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## **SOIL REMOVAL REPORT**

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Former Sooper Dry Cleaners Site  
Normandy Park Shopping Center Redevelopment  
Normandy Park, Washington

*Prepared for:*

Griffin & Jensen Tenancy in Common  
Normandy Park, Washington

*Prepared by:*

**SCS ENGINEERS**

Bellevue, Washington

**November 2006**

**04205059.00**

**SCS ENGINEERS**

November 30, 2006  
File No. 04206059.00

Mr. Frank Jensen  
Griffin & Jensen Tenancy in Common  
16027 SE 63<sup>rd</sup> Street  
Bellevue, Washington 98006

**Subject: PCE Soil Removal Report, Former Sooper Cleaners Site,  
Normandy Park Shopping Center, Normandy Park, Washington**


Dear Mr. Jensen:

Attached please find two (2) copies of the Soil Removal Report that documents the site cleanup activities completed for the Four Star Dry Cleaners site located at the Normandy Park Shopping Center, Normandy Park, Washington. The current cleanup action included limited soil excavation, characterization, and offsite disposal to remove previously inaccessible, higher level PCE contaminated soils from beneath a building extension.

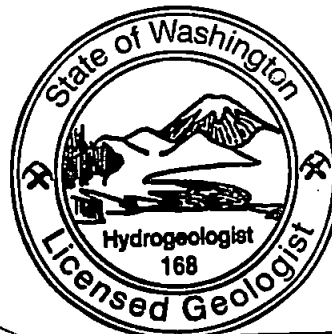
This work was conducted in conjunction with ongoing site redevelopment work being completed by the current property owner (The Schuster Group). In addition, six existing groundwater monitoring wells situated in the redevelopment footprint were decommissioned in accordance with state requirements.

Thank you for the opportunity to provide our services. If you have any questions concerning our report, please do not hesitate to call.

Very truly yours,



Daniel A. Venchiarutti, R.G.  
Project Manager  
SCS ENGINEERS



Daniel A. Venchiarutti



Gregory D. Helland, R.G.  
Project Director  
SCS ENGINEERS

cc: Agnes Griffin, Griffin & Jensen Tenancy in Common  
Bob DiJulio, Wolfstone Panchot & Bloch  
Mark Schuster, The Schuster Group  
VCP Coordinator, Washington Department of Ecology

attachment



# SOIL REMOVAL REPORT

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Former Sooper Dry Cleaners  
Normandy Park Shopping Center Redevelopment  
17835 First Avenue South  
Normandy Park, Washington 98148

*Prepared for:*

Griffin & Jensen Tenancy in Common  
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**November 2006**

**04205059.00**

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## SECTION 1 INTRODUCTION

This Soil Removal Report was prepared by SCS Engineers for Griffin and Jensen Tenancy in Common (TIC) - Normandy Park Shopping Center to document soil cleanup activities completed at the former Sooper Dry Cleaners site during the redevelopment of the Normandy Park Shopping Center. The soil cleanup activities focused on the excavation, characterization and offsite disposal of approximately 100 tons shallow subsurface soils located in a 600 square foot area situated on the western end of the shopping center property. The removed soils were contaminated with residual concentrations of dry cleaning solvents, primarily tetrachloroethene (PCE), in excess of applicable Model Toxics Control Act (MTCA) soil standards.

Previous remedial investigations and site cleanup efforts confirmed that higher level PCE soil contamination (defined as soils containing > 0.5 mg/kg PCE) remained in-place beneath a small structural extension attached to the northwest corner of the main shopping center building (which formerly housed several commercial businesses including the former dry cleaners). This contaminant "hot spot" could not be immediately addressed during a 2003 site remediation effort because these impacted soils were situated beneath an existing structure. However, current redevelopment activities at the shopping center property, which included demolition of all the existing site buildings, provided an opportunity to remove these higher level PCE soils from the site resulting in significant additional contaminant source reduction. As provided for under an existing soil management plan, once the site redevelopment has been completed engineered and institutional controls will continue to be used to manage any remaining areas of residual PCE soil contamination.

The independent cleanup activities described in this document were completed under the Washington Department of Ecology's Voluntary Cleanup Program (VCP). The site was formerly entered into the VCP in February 2001 (TCP #NW0614).

### 1.1 PURPOSE AND SCOPE

The purpose of the current soil remediation is to address hot-spot areas of PCE soil contamination which could not be removed during a previous (March 2003) site cleanup action because they were situated beneath a building extension. The work was conducted after the existing site buildings and foundation structures were demolished as part of the planned redevelopment of the site.

The current soil removal action included the excavation, stockpiling, analytical testing and offsite disposal of the higher-level PCE contaminated soils beneath a building extension connected to the northwest corner of the shopping center's main commercial building. This work took advantage of the removal of this building and the clearing of the site for redevelopment. The overall goal of the soil removal action was to further reduce the volume of PCE soil contamination that will continue to be managed onsite, minimize the potential for future leaching of PCE to groundwater, and to comply with requirements of the purchase and sale agreement between Griffin & Jensen TIC and the current property owner.



The soil removal action was intended to accomplish the following:

- Achieve additional contaminant source removal through the excavation, characterization and offsite disposal of shallow, higher-level PCE soils that were not accessible during the March 2003 remedial program.
- Ensure the proper characterization, management, disposal and documentation of the PCE soils that are removed from the site.
- Protect existing groundwater monitoring infrastructure (including 5 actively monitored onsite groundwater wells) and properly decommission 6 old/unusable monitoring wells that would otherwise be impacted during site redevelopment.
- Comply with contractual requirements specified in the 2003 purchase and sale agreement between Griffin & Jensen TIC and the Schuster Group.

These remedial measures were intended to remove the shallowest, most PCE-impacted soils observed at the site, while continuing to providing for the secure in-place management of the residual contamination beneath the property. As discussed in the SCS Engineer's May 2003 remedial action report, because there is no apparent onsite or downgradient exposure to site contaminants, the originally recommended site remedy of hot spot removal combined with in-place management of the remaining, lower-level, residual contamination is anticipated to remain protective of human health and the environment.



## SECTION 2 BACKGROUND INFORMATION

The Sooper Dry Cleaners business was formerly situated in a multi-tenant commercial building on the western end of the Normandy Park Shopping Center at 19935 First Avenue South in Normandy Park, Washington (Figure 1). Various dry cleaning businesses have historically operated within this tenant space since approximately the early 1970's. The last dry cleaner business (Sooper Dry Cleaners) vacated the tenant space in February 2000.

A series of remedial investigations completed at the site between 2000 and 2002 confirmed the presence of PCE contaminated soils and groundwater beneath the western portions of the shopping center. The primary point of release was identified as a former dry well situated immediately behind the dry cleaner tenant space. The conduit formed by the septic line servicing the building was considered to represent a probable secondary source of subsurface contamination. A generalized site plan illustrating the former layout of the Normandy Park shopping center and the previous location of the Sooper Dry Cleaners is provided in Figure 2.

### 2.1 PREVIOUS REMEDIAL ACTIONS

Based on the investigative findings, a feasibility analysis of the remedial alternatives to address contaminated soils and groundwater at the site was completed and a formal site cleanup/management plan was prepared (SCS Engineers, June 2002). Based on the lack of downgradient receptors, and the observed distribution of the PCE contamination, the cleanup strategy selected for the site consisted of limited soil excavation to remove suspected sources of PCE contamination followed by the implementation of engineered and institutional controls to isolate the remaining residual soil contamination from onsite surface receptors and minimize future contaminant leaching into the underlying groundwater.

The remedial plan was submitted to Ecology for review. Following their technical review, Ecology indicated that proposed cleanup approach (with several minor modifications) was consistent with the goal of achieving a no further action (NFA) determination for the residual soil contamination at the site (Ecology correspondence, dated January 6, 2003). As a result, the proposed site cleanup was initiated in March 2003.

The main components of the soil 2003 cleanup and engineering controls included:

- Source removal of approximately 100 tons of the most highly contaminated soils observed at the site. The removal action focused on PCE soils associated with the former dry well and the soils/fill materials surrounding downstream sanitary sewer utilities.
- Removal of three out-of-service septic tanks including the removal of approximately 6,800 pounds of PCE contaminated bottom sediment. In addition, an estimated 2,500 gallons of PCE contaminated septic tank water was successfully treated onsite by carbon filtration and hauled off for discharge at a METRO water treatment plant.
- Removal and replacement of 600 linear feet of sanitary sewer and stormwater utilities that serviced the former dry cleaner tenant space to eliminate further infiltration of surface water into areas of residual soil contamination.



- Installation of a french drain along the western property border to route runoff into the improved stormwater system and further isolate any residual soil contamination.
- Sealing and repaving the entire area behind the main building and all the disturbed portions of the parking areas.
- Preparation of a site-specific Soil Management Plan to ensure the continued implementation and maintenance of the engineered/institutional controls deployed at the property. In addition, a deed restriction was formerly placed on the property to prevent the future use of impacted groundwater and downgradient municipalities and property owners were officially notified of the contaminant release and remedial program.

Implementation of these cleanup measures succeeded in removing the majority of the shallowest, most PCE-impacted media observed at the site, while providing the infrastructure to enable the secure in-place management of the lower-level residual contamination beneath the property. However, confirmational soil sampling confirmed that some higher level PCE contaminated soils remained inaccessible beneath a structural extension attached to the main commercial building. PCE concentrations ranging between 0.28 and 1.5 mg/kg were detected in shallow (2-5' below ground surface [bgs]) soil samples collected immediately next to the building extension. This zone of PCE contamination appeared to be restricted to the immediate vicinity of a pair of old, broken sanitary and stormwater lines.

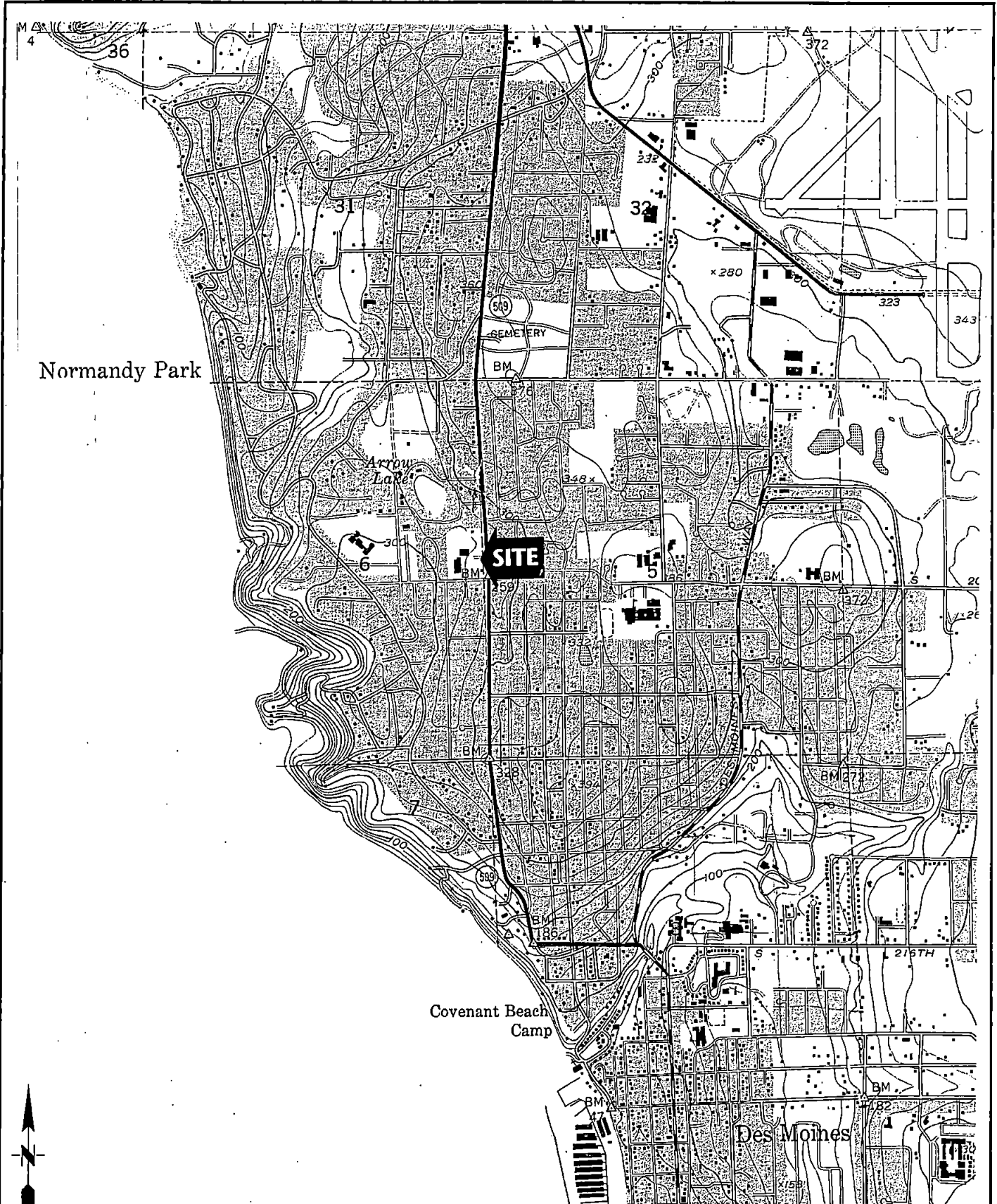
Based on the results of the 2003 remedial actions, Ecology issued a no further action (NFA) designation (dated April 20, 2004) for the PCE contaminated soils at the property. However, due to recent administrative changes to Ecology's VCP program that were mandated by the state's attorney general's office, all partial, interim or conditional NFA determinations were formerly rescinded for all VCP sites statewide. As a result, Ecology issued a Further Action Determination Status letter (dated June 8<sup>th</sup>, 2006) for the Sooper Dry Cleaners site that formerly rescinded the April 2004 soil NFA.

## 2.2 POST-REMEDIAL GROUNDWATER MONITORING

Groundwater PCE concentrations exceeding the 5 µg/L MTCA Method A standard have been detected beneath the western end of the shopping center. Subsurface borings confirmed that the local water table occurs approximately 50 feet bgs. The saturated zone is estimated to be between 60 to 80 feet thick and overlies a thick sequence of compact silt and clay. Hydrological calculations indicated that groundwater flow beneath the site is principally towards the west-southwest at an estimated rate ranging between 10 and 183 feet/year.

As a condition of the 2004 soil NFA, Ecology required that post-remedial groundwater monitoring be conducted at onsite and offsite locations. Beginning in October 2003, quarterly groundwater monitoring was initiated at five onsite (MW-5B, MW-8, MW-10, MW-11 and MW-12) and three offsite (MW-13 to MW-15) well locations. The three offsite monitoring wells are located downgradient (west-southwest) of the shopping center property on 4<sup>th</sup> Avenue South and within Marivista Park.





Normandy Park

**SITE**

Covenant Beach Camp

Des Moines

Source: USGS

**SCS ENGINEERS**

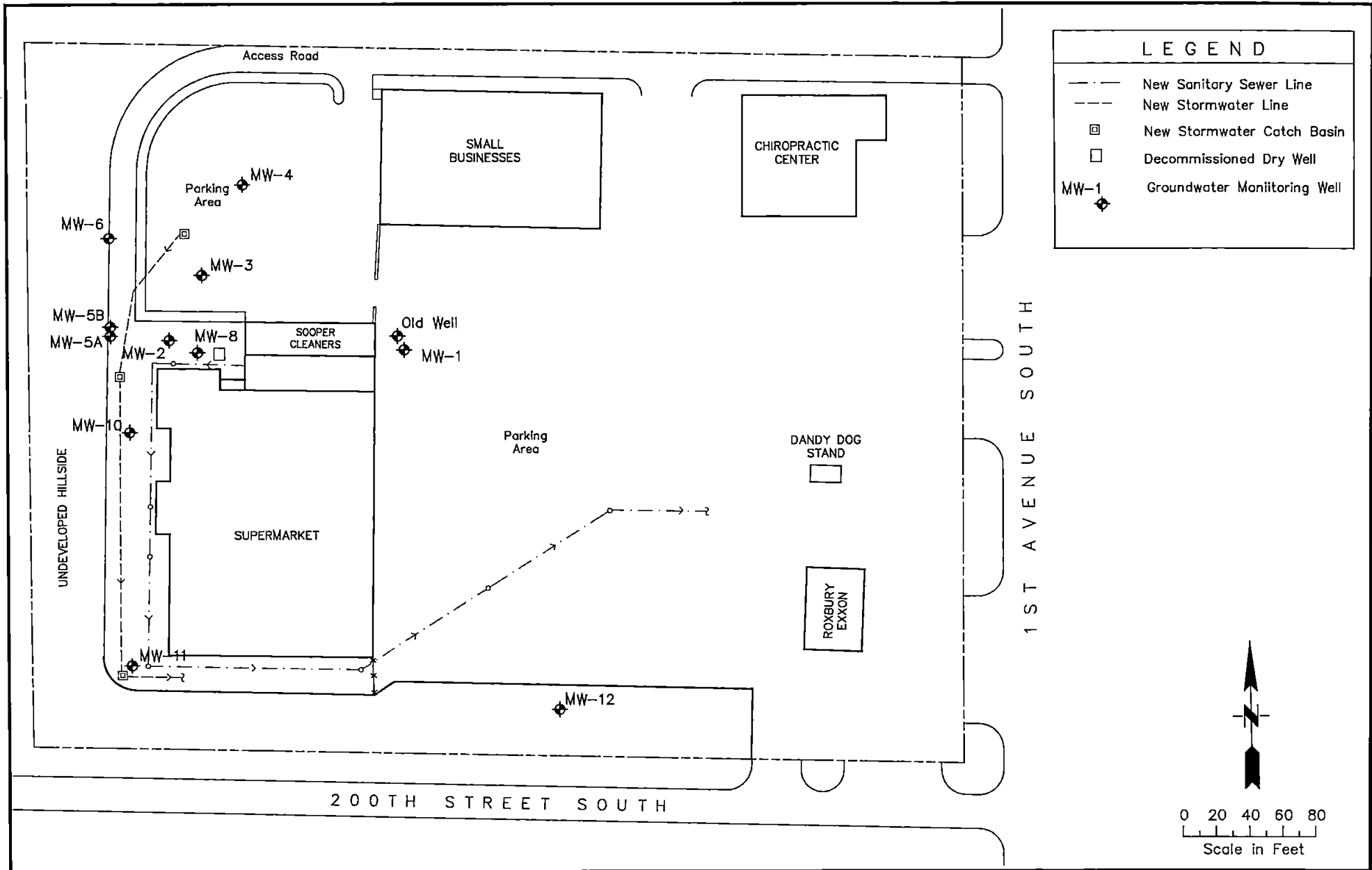
STEARNS, CONRAD AND SCHMIDT  
CONSULTING ENGINEERS, INC.

2405 140TH AVE NE, SUITE 107, BELLEVUE, WA 98005 (425) 746-4600

PROJECT NO. 04205059.00	DES BY D.V.
SCALE -	CHK BY D.V.
CAD FILE Figure 1	APP BY G.H.

SITE LOCATION MAP  
NORMANDY PARK SHOPPING CENTER  
NORMANDY PARK, WA

DATE SEPT 2006
FIGURE 1



**SCS ENGINEERS**  
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PROJECT NO.	04205059.00	DES BY	D.V.
SCALE	AS SHOWN	CHK BY	D.V.
CAD FILE	Figure 2	APP BY	G.H.

PRE-REDEVELOPMENT SITE PLAN  
 NORMANDY PARK SHOPPING CENTER  
 NORMANDY PARK, WASHINGTON

DATE	SEPT 2006
FIGURE	2

Detectable PCE concentrations have been routinely reported in three of the onsite groundwater monitoring wells (MW-5B, MW-10 and MW-11). During the most recent (May 2006) quarterly event, the reported PCE concentrations ranged from 2.3 to 570  $\mu\text{g/L}$ , with two detections (570  $\mu\text{g/L}$  at MW-10 and 150  $\mu\text{g/L}$  at MW-5B) exceeding the 5  $\mu\text{g/L}$  MTCA Method A groundwater standard. These PCE exceedances continue to be observed near the western property border in the area immediately downgradient of the former dry cleaner tenant space. Neither PCE nor any of its associated breakdown products have ever been detected in any of the three offsite monitoring wells (MW-13, MW-14, or MW-15) located downgradient of the shopping center property.

PCE groundwater concentrations at the site have been significantly reduced from their pre-remedial levels and continue to trend downward. In May 2006, PCE levels in onsite wells MW-11, MW-5B and MW-10 were 2.3, 150 and 570  $\mu\text{g/L}$ , respectively. These latest results are over 75 percent less than the pre-remedial levels (18, 1,100 and 5,900  $\mu\text{g/L}$ , respectively) recorded in these same wells during the 2001 Environmental Site Assessment Report (SCS Engineers, October 2001). In addition, the maximum onsite PCE groundwater concentration (570  $\mu\text{g/L}$  at MW-10) reported during May 2006 is the lowest observed to date at this monitoring location.

The observed contaminant reductions are likely related to the source removals and engineered-control infrastructure completed at the site during 2003. In addition, all the offsite groundwater results continue to suggest that residual PCE groundwater contamination has not migrated a significant distance downgradient (i.e. west-southwest) of the western border of the shopping center property.



## SECTION 3 REMEDIAL ACTIONS

Follow-up remedial actions completed at the former Sooper Dry Cleaners site as part of the September 2006 redevelopment of the Normandy Park Shopping Center property included the following:

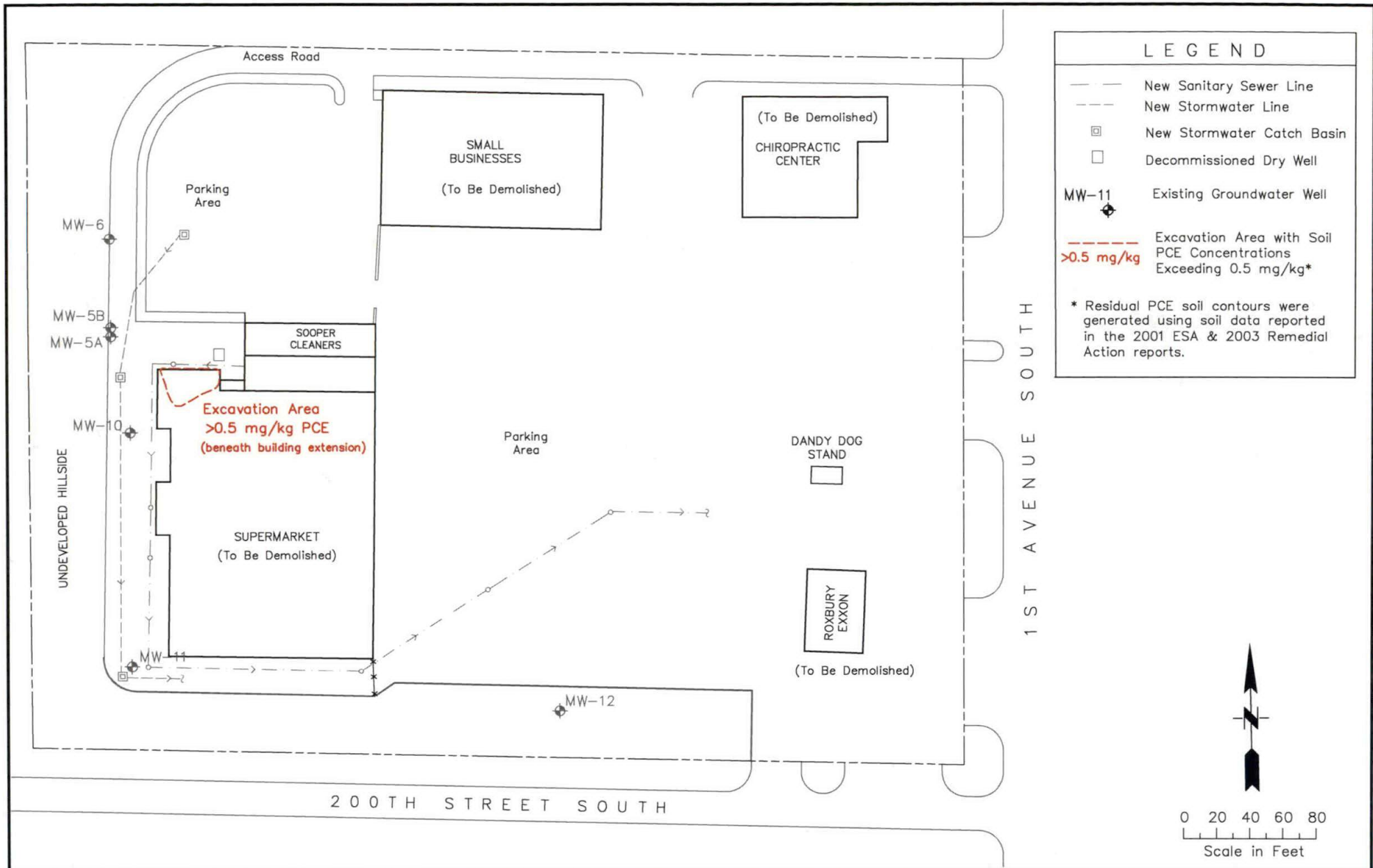
- Decommissioning a total of six existing onsite groundwater monitoring wells located within the footprint of the new buildings to be constructed during the current site redevelopment efforts;
- Excavation, stockpiling, characterization and offsite disposal of approximately 100 tons of higher-level PCE contaminated soils that were formerly covered by the old supermarket building extension; and
- Collection and analysis of soil samples within the excavation area to confirm the removal of the higher-level PCE soils and to document the levels of residual soil contamination that continue to be managed in-place.

The remedial efforts directed by SCS Engineers were all completed under the site-wide grading and construction permits that were obtained by the Schuster Group's redevelopment manager. All the groundwater well decommissioning and well closure reporting activities were completed by a Washington State licensed well drilling company (Cascade Drilling, Woodinville, WA). In addition, after reviewing the available site information, the Washington Department of Ecology issued a contained-in determination (dated September 19<sup>th</sup>, 2006) allowing the majority of the PCE soils removed/disposed during the site cleanup to be managed as a non-hazardous waste. Ecology's determination was based on confirmational testing of the excavated soils pending disposal, as well as the separate removal and stockpiling of the fill materials in the immediate vicinity of the old sanitary and storm water utility lines (i.e., the area anticipated to contain the most elevated PCE soil concentrations). As detailed in Section 4, a portion of the PCE soils excavated next to the old utility lines were disposed of as hazardous waste.

After the soil removal action was completed, the excavation was backfilled with clean material in preparation for new building construction. The engineered controls (including a french drain system and surface pavement) that were implemented as part the 2003 remedial effort will either be maintained or replaced with equally protective structures to ensure that any remaining residual PCE soils continue to be managed in a manner protective of human health and the environment.

A site-specific health and safety plan addressing worker safety issues associated with the planned soil removal action was also completed before mobilizing to the site. Work safety/exclusion zones, which utilized perimeter fencing, fixed site features (i.e. building walls), flagging and warning tape, excavation covers and traffic diversion measures, were implemented to manage safety risks and prevent exposure to subsurface contamination.





<p><b>SCS ENGINEERS</b>                  STEARNS, CONRAD AND SCHMIDT                  CONSULTING ENGINEERS                  2405 140TH AVE NE, SUITE 107, BELLEVUE, WA 98005 (425) 746-4600</p>	PROJECT NO. 04205059.00	DES BY D.V.	<p>AREA OF PCE SOIL REMOVAL                  NORMANDY PARK SHOPPING CENTER                  NORMANDY PARK, WASHINGTON</p>	DATE SEPT 2006
	SCALE AS SHOWN	CHK BY D.V.		FIGURE
	CAD FILE Figure 3	APP BY G.H.		3

Detailed descriptions of the current soil removal effort, including the results of the confirmation soil sampling, are provided in the following sections. Site drawings illustrating the area of soil excavation and the confirmation soil sampling locations are provided in Figures 3 and 4. The analytical results for all of the soil characterized during the remedial action are summarized in Table 1.

In addition, a series of photographs illustrating the critical phases of the site cleanup are included in Appendix A. Laboratory data packages and sample chain-of-custody records for all the analytical data supporting the cleanup action are attached as Appendix B. Contaminated soil and hazardous waste disposal documentation for the waste materials generated during the soil cleanup are provided in Appendix C. Appendix C also includes a copy of Ecology's contained-in determination letter.

### **3.1 MONITORING WELL DECOMMISSIONING**

As illustrated on Figure 2, a total of 11 groundwater monitoring wells (MW-1, MW-2, MW-3, MW-4, MW-5A, MW-5B, MW-6, MW-8, MW-10, MW-11 and MW-12) and one old vadous zone well (Old Well) were situated on the Normandy Park shopping center property. In preparation of the planned site redevelopment, six of the existing wells (MW-1, MW-2, MW-3, MW-4, MW-8 and Old Well) were formerly decommissioned on May 3<sup>rd</sup>, 2006.

As required under Ecology's Minimal Functional Standards for Resource Protection Wells, the wells were decommissioned by a licensed water well professional (Cascade Drilling). The well decommissioning consisted of sealing the 2-inch PVC well casing with bentonite grout to within two feet of ground surface, removal of the well monument, and sealing the remainder of the wellhead space with concrete flush to the surrounding pavement. Well closure notices were subsequently submitted by Cascade Drilling to Ecology's division of water well records.

### **3.2 SITE PREPARATION AND BUILDING DEMOLITION**

Demolition activities related to the Normandy Park shopping center redevelopment commenced during the first week of September 2006. The building extension that formerly covered the suspected higher-level PCE soils was removed on September 13<sup>th</sup>, 2006. The extension consisted of a slab on grade structure on a 6-inch, perimeter concrete foundation. Once the underlying foundation was broken up, concrete and asphalt debris from around this structure were carefully scrapped clean of any adhered soils, and removed from the site for offsite disposal.

Before initiating any soil excavation activities, a soil stockpile area was prepared to temporary store the suspected PCE soils pending their characterization and subsequent disposal. The soil stockpile area was located over asphalt pavement and was underlain with a plastic liner. All the excavated soils stored in this area were covered with plastic sheeting to protect the stockpiles from the elements.

### **3.3 PCE SOIL REMOVAL**

The PCE soil removal action at the former Sooper Cleaners site was completed between September 13<sup>th</sup> and 15<sup>th</sup>, 2006. Once the soils underneath the building extension were exposed, a track-mounted excavator was used to remove the PCE contaminated materials associated with the former sewer/roof drain utility lines. The area of excavation had a dimension of approximately 25' x 15' and extended



to a depth of approximately 9 to 10 feet bgs. In addition, the disconnected sewer line/roof drain sections that could not be accessed from beneath the building extension during the 2003 remedial effort were exposed and removed. Figure 4 illustrates the main areas of soil excavation and the approximate locations of the confirmational soil samples collected from this area.

The subsurface materials encountered in the upper 2 feet of the remedial excavation generally consisted of a loose, tan, gravelly silt containing 1" to 4" diameter cobbles. The soil horizons between 2 and 6 feet deep graded towards a slightly darker, more compact, gravelly silt containing thin (1 to 3 inch thick) sandy/gravelly lenses. Several of these lenses appeared to have a rusty staining in the immediate vicinity of the former utility lines. Organic vapor meter (OVM) field screening of these stained layers sporadically indicated the presence of chemical vapors. A dense, tan, gravelly silt, with no apparent staining, was observed in the excavation between 6 and 10 feet bgs. OVM field screening did not report any indications of chemical vapors in these deep soils.

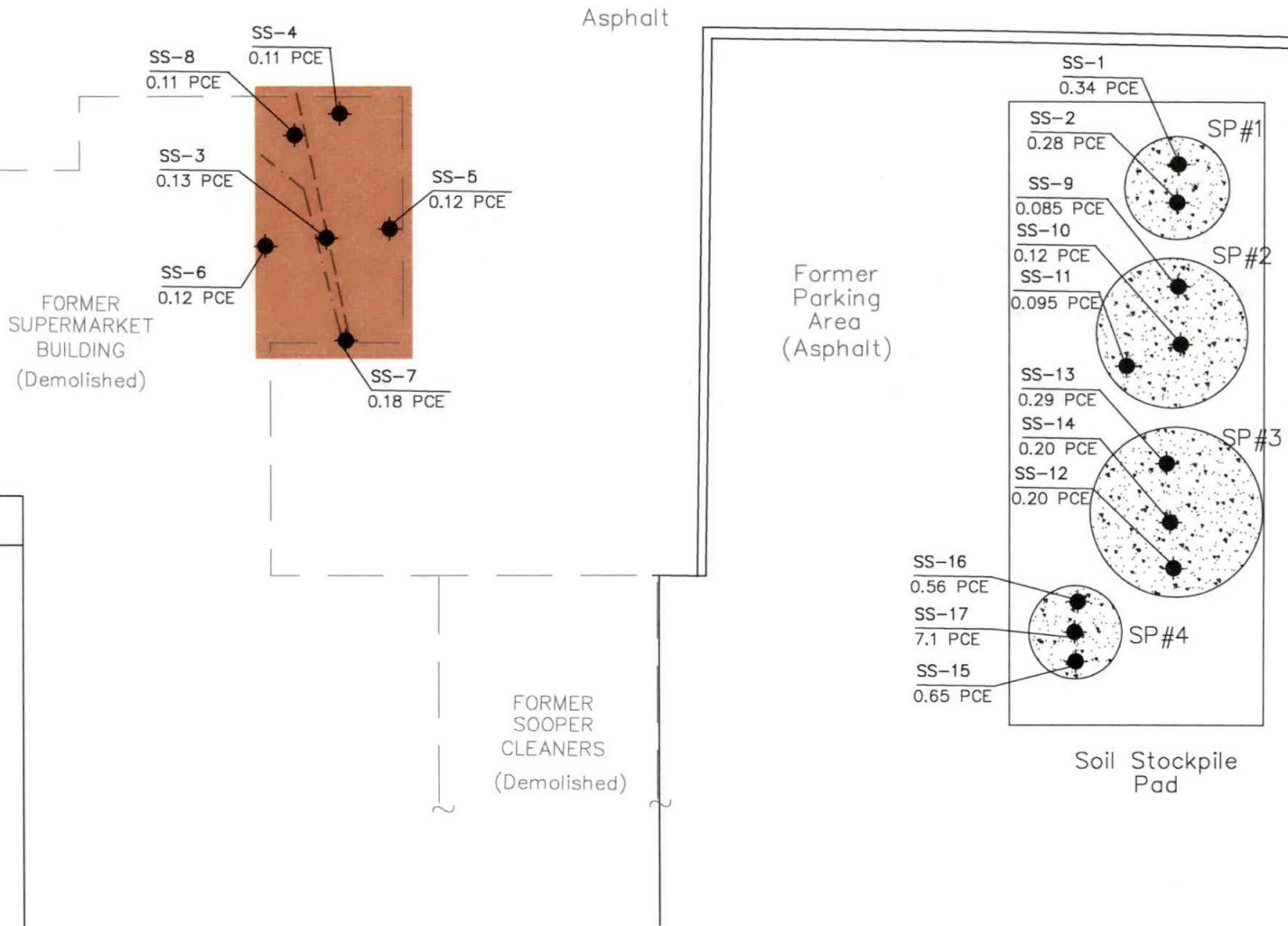
As outlined in the remedial work plan, the excavated soils were removed from the excavation in several distinct lifts that were handled, stockpiled and characterized separately to reduce the potential for mixing higher level PCE contaminated soils with either PCE free or low-level PCE contaminated soils. As a result, the excavated soils were initially placed in four discrete stockpiles pending characterization and disposal. Stockpile #1 (approximately 10 cubic yards) consisted of surface soils generated between 0 and 2 feet below ground surface immediately above the sewer line/roof drain corridor. Stockpile #2 (approximately 25 cubic yards) consisted of shallow soils from 2 to 6 feet deep, especially along the perimeter and western end of the excavation. Stockpile #3 (approximately 30 cubic yards) consisted of deeper level soils excavated from between 6 and 10 feet bgs. Soils excavated from the immediate vicinity of the sewer line/roof drain lines were removed separately and placed in Stockpile #4 (approximately 10 cubic yards). Approximately 85 cubic yards of soil was removed from the remedial excavation.

A total of 17 confirmational soil samples were collected and analyzed during the current remedial effort. Six soil samples (SS-3 through SS-8) were obtained from the sidewalls and floor of the remedial excavation. Eleven soil samples (SS-1, SS-2 and SS-9 through SS-17) were collected to characterize the four soil stockpiles. All the samples were rush analyzed (24-hour turn around) for volatile halogenated organics using EPA method 8260 (Advanced Analytical Laboratory, Bellevue, WA). The confirmational testing results are summarized in Table 1.

Method 8260 analysis of the six confirmational excavation soil samples detected residual PCE concentrations ranging between 0.11 and 0.18 mg/kg. Although these reported PCE concentrations continued to exceed the current 0.05 mg/kg MTCA Method A soil standard, the data confirmed that no higher level (>0.5 mg/kg) PCE contaminated soils remained present in the excavation. Neither TCE nor any halogenated breakdown products (DCE or vinyl chloride) were detected in these samples.

PCE concentrations in the soil stockpiles ranged between 0.085 and 7.1 mg/kg. All of the stockpile soils samples reported PCE levels in excess of the current 0.05 mg/kg MTCA Method A soil standard. The most elevated PCE levels were reported in Stockpile #1 (ranging to 0.34 mg/kg) and Stockpile #4 (ranging to 7.1 mg/kg), both which represented material excavated from the vicinity of the removed utility line sections. TCE in excess of the 0.03 mg/kg MTCA Method A soil standard was also reported in samples SS-12 (0.035 mg/kg), SS-14 (0.092 mg/kg) and SS-15 (0.059 mg/kg).





LEGEND

- SS-1  
0.06 PCE Soil Sample with results in mg/kg
  - Footprint of Remedial Soil Excavation
  - Soil Stockpile
  - SP#1
  - Removed Utility Line
- 0 10 20  
SCALE IN FEET

12

<p><b>SCS ENGINEERS</b>          STEARNS, CONRAD AND SCHMIDT          CONSULTING ENGINEERS          2405 140TH AVE NE, SUITE 107, BELLEVUE, WA 98005 (425) 746-4600</p>	PROJECT NO. 04205059.00	DES BY D.V.	EXCAVATION AND CONFIRMATIONAL PCE SOIL SAMPLING RESULTS NORMANDY PARK SHOPPING CENTER	DATE NOV 2006
	SCALE AS SHOWN	CHK BY D.V.		FIGURE 4
	CAD FILE Figure 4	APP BY G.H.		

**Table 1: Summary of Analytical Data for Volatile Organic Compounds (VOCs) in Soil**

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE DEPTH	SAMPLE LOCATION	EPA 8260 RESULTS (mg/kg)	
				PCE	TCE
<b>Excavation Area Confirmational Soil Samples</b>					
SS-3	9/14/06	9'	Center floor	0.13	ND
SS-4	9/14/06	6'	West sidewall	0.11	ND
SS-5	9/14/06	6'	North sidewall	0.12	ND
SS-6	9/14/06	5'	South Sidewall	0.12	ND
SS-7	9/14/06	6'	East Sidewall	0.18	ND
SS-8	9/14/06	5-6'	Southwest floor	0.11	ND
<b>Soil Stockpile Samples</b>					
SS-1	9/14/06	2'	Soil Stockpile 1, west end	0.34	ND
SS-2	9/14/06	2'	Soil Stockpile 1, east end	0.28	ND
SS-9	9/14/06	2'	Soil Stockpile 2, west end	0.085	ND
SS-10	9/14/06	2'	Soil Stockpile 2, center	0.12	ND
SS-11	9/14/06	2'	Soil Stockpile 2, west end	0.095	ND
SS-12	9/14/06	2'	Soil Stockpile 3, east end	0.20	0.035
SS-13	9/14/06	2'	Soil Stockpile 3, west end	0.29	ND
SS-14	9/14/06	2'	Soil Stockpile 3, center	0.20	0.092
SS-15	9/14/06	2'	Soil Stockpile 4, east end	0.65	0.059
SS-16	9/14/06	2'	Soil Stockpile 4, west end	0.56	ND
SS-17	9/14/06	2'	Soil Stockpile 4, center	7.1	ND
<b>MCTA METHOD A SOIL STANDARD</b>				<b>0.05</b>	<b>0.03</b>

PCE Tetrachloroethylene.  
TCE Trichloroethene.  
ND Analyte not detected.

Based on the analytical testing results and communications with Ecology, Stockpiles 1 through 3 were confirmed to contain non-hazardous PCE contaminated soils that were suitable for transportation and disposal under Ecology's contained-in policy. As a result, approximately 85 tons of this non-hazardous material was loaded into 30-ton, plastic-lined, steel storage containers and hauled for offsite disposal at the Columbia Ridge Landfill in Arlington, Oregon. However, given the elevated PCE levels reported in Stockpile #4, it was determined that this material would need to be managed and disposed of as a hazardous waste. Approximately 16.75 tons of Stockpile #4 soil was placed in a separate 30-ton, plastic-lined, steel storage container and hauled offsite for disposal at Waste Management's hazardous waste landfill in Arlington, Oregon. All the PCE soils removed from the project area were properly placarded and accompanied by the appropriate transportation manifests and supporting documentation.

After the PCE soil removal was completed, the excavation was backfilled with clean backfill. Because the site was under redevelopment, no additional surface restoration or repaving was conducted as part of the remedial action. Paving and/or buildings will be installed by the Schuster Group to restore the engineered controls at the property.



## SECTION 4 CONCLUSIONS AND RECOMMENDATIONS

Limited soil removal was completed during September 2006 to further mitigate residual PCE contamination with the former Sooper Dry Cleaners. The current remedial effort focused on removing an area of previously inaccessible hot-spot PCE soil contamination situated beneath a building extension. The covering structure was demolished immediately prior to the soil removal action as part of the current redevelopment of the Normandy Park Shopping Center.

Cleanup actions included the excavation of an approximately 25 x 15 foot area former beneath the building extension, the removal of two old sections of sanitary sewer and roof drain line, and the removal, characterization and disposal of approximately 80 cubic yards of higher level (i.e. >0.5 mg/kg) PCE contaminated soil. Approximately 85 tons of PCE contaminated soil was transported for offsite land disposal as a non-hazardous waste. An additional 16.75 tons of the most highly contaminated soil (with PCE concentrations exceeding 7 mg/kg) were removed from the property for offsite land disposal as a hazardous waste.

Confirmational soil sampling within the completed excavation confirmed that all the identified higher level PCE soils have been removed from the site. Although residual PCE soil contamination in excess of the current 0.05 mg/kg MTCA Method A standard remains present beneath the area formerly occupied by the Sooper Dry Cleaners, these impacted soils can continue to be effectively managed using the engineered and institutional controls implemented during the 2003 remedial action (and mandated by the site's Soil Management Plan). The current remedial action has further reduced the remaining residual PCE soil contamination at the site and, in combination with the continued implementation of the soil management plan, has reduced the potential for future contaminant leaching to the underlying groundwater. As previously discussed, the redevelopment plans for the Normandy Park Shopping Center call for maintaining the remedial site controls (i.e. impermeable sewer/storm utilities, french drain system, and covering pavement) documented in the soil management plan.



## APPENDIX A

### SITE PHOTOGRAPHS





**Photo 1.** View towards the southwest showing the structural extension attached to the northwest corner of the former supermarket building.



**Photo 2.** View looking south immediately after the demolition of the northern section of the supermarket building. The northwest building extension was previously situated immediately to the west (right) of the excavator.



**Photo 3.** Easterly view showing the removal of the covering asphalt and the shallow overburden soils from the remedial excavation.



**Photo 4.** View of the shallow exposed surface near the center of the excavation (approximately 30 inches deep) showing one of the former utility lines present beneath the building extension. Note the horizon of stained soil immediately adjacent to this utility line.



**Photo 5.** View looking northeast during the excavation of the deeper (6-9 feet bgs) horizons of the remedial excavation.



**Photo 6.** View looking west showing soil removal along the western end of the remedial excavation. The excavated soils were hauled to an adjacent stockpiling area.



**Photo 7.** View looking to the northeast showing the temporary soil stockpiling area. Four separate stockpiles (each from a different portion of the excavation) were kept over plastic containment pending characterization and disposal.



**Photo 8.** View looking northwest showing the four covered soil stockpiles pending transportation and offsite disposal.

## APPENDIX B

### LABORATORY DATA REPORTS AND CHAIN OF CUSTODY DOCUMENTATION



**ADVANCED** / **ANALYTICAL**

*Environmental Testing Laboratory*

---

September 25, 2006

*Dan Venchiarutti  
SCS Engineers  
2808 176<sup>th</sup> Place NE, Suite 107  
Bellevue, WA 98052*

Dear Mr. *Venchiarutti*:

Please find enclosed the analytical data report for the *Normandy Park Soil Removal, 04205059.00 (A60914-2)* Project.

Samples were received on *September 14, 2006*. The results of the analyses are presented in the attached tables. Applicable reporting limits, QA/QC data and data qualifiers are included. A copy of the chain-of-custody and an invoice for the work is also enclosed.

ADVANCED ANALYTICAL LABORATORY appreciates the opportunity to provide analytical services for this project. Should there be any questions regarding this report, please contact me at (425) 497-0110.

It was a pleasure working with you, and we are looking forward to the next opportunity to work together.

Sincerely,



Val G. Ivanov, Ph.D.  
Laboratory Manager

---

Overlake Business Center ■ 2821 152 Avenue NE ■ Redmond, WA 98052  
ph 425.497.0110 fax 425.497.8089  
E-mail: [aachemlab@yahoo.com](mailto:aachemlab@yahoo.com)

*This report is issued solely for the use of the person or company to whom it is addressed.  
Any use, copying or disclosure other than by the intended recipient is unauthorized.*

AAL Job Number: A60914-2  
 Client: SCS Engineers  
 Project Manager: Dan Venchianutti/Greg Heiland  
 Client Project Name: Normandy Park Soil Removal  
 Client Project Number: 04205059.00  
 Date received: 09/14/06

Analytical Results		MTH BLK		LCS		S-1		S-2		S-3		S-4		S-5	
8260B/5035, µg/kg	Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	09/14/06	09/14/06	09/14/06	09/14/06	09/14/06	09/14/06	09/14/06	09/14/06	09/14/06	09/14/06	09/14/06	09/14/06	09/14/06	09/14/06
Date analyzed	Limits	09/14/06	09/14/06	09/14/06	09/14/06	09/14/06	09/14/06	09/14/06	09/14/06	09/14/06	09/14/06	09/14/06	09/14/06	09/14/06	09/14/06
Dichlorodifluoromethane	50	nd													
Chloromethane	50	nd													
Vinyl chloride	50	nd													
Bromomethane	50	nd													
Chloroethane	50	nd													
Trichlorofluoromethane	50	nd													
1,1-Dichloroethene	50	nd	71%												
Methylene chloride	20	nd													
trans-1,2-Dichloroethene	50	nd													
1,1-Dichloroethane	50	nd													
2,2-Dichloropropane	50	nd													
cis-1,2-Dichloroethene	50	nd													
Chloroform	50	nd													
1,1,1-Trichloroethane	50	nd													
Carbontetrachloride	50	nd													
1,1-Dichloropropene	50	nd													
1,2-Dichloroethane(EDC)	20	nd													
Trichloroethene	20	nd	112%												
1,2-Dichloropropane	50	nd													
Dibromomethane	50	nd													
Bromodichloromethane	50	nd													
cis-1,3-Dichloropropene	50	nd													
trans-1,3-Dichloropropene	50	nd													
1,1,2-Trichloroethane	50	nd													
Tetrachloroethene	50	nd													
1,3-Dichloropropane	50	nd													
Dibromochloromethane	20	nd													
1,2-Dibromoethane (EDB)*	5	nd													
Chlorobenzene	50	nd	114%												
1,1,1,2-Tetrachloroethane	50	nd													
1,3-Dichlorobenzene	50	nd													
1,4-Dichlorobenzene	50	nd													
1,2-Dichlorobenzene	50	nd													

\*-Instrument detection limits

Surrogate recoveries	97%	103%	102%	98%	102%	98%	101%	96%
Dibromofluoromethane	103%	106%	101%	104%	107%	107%	111%	103%
Toluene-d8	90%	86%	86%	87%	90%	90%	91%	89%
1,2-Dichloroethane-d4	101%	109%	104%	103%	103%	103%	102%	101%
4-Bromofluorobenzene								

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits  
 Acceptable Recovery limits: 70% TO 130%  
 Acceptable RPD limit: 30%

AAL Job Number: A60914-2  
 Client: SCS Engineers  
 Project Manager: Dan Venchiarutti/Greg Helland  
 Client Project Name: Normandy Park Soil Removal  
 Client Project Number: 04205059.00  
 Date received: 09/14/06

Analytical Results

8260B/5035, µg/kg		MTH BLK	S-6	S-7	S-8	S-9	S-10	S-11
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	09/14/06	09/14/06	09/14/06	09/14/06	09/14/06	09/14/06	09/14/06
Date analyzed	Limits	09/14/06	09/14/06	09/14/06	09/14/06	09/14/06	09/14/06	09/14/06
Dichlorodifluoromethane	50	nd	nd	nd	nd	nd	nd	nd
Chloromethane	50	nd	nd	nd	nd	nd	nd	nd
Vinyl chloride	50	nd	nd	nd	nd	nd	nd	nd
Bromomethane	50	nd	nd	nd	nd	nd	nd	nd
Chloroethane	50	nd	nd	nd	nd	nd	nd	nd
Trichlorofluoromethane	50	nd	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	50	nd	nd	nd	nd	nd	nd	nd
Methylene chloride	20	nd	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	50	nd	nd	nd	nd	nd	nd	nd
1,1-Dichloroethane	50	nd	nd	nd	nd	nd	nd	nd
2,2-Dichloropropane	50	nd	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	50	nd	nd	nd	nd	nd	nd	nd
Chloroform	50	nd	nd	nd	nd	nd	nd	nd
1,1,1-Trichloroethane	50	nd	nd	nd	nd	nd	nd	nd
Carbontetrachloride	50	nd	nd	nd	nd	nd	nd	nd
1,1-Dichloropropene	50	nd	nd	nd	nd	nd	nd	nd
1,2-Dichloroethane(EDC)	20	nd	nd	nd	nd	nd	nd	nd
Trichloroethene	20	nd	nd	nd	nd	nd	nd	nd
1,2-Dichloropropane	50	nd	nd	nd	nd	nd	nd	nd
Dibromomethane	50	nd	nd	nd	nd	nd	nd	nd
Bromodichloromethane	50	nd	nd	nd	nd	nd	nd	nd
cis-1,3-Dichloropropene	50	nd	nd	nd	nd	nd	nd	nd
trans-1,3-Dichloropropene	50	nd	nd	nd	nd	nd	nd	nd
1,1,2-Trichloroethane	50	nd	nd	nd	nd	nd	nd	nd
Tetrachloroethene	50	nd	120	180	110	85	120	95
1,3-Dichloropropane	50	nd	nd	nd	nd	nd	nd	nd
Dibromochloromethane	20	nd	nd	nd	nd	nd	nd	nd
1,2-Dibromoethane (EDB)*	5	nd	nd	nd	nd	nd	nd	nd
Chlorobenzene	50	nd	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	50	nd	nd	nd	nd	nd	nd	nd
1,3-Dichlorobenzene	50	nd	nd	nd	nd	nd	nd	nd
1,4-Dichlorobenzene	50	nd	nd	nd	nd	nd	nd	nd
1,2-Dichlorobenzene	50	nd	nd	nd	nd	nd	nd	nd

\*-instrument detection limits

Surrogate recoveries								
Dibromofluoromethane		97%	99%	98%	100%	101%	103%	105%
Toluene-d8		103%	107%	105%	108%	106%	107%	109%
1,2-Dichloroethane-d4		90%	89%	90%	91%	91%	90%	88%
4-Bromofluorobenzene		101%	99%	103%	110%	101%	97%	101%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits  
 Acceptable Recovery limits: 70% TO 130%  
 Acceptable RPD limit: 30%

AAL Job Number: A60914-2  
 Client: SCS Engineers  
 Project Manager: Dan Vencharutti/Greg Helland  
 Client Project Name: Normandy Park Soil Removal  
 Client Project Number: 04205059.00  
 Date received: 09/14/06

Analytical Results

8260B/5035, µg/kg	MTH BLK	S-12	S-13	S-14	S-15	S-16	S-17
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	09/14/06	09/14/06	09/14/06	09/14/06	09/14/06	09/14/06	09/14/06
Date analyzed	Limits	09/14/06	09/14/06	09/14/06	09/14/06	09/14/06	09/14/06

Dichlorodifluoromethane	50	nd	nd	nd	nd	nd	nd
Chloromethane	50	nd	nd	nd	nd	nd	nd
Vinyl chloride	50	nd	nd	nd	nd	nd	nd
Bromomethane	50	nd	nd	nd	nd	nd	nd
Chloroethane	50	nd	nd	nd	nd	nd	nd
Trichlorofluoromethane	50	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	50	nd	nd	nd	nd	nd	nd
Methylene chloride	20	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	50	nd	nd	nd	nd	nd	nd
1,1-Dichloroethane	50	nd	nd	nd	nd	nd	nd
2,2-Dichloropropane	50	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	50	nd	nd	nd	nd	nd	nd
Chloroform	50	nd	nd	nd	nd	nd	nd
1,1,1-Trichloroethane	50	nd	nd	nd	nd	nd	nd
Carbon tetrachloride	50	nd	nd	nd	nd	nd	nd
1,1-Dichloropropane	50	nd	nd	nd	nd	nd	nd
1,2-Dichloroethane(EDC)	20	nd	nd	nd	nd	nd	nd
Trichloroethene	20	nd	35	nd	92	59	nd
1,2-Dichloropropane	50	nd	nd	nd	nd	nd	nd
Dibromomethane	50	nd	nd	nd	nd	nd	nd
Bromodichloromethane	50	nd	nd	nd	nd	nd	nd
cis-1,3-Dichloropropene	50	nd	nd	nd	nd	nd	nd
trans-1,3-Dichloropropene	50	nd	nd	nd	nd	nd	nd
1,1,2-Trichloroethane	50	nd	nd	nd	nd	nd	nd
Tetrachloroethene	50	nd	200	290	200	650	560
1,3-Dichloropropane	50	nd	nd	nd	nd	nd	7,100
Dibromochloromethane	20	nd	nd	nd	nd	nd	nd
1,2-Dibromoethane (EDB)*	5	nd	nd	nd	nd	nd	nd
Chlorobenzene	50	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	50	nd	nd	nd	nd	nd	nd
1,3-Dichlorobenzene	50	nd	nd	nd	nd	nd	nd
1,4-Dichlorobenzene	50	nd	nd	nd	nd	nd	nd
1,2-Dichlorobenzene	50	nd	nd	nd	nd	nd	nd

\*-Instrument detection limits

Surrogate recoveries							
Dibromofluoromethane	97%	99%	101%	103%	105%	96%	98%
Toluene-d8	103%	108%	104%	110%	109%	102%	104%
1,2-Dichloroethane-d4	90%	91%	89%	91%	90%	96%	94%
4-Bromofluorobenzene	101%	106%	98%	96%	97%	106%	109%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits  
 Acceptable Recovery limits: 70% TO 130%  
 Acceptable RPD limit: 30%

AAL Job Number: A60914-2  
 Client: SCS Engineers  
 Project Manager: Dan Venchiarutti/Greg Helland  
 Client Project Name: Normandy Park Soil Removal  
 Client Project Number: 04205059.00  
 Date received: 09/14/06

Analytical Results		MS	MSD	RPD
8260B/5035, µg/kg	MTH BLK	S-17	S-17	S-17
Matrix	Soil	Soil	Soil	Soil
Date extracted	Reporting	09/14/06	09/14/06	09/14/06
Date analyzed	Limits	09/14/06	09/14/06	09/14/06

Dichlorodifluoromethane	50	nd			
Chloromethane	50	nd			
Vinyl chloride	50	nd			
Bromomethane	50	nd			
Chloroethane	50	nd			
Trichlorofluoromethane	50	nd			
1,1-Dichloroethene	50	nd	91%	86%	6%
Methylene chloride	20	nd			
trans-1,2-Dichloroethene	50	nd			
1,1-Dichloroethane	50	nd			
2,2-Dichloropropane	50	nd			
cis-1,2-Dichloroethene	50	nd			
Chloroform	50	nd			
1,1,1-Trichloroethane	50	nd			
Carbontetrachloride	50	nd			
1,1-Dichloropropene	50	nd			
1,2-Dichloroethane(EDC)	20	nd			
Trichloroethene	20	nd	116%	104%	11%
1,2-Dichloropropane	50	nd			
Dibromomethane	50	nd			
Bromodichloromethane	50	nd			
cis-1,3-Dichloropropene	50	nd			
trans-1,3-Dichloropropene	50	nd			
1,1,2-Trichloroethane	50	nd			
Tetrachloroethene	50	nd			
1,3-Dichloropropane	50	nd			
Dibromochloromethane	20	nd			
1,2-Dibromoethane (EDB)*	5	nd			
Chlorobenzene	50	nd	124%	109%	13%
1,1,1,2-Tetrachloroethane	50	nd			
1,3-Dichlorobenzene	50	nd			
1,4-Dichlorobenzene	50	nd			
1,2-Dichlorobenzene	50	nd			

\*-instrument detection limits

Surrogate recoveries

Dibromofluoromethane	97%	96%	94%
Toluene-d8	103%	101%	104%
1,2-Dichloroethane-d4	90%	95%	97%
4-Bromofluorobenzene	101%	101%	100%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits  
 Acceptable Recovery limits: 70% TO 130%  
 Acceptable RPD limit: 30%



Laboratory Job #: A609142

2821 152 Avenue NE  
Redmond, WA 98052  
(425) 497-0110 fax: (425) 497-8089  
aachemlab@yahoo.com

Client: SCS Engineers  
Project Manager: Dan Venchiarotti / Greg Holland  
Address: 2808 176<sup>th</sup> PINE Redmond WA 98052  
Phone: 425-746-4600 Fax: 425-746-6747

Project Name: Normandy Park Soil Removal  
Project Number: 04205059.00  
Collector: Dan Venchiarotti  
Date of collection: 9/14/06

	Sample ID	Time	Matrix	Container type	Analytes													Notes, comments	# of containers						
					8280 Volatiles	8021B Volatiles	BTEX	BTEX/NWTPH-Gx	NWTPH-Gx	NWTPH-Dx	NWTPH-HCID	8270 PAH	8082 PCBs	8081 Pesticides	RCRA & Metals	Lead									
1	S-13		Soil		X																				
2	S-14				X																				
3	S-15				X																				
4	S-16				X																				
5	S-17		↓		X																				
6																									
7																									
8																									
9																									
10																									
11																									
12																									

Relinquished by:	Date/Time	Received by:	Date/Time
	1:30 pm	Lisa Zhang	1:30 pm 9/14/06
Relinquished by:	Date/Time	Received by:	Date/Time

Sample receipt info: Total # of containers: 17  
Condition (temp, °C) \_\_\_\_\_  
Seals (intact?, Y/N) \_\_\_\_\_  
Comments: \_\_\_\_\_

Turnaround time: Same day   
24 hr   
48 hr   
Standard

## APPENDIX C

# PCE SOIL AND HAZARDOUS WASTE DISPOSAL RECORDS





**Oregon Waste Systems**  
 A Waste Management Company  
 18177 Cedar Springs Lane  
 Arlington, Oregon 97812  
 (541) 454-2030

**No: 622527**

DATE/TIME: \_\_\_\_\_  
 LOAD DATE: \_\_\_\_\_  
 CUSTOMER: Rivers Edge / Griffen  
 PROFILE NUMBER: 6253VB  
 TRUCK NUMBER: 709  
 TRAILER/CONTAINER NUMBER: CWU4 7415  
 SEAL NUMBER: \_\_\_\_\_  
 CUSTOMER INVOICE NO.: \_\_\_\_\_

GROSS WEIGHT: 45400  
 TARE WEIGHT-TRACTOR: \_\_\_\_\_  
 TARE WGT.-TRAILER/CONTAINER: 7780  
 NET WEIGHT: 37620

GATEHOUSE: \_\_\_\_\_  
 DRIVER: [Signature]  
 TRAIN ID: 456608 ORIGIN: OXIS  
 WASTE TYPE: PCE Contained in Soil  
 DISPOSAL: CM DC BU GRID SEGREGATE  
 REMARKS: \_\_\_\_\_  
 HAULER: \_\_\_\_\_



6253VB

WM Columbia Ridge Landfill  
 18177 Cedar Springs Lane  
 Arlington, OR 97812  
 (541)-454-2030

082325

TICKET: 379908  
 DATE: 10/13/2008  
 TIME: 11:58 - 11:58  
 LOAD DATE: 10/09/2008  
 TIP DATE: 10/12/2008

Rivers Edge / Griffen

CUSTOMER: RIVERS EDGE SERVICES  
 PROFILE: 6253VB / RIVERSEGE/GRIFFI  
 TRUCK: 622527  
 ORIGIN: BELL / BELLINGHAM  
 COMMENT:

TRAILER: CWMU7415  
 CONTAINER: CWMU7415

P.O.: 622527  
 GROSS: 45400 LBS  
 TARE: 7780 LBS  
 NET: 37620 LBS  
 MANIFEST:

WASTE	NET/TONS	UNIT
TRANSUSPW / TRANS BY UNIT SPW (ST)	1.00	U
PCSCP / PCS COMINGLE -(PCP)	18.81	T
LOC-U-SPW / LOCAL TRANS BY UNIT SPW	1.00	U

Driver: SARAH MASTRIONA B: ORARLIO1PC

Weighmaster: SARAH MASTRIONA B: ORARLIO1PC



**Oregon Waste Systems**  
 A Waste Management Company  
 18177 Cedar Springs Lane  
 Arlington, Oregon 97812  
 (541) 454-2030

**Nº 622616**

DATE/TIME: \_\_\_\_\_  
 LOAD DATE: \_\_\_\_\_  
 CUSTOMER: Rivers Edge / Griffin  
 PROFILE NUMBER: 6253 VB  
 TRUCK NUMBER: 709  
 TRAILER/CONTAINER NUMBER: CWMU 7249  
 SEAL NUMBER: \_\_\_\_\_  
 CUSTOMER INVOICE NO.: \_\_\_\_\_

GROSS WEIGHT: 40620  
 TARE WEIGHT-TRACTOR: 7780  
 TARE WGT-TRAILER/CONTAINER: \_\_\_\_\_  
 NET WEIGHT: 32840

GATEHOUSE: RP  
 DRIVER: DM  
 TRAIN ID: Uase 09 ORIGIN: OR 957  
 WASTE TYPE: PCP Contained in Soil  
 DISPOSAL: CM DC BU GRID SEGREGATE  
 REMARKS: \_\_\_\_\_

HAULER: \_\_\_\_\_



**082326**

WM Columbia Ridge Landfill  
 18177 Cedar Springs Lane  
 Arlington, OR 97812  
 (541)-454-2030

TICKET: 379909  
 DATE: 10/13/2008  
 TIME: 11:57 - 11:57  
 LOAD DATE: 10/10/2008  
 TIP DATE: 10/12/2008

CUSTOMER: RIVERS EDGE SERVICES  
 PROFILE: 6253VB / RIVERSEDGE/GRIFFI  
 TRUCK: 622616  
 ORIGIN: BELL / BELLINGHAM  
 COMMENT:

TRAILER: CWMU249  
 CONTAINER: CWMU7249

P.O.: 622616  
 GROSS: 40620 LBS  
 TARE: 7780 LBS  
 NET: 32840 LBS  
 MANIFEST:

WASTE	NET/TONS	UNIT
TRANSUSPW / TRANS BY UNIT SPW (ST)	1.00	U
PCSCP / PCS COMINGLE (PCP)	16.42	T
LOC-U-SPW / LOCAL TRANS BY UNIT SPW	1.00	U
DELSPW / DELIVERY SPECIAL WASTE (ST)	1.00	U

Driver: SARAH MASTRIONA B: ORARLIO1PC

Weighmaster: SARAH MASTRIONA B: ORARLIO1PC



**Oregon Waste Systems**  
A Waste Management Company

18177 Cedar Springs Lane  
Arlington, Oregon 97812  
(541) 454-2030

**Nº 622615**

09 2006 15 17 20 00

DATE/TIME:  
LOAD DATE:  
CUSTOMER: Rivers Edge / Griffin  
PROFILE NUMBER: 6253VB  
TRUCK NUMBER: 109  
TRAILER/CONTAINER NUMBER: CWMU 7131  
SEAL NUMBER:  
CUSTOMER INVOICE NO.:

GROSS WEIGHT: 41860  
TARE WEIGHT-TRACTOR: 7780  
TARE WGT.-TRAILER/CONTAINER:  
NET WEIGHT: 34080

GATEHOUSE: KL  
DRIVER: JAM  
TRAIN ID: Useful 9 ORIGIN: 07957  
WASTE TYPE: pete contained in soil  
DISPOSAL: CM DC BU GRID SEGREGATE  
REMARKS:

HAULER:

902-ARLINGTON

WM Columbia Ridge Landfill  
18177 Cedar Springs Lane  
Arlington, OR 97812  
(541)-454-2030

TICKET: 379910  
DATE: 10/13/2006  
TIME: 11:58 - 11:58  
LOAD DATE: 10/10/2006  
TIP DATE: 10/12/2006

082327

CUSTOMER: RIVERS EDGE SERVICES  
PROFILE: 6253VB / RIVERSEDGE/GRIFFI  
TRUCK: 622615  
ORIGIN: BELL / BELLINGHAM  
COMMENT:

TRAILER: CWMU7131  
CONTAINER: CWMU7131

P.O.: 622615  
GROSS: 41860 LBS  
TARE: 7780 LBS  
NET: 34080 LBS

MANIFEST:

WASTE	NET/TONS	UNIT
TRANSUSPW / TRANS BY UNIT SPW (ST	1.00	U
PCSCP / PCS COMINGLE -(PCP)	17.04	T
LOC-U-SPW / LOCAL TRANS BY UNIT SPW	1.00	U
DELSPW / DELIVERY SPECIAL WASTE (ST	1.00	U

Driver: SARAH MASTRIONA B: ORARLI01PC

Weighmaster: SARAH MASTRIONA B: ORARLI01PC

WM Columbia Ridge Landfill  
18177 Cedar Springs Lane  
Arlington, OR 97812  
(541)-454-2030

TICKET: 380508 084342  
DATE: 10/17/2006  
TIME: 09:51 - 09:51  
LOAD DATE: 10/09/2006  
TIP DATE: 10/12/2006

CUSTOMER: RIVERS EDGE SERVICES  
PROFILE: 6253VB / RIVERSEDGE/GRIFFI  
TRUCK: DEL TRAILER:  
ORIGIN: BELL / BELLINGHAM CONTAINER: 7415  
COMMENT: .Drop of Cont charge for ticket 379908

P.O.: 379908  
GROSS: 0 LBS  
TARE: 0 LBS  
NET: 0 LBS  
MANIFEST: DELIVERY

WASTE	NET/TONS	UNIT
DELSPW / DELIVERY SPECIAL WASTE (ST	1.00	U

Driver: \_\_\_\_\_  
IN: JULIE VALDEZ                      B: ORARLI01PC

Weighmaster: \_\_\_\_\_  
OUT: JULIE VALDEZ                      B: ORARLI01PC

kweys cage / riffen 6253VB



Oregon Waste Systems  
A Waste Management Company  
18177 Cedar Springs Lane  
Arlington, Oregon 97812  
(541) 454-2030

Nº 622780

06 OCT 20 PML:45

DATE/TIME:  
LOAD DATE:  
CUSTOMER: Rivers Edge / Riffen  
PROFILE NUMBER: 6253VB  
TRUCK NUMBER: 307323  
TRAILER/CONTAINER NUMBER: CWMU 7132  
SEAL NUMBER:  
CUSTOMER INVOICE NO.:



GROSS WEIGHT: 31160  
TARE WEIGHT-TRACTOR:  
TARE WGT-TRAILER/CONTAINER: 7780  
NET WEIGHT: 23380

GATEHOUSE:  
DRIVER: [Signature]  
TRAIN ID: Large 11 ORIGIN: 622780  
WASTE TYPE: PCF contained in Soil  
DISPOSAL: CM DC BU GRID SEGREGATE  
REMARKS:

HAULER:

083123

WM Columbia Ridge Landfill  
18177 Cedar Springs Lane  
Arlington, OR 97812  
(541)-454-2030

TICKET: 382313  
DATE: 10/23/2006  
TIME: 09:52 - 09:53  
LOAD DATE: 10/12/2006  
TIP DATE: 10/20/2006

CUSTOMER: RIVERS EDGE SERVICES  
PROFILE: 6253VB / RIVERSEGE/GRIFFI  
TRUCK: 622780 TRAILER: CWMU7132  
ORIGIN: BELL / BELLINGHAM CONTAINER: CWMU7132  
COMMENT:

F.O.: 622780  
GROSS: 31160 LBS  
TARE: 7780 LBS  
NET: 23380 LBS  
MANIFEST:

WASTE	NET/TONS	UNIT
TRANSUFPW / TRANS BY UNIT SPW (ST)	1.00	U
PCSCP / PCS COMINGLE -(PCP)	11.69	T
LOC-U-SPW / LOCAL TRANS BY UNIT SPW	1.00	U

Driver: IN: SARAH MASTRICONA E: CRARLI01PC

Weighmaster: OUT: SARAH MASTRICONA E: CRARLI01PC



**Oregon Waste Systems**  
 A Waste Management Company  
 18177 Cedar Springs Lane  
 Arlington, Oregon 97812  
 (541) 454-2030

Nº 622779

06 DEC 23 AM 7:53

DATE/TIME: \_\_\_\_\_  
 LOAD DATE: \_\_\_\_\_  
 CUSTOMER: Rivers Edge / Griffen  
 PROFILE NUMBER: 6253VB  
 TRUCK NUMBER: 709  
 TRAILER/CONTAINER NUMBER: CWMU 7116  
 SEAL NUMBER: \_\_\_\_\_  
 CUSTOMER INVOICE NO.: \_\_\_\_\_

GROSS WEIGHT: 42740  
 TARE WEIGHT-TRACTOR: \_\_\_\_\_  
 TARE WGT-TRAILER/CONTAINER: 7780  
 NET WEIGHT: 34960

GATEHOUSE: \_\_\_\_\_  
 DRIVER: KR Dan

TRAIN ID: 11 ORIGIN: 07957  
 WASTE TYPE: PCF Contained in Soil  
 DISPOSAL: CM DC BU GRID SEGREGATE

REMARKS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 HAULER: \_\_\_\_\_



083190

WM Columbia Ridge Landfill  
 18177 Cedar Springs Lane  
 Arlington, OR 97812  
 (541)-454-2030

TICKET: 382537  
 DATE: 10/24/2006  
 TIME: 13:19 - 13:19  
 LOAD DATE: 10/12/2006  
 TIP DATE: 10/23/2006

CUSTOMER: RIVERS EDGE SERVICES  
 PROFILE: 6253VB / RIVERSEDGE/GRIFFI  
 TRUCK: 622779 TRAILER: CWMU7116  
 ORIGIN: BELL / BELLINGHAM CONTAINER: CWMU7116  
 COMMENT: \_\_\_\_\_

P.O.: 622779  
 GROSS: 42740 LBS  
 TARE: 7780 LBS  
 NET: 34960 LBS  
 MANIFEST:

WASTE	NET/TONS	UNIT
TRANSUSPW / TRANS BY UNIT SPW (ST)	1.00	U
PCSCEP / PCS COMINGLE. -(PCP)	17.48	T
LCC-U-SPW / LOCAL TRANS BY UNIT SPW	1.00	U

Driver: \_\_\_\_\_  
 IN: SARAH MASTRIONA E: CHARLIE@PC

Weighmaster: \_\_\_\_\_  
 OUT: SARAH MASTRIONA B: CHARLIE@PC

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

**UNIFORM HAZARDOUS WASTE MANIFEST**  
 1. Generator ID Number: WAH000020438  
 2. Page 1 of 2  
 3. Emergency Response Phone: +1 800-474-9302  
 4. Manifest Tracking Number: 001822726 JJK  
 Form Approved, OMB No. 2050-0039

5. Generator's Name and Mailing Address: GRIFFIN JENSEN DBA NORMANDY 1945 1st Ave South NORMANDY PARK, WA 98148  
 Generator's Phone: (725) 748-4800  
 U.S. EPA ID Number: WAD988516829

6. Transporter 1 Company Name: ENVIRO CON + TRUCKING, INC.  
 U.S. EPA ID Number: WAD988516829

7. Transporter 2 Company Name: UNION PACIFIC RAILROAD  
 U.S. EPA ID Number: INED001792910

8. Designated Facility Name and Site Address: CUMMINS INC 17629 Cedar Springs Lane ANGSTON, OR 97812-9708  
 Facility's Phone: (541) 454-2643 (541) 454-52353  
 U.S. EPA ID Number: ORD089452353

9a. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, HM# and Packing Group (if any))  
 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, HM# and Packing Group (if any))

10. Containers	No.	Type	11. Total		12. Unit	13. Waste Codes
			Quantity	Weight		
1	001	CM	4200	33500	P	D039
2						
3						
4						

14. Special Handling Instructions and Additional Information: V06832 Haz Waste Solid PCB Solids Bag #171 (20-100 lbs) Container # CWMU7091  
 U4 33500, U6, UBT

15. GENERATOR'S/OFFICER'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations, if export shipment and I am the Primary Exporter. I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.  
 I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.  
 Generator's/Officer's Printed Name: Dave Bond  
 Signature: [Signature]  
 Date: 10/13/06

16. International Shipment:  Import to U.S.  Export from U.S.  
 Date leaving U.S.: 10/13/06

17. Transporter Acknowledgment of Receipt of Materials: Transporter 1 Printed/Typed Name: JESSIE BURT  
 Signature: [Signature]  
 Date: 10/13/06

18. Discrepancy: K12 SATHS

19. Discrepancy: [Blank]

19a. Discrepancy Indication Space: Quantity: 2000, Type: Solid, Safety Supervisor: Mark St. John, 5011-6-07

19b. Alternate Facility (or Generator): U.S. EPA ID Number: [Blank]

19c. Signature of Alternate Facility (or Generator): [Blank]

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems): H132

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest, except as noted in Item 18a: [Signature]  
 Printed/Typed Name: [Blank]

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED): [Blank]

DESIGNATED FACILITY

TRANSPORTER

INTL

GENERATOR

001822726 JJK





**WASTE MANAGEMENT**

17629 Cedar Springs Lane  
Arlington, OR 97812  
(541) 454-2643

GRIFFIN & JENSEN DBA NORMANDY  
WAH000020438  
19945 1ST AVE S  
NORMANDY PARK WA 98148-2403

**CERTIFICATE OF DISPOSAL**

Chemical Waste Management of the Northwest, Inc. has received the following waste material:

GENERATOR:	GRIFFIN & JENSEN DBA NORMANDY
MANIFEST #:	001822726JJK
CWM TRACKING ID:	386797-01
PROFILE #:	VB6832
LINE ITEM:	9b.1
QUANTITY:	1 CM
RECEIVED DATE:	10/17/06
DISPOSAL PROCESS(ES):	LANDFILL
FINAL DISPOSAL LOCATION:	LANDFILL 14
DISPOSAL DATE:	10/18/06

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste material was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

CWMNW RECORDS DEPARTMENT

Date: 11/08/06