INTERIM REMEDIAL MEASURE WORK PLAN

Dalewood I Shopping Plaza
357 North Central Avenue
Hartsdale, NY

VCP Site V00457-3

May 2003

Prepared for:

Heritage SPE, LLC
535 Boylston Street
Boston, MA 02116

Prepared by:

Kroll Inc.
900 Third Avenue
New York, NY 10022

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1.0 Introduction and Purpose

Heritage SPE, LLC (Heritage) and the New York State Department of Environmental Conservation (NYSDEC) executed a Voluntary Cleanup Program (VCP) agreement for the subject Site. The VCP application was submitted based on information obtained in previous investigations completed at the Site. A NYSDEC approved Investigation Work Plan was initiated in February 2003 and from this effort Kroll identified the presence of perchloroethylene (PCE) impacted soils beneath the floor of the former drycleaning facility. The intent of this Interim Remedial Measure (IRM) Work Plan is to minimize potential impacts to the tenant space and to improve groundwater quality by:

- Removing approximately 80 cubic yards of contaminated soil; and
- Installing a soil vapor extraction system, and the piping for an in situ groundwater treatment system beneath the building floor.

A brief summary of the results of this investigation is provided in Section 2.0 of this Interim Remedial Measure (IRM) work plan. The intent of this IRM Work Plan is to identify the specific tasks that will be completed in order to mitigate a Site condition.

2.0 Site Background and Description

The subject Site consists of a retail shopping center located on the west side of North Central Avenue (Route 100) in the Village of Hartsdale, Greenburgh Township, Westchester County, NY. The Site property consists of approximately 7 acres of land, and is improved with two structures consisting of 67,500 square feet and 1,500 square feet. The Site area was reportedly occupied by residential structures prior to 1966. The Dalewood I Site building was constructed circa 1966. The surrounding properties are heavily developed with a mixed use of commercial and residential buildings.

The main Site building is occupied by the following businesses, based on mailing address:

355 N. Central Avenue	Coconuts Music
357 N. Central Avenue	Huntington Learning Center
359 N. Central Avenue	Spectrum (Card and Novelty Store)
361 N. Central Avenue	Friendly's Restaurant
365 N. Central Avenue	Sally Beauty Supply (Retail Store)
371 N. Central Avenue	Path Mark (Grocery Store)

357 N. Central Avenue was previously occupied by a dry cleaning facility from 1966 until 1997, and is the project area of concern.

A separate building is located in the southeast area of the property with an address of 353 N. Central Avenue and is occupied by Proper Service Center (an ExxonMobil vehicle service center and retail gasoline sales facility).

The shopping center construction generally consists of slab on grade with standard subsurface footing walls located below the outside structural walls and certain internal structural walls. Internal concrete block, structural walls are known to exist between Units 355 and 357, and Units 365 and 371. Basements are not present in any areas of the Site building. Individual subsurface utilities are generally limited to sewer and water connections, which are predominantly located in the rear section (west) of each unit. According to town records, the property has been connected to municipal water and sewer systems since the Site was developed in 1966.

2.1 Site Hydrogeology

The ground surface topography at the Site is generally level and according to the USGS Topographic Map of this area, the Site is located at an elevation of approximately 205 feet above mean sea level. A large parking area is located in the front of the shopping center, and a driveway and service entrance is located in the rear of the center. A steep embankment is located immediately behind (west) the Plaza which rises approximately 110 feet in less than 500 linear feet. The closest surface water body to the Site is the Bronx River that is located ½ mile to the east and 3/4 mile to the northeast.

Soil encountered in the borings generally consists of a medium size brown sand. Groundwater is typically present throughout the Site between 3.5 and 5 feet below grade. Based on water table elevation data, groundwater within the Site area has been determined to flow toward the east/northeast. A drainage culvert is present in the front (eastern) parking area of the Site that runs in a north-south orientation. The estimated size of the drainage culvert, based on utility locating data, is four feet (4') in diameter. The culvert extends into the groundwater table and appears to act as a divide in this area of the Site.

2.2 Previous Investigations

Phase I Environmental Site Assessments have been completed for the subject property by GZA GeoEnvironmental, Inc. in February 1997 and EMG in September 2000. The GZA and EMG Phase I identified a former building tenant that completed dry cleaning on-site. The former dry cleaning facility was specifically located at 357 North Central Avenue, which is currently occupied by the Huntington Learning Center.

An Initial Sub-Surface Assessment was completed by Kroll, Inc. (Kroll) in March 2000. The results of this assessment identified tetrachloroethylene, trichloroethylene, vinyl chloride, trans and cis 1,2-dichloroethylene, and benzene in groundwater samples.

The NYSDEC and Westchester County Department of Health (WCDOH) were notified of these results in the form of a written report of the assessment findings dated July 25, 2000.

Subsequently, Kroll completed a Phase II Sub-Surface Assessment of the Site during the period from August to November 2000. A Comprehensive Site Assessment and Remedial Investigation was completed by Kroll during the period from March to June 2001, and was provided to the NYSDEC and NYSDOH in June 2001.

An Investigation Work Plan was submitted to the NYSDEC in October 2002 for additional subsurface investigation of soil and groundwater as well as indoor air. The Investigation Work Plan was approved by the NYSDEC in January 2003 and work was initiated in February 2003. Preliminary results of the Investigation are provided in the next section of this Work Plan.

2.3 Preliminary Investigation Results

This IRM Work Plan has been developed as a result of various investigation studies that have been conducted during March and April 2003 following collection of indoor air samples in February 2003. Indoor air samples collected on February 18, 2003 within unit number 357 (former dry cleaner) ranged from 0.011 ppmv to 0.473 ppmv of tetrachloroethylene (PCE). These results were compared to the New York State Department of Health (NYSDOH) and Westchester County Department of Health guideline for PCE of 0.015 ppmv.

An immediate response to these findings consisted of repair of the tenant space heating system and proper adjustment of the fresh air intake. Subsequently, Kroll field staff collected additional air samples on March 5, 2003 that ranged from 0.0107 to 0.0778 ppmv of PCE.

A Sub-Slab Depressurization System (SSDS) / Soil Vapor Extraction System (SVE) was installed and commenced operation on March 9, 2003 to mitigate volatile organic vapors migrating into the tenant space. Soil samples were collected from SVE extraction point locations during the SVE installation process for laboratory analysis. A summary of the soil samples results is provided in Table 1 (see Appendix A). One additional indoor air sample was collected from within unit 357 on March 11, 2003 and was reported with 0.0363 ppmv of PCE.

On March 13, 2003 several soil gas survey points were installed through the tenant space floor and additional SVE extraction points were installed. A summary of the various soil gas readings from below the concrete floor and SVE system readings are provided on Table 2. Soil gas samples and SVE system readings were collected utilizing a handheld photoionization detector (PID). The SVE system readings were collected on March 11th and April 16th, and ranged from 194 ppmv to 2,400 ppmv; and 0.7 to 56.4 ppmv, respectively. The soil gas readings ranged from 11 to 200 ppmv on March 13th and ranged from "Non-Detected" to 0.2 ppmv on April 16, 2003. However, the April 16th results may have been influenced by the fact that the soil gas readings were collected with the SVE system operating.

On April 10, 2003 three additional soil borings (IB-52, IB-53, IB-54) were installed through the tenant floor in an effort to further quantify the extent of impacted soil beneath the concrete floor. The laboratory results of the three soil samples ranged from 5,490 to 30,200 ug/kg (ppb), and are summarized in Table 1.

Based on the results of all-indoor area sampling and response actions completed, the need for additional reduction of the contaminant mass was determined to be the necessary remedial approach. Therefore, the purpose of this IRM is to describe the method for removal by excavation of the currently defined contaminated soil mass located below the former drycleaning facility floor.

3.0 Objectives and Scope

This IRM Work Plan has been prepared pursuant to:

NYSDEC, Division of Environmental Remediation, DRAFT Voluntary Cleanup Program Guide dated May 2002.

The project organization will consist of the following individuals:

Sr. Project Manager	Neal Drawas
Project Manager:	Robert McCarthy
Quality Assurance Officer:	Richard Vocke

The primary objective of this work plan is to remedy a condition whereby a volume of contaminated soil (approximately 80 cubic yards) located beneath the former drycleaning facility floor has resulted in the presence of measurable concentrations of perchloroethylene in the tenant space air.

A summary of the scope of work, health and safety procedures, sampling, and analysis to be completed is provided as follows:

3.1 Sub-floor Soil Abatement

The concrete floor within the identified area of 357 N. Central Avenue (see Figure 1) will be removed. Excavation will be completed down to the water table (approximately 4 to 5 feet below grade) where structural conditions allow. Potential undermining of the interior wall footing or remaining concrete slab will be monitored and excavation will be discontinued if unsafe conditions occur.

Excavation will completed utilizing a diesel powered Bobcat type machine inside the building. The excavated soil will be immediately loaded into lined roll off type dumpsters. The dumpsters will be covered following loading and when active Site work is not occurring. All impacted soil will be transported from the site for disposal. The excavation will be backfilled and compacted with clean soil. The existing sub-floor soil vapor extraction system will be expanded, and piping for an in situ groundwater treatment system will be installed for future use.

3.2 Health and Safety Procedures

Health and safety of the Site workers and the building users will be addressed utilizing the following measures:

- A Site Health and Safety Plan has been developed (see Appendix B) that defines the work zone conditions where additional personal protective equipment may be needed.
- The front and rear doors will remain open during floor removal, excavation, and compaction activities.
- A high volume fan will be placed in the front door, blowing into the building, to introduce fresh air into the work zone and remove any potential vapors or emissions through the rear door of the building.
- Work will be completed during nighttime hours, 10 p.m. through 7 a.m., when the adjacent building units are not occupied.
- Open excavations that may be emitting vapors will be covered with plastic sheeting when excavation or backfilling is not in progress.
- Work zone air will be monitored utilizing a handheld photoionization detector (PID) and multi gas detector (O2, LEL, CO, H2S).
- A Community Air Monitoring Plan will be implemented.

3.3 Community Air Monitoring Plan

A Community Air Monitoring Plan (CAMP) is provided in Section 6.0 of this Work Plan. The CAMP is prepared following the New York State Department of Health "Generic Community Air Monitoring Plan" (June 20, 2000).

3.4 Post Excavation Soil Screening and Sampling

The extent of excavation will be determined based on field screening readings collected from the bottom and sides of the excavation area. Undisturbed soil samples will be collected and field screened utilizing a photoionization detector and following the procedure described in Section 4.0 of this Work Plan.

Post excavation soil samples will be collected from the final excavation sides and bottom for laboratory analysis. Samples will be collected at approximately ten-foot (10') intervals and additional samples will be collected in locations where field conditions warrant.

Soil samples will be handled following the procedures described in Section 5.0 of this IRM Work Plan. Soil samples from the excavation area will be analyzed for halogenated volatile organic compounds (HVOCs) by EPA Method 8021.

3.5 Sub-Slab Depressurization System and Soil Vapor Extraction System Modification

Based on the shallow depth to groundwater and identified contamination of the groundwater, there is the potential for volatile organic constituent vapors under the building. A Sub-Slab Depressurization System (SSDS) and vapor extraction

(SVE) system was installed in this area of the building in March 2003. During the soil screening and sampling process, areas of elevated VOC concentrations will be identified and modifications to the SSDS/SVE system will be implemented as warranted. The modifications will include the installation of additional screened pipe sections within the identified areas.

The screened pipe sections are expected to be installed in a horizontal orientation, just above the saturated soil zone. However, actual Site conditions will be determined the location, depth, length, and orientation of the SSDS/SVE components. The installed screen sections will be connected to the SSDS/SVE system via the existing trunk lines.

3.6 Excavation Backfill

Clean soil obtained from off site will be utilized as backfill material. Backfilling of the excavation is expected to occur in stages, while additional excavation is underway. Following collection of soil samples and installation of necessary SSDS/SVE components and in situ groundwater treatment piping, the backfilling process will be initiated. Backfill material will be placed and compacted in lifts, as needed.

A vapor barrier (polyethylene sheeting) will be installed at an appropriate depth, within the backfill material, above the SSDS/SVE and in situ treatment system components. The vapor barrier will be continuous throughout the excavation area and along the interior building wall.

The backfill material will be brought up to match existing grade in order to install a new concrete floor for the building. The new concrete floor will be sealed along the building wall with an epoxy material in order to prevent potential vapor migration into the tenant space.

3.7 Soil Disposal

The contaminated soil will be loaded into lined and covered dumpsters located on-site. Preliminary total VOC results from grab samples that have been previously collected indicate that the material is considered a hazardous waste and will be transported and disposed as such.

Waste disposal manifests will be retained prior to off-site shipment, and signed manifests will be obtained from the disposal facility certifying receipt and proper management of all soil shipments.

4.0 PID Field Screening Method

Field screening of soils for the presence of volatile organic compounds will be performed with a portable Photoionization Detector (PID) (calibrated to yield "total organic vapors" in ppmv (v/v) as isobutylene, 10.6 eV lamp). Operation, maintenance, and calibration are performed in accordance with the manufacturer's specifications. For field screening analysis, instrument calibration will be checked/adjusted no less than once every 10 analyses, or daily, whichever is greater.

The field screening procedure consists of first collecting a soil sample in a using a stainless trowel or directly into a laboratory supplied contained (i.e. utilize a backhoe to collect sample and obtain a sample from the backhoe bucket). The sample is relocated to a clean, contaminate free area and the instrument sampling probe is placed approximately 1/4 inch from the exposed portions of the soil sample, exercising care to avoid uptake of water droplets or soil particulates. The maximum instrument response is recorded.

Where suspect soils, elevated screening readings, or other conditions require, a jar headspace procedure will be followed which includes half-filling a clean 8 oz. glass jar with the sample to be analyzed. The top of the jar is then quickly covered with clean aluminum foil followed by the screw cap. A vapor headspace is allowed to develop for at least 10 minutes; the jar is shaken for 15 seconds both at the beginning and end of the headspace development period. Subsequent to headspace development, remove screw lid/expose foil seal. Quickly puncture foil seal with instrument sampling probe, to a point about one-half of the headspace depth. Following probe insertion through foil seal, record highest meter response as the jar headspace concentration. Using foil seal, maximum response should occur between 2 and 5 seconds. Erratic meter response may occur at high organic vapor concentrations or conditions of elevated headspace moisture, in which case headspace data should be discounted.

5.0 Analytical Methods

Retrieved samples will be logged by the supervising engineer/geologist and placed directly in laboratory supplied glassware and kept in an iced cooler; the cooler and samples will be transported to an independent New York State ELAP Certified laboratory under Chain-of- Custody documentation.

The primary laboratory intended to be utilized for this project is:
Contest Analytical Laboratory (New York ELAP 10899)
East Longmeadow, MA.

If necessary, an alternate laboratory intended to be utilized is:
EAS Laboratories (New York ELAP 10916)

Watertown, CT.

The analytical procedures used on selected soil samples collected at the site include the following:

Method 8021 — Halogenated and/or Aromatic Volatile Organic Compounds (VOCs) by gas chromatography (GC) with conductivity detector. The target analyte list includes purgeable aromatic hydrocarbons and purgeable halocarbons. The aromatic hydrocarbons include benzene, toluene, ethyl benzene, and xylenes (BTEX) which are gasoline indicator compounds as well as other compounds. Halocarbons include chlorinated solvents and other organohalides, which are commonly, used in dry cleaning processes and in vehicle maintenance processes such as degreasing.

Soil samples that are collected from the contaminated soil for waste characterization will be analyzed pursuant to the intended disposal facilities requirements.

6.0 Community Air Monitoring Plan

A "Community Air Monitoring Plan" (CAMP) following the procedure provided in this Section will be completed during the course of excavation activities. The CAMP requires real time monitoring for volatile organic compounds (VOCs) and particulates (i.e. Dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

Reliance on the CAMP will not preclude simple, common sense measures to keep VOCs, dust, and odors at a minimum around the proposed work areas.

Real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Continuous monitoring will be required for all ground intrusive activities. Generally, ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. "Periodic" monitoring during sample collection might

reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well bailing/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells adjacent to busy sidewalks or parking areas.

6.1 VOC Monitoring, Response Levels, and Actions

Volatile Organic Compounds (VOCs) will be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis. Upwind concentrations will be measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring work will be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment will be calibrated at least daily for the contaminant(s) of concern or an appropriate surrogate. The equipment will be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background, but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities will resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less – but in no case less than 20 feet, is below 5 ppm over background for the 15 minute average.

If the organic vapor level is above 25 ppm at the perimeter of the work area, activities will be shutdown.

All 15-minute readings must be recorded and be available for State (DEC and DOH) personnel to review. Instantaneous readings, if any, used for decision purposes will also be recorded.

6.2 Particulate Monitoring, Response Levels and Actions

Particulate concentrations will be monitored continuously at the upwind and downwind perimeter of the exclusion zone at temporary particulate monitoring stations. The

particulate monitoring will be performed using real time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment will be equipped with an audible alarm to indicate exceedence of the action level. In addition, fugitive dust migration will be visually assessed during all work activities.

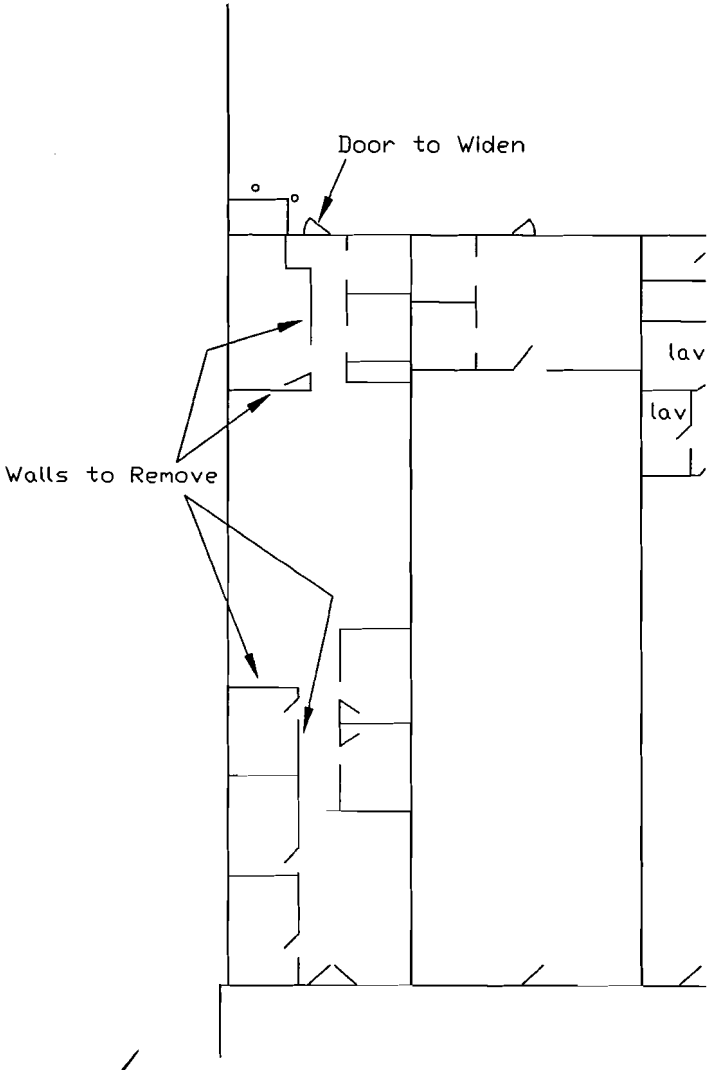
If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m3 above the upwind level and provided that no visible dust is migrating from the work area.

If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m3 above the upwind level, work will be stopped and a re-evaluation of activities initiated. Work will resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m3 of the upwind level and in preventing visible dust migration.

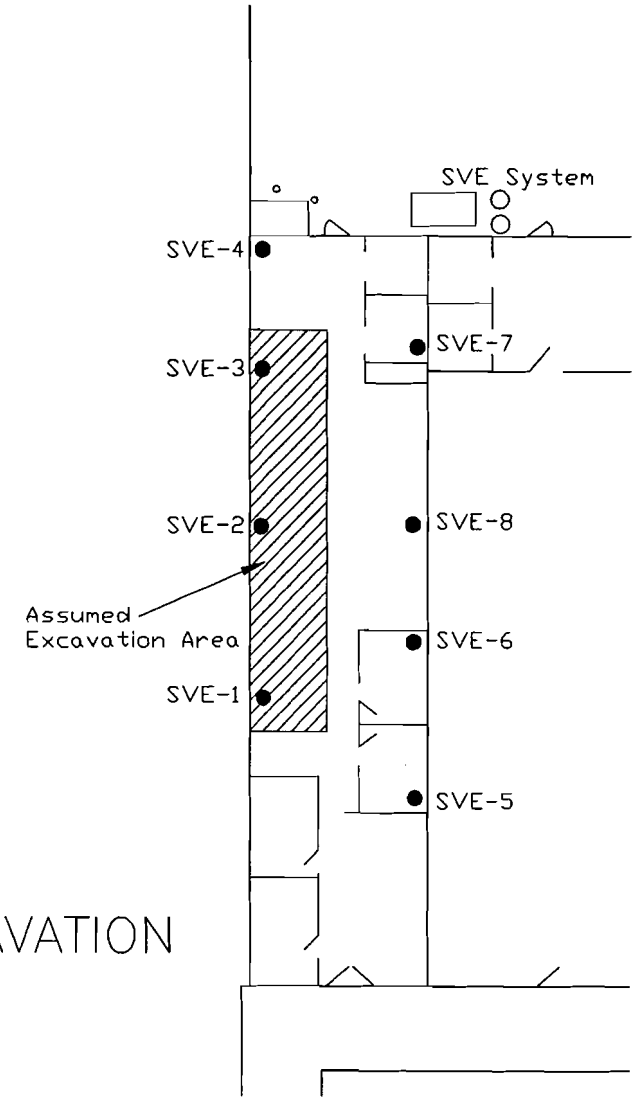
All readings will be recorded and available for State (DEC and DOH) personnel to review.

7.0 Interim Remedial Measure Summary Report

A report of the IRM outcome will be completed, including scaled site plans illustrating sample locations and results. The report will include final volumes of soil removed, post excavation sampling results, soil disposal documentation, and other pertinent details.



WALL REMOVAL



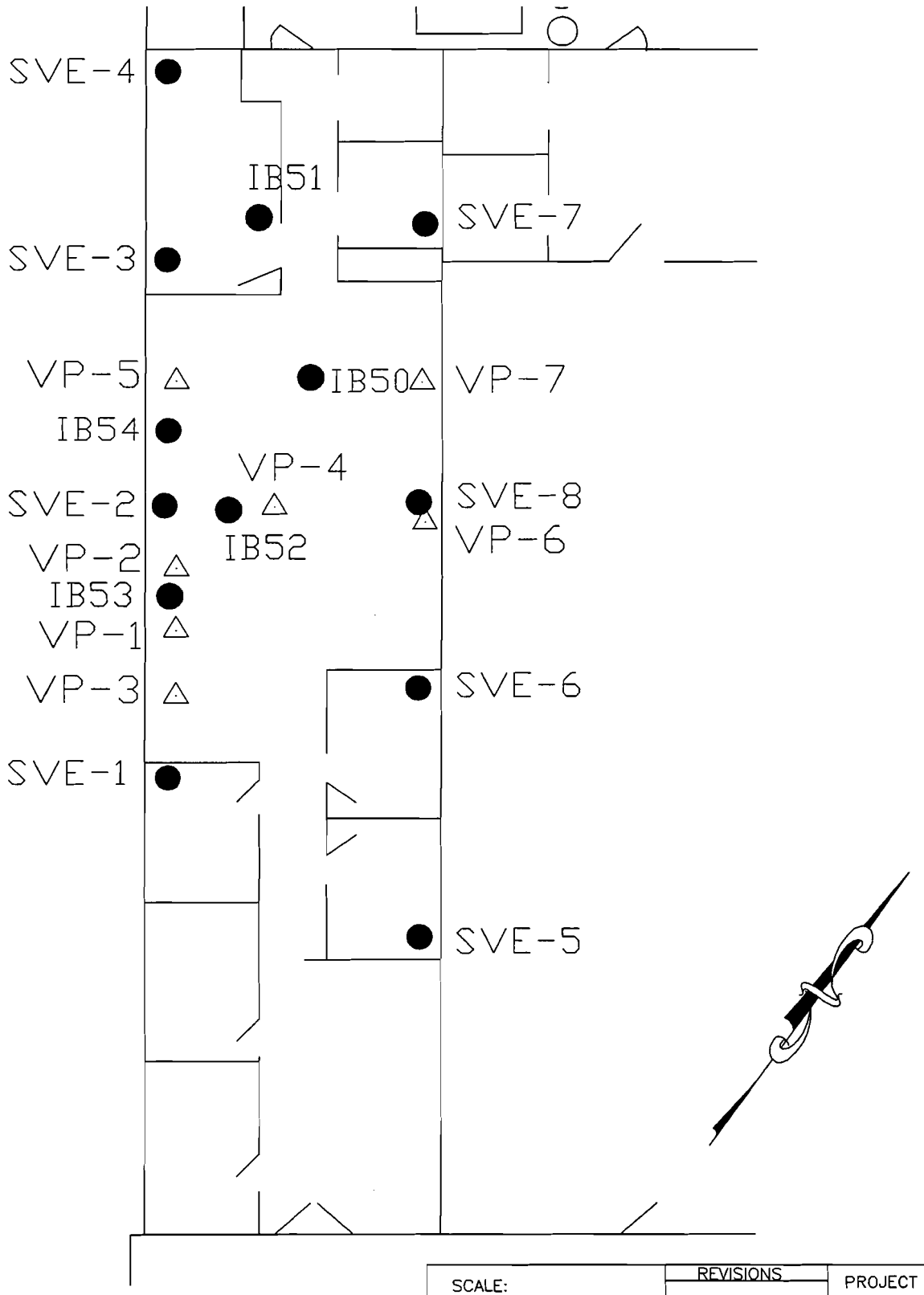
EXCAVATION

DALEWOOD PLAZA
HUNTINGTON LEARNING CENTER

SCALE: DATE: 5/2/03 DRAWN BY: RPM CHECKED BY:	REVISIONS	PROJECT NO.: 2346-F FILE NAME: 2346F-DALEWOOD PLAZA

KROLL ASSOCIATES, INC.
900 THIRD AVENUE, NEW YORK, NEW YORK 10022

1 OF 1 SHEETS



DALEWOOD PLAZA
INDOOR SAMPLES

SCALE:
DATE: 5/13/03
DRAWN BY: RPM
CHECKED BY:

REVISIONS

PROJECT NO.: 2346-F

FILE NAME: Int Wall demo Plan

KROLL ASSOCIATES, INC.
900 THIRD AVENUE, NEW YORK, NEW YORK 10022

1 OF 1 SHEETS

Table 1 - Indoor Soil Sample Summary
Dalewood I Shopping Center
Hartsdale, New York

Parameter	Sample Location and Depth						NYSDEC Allowable Conc.	NYSDEC Cleanup Objective
	IB-50	IB-50	IB-51	IB-52	IB-53	IB-54		
	1-2'	3-4'	0-2'	3 - 4'	3 - 4'	3 - 4'		
Date Collected	10/11/00	10/11/00	10/11/00	04/10/03	04/10/03	04/10/03		
Tetrachloroethylene	7,620	3,640	7,660	30,200	30,100	5,490	14 ug/kg	1,400 ug/kg
Trichloroethylene	ND	ND	ND	<367	<400	<426	7 ug/kg	700 ug/kg

Notes:

All concentrations reported in parts per billion unless otherwise noted.
ND = Not Detected.
NYSDEC Allowable and Cleanup Objectives from TAGM 4046, Appendix A, Table 1

Parameter	Sample Location and Depth						NYSDEC Allowable Conc.	NYSDEC Cleanup Objective
	SVE-1	SVE-2	SVE-3	SVE-4	SVE-5	SVE-6		
	0.5'	0.5'	0.5'	0.5'	0.5'	0.5'		
Date Collected	03/08/03	03/08/03	03/08/03	03/08/03	03/08/03	03/08/03		
Tetrachloroethylene	15,300	51,700	43,800	2,200	19	39	14 ug/kg	1,400 ug/kg
Trichloroethylene	2	<192	0	3	<2	<2	7 ug/kg	700 ug/kg

Notes:

All concentrations reported in parts per billion unless otherwise noted.
ND = Not Detected.
NYSDEC Allowable and Cleanup Objectives from TAGM 4046, Appendix A, Table 1

Table 2 - Soil Vapor Summary
Dalewood I Shopping Center
Hartsdale, New York

Soil Vapor Extraction System Leg Screening Readings								
Date	3/11/03	3/13/03	3/14/03	3/17/03	3/25/03	4/3/03	4/8/03	4/16/2003
SVE Leg	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv
SVE-1	340	50 - 80	165	25.5	78.4	7.1	8.3	2.4
SVE-2	2300	600	739	468	315	245	280	56.4
SVE-3	471	76	75.4	45.6	0	9.5	8.3	0.7
SVE-4	194	97	58.8	59.7	31	8.9	10.1	9.8
SVE-5	367	13	29.6	33.5	0	19	14	12.9
SVE-6	366	48	51.8	9.0	0	25	9.9	12
SVE-7	162	233	28.2	25.0	0	8.5	10	9.8
SVE-8	NA	NA	No Port	No Port	No Port	65.2	58	11.4
System Legs Off	5 & 7	4 & 7	4 & 8	4	4	4	4	4

Soil Vapor Point Screening Readings								
Date		3/13/03	3/14/03	3/17/03	3/25/03	4/3/03	4/8/03	4/16/03
Vapor Point		ppmv	ppmv	ppmv	ppmv	ppmv	ppmv	ppmv
VP-1		100	32.9	24.2	92.5	4.2	1.2	0.2
VP-2		22	1.5	1.2	19.6	0.1	0.3	0.1
VP-3		11	15.5	5.2	0.1	1.1	0.8	0
VP-4		74	8	10.3	6.7	6.4	1.5	0
VP-5		14	5	5.7	2	0.1	4.4	0.1
VP-6		96	NA	NA	NA	NA	NA	NA
VP-7		200	2.4	1.1	0.3	0.2	0.4	0
		*	Leg 8 Open	Leg 8 Open	Leg 8 Open	Leg 8 Open	Leg 8 Open	Leg 8 Open

NOTE:
* VP-7 on 3/13 - Sealed SVE-7 & opened leg - reading at VP-7 dropped to 32.5
Vapor Points installed through floor using 1/4" tubing, sealed w/ bentonite
Leg readings are collected by closing off the individual valve and measuring through a port in the line
VP - 1, 4, & 5 are 9' away from SVE-2
VP-2 is 4.5' away from SVE-2; VP-3 is 4.5' from VP-1
VP-7 is 10' away from SVE-8
ppmv = Parts Per Million volume
ppmv readings obtained utilizing a handheld photoionization detector (PID) with 10.6 eV lamp

HEALTH & SAFETY PLAN

INTERIM REMEDIAL MEASURE ACTIVITIES

DALEWOOD I SHOPPING PLAZA
357 N. Central Avenue
Hartsdale, NY

VCP Site V00457-3

prepared:

May 2003

prepared by:

KROLL Associates, Inc.
900 Third Avenue
New York, NY 10022

receipt acknowledged by:

_____	_____
Signature	Date
_____	_____
Printed Name	Title

PROJECT NAME:	**Dalewood I Shopping Plaza**
JOB SITE ADDRESS:	357 N. Central Avenue, Hartsdale, NY
SITE OWNER:	Heritage
SITE / OWNER CONTACT:	Joe Cava 516-466-4300
SITE CONTRACTORS	
KROLL Associates, Inc. (Project Management)	Neal Drawas (978)443-1833
AARON Environmental (Field Activities)	Robert McCarthy (860)276-1201 / (860)662-1056

START DATE: May 19, 2003
DURATION OF SITE ACTIVITIES: 1 Week (Approximate)

SITE DESCRIPTION AND FEATURES: *Summarize below. Include principal operations and unusual features (containers, buildings, dikes, power lines, terrain, etc.)*

The property is an active retail shopping center. The main Site structure consists of a 67,500 square foot concrete block building housing multiple tenants. A parking area is located in the front (east) of the facility and a driveway and vehicle unloading area located in the rear (west) of the facility. The Site is bordered on the east by N. Central Avenue where driveway access is provided into the parking area in two locations. The Site is bordered to the north and south by other retail shopping centers. The Site is bordered to the west by an apartment complex. Underground utilities include electrical, telephone, water, sewer, and natural gas.

OBJECTIVES

Completion of an Interim Remedial Measure to remedy a condition consisting of contaminated soil located under the building floor.

SCOPE OF WORK

1. Remove concrete floor and excavate impacted soil.
2. Conduct Community Air Monitoring and Work Zone Monitoring during intrusive activities
3. Collection of post excavation soil samples.
4. Extend / supplement the existing SVE system, as deemed necessary.
5. Backfill excavation.

EMERGENCY INFORMATION:

	Phone No.	Non-Emergency
Fire Department	911	
Police Department	911	
Medical	911	(914) 681-0600 (White Plains Hospital)

APPARENT SITE HAZARD:

G Serious , Moderate G Low G None G Unknown

SURROUNDING POPULATION:

, Residential G Industrial G Rural

G Urban , Commercial G Other

WASTE TYPES:

G Liquid , Solid G Sludge , Vapor G Unknown G Other

WASTE CHARACTERISTICS: *(check as many as applicable)*

G Corrosive G Flammable G Radioactive

, Toxic G Volatile G Unknown

G Inert G Reactive G Other

PRINCIPAL DISPOSAL PRACTICES AND METHODS:

Excavated soil will be placed in roll off dumpsters pending waste characterization analysis and off-site disposal. The dumpsters will be lined and covered in order to limit vapor emissions and potential for rainwater collection and runoff.

HAZARDOUS MATERIAL SUMMARY:

Material Safety Data Sheets (MSDSs) and a chemical hazard summary for each compound or chemical listed below are attached as Appendix B to this plan. The listed chemicals have been identified at the Site during previous investigations.

Chemicals:

Tetrachloroethylene
Trichloroethylene
Vinyl chloride

HAZARDS OF CONCERN:

G Heat Stress	, Noise	G Explosion
G Flammable	G Oxygen Deficient	G Combustible
G Biological	G Inorganic Chemicals	G Radiological
, Organic Chemical	, Other - Physical Hazards (see justification)	

FIRE / EXPLOSION POTENTIAL:

G High G Medium , Low G Unknown

OVERALL HAZARD EVALUATION:

G High G Medium , Low G Unknown

JUSTIFICATION:

Hazards include: the potential release of dry cleaning related compounds to the environment; worker exposure to contaminated soil or vapors. Exposure of field personnel to on-site contaminants shall not exceed OSHA limits, and will be maintained as low as reasonably achievable.

Physical and air emission hazards due to indoor operation of equipment will also be present. This condition will be monitored with appropriate metering devices. Indoor air will be controlled utilizing a large volume fan place in the front door of the building and blowing through the back door.

FIELD ACTIVITIES COVERED UNDER THIS PLAN:

		TYPE	LEVEL OF PROTECTION Primary	Contingency
1.	Soil Excavation and Backfill	Intrusive	A B C **D**	A B **C** D
2.	SVE System Installation	Intrusive	A B C **D**	A B **C** D
3.	Air Monitoring / Soil Sampling	Intrusive	A B C **D**	A B **C** D

KEY PERSONNEL

General: The Project Manager will identify responsible staff members to supervise the administration of the project and the site specific health and safety procedures.

RESPONSIBILITY	**NAME**	**TASK**
Sr. Project Manager	Neal Drawas	Oversee & coordinate all technical aspects of the project.
Project / Safety Manager	Robert McCarthy	Review project scope of work and assure that all staff understand and comply with the safety plan. Enforce all aspects of the safety plan and identify new hazards.

SAFETY BRIEFING

A site safety briefing will be held on-site prior to initiating operations. Staff members and contractors will attend this briefing. Immediately after the discovery of real or potential hazards which were not anticipated, a safety briefing will be held. Prior to any new or non-scheduled operation, a safety briefing will be held.

The safety briefing will present the following information:

- " The hazards workers face and personnel responsibility
- " The hazard monitoring techniques to be used
- " Personnel protective equipment requirements
- " Personnel protective equipment use.
- " Decontamination procedures
- " Safe operation procedures for equipment
- " Response to injuries, property damage / fires

WORK ZONES

During all project operations, a series of work zones will be established. These zones include a "Hot Zone" or area of work where contamination is probable, a "Decontamination Zone" where personnel and equipment will be decontaminated after work evolutions, and a "Cool Zone" or staging area where clean equipment can be staged and site workers can rest.

SAFETY TRAINING / MEDICAL SURVEILLANCE

All employee's must have training applicable to their job assignments prior to beginning site work. At a minimum all workers must have the minimum training as required by applicable OSHA regulations.

GENERAL SITE SPECIFIC SAFETY REQUIREMENTS

- All persons entering and / or working in the exclusion zone on the Site shall read, sign and become familiar with this Health & Safety Plan. The master copy will be available on-site through the site safety manager.
- No staff member or subcontractor may be allowed in the exclusion zone on the Site without the prior knowledge and consent of the site safety manager.
- There will be no intrusive activities conducted on-site without sufficient backup personnel. At a minimum, two persons must be present at the site. Visual, voice or radio communication will be maintained at all times.
- All contractor or subcontractor personnel shall bring to the attention of the site safety manager or project manager any unsafe condition or practice associated with the site activities that they are unable to correct themselves.
- There will be no smoking, eating, chewing gum, or drinking in the exclusion area.
- Hands shall be thoroughly cleaned prior to smoking, eating or other activities outside the exclusion zone.
- On-site workers must avoid unnecessary contamination (i.e., walking through known or suspected "hot" zones or contaminated puddles, kneeling or sitting on the ground, leaning against potentially contaminated equipment, etc).
- All accidents and/or injuries shall be immediately reported to the site safety manager.

PERSONNEL PROTECTIVE EQUIPMENT (PPE)

! Equipment Staging and Preparation & Other Non Intrusive Site Work:

All operations required for equipment staging and preparation will be performed in Level D PPE. Level D will consist of the following:

" Hard hat and safety glasses
" Routine work clothing (i.e., coveralls)
" Disposable work gloves
" Safety shoes

! Excavation and handling of contaminated soil:

The removal of contaminated soils will be performed in Level D PPE. Level D will consist of the following:

" Hard hat and safety glasses
" Disposable tyvek coveralls over routing work clothing
" Disposable latex / PVC outer gloves
" Safety shoes

! If determined to be necessary, Level C will consist of the following:

" Disposable Tyvek coveralls over routine work clothing
" Disposable latex / PVC outer gloves
" Safety shoes / latex outer boots
" Full face or half face (w/safety glasses) air purifying respirator equipped with Organic Vapor / Acid gas / toxic particulate filter Cartridges or canisters.

MONITORING EQUIPMENT

General: A Community Air Monitoring Plan (CAMP) will be followed as described in Section 8.0 of the Interim Remedial Measure Work Plan. The intent of the CAMP is to provide a measure of protection for the downwind community (i.e. off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) and is not intended for use in establishing action levels for worker respiratory protection. However, the data collected and instruments utilized as part of the CAMP will be utilized as part of the on-site evaluation.

Site personnel will monitor the ambient air for total organic vapor concentrations and particulate matter concentrations during on-site operations. The site Safety Manager will establish air monitoring frequency based on type of operations being performed. Work zone monitoring will include a VOC testing as well as testing for vehicle emission products. Air monitoring will be performed utilizing:

1. Photo-Ionization Detector (PID) with an electron volt range able to detect VOCs (Volatile Organic Compounds).

2. Four gas multi meter for oxygen (O2), carbon monoxide (CO), lower explosion limit (LEL), and hydrogen sulfide (H2S). The O2 and CO levels will be closely monitored during indoor vehicle operations.

3. The particulate monitoring shall be performed using real time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level.

All monitoring equipment will be operated, maintained and calibrated according to the manufacturers equipment operations manual.

MONITORING CONTINGENCIES

1. Any consistent "continuous reading" (greater than 5 ppm) in the breathing zone of:

   Any detectable odor through 500 ppm (parts per million) of VOCs
   will require site workers to don Level C protective equipment. Level C will consist of the following:

   " Hard hat
   " Disposable tyvek coveralls over routine work clothing
   " Disposable latex / vinyl gloves
   " Safety shoes
   " Full face or half face air purifying respirator equipped with Organic Vapor / Acid gas / toxic particulate filter cartridges or canisters.

2. Any consistent "continuous reading" detection in the breathing zone of:

   500 ppm or greater of VOCs will require site workers to egress from the site. The site safety officer will be notified and will then determine the need for additional PPE, additional air monitoring and/or change in work procedures.

DECONTAMINATION

Personnel:

Personnel decontamination will consist of good working practice, maximum use of disposable clothing, personal hygiene and a field decontamination station to be used at the completion of each work evolution. Because the likeliest point of personnel contact with contaminants will be the feet and hands, the field decontamination will involve the following steps:

1. Disposable outer boots will be removed and discarded in a plastic trash bag.
2. Disposable outer gloves will be removed and discarded in a plastic trash bag
3. Disposable coveralls will be removed and disposed of in a plastic trash bag.
4. Inner gloves will be removed and disposed of in a plastic trash bag.

If necessary, a personnel decontamination station will be positioned at a location just outside of the contaminated area and in the clean zone. The components of the decontamination station will consist of:

- Long handle scrub brushes
- Metal wash basins large enough to step into
- Hand pressurized sprayer
- Plastic sheeting
- Plastic tubs or bowls for washing hands
- Plastic trash cans with trash liners
- Table
- First aid kit
- Portable eye wash
- Mild soap solution
- 5 gallon water container
- Class A,B,C fire extinguisher

Equipment:

All equipment shall be decontaminated before leaving the site. heavy equipment (truck, backhoe, drilling rigs, etc) directly involved in on-site activities shall be either steam cleaned then scrubbed with a water and mild soap solution or washed under high pressure water then scrubbed with a water and mild soap solution before departing the site. Light equipment (shovels, pails, hand tools) shall be scrubbed with a mild soap and water solution followed by a rinse before being removed from the site. Field decontamination of equipment will be performed by the following steps:

- Physically remove packed dirt and grit with wire brushes
- Steam clean with water / soap solution
- Rinse with high pressure water
- Allow to air dry before departing the site.

CONSTRUCTION DERIVED WASTE

Solid Waste:

All solid waste generated on-site such as disposable coveralls, gloves, soda cans, packing boxes, and general trash will be treated as "non-hazardous". This waste will be disposed of as a municipal trash.

Liquid Waste:

All liquid waste from decontamination rinse water will be collected in drums pending laboratory results.

INJURIES / EMERGENCIES

Injury:

If an injury should occur, the victim shall be removed from potentially contaminated areas if possible, immobilized if necessary, and transported to the local hospital for treatment. If the victim has received a potential spinal injury, they should be immobilized if possible and transported to the local hospital by a trained ambulance "EMS" crew. Minor injuries such as small cuts and lacerations can be treated on-site by qualified first aid trained workers. All potentially contaminated clothing should be removed from an injured worker on-site prior to transport for medical treatment.

Refer to Appendix B for Hospital Location maps.

Fire:

In the event of fire, the following steps should be taken:

1. Attempt to extinguish or control fire with a Class A,B,C, fire extinguisher.
2. Notify local fire department
3. Remove vehicles from area
4. Remove flammable materials such as fuels and solvents from area
5. Egress from site to an upwind position
6. Perform a personnel count "verification"
7. Wait for fire fighting forces

SITE SPECIFIC PROCEDURES

Any site specific safety features will be determined by the safety manager during each briefing.

ATTACHED MAPS

Route to nearest hospital

APPENDIX A

Route to Nearest Hospital

APPENDIX B

Material Safety Data Sheets