other Measures.....	7
· Early Indicators of Potential Remedy Failure.....	7
<i>Question B</i> .....	7
· Changes in Standards and To Be Considereds.....	7
· Changes in Exposure Pathways .....	7
· Changes in Toxicity and Other Contaminant Characteristics .....	7
· Changes in Risk Assessment Methodologies.....	8
<i>Question C</i> .....	8
Technical Assessment Summary .....	8
V. Issues/Recommendations and Follow-Up Actions.....	8
VI. Protectiveness Statement.....	9
VII. Next Review .....	10

## Appendix

Appendix A Existing Site Information .....	A1
--	----

## Tables

Table 1 - Protectiveness Determinations/Statements from the 2008 FYR .....	2
Table 2 - Summary of Planned and/or Implemented ICs .....	2
Table 3 - Summary of Results for the SES Site since 2008 for Monitoring Wells with contaminants exceeding the MCLs .....	6
Table 4 - Issues and Recommendations/Follow-up Actions .....	9
Table A.1 – Site Chronology .....	A1
Table A.2 – Remediation Goals for Soil.....	A7
Table A.3 – Institutional Controls Summary Table .....	A10

## Figures

Figure 1 – Summit Equipment & Supplies Tax Parcel # 6741011- Map .....	3
Figure 2 - SES Site Monitoring Wells .....	5
Figure A.1 – SES Site General Location Map - Akron, Ohio .....	A3

## List of Acronyms

AOC	Administrative Order by Consent
ARAR	Applicable or Relevant and Appropriate Requirement
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
COC	Contaminant of Concern
DLA	Defense Logistics Agency
DMW	Deep Monitoring Well
DRMS	Defense Reutilization and Marketing Service
ECC	Environmental Chemical Corporation
EPA	U.S. Environmental Protection Agency
IA	Inter-Agency Agreement
IC	Institutional Control
ICI	International Consultants, Inc.
IT	International Technology Corporation
MCLs	Maximum Contaminant Levels
mg/kg	milligrams per kilogram
MNA	Monitored Natural Attenuation
MW	Monitoring Well
NCP	National Contingency Plan
NPL	National Priorities List
OEPA	Ohio Environmental Protection Agency
PCBs	Polychlorinated biphenyl
PCE	tetrachloroethene
ppm	parts per million
PRP	Potentially Responsible Party
RCRA	Resource Conservation and Recovery Act
RG	Remedial Goal
RI	Remedial Investigation
ROD	Record of Decision
SDWA	Safe Drinking Water Act
SES	Summit Equipment and Supply, Inc.
SVOCs	Semi-volatile organic compounds
TCE	Trichloroethene
TCLP	Toxic Characteristic Leaching Procedure
TSCA	Toxic Substances Control Act
ug/L	micrograms per liter
UECA	Uniform Environmental Covenants Act
USACE	United States Army Corps of Engineers
UXO	Unexploded Ordnance
VOCs	Volatile Organic Compounds
WTI	WasteTron, Inc.

[This page intentionally left blank.]

## Executive Summary

This is the third Five-Year Review (FYR) completed for the Summit Equipment and Supplies Incorporation Site (the SES Site, or Site) in the city of Akron, Summit County, Ohio. The purpose of this FYR is to review information to determine if the remedy is and will continue to be protective of human health and the environment. The triggering action for this statutory FYR was the signing of the previous FYR on July 31, 2008.

The June 30, 1998, Record of Decision (ROD) for the SES Site selected excavation of PCB-contaminated soils for offsite disposal. Additionally, the ROD required unexploded ordnance to be removed from the Site. Soil removal activities commenced at the Site in September 1998, with over 65,000 tons of soil eventually being excavated and shipped for disposal. Closeout of this aspect of the remedy was documented in the *Interim Remedial Action Report - Removal and Disposal of Contaminated Soil at the Summit Equipment and Supply, Inc. Site, Akron, Ohio*, dated August 8, 2002. The ROD also required institutional controls to provide ongoing access and protections for on-site workers, prohibit installation of groundwater extraction wells for uses other than contaminant monitoring, prohibit off-site relocation of soils, and to prevent non-industrial uses.

For the remediation of groundwater, monitored natural attenuation (MNA) was chosen in the June 1998 ROD. The ROD also provided that if future monitoring of Site wells indicated that adequate natural attenuation was not occurring, U.S. Environmental Protection Agency (EPA) would require more active treatment methods for addressing the groundwater contamination. Groundwater sampling events since the ROD indicate that the concentrations of the COCs in groundwater at the SES Site are decreasing and that satisfactory natural attenuation of Site contaminants is occurring.

On July 24, 2004, EPA signed an Explanation of Significant Differences (ESD) which modified the remedial requirements for institutional controls (ICs), in that restrictions to protect on-site workers from exposure to Site contaminants during excavation or construction activities on the SES property were determined no longer to be necessary. The ESD also determined that the following restrictions on the future use of the property remained necessary:

- The installation of groundwater extraction wells shall be prohibited unless they are to be used for groundwater monitoring purposes;
- Future use of the Site shall be restricted to industrial and commercial uses. Residential or agricultural uses such as daycare, school facilities, single-family homes, condominiums, apartments, or farming shall be prohibited;
- Soil at the SES Site shall not be moved to any offsite locations; and
- Access must be granted to EPA and its designated representatives, for Site response activities.

In accordance with this determination, the United States and the Site's owner and operator entered into a Consent Decree on March 31, 2008, that provided, among other things, for the owner's recording of an environmental covenant that imposed these restrictions.

The results of the Five-Year Review indicate that the remedy at the SES Site is protective of human health and the environment in the short term. Overall, the removal of polychlorinated biphenyl (PCB)-contaminated soil with offsite disposal and the clearance of unexploded ordnance over the entire site were accomplished successfully, and continued groundwater monitoring at the Site has shown consistently diminishing concentrations of Contaminants of Concern (COCs). To ensure long-term protectiveness, an institutional control in the form of an affidavit recorded with the Summit County Recorder of Deeds must be evaluated for effectiveness, to ensure exposure pathways that could result in unacceptable risks are being controlled. If the affidavit is determined not to be effective to impose the restrictions recited in the ROD, EPA will engage with the site owner to ensure it is replaced with an effective covenant.

## Five-Year Review Summary Form

### SITE IDENTIFICATION

**Site Name:** Summit Equipment and Supplies Incorporation

**EPA ID:** OHDO55523401

**Region:** 5

**State:** OH

**City/County:** Akron / Summit

### SITE STATUS

**NPL Status:** Non-NPL

**Multiple OUs?**

No

**Has the site achieved construction completion?**

Yes

### REVIEW STATUS

**Lead agency:** EPA

**Author name (Federal or State Project Manager):** David Seely

**Author affiliation:** U.S. Environmental Protection Agency

**Review period:** 7/31/2008 - 7/31/2013

**Date of site inspection:** 5/9/2013

**Type of review:** Statutory

**Review number:** 3

**Triggering action date:** 7/31/2008

**Due date (five years after triggering action date):** 7/31/2013

**Five-Year Review Summary Form (continued)**

**Issues/Recommendations**

**Issues and Recommendations Identified in the Five-Year Review:**

OU(s): <i>OU1</i>	<b>Issue Category: Institutional Controls</b>			
	<b>Issue:</b> Effectiveness of recorded restriction			
	<b>Recommendation:</b> Evaluate through IC Study; replace with effective covenant if necessary			
<b>Affect Current Protectiveness</b>	<b>Affect Future Protectiveness</b>	<b>Party Responsible</b>	<b>Oversight Party</b>	<b>Milestone Date</b>
No	Yes	PRP, EPA	EPA	7/31/2014

**Protectiveness Statement(s)**

<i>Operable Unit:</i> OU1	<i>Protectiveness Determination:</i> Short-term Protective
<p><i>Protectiveness Statement:</i> The remedy at the SES Site is protective of human health and the environment in the short term. Overall, the removal of polychlorinated biphenyl (PCB)-contaminated soil with offsite disposal and the clearance of unexploded ordnance over the entire site were accomplished successfully, and continued groundwater monitoring at the Site has shown consistently diminishing concentrations of Contaminants of Concern (COCs). To ensure long-term protectiveness, an institutional control in the form of an affidavit recorded with the Summit County Recorder of Deeds must be evaluated for effectiveness, to ensure exposure pathways that could result in unacceptable risks are being controlled. If the affidavit is determined not to be effective to impose the restrictions recited in the ROD, EPA will engage with the site owner to ensure it is replaced with an effective covenant.</p>	

**Sitewide Protectiveness Statement**

<p><i>Protectiveness Determination:</i> Short-term Protective</p>
<p><i>Protectiveness Statement:</i></p> <p>The remedy at the SES Site is protective of human health and the environment in the short term. Overall, the removal of polychlorinated biphenyl (PCB)-contaminated soil with offsite disposal and the clearance of unexploded ordnance over the entire site were accomplished successfully, and continued groundwater monitoring at the Site has shown consistently diminishing concentrations of Contaminants of Concern (COCs). To ensure long-term protectiveness, an institutional control in the form of an affidavit recorded with the Summit County Recorder of Deeds must be evaluated for effectiveness, to ensure exposure pathways that could result in unacceptable risks are being controlled. If the affidavit is determined not to be effective to impose the restrictions recited in the ROD, EPA will engage with the site owner to ensure it is replaced with an effective covenant.</p>

[This page intentionally left blank.]

# Summit Equipment and Supplies Incorporation Five-Year Review Report

## I. Introduction

The purpose of a Five-Year Review (FYR) is to evaluate the implementation and performance of a remedy in order to determine whether the remedy will continue to be protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in FYR reports. In addition, FYR reports identify issues found during the review, if any, and document recommendations to address them.

The U.S. Environmental Protection Agency (EPA) prepares FYRs pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121 and the National Contingency Plan (NCP). CERCLA 121 states:

*"If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews."*

EPA interpreted this requirement further in the NCP; 40 Code of Federal Regulations (CFR) Section 300.430(f)(4)(ii), which states:

*"If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such actions no less often than every five years after the initiation of the selected remedial action."*

EPA conducted a FYR on the remedy implemented at the Summit Equipment and Supplies Incorporation (SES) Superfund Site in Akron, Summit County, Ohio. EPA is the lead agency for developing and implementing the remedy for the SES Site. Ohio Environmental Protection Agency (OEPA), as the support agency representing the State of Ohio, has reviewed all supporting documentation and provided input to EPA during the FYR process.

This is the third FYR for the SES Superfund Site. The triggering action for this statutory review is the completion date of the previous FYR report, which was July 31, 2008. The FYR is required due to the fact that hazardous substances, pollutants, or contaminants remain at the site above levels that allow for unlimited use and unrestricted exposure. The Site consists of one Operable Unit and is addressed in this FYR.

## II. Progress Since the Last Five-Year Review

This is the third FYR for the SES Site. No issues were noted during the 2008 FYR. Notably, at that time of the 2008 FYR, the requirement of recording an environmental covenant was pending and was to be accomplished by September 30 of that year. Table 1 summarizes the protectiveness determination from the 2008 FYR.

**Table 1: Protectiveness Determinations/Statements from the 2008 FYR**

OU #	Protectiveness Determination	Protectiveness Statement
1	Protective	The remedy at the SES Site is expected to be protective of human health and the environment upon attainment of groundwater cleanup levels, and in the interim, exposure pathways that could result in unacceptable risks are being controlled.
Sitewide	Protective	The remedy at the SES Site is expected to be protective of human health and the environment upon attainment of groundwater cleanup levels, and in the interim, exposure pathways that could result in unacceptable risks are being controlled.

**Remedy Implementation Activities**

Since the 2008 FYR, monitoring of the groundwater has continued and the results are provided in Table 3 and continue to indicate that the remedy is protective of human health and the environment. Additionally, EPA entered into a Consent Decree on March 31, 2008 in which the Site owner agreed to provide access to EPA to conduct future response activities and to accept and impose ICs in the form of land and groundwater use restrictions on the Site property. Figure 1 provides a map of the Site Property Tax Parcel # 6741011. Table 2 provides a summary of planned and implemented ICs.

**Table 2: Summary of Planned and/or Implemented ICs**

Media, engineered controls, and areas that do not support UU/UE based on current conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date (or planned)
Soils	Yes	Yes	17 acres; 875 Ivor Ave., Akron, Ohio Parcel # 6741011	Commercial / Industrial Uses only, prohibition on off-site removal of soils	Affidavit recorded with Summit County Recorder of Deeds June 10, 2008
Groundwater	Yes	Yes	17 acres; 875 Ivor Ave., Akron, Ohio Parcel # 6741011	No groundwater extraction well installation other than for groundwater monitoring purposes	Affidavit recorded with Summit County Recorder of Deeds June 10, 2008

**System Operation / Operation and Maintenance Activities**

There are no continuing treatment systems in operation at the SES Site.

The only Operation and Maintenance (O&M) costs associated with the SES Site remedy are associated with the continued groundwater monitoring and general site maintenance. EPA is funding the O&M

activities with funds set aside in the SES Special Account which were received pursuant to the March 2006 Consent Decree with the Settling Defendants. EPA signed an inter-agency agreement (IA) with the Corps of Engineers to implement the O&M activities. The cost associated with the groundwater monitoring at the SES Site is about \$20,000 per sampling event.



Figure 1: Summit Equipment & Supplies Site Tax Parcel # 6741011 Map

### **III. Five-Year Review Process**

#### **Administrative Components**

The SES Site Five-Year Review was led by David Seely, Remedial Project Manager (RPM) for the SES Site and was assisted by Susan Pastor, EPA Community Involvement Coordinator (CIC), Larry Antonelli, OEPA RPM, and Lisa Humphries, Corps of Engineers Project Manager.

The review, which began on 11/29/2012, consisted of the following components:

- Community Involvement;
- Document Review;
- Data Review;
- Site Inspection; and
- Five-Year Review Report Development and Review.

#### **Community Involvement and Notification**

A notice regarding the review was placed in the local newspaper, Akron Beacon Journal, on December 11, 2012, stating that there was a five-year review and inviting the public to submit any comments to the EPA. The results of the review and the report will be made available at the Site information repository located at the Akron-Summit County Public Library, 60 S. High St., Akron, Ohio 44311.

#### **Document Review**

This five-year review consisted of a review of relevant documents including O&M records and monitoring data. Applicable media type cleanup standards, as listed in the June 1998 Record of Decision (ROD) and the July 2004 Explanation of Significant Differences (ESD) were also reviewed.

The following relevant documents were developed since the 2008 FYR:

*Affidavit pursuant to Ohio Revised Code 5301.252*, executed by Benjamin J. Hirsch and recorded with Summit County Recorder of Deeds, June 10, 2008

*Groundwater Report No. 9 - Summit Equipment and Supply, Inc. Groundwater Monitoring - Akron, Ohio*, prepared for the US Army Corps of Engineers by TMG Services, Inc., 2013.

*Groundwater Report No. 10 - Summit Equipment and Supply, Inc. Groundwater Monitoring - Akron, Ohio*, prepared for the US Army Corps of Engineers by TMG Services, Inc., 2013.

*Groundwater Report No. 11 - Summit Equipment and Supply, Inc. Groundwater Monitoring - Akron, Ohio*, prepared for the US Army Corps of Engineers by TMG Services, Inc., 2012.

*Groundwater Report No. 12 - Summit Equipment and Supply, Inc. Groundwater Monitoring - Akron, Ohio*, prepared for the US Army Corps of Engineers by TMG Services, Inc., 2013.

*Data Validation for Summit Equipment* Prepared by Oneida Total Integrated Enterprises, June 27, 2013.

#### **Data Review**

##### *Groundwater*

Groundwater monitoring has been conducted at the SES Site on multiple occasions. The groundwater monitoring plan has been modified to remove wells from sampling efforts where contaminant

concentrations were below detection, below the MCLs for two consecutive sampling efforts, or were determined to be no longer necessary to monitor for contaminants of concern. Currently only MW-1, MW-5, MW-8A, and MW-9A are being sampled for laboratory analysis. The remaining wells MW-7 and MW-12 are only being monitored for groundwater elevation data. Figure 2 shows the locations of the monitoring wells.

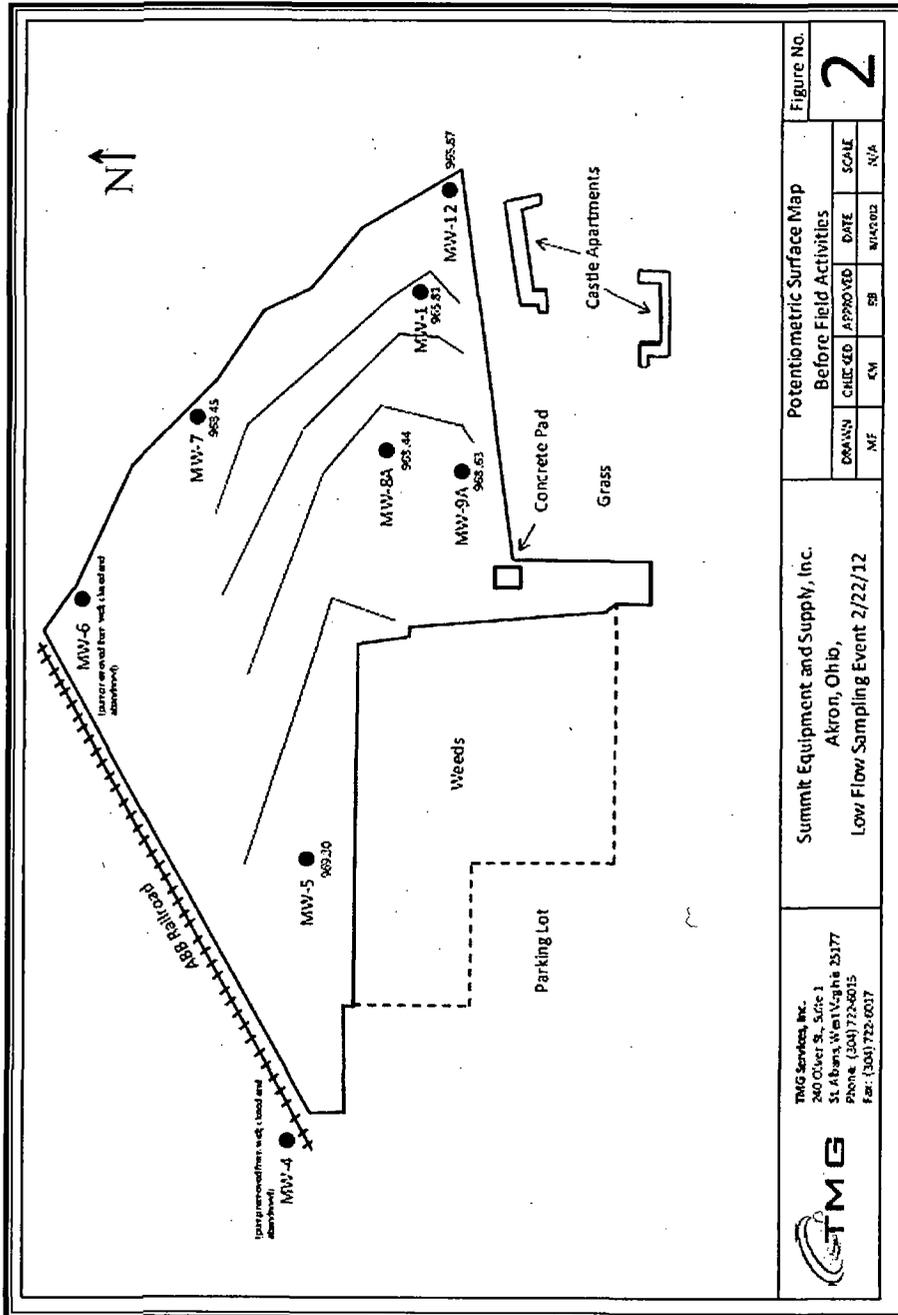


Figure 2: SES Site Monitoring Wells

A Summary of the results from the sampling events since the 2003 Five-Year Review Report is shown below in Table 3.

	10 / 2008	01 / 2010	02 / 2011	02 / 2012	05 / 2013
Trichloroethene (TCE) MCL = 5 ug/L	5.8 ug/L (8) 4.3 ug/L (9)	8 ug/L (8) 4.4 ug/L (9)	5.5 ug/L (8) 4.6 ug/L (9)	3.9 ug/L (8) 1.1 ug/L (9)	3.5 ug/L (8) 1.4 ug/L (9)
Tetrachloroethene (PCE) MCL = 5 ug/L	24 ug/L (8) 88 ug/L (9)	17 ug/L (8) 84 ug/L (9)	19 ug/L (8) 95 ug/L (9)	13 ug/L (8) 52 ug/L (9)	15 ug/L (8) 55 ug/L (9)

**TABLE KEY**

(8) - Number of the monitoring well where the exceedance took place (e.g. MW-8)

ug/L - micrograms per liter (equivalent to parts per billion)

All results for all wells *not shown* in the table are below applicable RGs or MCLs.

Based upon the data above, TCE has been below the Maximum Contaminant Levels (MCLs) of 5ug/L in all monitoring locations beginning with the February 2012 groundwater sampling event. PCE is now the only remaining contaminant being detected in excess of drinking water standards. The overall data trend for PCE is downward and is only slightly above the MCL in MW-8. PCE concentrations in MW-9 have been dropping but are still significantly above the MCL. Overall the data indicates that unacceptable levels of TCE and PCE are not migrating away from the Site.

*Soils*

The excavation of contaminated soil at the SES Site took place between September 14, 1998 and November 8, 2000, with a total of approximately 65,825 tons of contaminated soil, debris and other waste being shipped offsite for disposal. In all, 134 grids were excavated at the Site until the residual PCB concentration was less than 10 mg/kg, as specified by the ROD for the Site. The average residual PCB concentration left at the shallow depth of zero to four feet was 2.42 mg/kg (with a range of 0-10 mg/kg). The average backfill depth for the Site is 3.84 feet. Based upon the average residual PCB concentration, which is approximately one-fourth the allowable level, and the average soil coverage of almost four feet, the remaining risk factor is significantly lower than that required by the ROD. Additionally, a UXO clearance effort was conducted across the entire property. All items found were removed taken off-site for appropriate disposal.

**Site Inspection**

David Seely, Larry Antonelli, and Lisa Humphries took part in a Site inspection on May 9, 2013. During the Site inspection, land uses, monitoring wells and fencing were inspected. The inspection evaluated the overall condition of the property (vegetation and access restrictions) and the condition of the monitoring wells. A summary of the inspection findings is presented below.

Conditions during the inspection were favorable with temperatures in the low 80s and no precipitation. Site vegetation was minimal as the site had recently undergone a routine mowing. The perimeter fencing was intact and in good condition. As shown in the site photos, limited portions the fence had been damaged where it appeared that individuals had cut the fence to gain access. The fence is routinely inspected and repaired as necessary during routine maintenance efforts. Access to the Site was still reasonably restricted due to the perimeter fencing and locked gates. It should be noted that a fence to prevent access is not required by the selected remedy. However, the fence is being maintained to minimize vandalism and to protect the integrity of the monitoring wells. All of the monitoring wells also appeared to be in good condition, with locked and intact caps.

## Interviews

Specific interviews were determined to be unnecessary for this Five-Year Review, since the only active components of the remedy was long-term groundwater monitoring whose results were documented in a series of annual reports. There is also appears no active community concerns with the remedy at this Site.

## IV. Technical Assessment

The following conclusions support the determination that the remedy at the SES Site is protective of human health and the environment.

**Question A: Is the remedy functioning as intended by the decision documents? Yes.**

**Remedial Action Performance:** The excavation and offsite disposal of contaminated soil at the SES Site was successfully completed in November 2000. A total of 65,825 tons of material were removed from the Site at a cost of \$11 million. The groundwater monitoring is still being conducted on an annual basis with the concentrations of Site contaminants consistently stable, decreasing, or disappearing in the groundwater.

**Implementation of Institutional Controls and Other Measures:** Access to the Site is being controlled by chain-link fencing which surrounds the property. Eventually, this fencing may be removed since it will not be required to ensure protectiveness of the remedy. In March 2008, EPA entered into a Consent Decree with the Site owner to impose ICs to ensure land uses are consistent with industrial uses. On June 10, 2008, the site owner recorded in the Summit County recorder of Deeds an affidavit reciting that the site was subject to an environmental easement and declaration of restrictive covenants that run with the land, and granting a right of access for future response activities, a right to enforce use restrictions on groundwater, and a right to enforce restrictions on land use to industrial scenarios. There may be an issue regarding the effectiveness of the institutional control that the Site owner recorded. Accordingly, EPA will perform an IC Study, which will include determining whether a title insurer will ensure clear title for this Site, and engaging the Site owner to replace the recorded instrument with a covenant prepared in accordance with Ohio's Uniform Environmental Covenants Act.

**Early Indicators of Potential Remedy Failure:** No early indicators of potential remedy failure were noted during the review. Costs and monitoring activities have been consistent with expectations.

**Question B: Are the assumptions used at the time of remedy selection still valid? Yes.**

**Changes in Standards and To Be Considereds:** This Five-Year Review identified no changes in the Federal or State standards which were considered in the remedy selection process. Therefore, all relevant assumptions are still valid.

**Changes in Exposure Pathways:** No changes in Site conditions that affect exposure pathways were identified as part of the Five-Year Review. First, there are no current or planned changes in land use, and, access is currently restricted by physical controls. Second, no new contaminants, sources, or routes of exposure were identified as part of this Five-Year Review. Finally, the rate of decrease of contaminant levels in groundwater at the SES Site is adequate and no unacceptable concentrations of groundwater contaminants are migrating off of the SES Site.

**Changes in Toxicity and Other Contaminant Characteristics:** Toxicity and other factors for contaminants of concern have not changed.

**Changes in Risk Assessment Methodologies:** Changes in risk assessment methodologies since the time of the ROD do not call into question the protectiveness of the remedy.

**Question C: Has any other information come to light that could call into question the protectiveness of the remedy? Yes.**

As discussed earlier and below, there may be an issue regarding the effectiveness of the institutional control that the Site owner recorded. Accordingly, EPA will perform an IC Study, which will include determining whether a title insurer will insure clear title for this Site, and engaging the Site owner to replace the recorded instrument with a covenant prepared in accordance with Ohio's Uniform Environmental Covenants Act.

No additional information has been identified that would call into question the protectiveness of the remedy.

### **Technical Assessment Summary**

The excavation of contaminated soil at the SES Site took place between September 14, 1998 and November 8, 2000, with a total of approximately 65,825 tons of contaminated soil, debris and other waste being shipped offsite for disposal. More details with respect to the excavation effort at the SES Site can be found in the *Final Interim Remedial Action Report - Removal and Disposal of Contaminated Soil at the Summit Equipment and Supply, Inc. Site - Akron, Ohio*, dated August 8, 2002. In all, 134 grids were excavated at the Site until the residual PCB concentration was less than 10 mg/kg, as specified by the ROD for the Site. The average residual PCB concentration left at the shallow depth of zero to four feet below ground surface was 2.42 mg/kg (with a range of 0-10 mg/kg). The average backfill depth for the Site is 3.84 feet. Based upon the average residual PCB concentration, which is approximately one-fourth the allowable level, and the average soil coverage of almost four feet, the remaining risk factor is significantly lower than that required by the ROD. The total cost associated with the excavation and offsite disposal of contaminated material was about \$11 million, which exceeded the original estimate in the ROD of \$7 million due to waste treatment and disposal issues.

Groundwater monitoring has been routinely conducted at the SES Site since the ROD. The results of the continued monitoring at the Site show that chromium and TCE levels have fallen below the remedial goals and, with the exception of PCE, all VOCs have fallen below the MCLs on-site. Although PCE has been consistently detected above the MCL in monitoring wells MW-8 and MW-9, it has not been detected above their MCLs in downgradient Site wells. This indicates that the VOC contamination is not migrating off of the SES Site at significant concentrations. The trends in the groundwater data over the last ten years indicate that the groundwater remedy will probably be complete within the timeframe estimated in the ROD.

There may be an issue regarding the effectiveness of the institutional control that the Site owner recorded. Accordingly, EPA will perform an IC Study, which will include determining whether a title insurer will ensure clear title for this Site, and engaging the Site owner to replace the recorded instrument with a covenant prepared in accordance with Ohio's Uniform Environmental Covenants Act.

No additional information has been identified that would call into question the protectiveness of the remedy.

## **V. Issues/Recommendations and Follow-Up Actions**

Apart from the issue of the sufficiency of the institutional control recorded with the Summit County Recorder of Deeds, there were no other issues affecting the protectiveness of the remedy identified during this review. Table 4 summarizes one issue and recommendation from this FYR.

**Table 4: Issues and Recommendations/Follow-up Actions**

OU #	Issue	Recommendations/ Follow-up Actions	Party Responsible	Oversight Agency	Milestone Date	Affects Protectiveness? (Y/N)	
						Current	Future
OU1	Effectiveness of the recorded restriction	IC Study to evaluate recorded instrument, including title commitment; replacement if necessary	EPA, PRP	EPA	7/31/2014	No	Yes

**VI. Protectiveness Statement**

<b>Protectiveness Statement(s)</b>	
<i>Operable Unit:</i> #1	<i>Protectiveness Determination:</i> Short-term Protective
<i>Protectiveness Statement:</i>	
<p>The remedy at the SES Site is protective of human health and the environment in the short term. Overall, the removal of polychlorinated biphenyl (PCB)-contaminated soil with offsite disposal and the clearance of unexploded ordnance over the entire site were accomplished successfully, and continued groundwater monitoring at the Site has shown consistently diminishing concentrations of Contaminants of Concern (COCs). To ensure long-term protectiveness, an institutional control in the form of an affidavit recorded with the Summit County Recorder of Deeds must be evaluated for effectiveness, to ensure exposure pathways that could result in unacceptable risks are being controlled. If the affidavit is determined not to be effective to impose the restrictions recited in the ROD, EPA will engage with the site owner to ensure it is replaced with an effective covenant.</p>	

<b>Sitewide Protectiveness Statement</b>	
<i>Protectiveness Determination:</i> Short-term Protective	
<i>Protectiveness Statement:</i>	
<p>The remedy at the SES Site is protective of human health and the environment in the short term. Overall, the removal of polychlorinated biphenyl (PCB)-contaminated soil with offsite disposal and the clearance of unexploded ordnance over the entire site were accomplished successfully, and continued groundwater monitoring at the Site has shown consistently diminishing concentrations of Contaminants of Concern (COCs). To ensure long-term protectiveness, an institutional control in the form of an</p>	

affidavit recorded with the Summit County Recorder of Deeds must be evaluated for effectiveness, to ensure exposure pathways that could result in unacceptable risks are being controlled. If the affidavit is determined not to be effective to impose the restrictions recited in the ROD, EPA will engage with the site owner to ensure it is replaced with an effective covenant.

## **VII. Next Review**

The next five-year review report for the SES Superfund Site is required five years from the completion date of this review.

## Appendix A: Existing Site Information

### A. Site Chronology

**Table A.1: Site Chronology**

DATE	EVENT
July 1986	OEPA collects soil samples at the SES Site in response to a complaint about improper handling of PCB transformers at the Site. Concentrations of up to 74,000 ppm are detected.
February 1987	EPA conducts a Site investigation to determine if PCBs have migrated off of the SES Site.
March 1987	EPA notifies Site owner and operator, Benjamin Hirsch, of the need to undertake a removal of hazardous substances.
March - September 1987	EPA conducts an emergency removal action to stabilize the SES Site and bring offsite contaminated soils onto the Site in order to mitigate threats to the public health. Extensive sampling of the SES Site also takes place, along with the installation of the first four groundwater monitoring wells.
September 1989	EPA sends a Notice of Liability letter to US Defense Logistics Agency (DLA).
June 1990	EPA sends Notice of Liability letters to eight other potentially responsible parties (PRPs) which sold materials containing hazardous substances to SES.
September 1990	The US Department of Justice, on behalf of EPA, files a complaint under CERCLA in the US District Court to recover costs in connection with the SES Site.
1990	A Site screening inspection is conducted as a step toward Hazard Ranking Scoring for the SES Site and possible listing on the National Priorities List (NPL).
April 1991	EPA conducts a second emergency removal action after observed Site conditions have deteriorated, including holes in the fencing allowing trespassers access to the Site, and the disturbance of covers for staged contaminated soil piles.
July 23, 1991	An Administrative Order on Consent is executed between EPA and the Defense Logistics Agency (DLA) calling for the cleanup of the SES Site under CERCLA.
November 1991	DLA initiates a Phase I Site removal action to characterize and segregate Site scrap materials, and then remove them from the Site. The action is conducted by the United States Army Corps of Engineers (USACE) and IT Corporation on behalf of DLA.
Spring 1993	International Consultants, Inc. (ICI) initiates a Remedial Investigation (RI) of the SES Site on behalf of DLA.
Fall 1995	Additional groundwater investigation is conducted by ICI on behalf of DLA.
1995	972 cubic yards of PCB-contaminated soil are removed from the Castle Apartment complex located adjacent to the SES Site.
Spring 1996	Additional "hot spot" and soil pile sampling are conducted by ICI.

<b>DATE</b>	<b>EVENT</b>
Spring 1997	An interim removal action is conducted at the SES Site to remove the contaminated soil piles that were being staged at the Site.
June 30, 1998	A ROD is signed for the SES Site selecting excavation and offsite disposal for PCB-contaminated soil and monitored natural attenuation of Site groundwater.
August 10, 1998	Remedial Action starts at the SES Site with Pre-Construction Meeting.
September 1998-December 2000	Excavation of over 65,000 tons of PCB-contaminated soil is completed at the SES Site and the first two groundwater sampling events take place.
December 2001	Final Sampling and Analysis Plan (FSP) approved.
February 2002	The first "low-flow" groundwater sampling event is conducted at the SES Site.
April 2003	EPA approves reduction in number of Site wells required for long-term groundwater monitoring based upon five rounds of groundwater sampling. Monitoring will continue indefinitely on a semiannual basis for the remaining Site wells.
August 2003	First Five-Year Review is completed for the SES Site.
December 2003	SAP Addendum No. 1 finalized directing the closure of 5 wells and reducing sampling and analytical parameters for future sampling events.
August 2004	SAP Addendum No. 2 finalized directing closure of two wells, eliminating sampling at two wells, reducing the sampling and analytical parameters for future events, and reducing the groundwater sampling frequency to annual sampling.
July 27, 2004	EPA signed an Explanation of Significant Difference (ESD) modifying the remedy selected in the June 1998 ROD.
March 2006	EPA enters into a Consent Decree cashing out Settling Defendants and providing funds to EPA to implement remaining response actions.
September 2007	EPA enters into an Inter-Agency Agreement with the Corps of Engineers to implement long-term groundwater sampling and analysis and to perform Site maintenance.
March 2008	EPA enters into a Consent Decree with property owner providing access to implement response actions and establishing ICs in the form of environmental easements and restrictive covenants.
June 10, 2008	Site owner records Affidavit purporting to grant access for environmental response activity, and impose prohibitions on extraction well installation, and future uses other than industrial uses
July 31, 2008	Second Five-Year Review is completed for SES Site.

## B. BACKGROUND

### 1) Physical Characteristics/Land and Resource Use

The SES Site (USEPA Site #OHDO55523401) is located at 875 Ivor Avenue, approximately one half mile south of 1-76 and the 1-277/State Route 224 interchange in the southwest portion of Akron, Ohio (See Figure A.1). The Site is bordered by the Akron - Barberton Beltway Railroad tracks to the north; a low-lying woodland and marsh to the east; a residential area on Ivor Avenue to the south; and a light industrial area to the west. The marsh to the east of the salvage yard is immediately adjacent to Lake Nesmith, a local recreation area. The Site consists of about seven and a half acres of property of a 17 acre parcel and it was used by its owner, Benjamin Hirsch, as a salvage yard and scrap metal facility from the 1950s to the 1980s.

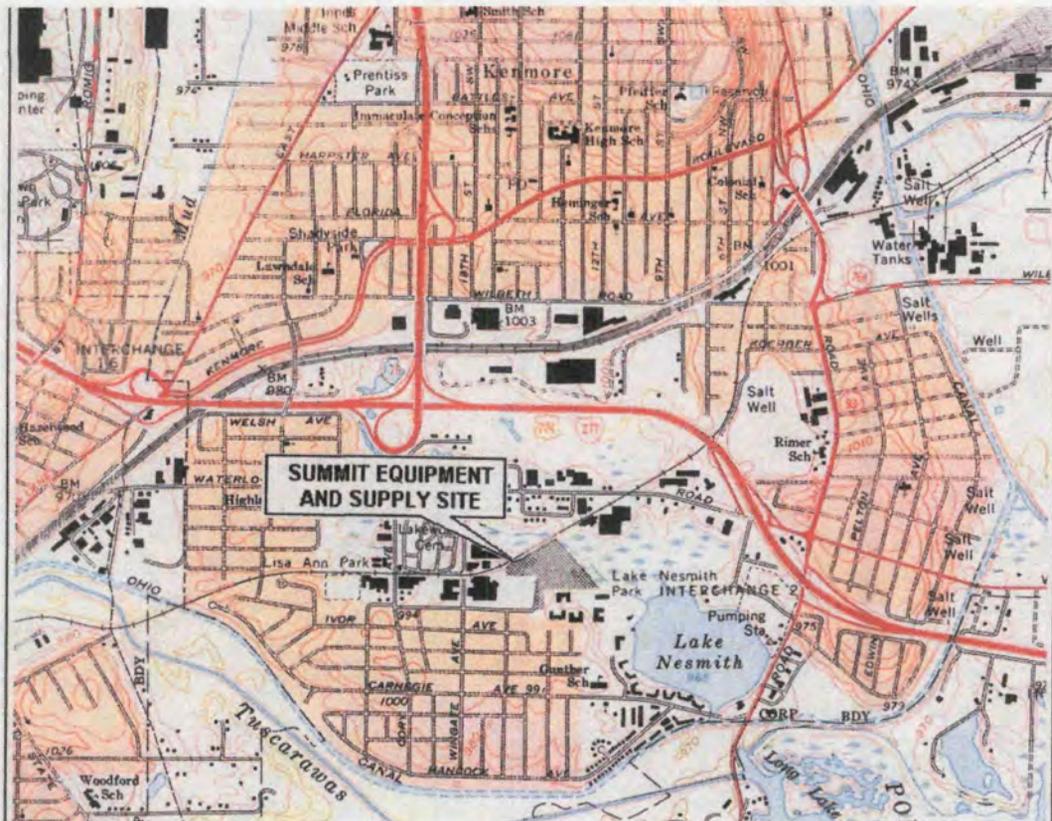


Figure A.1. SES Site General Location Map – Akron, Ohio

### 2) History of Contamination

Among the salvage materials brought to the Site from the late 1960s until 1979 were large numbers of transformers containing PCB oils. Operations at SES included the storage of large quantities of materials, including transformers and batteries, intended for scrap and reclamation. In the early 1970s, batteries were recycled and metals from electrical equipment were smelted on-site in a small furnace, with oils reclaimed from the transformers reportedly providing the fuel for the furnace. These activities resulted in widespread PCB contamination of soils at the Site and off-site migration of PCBs to adjacent areas. These Site operations also resulted in the contamination of the groundwater aquifer beneath the Site with volatile organic compounds (VOCs) and chromium, including hexavalent chromium. Groundwater contamination was found to be somewhat isolated and limited to the site property.

### 3) Initial Response

The following is a summary of the regulatory and enforcement history associated with SES:

#### *Ohio Environmental Protection Agency (OEPA) Investigations (1986)*

The OEPA collected soil samples from the SES Site in July 1986, in response to a complaint made to the Akron Police Department regarding improper handling of PCB transformers at the Site. These samples indicated PCB contamination in the soil ranging from 180 parts per million (ppm) to 74,000 ppm. As a result, OEPA notified the property owner to clean up the Site and informed the EPA of the high level of PCB contamination detected at the Site.

#### *EPA Investigation (1987)*

Beginning in February 1987, a Site investigation was conducted by the EPA to determine if PCB contamination had migrated beyond the SES fence line. Soil samples were collected in the parking area to the south of the salvage yard, in the drainage ditch along the northern boundary of the salvage yard, and in areas such as gullies, ditches, and storm water drains where the presence of PCBs would indicate migration from the salvage yard. Samples from the parking area to the south of the Site contained PCB contamination up to 16 ppm, while three samples from the northern boundary ditch contained PCB contamination ranging from 550 ppm to 8,700 ppm. Seventeen samples collected from the Castle Apartment area contained PCBs with concentrations ranging from 1 ppm to 75 ppm. Sampling within the salvage yard consisted of surface samples to determine the lateral extent of contamination, test pits and soil borings to determine the vertical extent of contamination, and groundwater samples to determine the impact of Site contamination on shallow groundwater. Scrap and electrical equipment overlying the majority of the Site limited sampling points to those areas where surface soils were exposed. Samples were collected in areas where transformers or large electrical devices with capacitors were observed, in areas of visible soil staining, or where there was evidence of tampering with transformers. Samples were also collected in channeled and ponded runoff water areas. A summary of sample locations and results can be found in the Scoping Plan (ICI, 1992) and in the Extent of Contamination Report (TAT, 1988). Of the 130 samples analyzed, 54 contained PCB concentrations greater than 50 ppm, with 44 of these greater than 100 ppm and 18 greater than 500 ppm. The highest concentration detected in the salvage yard was 78,000 ppm.

#### *EPA Emergency Removal Action (March - September 1987)*

From March to September 1987, EPA conducted an emergency removal action designed to stabilize the SES Site and mitigate threats to the public health, welfare and environment caused by PCB migration offsite. Approximately 300 capacitors and 1,300 transformer carcasses were removed from the Site. Four hundred sixty cubic yards of soil were excavated from offsite areas and stockpiled within the SES Site boundaries. Four groundwater monitoring wells were also installed in May 1987 during the emergency response action at the SES Site.

#### *Site Screening Inspection (1990)*

A Site screening inspection was conducted in 1990 as an intermediate step to determining a Hazard Ranking Score for the SES Site. This was completed for the possible listing of the SES Site on the NPL. Five surface soil samples (including one background sample) and three groundwater samples were collected and analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides/PCBs, metals, and cyanide. Ten other surface soil samples were analyzed only for pesticides/PCBs (Ecology and Environment, 1991). Five samples had PCB concentrations ranging from 50 ppm to 2,300 ppm. One background soil sample was collected from Lisa Ann Park, located approximately one-half mile west of the salvage yard at the end of Ivor Avenue. No PCBs were detected in this background sample. For

sampling locations and analytical results refer to the Site Screening Inspection Report (Ecology and Environment, 1991).

#### *Second EPA Emergency Removal Action (April 1991)*

During a Site visit in December 1990, EPA representatives observed deterioration in Site conditions. Trespassers had gained access to the Site, and soil piles that had been placed on-site and covered during the 1987 emergency removal action were uncovered. In April 1991, EPA was advised by OEPA that a fire had occurred on the SES Site. Investigators determined that three separate fires had occurred and that the materials burned included rubber tires, hoses, and wire insulation. However, the additional burning of PCB-containing oils was not ruled out. Site stabilization was initiated by upgrading Site security and re-drumming PCB-contaminated soils that were being staged in damaged drums. Further actions planned for this response could not be executed because military ordnance was discovered on the Site during the removal action.

#### *Removal Action - November 1991*

In September 1989 EPA sent a Notice of Liability letter to the Defense Logistics Agency (DLA), informing the agency that EPA had determined that it was a potentially responsible party (PRP) at the SES Site. EPA and DLA entered into an Administrative Order by Consent (AOC), which was executed on July 23, 1991, requiring DLA to continue future Site investigations and remedial action. In compliance with the requirements of the AOC, a Phase I Site action was initiated by DLA to characterize and segregate clean and contaminated scrap on the SES Site. This removal action was conducted by the United States Army Corps of Engineers (USACE) and International Technology (IT) Corporation. The intent of this action was to secure the Site against vandalism and casual access by the public; to construct staging areas for clean and contaminated scrap; and to segregate, inventory, and stage PCB items, cylinders, drums, scrap, and ordnance. The contaminated scrap was decontaminated and sold to a smelter prior to the commencement of Site characterization activities. Action taken at the Site included the following:

- Decontamination of approximately 4,000 cubic yards of scrap material;
- Disposal of 2,000 tons of contaminated scrap, motors, and stone;
- Disposal of over 160 drums containing various items including furnace residue, metal grinding dust, mercury contaminated soils, PCB contaminated oil, nonhazardous waste oil, paint residue, and miscellaneous batteries;
- Disposal of over 432 cubic yards of tires and 219 tons of building demolition debris;
- Disposal of two large transformer carcasses totaling 2,500 pounds;
- Disposal of three mercury rectifiers and eight compressed air cylinders;
- Demolition of the former concrete block office and scale building; and
- Removal of the stone staging pad and liner system and restoration of the neighboring Hamlin Steel property to near original condition.

Ordnance, including practice ammunition and smoke grenades, was also physically removed from the Site and sent to the US Army's Ravenna Army Ammunition Plant in Ravenna, Ohio, for destruction. Prior to this removal action by IT Corporation, the salvage yard was covered over most of its surface with piles of scrap and debris as high as 30 feet. The piles were not sorted but were aggregate heaps of sheet metal, structural steel, wire, tires, electrical equipment, batteries and other miscellaneous debris.

#### *International Consultants, Inc. (ICI) Remedial Investigation (1993)*

In the spring of 1993, ICI conducted a Remedial Investigation (RI) of the SES Site. This program was undertaken on behalf of DLA at the direction of the USACE, Huntsville Division. ICI conducted sampling in all areas of concern, including the salvage yard, northern fence line, the western fence line, the eastern fence line, the support zone, the Castle Apartments complex, the

Lake Nesmith area, and the marsh, including the Summit North Ditch. In addition to collecting soil samples, five new shallow monitoring wells were installed and sampled.

*ICI Remedial Investigation (1995)*

As a result of data gaps identified for Site hydrogeology and groundwater contamination, an additional groundwater investigation was conducted in the fall of 1995. During this investigation one deep monitoring well, three shallow monitoring wells, and ten hydro punches were installed. In addition to collecting groundwater samples from the Site, two samples were collected from temporary piezometers installed downgradient of the Site. Samples were analyzed for VOCs, heavy metals, hexavalent chromium, and water quality parameters. The results of this investigation are presented in the Groundwater Assessment Report (ICI 1996).

*Castle Apartments Removal Action (1995)*

Several Site investigations, consisting of soil sampling, were conducted in the Castle Apartment area adjacent to the SES Site. The presence of soil contaminated with elevated concentrations of PCBs led to a removal action of contaminated soils in this area above 1 ppm in 1995. Approximately 972 cubic yards of soil were excavated and staged on the SES Site. Confirmatory sampling after the soil removal revealed no further contamination in this area. The Castle Apartment area was backfilled, graded, seeded, considered clean, and no further action was required.

*Additional Sampling (1996)*

USACE, Huntsville Division, contracted ICI to perform additional fieldwork during the spring of 1996. This work involved collecting soil samples from the six soil piles excavated from the Castle Apartment complex and staged on-site, two hot spot zones, and groundwater samples from four monitoring wells. Soil samples were analyzed for total metals and Toxicity Characteristics Leaching Procedure (TCLP) metals.

*Interim Remedial Action (1997)*

Late in the spring of 1997, Environmental Chemical Corporation (ECC) was contracted by the USACE, Nashville District, to remove and dispose of the six contaminated soil stockpiles from the SES Site.

**4) Basis for Taking Remedial Action**

The human health risk assessment that was conducted as part of the remedial investigation at the SES Site indicated that the potential cancer risk to a future Site worker exposed to soil and groundwater would be  $7 \times 10^{-4}$  (seven in ten thousand). According to the NCP, carcinogenic risks from exposures at CERCLA sites are considered "acceptable" if they are within a  $1 \times 10^{-4}$  (one in ten thousand) to  $1 \times 10^{-6}$  (one in a million) risk range. Since the calculated potential risk at the SES Site was greater than the acceptable risk in the NCP, it was decided that remedial action was appropriate to insure the protection of human health. Soil COCs included PCBs and metals while groundwater COCs included chromium and VOCs.

**C. REMEDIAL ACTION**

**1) Remedy Selection**

The 1995 Castle Apartments Removal Action addressed the off-site PCB soil contamination. The Record of Decision (ROD) for the SES Site was signed on June 30, 1998 focused on the soil and

groundwater contamination that remained on-site and is the only ROD for the Site. The remedial objectives were to:

Minimize the potential for human exposure via incidental ingestion, dermal contact, and inhalation of soil contaminated with PCBs, copper, and mercury at concentrations that would result in an excess lifetime cancer risk greater than  $10^{-4}$  or a hazard index greater than 1.0 based on the trespasser, industrial worker, and construction worker scenarios.

Minimize the potential for PCBs, copper, and mercury to migrate from soil at the Site to the groundwater.

Minimize the potential for humans or wildlife to be injured from detonation of unexploded ordnance (UXO).

Prevent human exposure to contaminated groundwater via ingestion and dermal contact that would result in an excess lifetime cancer risk greater than  $10^{-4}$  or a hazard index greater than 1.0 based on the trespasser, industrial worker and construction worker scenarios

The remedial action for soil at the SES Site was

Excavation and off-site disposal of soils contaminated with PCBs, copper, and mercury until established cleanup objectives were met; and

Removal of UXO from the Site until natural soils are encountered.

The excavation and off-site disposal of contaminated soil was to continue until the remediation goals (RGs) identified in Table A.2 were attained. These RGs were developed using regulatory cleanup levels and considerations based on human health risks and are based upon industrial zoning and future use.

**Table A.2: Remediation Goals for Soil**

PCBs (Aroclor-1260)	10 mg/kg
Copper	1,700 mg/kg
Mercury	20 mg/kg

The remedial action for groundwater at the SES Site is

Monitored natural attenuation of Site groundwater to address hexavalent chromium and volatile organic compound (VOC) contamination.

The only remedial goal identified for SES groundwater is 500 micrograms per liter (ug/L) for hexavalent chromium [chromium (VI)]. VOCs are being monitored to insure that unacceptable concentrations are not allowed to reach Lake Nesmith, which is located downgradient of the Site. Chromium (VI) is not expected to migrate from the SES Site to downgradient areas due to the natural chemical processes which are taking place in Site groundwater. Iron, which exists naturally in the groundwater beneath the SES Site, is reacting with the chromium (VI) to form the more protective and less mobile trivalent chromium [chromium (III)]. Monitoring of the chromium and VOC concentrations was originally expected to continue for 30 years. In addition, ICs, in the form of an environmental covenant, under Ohio's version of the Uniform Environmental Covenants Act (UECA), were required on the SES property to prohibit the installation of groundwater wells at the Site. This will prevent any exposure to contamination in the

groundwater at the SES Site at levels which may pose unacceptable risks. The ROD also allowed for individual Site monitoring wells to be removed from the monitoring program at the SES Site, upon approval by EPA, if they showed concentrations below drinking water standards or Maximum Contaminant Levels (MCLs) for the contaminants of concern for two consecutive sampling events. Finally, the ROD states that if future monitoring results indicate that adequate natural attenuation is not occurring, EPA may require a more active treatment method for groundwater at the SES Site.

On July 27, 2004, an Explanation of Significant Differences (ESD) was signed modifying the remedy selected in the 1998 ROD. The June 1998 ROD for the SES Site identified the possibility that ingestion and dermal exposure to groundwater contaminants by construction workers could result in an unacceptable risk. This was based upon the levels of chromium contamination observed in the groundwater up until the time of the ROD. This ESD, based on subsequent monitoring, modified the remedial requirements for ICs by removing a restriction to protect on-site workers from exposure to Site contaminants during excavation or construction activities on the SES property.

Concentrations of chromium (VI) measured in groundwater at the time of ROD signature were in the thousands of micrograms per liter (ug/L), with a maximum detection of 4,100 ug/L. The remedial goal established in the ROD for chromium (VI) was 500 ug/L. The sample results were based upon a high-flow sampling method which caused turbidity (high concentrations of solid particles) in the samples and less reliable measurements. Groundwater sampling results obtained using more reliable low-flow sampling techniques since the ROD was signed have failed to detect elevated levels of chromium (VI) in the groundwater aquifer below the SES Site. Because of the rapid change in concentrations in such a short time, it is unlikely that unacceptable levels of chromium contamination ever really existed. It is more likely that the detections of chromium in the past were due to the collection of turbid samples which were not truly representative of aquifer conditions.

Based upon the recent groundwater data collected for VOCs at the SES Site and residual PCB soil concentrations, which meet the remediation goals for soil identified in the ROD, the ESD determined that the following restrictions on the future use of the property remain necessary.

- The installation of groundwater extraction wells shall be prohibited unless they are to be used for groundwater monitoring purposes;
- Future use of the Site should be restricted to industrial uses. Residential or agricultural uses such as daycare, school facilities, single-family homes, condominiums, apartments, or farming shall be prohibited;
- Soil at the SES Site shall not be moved to any off-site locations; and
- Access must be granted to EPA or its designated representatives, for Site monitoring purposes.

Contamination is no longer present in off-site soils above levels that require restrictions on unlimited use and unrestricted exposures.

## **2). Remedy Implementation**

The remedial design for the Site was started in June 1998, and Work Plans were completed in September 1998. The plans called for excavation to begin at the Site in September 1998 and for the first groundwater monitoring event to take place at the same time. An on-site meeting was held on August 10, 1998, with all of the concerned parties, including EPA and OEPA, to discuss final logistics and give approval for clearing, grubbing, and UXO clearance to begin at the Site (this action triggered the initial Five-Year Review).

Excavation of contaminated soil at the SES Site took place between September 14, 1998, and November 8, 2000. A total of approximately 65,825 tons of contaminated soil, debris and other waste were shipped off-site for disposal. More details with respect to the excavation effort at the SES Site

can be found in the *Final Interim Remedial Action Report - Removal and Disposal of Contaminated Soil at the Summit Equipment and Supply, Inc. Site - Akron, Ohio*, dated August 8, 2002. In all, 134 grids were excavated at the Site until the residual PCB concentration was less than 10 mg/kg, as specified by the ROD for the Site. The average residual PCB concentration left at the shallow depth of zero to four feet below ground surface was 2.42 mg/kg (with a range of 0-10 mg/kg). The average backfill depth for the Site is 3.84 feet. Based upon the average residual PCB concentration, which is approximately one-fourth the allowable level, and the average soil coverage of almost four feet, the remaining risk level is significantly lower than that required by the ROD. The total cost associated with the excavation and off-site disposal of contaminated material was about \$11 million, which exceeded the original estimate in the ROD of \$7 million due to waste treatment and disposal issues.

In addition to the soil excavation, groundwater monitoring has been conducted at the SES Site on multiple occasions. A summary of the results from these events is discussed in the Groundwater Report No. 12, February 2013.

### **3). Institutional Controls**

ICs are required to ensure the protectiveness of the remedy. ICs are those non-engineered instruments, such as administrative and/or legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of a remedy by limiting land or resource use. The ROD as modified by the ESD requires the following restrictions:

- The installation of groundwater extraction wells shall be prohibited unless they are to be used for groundwater monitoring purposes.
- Future use of the Site should be restricted to industrial uses. Residential or agricultural uses such as daycare, school facilities, single-family homes, condominiums, apartments, or farming shall be prohibited.
- Soil at the SES Site shall not be moved to any off-site locations.
- Access must be granted to EPA or its designated representatives, for Site monitoring purposes.

The SES Site property shown on Figure A.1 does not support unlimited use and unrestricted exposure (UU/UE) and the required ICs are summarized in Table 3. The SES Site property is defined as approximately 17 acres located at 875 Ivor Avenue in Akron, Ohio. The SES Site Property is identified in Summit County Auditor's Division under parcel number 6741011 for tax assessment purposes.

On March 31, 2008, EPA entered into a Consent Decree with the owner of the Site, Benjamin J. Hirsch, in which the owner agreed to provide access to the Site for future response actions and to accept and impose ICs in the form of groundwater and land use restrictions. These restrictions were specified as components of an environmental covenant for the SES Site property, under the Ohio UECA, that would run with the land. U.S. EPA also obtained a title commitment, to ensure that prior-in-time interests in the Site would not adversely impact the efficacy of the environmental covenant. The covenant imposing the specified restrictions was to be recorded in Summit County Recorder of Deeds, Akron, Ohio by September 30, 2008.

**Table A.3: Institutional Controls Summary Table**

<b>Media, Engineered Controls, &amp; Areas that Do Not Support UU/UE Based on Current Conditions.</b>	<b>IC Objective</b>	<b>Title of Institutional Control Instrument Implemented</b>
<b>SES Site Property<sup>1</sup> - Soils -</b> Remediation goals are specified in Table A.2 and were developed to be protective for industrial use exposures. Site soils in excess of the remediation goals were removed.	Restrict future Site uses to commercial and industrial scenarios (thereby prohibiting residential use); prohibit any other uses that interfere or adversely affect the remedial action's integrity or protectiveness	Restrictive Covenant under UECA to be recorded in Summit County Recorder of Deeds, Akron, Ohio by September 30, 2008
<b>SES Site Property<sup>1</sup> Groundwater</b>	Prohibit groundwater use until cleanup standards are achieved	Same as above; language in covenant to prohibit groundwater use.

<sup>1</sup> SES Site property is defined as approximately 17 acres located at 875 Ivor Avenue in Akron, Ohio and is identified in Summit County Auditor's Division under parcel number 6741011 for tax assessment purposes.

The Site Owner agreed to the following clauses in the Consent Decree:

- (a) Owner and Holder agree for himself and his successors in title not to permit the Site to be used in any manner that would interfere with or adversely affect the integrity or protectiveness of the remedial action which has been implemented under the ROD or which will be implemented pursuant to the Consent Decree unless the written consent of the EPA to such use is first obtained.
- (b) Owner and Holder acknowledge and agree that the Site has been remediated only for Commercial/Industrial Uses. Owner and Holder covenants, for himself and his successors and assigns, that future Site uses shall be restricted to Commercial/Industrial Uses.
- (c) Owner and Holder covenant for himself and his successors and assigns that there shall be no consumptive use of Site groundwater.

**4). System Operations/O&M**

There are no continuing treatment systems in operation at the SES Site.

The only Operation and Maintenance (O&M) costs associated with the SES Site remedy are associated with the continued groundwater monitoring and general site maintenance. EPA is funding the O&M activities with funds set aside in the SES Special Account which were received pursuant to the March 2006 Consent Decree with the Settling Defendants. EPA signed an IAG with the Corps of Engineers to implement the O&M activities. The cost associated with the groundwater monitoring site maintenance at the SES Site is about \$20,000 annually.