PARTNER
Engineering and Science, Inc.®

PHASE II SUBSURFACE INVESTIGATION REPORT

Cascade Village
16950-17060 116th Avenue Southeast
Renton, Washington 98058

October 13, 2015
Partner Project Number: 15-139176.3

Prepared for:

City of Renton
1055 South Grady Way
Renton, Washington 98057

Engineers who understand your business

PARTNER
Engineering and Science, Inc.

October 13, 2015

Mr. Lawrence J. Warren
City Attorney
City of Renton
1055 South Grady Way
Renton, Washington 98057

Subject: Phase II Subsurface Investigation Report
Cascade Village
16950-17060 116th Avenue Southeast
Renton, Washington 98058
Partner Project Number: 15-139176.3

Dear Mr. Warren:

Partner Engineering and Science, Inc. (Partner) is pleased to provide the results of the assessment performed on the above-referenced property. The following report describes the field activities, methods, and findings of the Phase II Subsurface Investigation conducted at the above-referenced property.

This assessment was performed utilizing methods and procedures consistent with good commercial or customary practices designed to conform to acceptable industry standards. The independent conclusions represent Partner's best professional judgment based upon existing conditions and the information and data available to us during the course of this assignment.

We appreciate the opportunity to provide these services. If you have any questions concerning this report, or if we can assist you in any other matter, please contact the undersigned at (310) 615-4500.

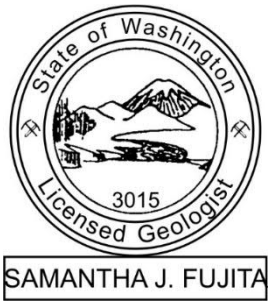
Sincerely,

Partner Engineering and Science, Inc.

Hunter White
Project Assessor

Eric English
Project Manager

Samantha J. Fujita, PG
Senior Reviewer



Summer Gell
Relationship Manger

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ATTACHMENTS

1.0 INTRODUCTION

1.1 Purpose

The purpose of the investigation was to investigate the potential impact of volatile organic compounds (VOCs) to groundwater as a consequence of a release or releases from the former dry cleaning facility. The City of Renton provided project authorization of Partner Proposal Number P15-139176.3.

1.2 Limitations

This report presents a summary of work conducted by Partner. The work includes observations of site conditions encountered and the analytical results provided by an independent third party laboratory of samples collected during the course of the project. The number and location of samples were selected to provide the required information. However, it cannot be assumed that the limited available data are representative of subsurface conditions in areas not sampled.

Conclusions and/or recommendations are based on the observations, laboratory analyses, and the governing regulations. Conclusions and/or recommendations beyond those stated and reported herein should not be inferred from this document.

Partner warrants that the environmental consulting services contained herein were accomplished in accordance with generally-accepted practices in the environmental engineering, geology, and hydrogeology fields that existed at the time and location of work. No other warranties are implied or expressed.

1.3 User Reliance

Partner was engaged by the City of Renton (the Addressee), or their authorized representative, to perform this assessment. The engagement agreement specifically states the scope and purpose of the assessment, as well as the contractual obligations and limitations of both parties. This report and the information therein, are for the exclusive use of the Addressee. This report has no other purpose and may not be relied upon, or used, by any other person or entity without the written consent of Partner. Third parties that obtain this report, or the information therein, shall have no rights of recourse or recovery against Partner, its officers, employees, vendors, successors or assigns. Any such unauthorized user shall be responsible to protect, indemnify and hold Partner, the Addressee and their respective officers, employees, vendors, successors and assigns harmless from any and all claims, damages, losses, liabilities, expenses (including reasonable attorneys' fees) and costs attributable to such use. Unauthorized use of this report shall constitute acceptance of, and commitment to, these responsibilities, which shall be irrevocable and shall apply regardless of the cause of action or legal theory pled or asserted.

This report has been completed under specific Terms and Conditions relating to scope, relying parties, limitations of liability, indemnification, dispute resolution, and other factors relevant to any reliance on this report. Any parties relying on this report do so having accepted the Terms and Conditions for which this report was completed.

2.0 SITE BACKGROUND

2.1 Site Description

The subject property consists of one parcel of land totaling approximately 13.63 acres located on the east side of 116th Avenue Southeast and the southwest side of 119th Street Southeast within a mixed residential and commercial area of King County, Washington. The subject property is currently developed with five structures totaling approximately 102,000 square feet, which were constructed in between 1959 and 1985 and are occupied by Cascade Village for commercial and retail use. Current tenants include Barber Shop, Pantel Tactical, Iglesia Pentecostal Bethel, Khalsa Gurmat School, Uhaul, and Only a Dollar Plus. In addition to the structures, the subject property is also improved with asphalt-paved parking areas and associated landscaping.

The subject property is bound by baseball fields to the north, single-family residences and a learning center to the east, a commercial shopping center and apartments to the south, and single-family residences and apartments to the west. Refer to Figure 1 for a site plan showing site features and surrounding properties.

2.2 Site History

Partner completed a Phase I Environmental Site Assessment (Phase I) Report, dated May 22, 2015, prepared on behalf of AMERCO Real Estate Company.

According to available historical sources, the subject property was formerly undeveloped as early as 1924; and developed with the current structures in 1959, 1960, 1961, 1985, and 1986. Tenants on the subject property have included various retail and commercial tenants (1959-Present).

During the onsite reconnaissance, Partner observed a vacant tenant space (17028 116th Avenue Southeast) that was a former dry cleaning facility. The dry cleaning facility, Cascade Cleaner, occupied the subject property from at least 1977 until approximately 2010. According to a prior report prepared by Surveys Inc. in 2007, separator water and spent solvents were stored in 30-gallon drums and recycled through a licensed hazardous waste disposal company. The drums and solvent were stored on a secondary spill containment pallet during the 2007 assessment. Since the 1930s, dry cleaning operations have typically used chlorinated solvents, particularly tetrachloroethene (PCE), during the dry cleaning process. These solvents, even when properly stored and disposed of, can be released from these facilities in small, frequent releases through floor drains, cracked concrete, and sewer systems. Chlorinated solvents are highly mobile chemicals that can easily accumulate in soil and migrate to groundwater beneath a facility. It should be noted that the dry cleaner operated during a time of little to no regulatory oversight. In 2008, a pre-existing monitoring well located presumably down-gradient of the dry cleaning facility was sampled for VOCs. Based on Partner's site reconnaissance, the monitoring well appears to be within approximately 20 feet of the entrance to the former dry cleaning facility. While the sample analyzed was below the reportable limit for VOCs, a recommendation to conduct additional assessments was noted to evaluate whether impacts to soil had occurred. Based on the nature of chemicals used, the long duration of occupancy, and the lack of a subsurface investigation, the presence of the former dry cleaning facility represented a recognized environmental condition (REC).

Partner completed a Phase II Environmental Site Assessment (Phase II) Report, dated July 22, 2015, prepared on behalf of AMERCO Real Estate Company. Three borings were advanced within the structure for the collection of soil and soil gas samples. Soil gas samples contained concentrations of trans-1,2,-dichloroethene (DCE), cis-1,2-DCE, PCE, and trichloroethene (TCE) at levels exceeding Washington Department of Ecology (DOE) regulatory guidelines. Soil samples contained concentrations of PCE and TCE at levels exceeding DOE regulatory guidelines. Drilling refusal was encountered at depths ranging from 5.5 to seven feet below ground surface (bgs). Groundwater was not encountered.

Partner was requested by the City of Renton to conduct an additional investigation with the objective of collecting groundwater samples.

2.3 Geology and Hydrogeology

Based on a review of the United States Geological Survey (USGS) Renton, Washington Quadrangle topographic map, the subject property is situated at an elevation approximately 450 feet above mean sea level, and the local topography is sloping gently to the southeast. Refer to Figure 2 for a topographic map of the site vicinity.

The subject property lies in the Puget Sound Lowland, a series of north to south trending valleys ranging from British Columbia to Eugene, Oregon and bordered by the Cascade Range and Olympic Mountains. Surfical soils in the Puget Sound Lowland are mainly formed in glacial drift deposits from the last period of glaciation, about 10-14,000 years ago. Underlying the young glacial deposits is sediment deposited during previous or interglacial periods.

Based on borings advanced during this investigation, the underlying subsurface consists predominantly of gravel and sand from the ground surface to approximately 12 feet bgs, at which depth glacial till was encountered.

Groundwater was not encountered in borings advanced during this investigation. Groundwater was encountered at 13 feet bgs in the existing monitor well MW-5, but is believed to be part of a perched water zone. Groundwater is anticipated to regionally be encountered between 50 and 60 feet bgs with groundwater flow to the southeast. However, due to recent drought conditions in the region the depth to groundwater may have increased.

Refer to Appendix A for boring logs from this investigation.

3.0 FIELD ACTIVITIES

Refer to Table 1 for a summary of the borings, sampling schedule and laboratory analyses for this investigation. The scope of the Phase II Subsurface Investigation included the advancement of three borings (B4 through B6) for the collection of representative soil and/or groundwater samples.

3.1 Preparatory Activities

Prior to the initiation of fieldwork, Partner completed the following activities.

3.1.1 Utility Clearance

Partner delineated the work area with white spray paint and notified Washington One-Call to clear public utility lines as required by law at least 48 hours prior to drilling activities. Washington One-Call issued ticket number 15288038 for the project.

3.1.2 Health and Safety Plan

Partner reviewed the site-specific Health and Safety Plan with on-site personnel involved in the project prior to the commencement of drilling activities.

3.2 Drilling Equipment

On September 29, 2015, Partner subcontracted with Environmental Services Network Northwest (ESN-NW) to provide and operate drilling equipment. ESN-NW, under the direction of Partner, advanced borings B4 through B6 with a truck-mounted Geoprobe Model 9500 direct push rig. Sampling equipment was decontaminated between sample intervals and boring locations to prevent cross-contamination.

3.3 Boring Locations

Borings B4 through B6 were advanced to the southwest, north, and south exterior of the former on-site dry cleaning facility, respectively.

Refer to Figure 3 for a map indicating boring locations.

3.4 Soil Sampling

Each boring was overlain by asphalt, which was penetrated using a punch bit attachment advanced by the direct push drill rig. Borings B4 and B5 were advanced to refusal at a depth of 12 feet bgs. Boring B6 was advanced to refusal at a depth of nine feet bgs.

Soil samples were collected using a five-foot long by 2.25-inch diameter MacroCore sampler with a four-foot long acetate liner, which was advanced by the direct push drill rig using five-foot long by 1.5-inch diameter drill rods. The sampler was driven into the subsurface to allow undisturbed soil to enter the open MacroCore barrel and retrieved in four-foot intervals to recover the soil-filled liners.

A lengthwise section of each acetate liner was removed with a splitting tool to expose the soil. The soil column was visually inspected for discoloration, monitored for odors, and classified in accordance with the Unified Soil Classification System (USCS). Select intervals were placed in sealable plastic bags and field-screened with a photoionization detector (PID) calibrated to isobutylene. PID readings were detected on

multiple soil samples, with the highest detection of 122.7 being observed in sample B4-12. Refer to the boring logs in Appendix A for specific PID observations.

Soil depths selected for laboratory analysis were sampled directly from the liners using a disposable plastic syringe and retained in two methanol-preserved volatile organics analysis (VOA) vials in accordance with United States Environmental Protection Agency (EPA) Method 5035 sampling protocol. A sample was also collected by transferring soil into a laboratory-supplied, four-ounce, wide-mouth, unpreserved glass jar, which was sealed with a threaded, Teflon-lined lid. The jars were filled with soil to capacity to minimize headspace and reduce the potential for volatilization. The jars and VOA vials were labeled for identification and stored in an iced cooler.

Soil samples were collected from borings B4 and B5 at five, nine, and 12 feet bgs and from boring B6 at five and nine feet bgs.

3.5 Groundwater Sampling

The onsite groundwater monitoring well, MW-5, was purged and sampled using a disposable bailer. A sample was collected from the bailer and retained in two hydrochloric acid-preserved VOA vials. The VOA vials were labeled for identification and stored in an iced cooler.

4.0 LABORATORY ANALYSIS

4.1 Laboratory Analysis

Partner collected eight soil samples and one groundwater sample on September 29, 2015, which were transported in an iced cooler under proper chain-of-custody protocol to a state-certified laboratory ESN-NW, a state-certified laboratory [Washington Department of Ecology Environmental Laboratory Accreditation Program certificate number C076] in the City of Olympia, Washington, for analysis on the same day. Each soil and groundwater sample was analyzed for VOCs in accordance with EPA Method 8260.

4.2 Laboratory Analytical Results

Laboratory analytical results are included in Appendix B and discussed below.

4.2.1 Soil Sample Analytical Results

PCE was detected in soil samples B4-5, B4-9, B4-12, B6-5, and B6-9 at concentrations exceeding the laboratory reporting limit (RL) of 0.02 milligrams per kilogram (mg/kg).

TCE was detected in soil samples B4-9 at a concentration that exceeded the laboratory RL of 0.02 mg/kg.

Refer to Table 2 for a summary of the soil sample VOCs laboratory analysis results.

4.2.2 Groundwater Sample Analytical Results

The groundwater sample MW-5 did not contain detectable concentrations of VOCs above the laboratory RLs.

Refer to Table 3 for a summary of the groundwater sample VOC laboratory results.

5.0 DISCUSSION AND CONCLUSIONS

5.1 Regulatory Agency Guidance

The DOE promulgated the Model Toxics Control Act (MTCA) Cleanup Regulation (Chapter 173-340 of the Washington Administrative Code [WAC]) to establish administrative processes and standards for identifying, investigating, and cleaning up facilities where there has been a release or threatened release of a hazardous substance or substances that may pose a threat to human health and/or the environment. The MTCA Cleanup Regulation provides Method A for establishing cleanup levels for groundwater for unrestricted land use.

5.2 Discussion

PCE was detected in soil samples B4-5, B4-9, B4-12, B6-5, and B6-9 at concentrations exceeding the applicable MTCA Method A soil cleanup level of 0.05 mg/kg. The highest concentration of PCE was detected at 78 mg/kg in sample B4-12. Boring B4 was located near the back door of the former onsite dry cleaning facility. Based on the presence of chlorinated solvents above DOE cleanup levels in soil, a release has occurred onsite.

5.3 Summary and Conclusions

Partner conducted a Phase II Subsurface Investigation at the subject property to investigate the potential impact of VOCs to soil and/or groundwater as a consequence of a release or releases from the former on-site dry cleaning facility. The scope of the Phase II Subsurface Investigation included the advancement of three soil borings and the collection of one groundwater sample from the existing onsite monitoring well. Eight soil samples and one groundwater sample were analyzed for VOCs.

Subsurface lithology encountered in the upper 12 feet bgs consisted of sand and gravel underlain by glacial till. Drilling refusal was encountered at 12 feet bgs in B4 and B5 and at nine feet bgs in B6. Groundwater was not reached in any of the soil borings. Groundwater was encountered at a depth of 13 feet bgs in MW-5, but is believed to be a perched water zone, since regional groundwater levels are between 50 and 60 feet bgs.

Based on field observations and analysis of soil and groundwater samples, there is evidence that soil is impacted with chlorinated solvents from the former on-site dry cleaning facility. Partner recommends further investigation to evaluate the possibility of groundwater impacts on the subject property.

TABLES

Table 1: Summary of Investigation Scope
16950-17060 116th Avenue Southeast
Renton, Washington 98058
Partner Project Number 15-139176.3
October, 2015

Boring Identification	Location	Terminal Depth (feet bgs)	Matrix Sampled	Sampling Depths* (feet bgs)	Target Analytes
B4	Exterior; southwest of former dry cleaning facility	12**	Soil	5, 9, 12	VOCs
B5	Exterior; northeast of former dry cleaning facility	12**	Soil	5, 9, 12	VOCs
B6	Exterior; southwest of former dry cleaning facility	9**	Soil	5, 9	VOCs
MW-5	Exterior; northeast of former dry cleaning facility	NA	Groundwater	13	VOCs

Notes:

*Depths in bold analyzed for for volatile organic compounds (VOCs) in accordance with United States Environmental Protection Agency (EPA) Methods 8260B (soil) or TO-15 (soil gas).

**Refusal encountered at the terminal depth

bgs = below ground surface

UST = underground storage tank

Table 2: Soil Sample VOCs Laboratory Results
16950-17060 116th Avenue Southeast
Renton, Washington 98058
Partner Project Number 15-139176.3
October 2015

EPA Method	VOCs via 8260B								
Units	(mg/kg)								
Analyte	MTCA Method A	B4-5	B4-9	B4-12	B5-5	B5-9	B5-12	B6-5	B6-9
Vinyl Chloride	0.24	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	<0.02
trans-1,2,-Dichloroethene	1,600	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
cis-1,2-Dichloroethene	160	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Tetrachloroethene (PCE)	0.05	6.7	14	78	< 0.02	< 0.02	< 0.02	0.06	0.19
Trichloroethene (TCE)	0.03	< 0.02	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Other VOCs	NA	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

VOCs = volatile organic compounds

EPA = United States Environmental Protection Agency

mg/kg = miligrams per kilogram

Method A= Soil cleanup levels for unrestricted land use (Washington State Department of Ecology, Model Toxics Control Act-November 2007)

< = not detected above indicated laboratory reporting limit (RL)

ND = not detected above laboratory RLs

NA = not applicable

Highlighted values exceed the regulatory guideline

Table 3: Groundwater Sample VOCs Laboratory Results
16950-17060 116th Avenue Southeast
Renton, Washington 98058
Partner Project Number 15-139176.3
October 2015

EPA Method	VOCs via 8260B	
Units	(µg/L)	
Analyte	MTCA Method A	MW-5
Benzene	5	< 1.0
Toluene	1,000	< 1.0
Ethylbenzene	700	< 1.0
Xylenes	1,000	< 3.0
PCE	5	< 1.0
TCE	5	< 1.0
Other VOCs	NA	ND

Notes:

VOCs = volatile organic compounds

EPA = United States Environmental Protection Agency

µg/L = micrograms per liter

Method A= Soil cleanup levels for unrestricted land use (Washington State Department of Ecology, Model Toxics Control Act-November 2007)

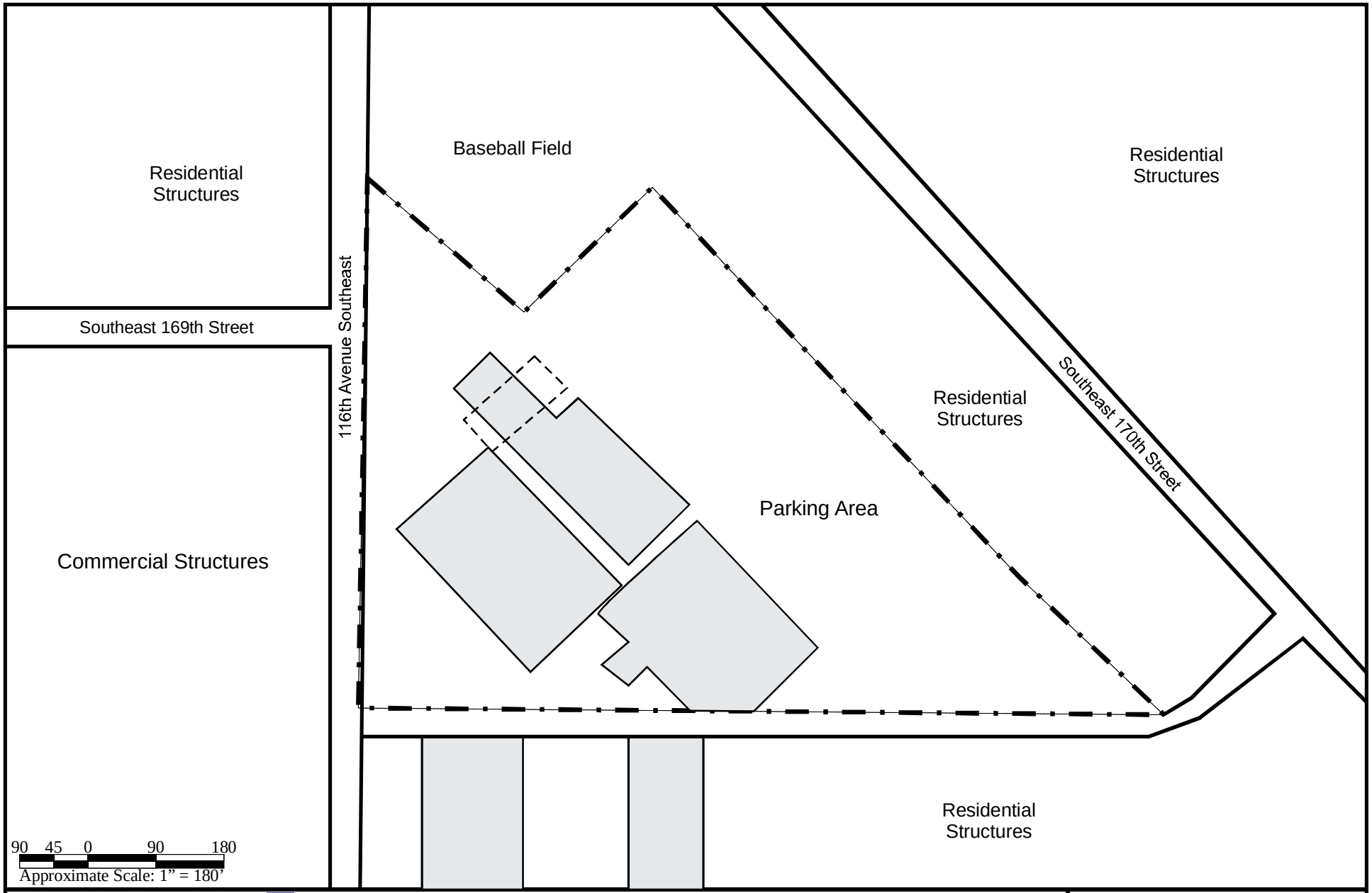
< = not detected above indicated laboratory reporting limit (RL)

ND = not detected above laboratory RLs

NA = not applicable

FIGURES

PARTNER



Legend

Subject Site

N

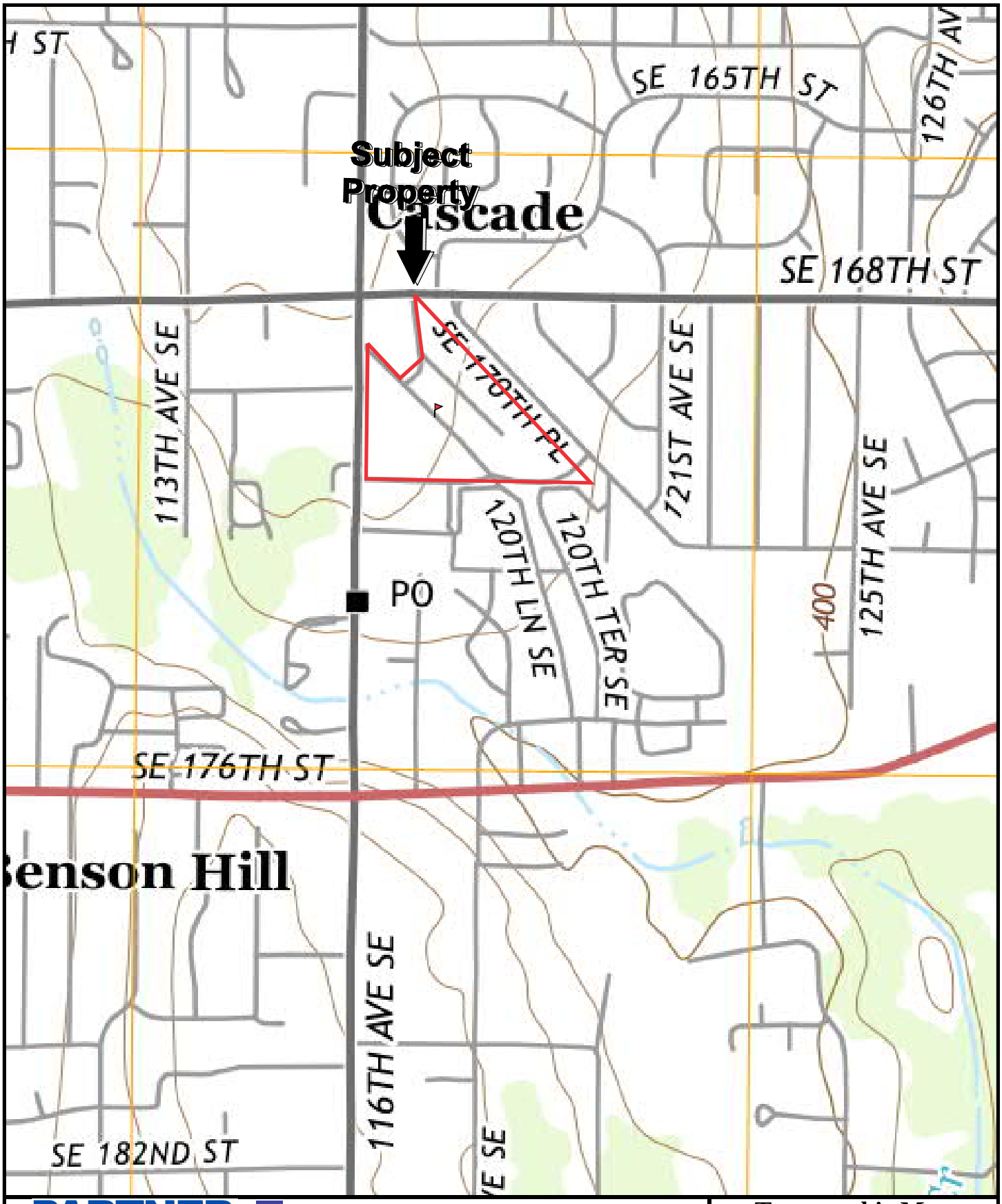
PARTNER
Engineering and Science, Inc.
2154 Torrance Boulevard, Suite 200
Torrance, California 90501

Project Number: 15-139176.3

Site Plan

Figure	Prepared By	Date
1	E. Englehart	October 2015

16910-17062 116th Avenue Southeast
Renton, Washington 98058



PARTNER
Engineering and Science, Inc.
2154 Torrance Boulevard, Suite 200
Torrance, California 90501

Project Number: 15-139176.3

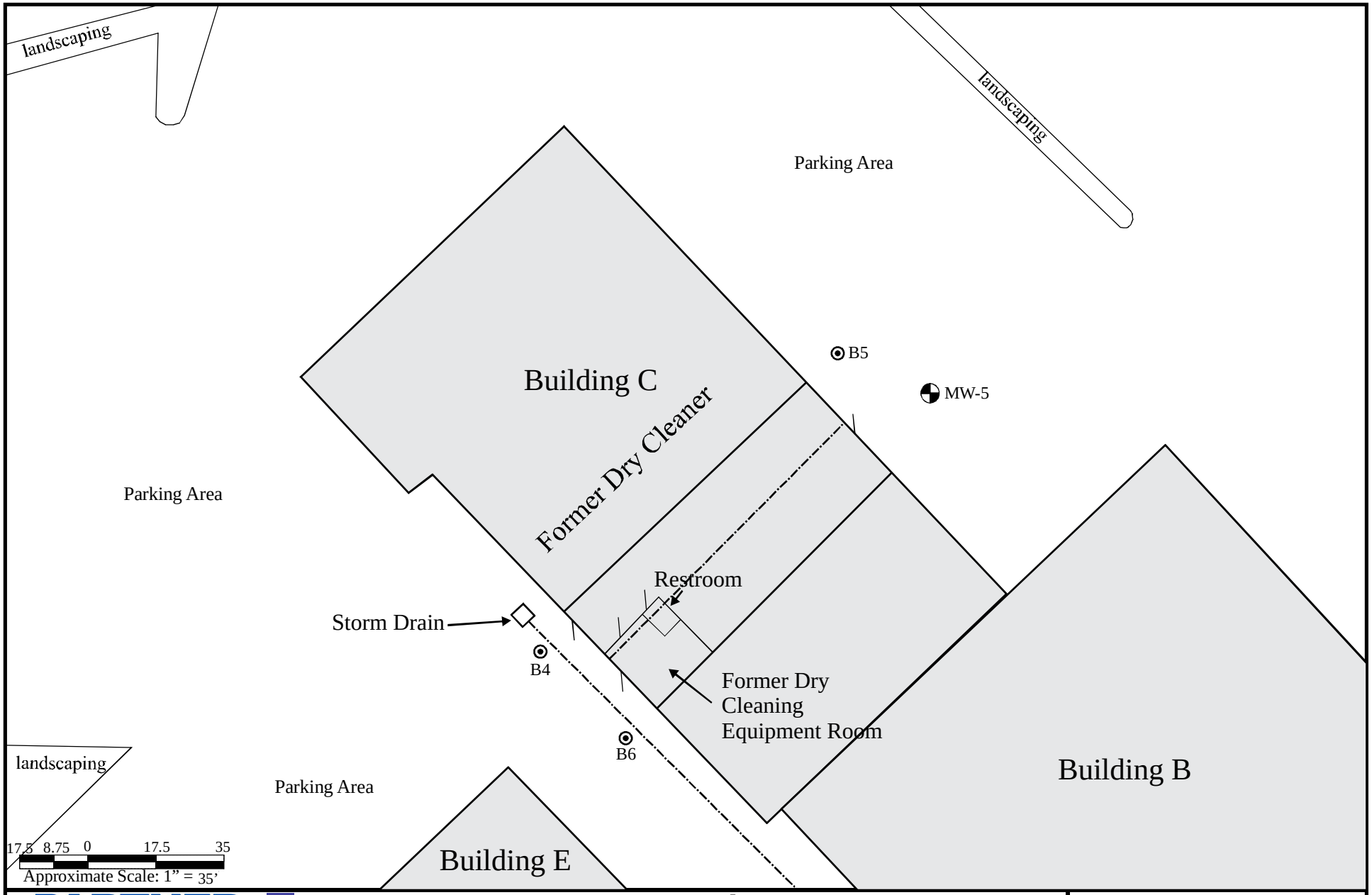
N

USGS Renton, WA Quadrangle
Version: 2014

Topographic Map

Figure	Prepared By	Date
2	H. White	October 2015

16950-17060 116th Avenue Southeast
Renton, Washington 98058



Legend

Sewer Line

Boring Location

Monitoring Well

N

PARTNER
Engineering and Science, Inc.
2154 Torrance Boulevard, Suite 200
Torrance, California 90501

Project Number: 15-139176.3

Sample Location Map

Figure	Prepared By	Date
3	H. White	October 2015

16950-17060 116th Avenue Southeast
Renton, Washington 98058

APPENDIX A: BORING LOGS

PARTNER

Boring Number:	B4				Page 1 of 1
Location:	Exterior; South of dry cleaning facility			Date Started:	9/29/2015
Site Address:	16952-17060 116th Avenue Southeast			Date Completed:	9/29/2015
	Renton, Washington 98058			Depth to Groundwater:	N/A
Project Number:	15-139176.3			Field Technician:	H. White
Drill Rig Type:	Direct-Push; Geoprobe 7800			Partner Engineering and Science	
Sampling Equipment:	Acetate Liners			2154 Torrance Boulevard, Suite 200	
Borehole Diameter:	2.25-inches			Torrance, California 90501	

Depth	Sample	PID	USCS	Description	Notes
1					6-inches of asphalt at surface
2					
3		9.8	SP	0.5'-5.0' Brown medium-fine SAND, some fine Gravel; Moist.	
4					
5	B4-5				
6					
7					
8		5.9	SM	5.0'-9.0' Brown Silty SAND, some fine Gravel; Dry.	
9	B4-9				
10					
11		122.7	GP/SP	9.0'-12.0' Dark brown GRAVEL and SAND; Dense; Dry.	
12	B4-12				
13					Boring refusal at 12 feet below ground surface (bgs). Borehole was backfilled with bentonite chips upon completion of sampling.
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Boring Number:	B5				Page 1 of 1
Location:	Exterior; North of dry cleaning facility			Date Started:	9/29/2015
Site Address:	16952-17060 116th Avenue Southeast			Date Completed:	9/29/2015
	Renton, Washington 98058			Depth to Groundwater:	N/A
Project Number:	15-139176.3			Field Technician:	H. White
Drill Rig Type:	Direct-Push; Geoprobe 7800			Partner Engineering and Science	
Sampling Equipment:	Acetate Liners			2154 Torrance Boulevard, Suite 200	
Borehole Diameter:	2.25-inches			Torrance, California 90501	

Depth	Sample	PID	USCS	Description	Notes
1			GP	0.5'-1.5' Dark brown Sandy GRAVEL; Dry.	6-inches of asphalt at surface
2			SP	1.5'-2.0' Gray medium-fine SAND; Dry.	
3		1.2			
4			SM	2.0'-5.0' Gray Silty SAND, some fine Gravel; Dry.	
5	B5-5				
6					
7		0.0	SP	5.0'-9.0' Brown medium-fine SAND, some fine Gravel, little Silt; Dense; Dry.	
8					
9	B5-9				
10			CL	9.0'-10.5' Dark brown Silty CLAY, little fine Sand; Dry.	
11		0.0			
12	B5-12		GP/SP	10.5'-12.0' Brown GRAVEL and SAND; Dry.	
13					Boring refusal at 12 feet below ground surface (bgs). Borehole was backfilled with bentonite chips upon completion of sampling.
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Boring Number:	B6				Page 1 of 1
Location:	Exterior; South of dry cleaning facility			Date Started:	9/29/2015
Site Address:	16952-17060 116th Avenue Southeast			Date Completed:	9/29/2015
	Renton, Washington 98058			Depth to Groundwater:	N/A
Project Number:	15-139176.3			Field Technician:	H. White
Drill Rig Type:	Direct-Push; Geoprobe 7800			Partner Engineering and Science	
Sampling Equipment:	Acetate Liners			2154 Torrance Boulevard, Suite 200	
Borehole Diameter:	2.25-inches			Torrance, California 90501	

Depth	Sample	PID	USCS	Description	Notes
1					6-inches of asphalt at surface
2					
3		0.9	SP	0.5'-5.0' Brown medium-fine SAND, little fine Gravel, little silt; Dense; Dry.	
4					
5	B6-5				
6			SP	5.0'-5.5' Gray medium-fine SAND; Dry.	
7		0.0			
8			GP/SP	5.5'-9.0' Brown GRAVEL and SAND; Dense; Dry.	
9	B6-9				
10					Boring refusal at 9 feet below ground surface (bgs). Borehole was backfilled with bentonite chips upon completion of sampling.
11					
12					
13					
14					
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16					
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25					

APPENDIX B: LABORATORY ANALYTICAL REPORTS

PARTNER

ESN NORTHWEST, INC. | Environmental Services Network

CHAIN-OF-CUSTODY RECORD

CLIENT: Partner Engineering & Science, Inc
ADDRESS: 3607 1st Ave NW, Seattle, WA
PHONE: 206-947-8875 FAX:
CLIENT PROJECT #: 15-139176-3 PROJECT MANAGER: Eric Engelhardt

DATE: 9/29/15 PAGE 1 OF 1
PROJECT NAME: Cascade Village
LOCATION: 16950 116th Ave SE, Renton, WA
COLLECTOR: Hunter White DATE OF COLLECTION: 9/29/15

Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260CL	NOTES	Total Number of Containers	Laboratory Note Number
1. B4-5	5	0930	S	VOC	X	HOLD	2	
2. B4-9	9	0935	S	VOC	X	HOLD	2	
3. B4-12	12	0940	S	VOA	X	HOLD	2	
4. B5-5	5	1005	S	VOA	X	Hold	2	
5. B5-9	9	1010	S	VOA	X	Hold / Hot	2	
6. B5-12	12	1015	S	VOA	X	Hold / Hot	2	
7. B6-5	5	1100	S	VOA	X	Hold	2	
8. B6-9	9	1105	S	VOA	X	Hold	2	
9. MW-5	10	1130	Water	VOA	X	RUSH	2	
10.								
11.								
12.								
13.								
14.								
15.								
16.								
17.								
18.								

ANALYSES: TPH - HCID; TPH - Diesel & Oil; TPH - Gasoline; BTEX; VOC 8260CL; VOC 8260; SemiVol 8270; PAH's 8270; PCB's 8082; CL Pesticides 8081; RCRA 8 Metals; MTCA 5 Metals; Pb; Asbestos - PLM; GRO Suite; DRO Suite; WO Suite

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
[signature]	9/29/15 1200		
[signature]	9/29/15 12:00	[signature]	9-29-15 1400

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	18
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES:
Run 1 GW sample
Hwhite@partneresi.com

Turn Around Time: 24 HR 48 HR (5 DAY)

1210 Eastside Street SE, Suite 200
Olympia, Washington 98501
Phone: 360-459-4670
Fax: 360-459-3432
Website: www.esnnw.com
E-Mail: info@esnnw.com

ESN NORTHWEST CHEMISTRY LABORATORY

Partner Engineering & Science, Inc.
PROJECT CASCADE VILLAGE
PROJECT #15-139176.3
Renton, Washington

ESN Northwest
1210 Eastside Street SE Suite 200
Olympia, WA 98501
(360) 459-4670 (360) 459-3432 Fax
lab@esnnw.com

Analysis of Volatile Organic Compounds in Water by Method 8260C/5030C

Analytical Results

	RL	MB	LCS	LCSD	MW-5	MW-5 Duplicate	Trip Blank
Date analyzed	(ug/L)	10/01/15	10/01/15	10/01/15	10/01/15	10/01/15	10/01/15
Dichlorodifluoromethane	1.0	nd			nd	nd	nd
Chloromethane	1.0	nd			nd	nd	nd
Vinyl chloride	0.2	nd	118%	115%	nd	nd	nd
Bromomethane	1.0	nd			nd	nd	nd
Chloroethane	1.0	nd			nd	nd	nd
Trichlorofluoromethane	1.0	nd			nd	nd	nd
Acetone	10.0	nd			nd	nd	nd
1,1-Dichloroethene	1.0	nd	109%	107%	nd	nd	nd
Methylene chloride	1.0	nd			nd	nd	nd
Methyl-t-butyl ether (MTBE)	1.0	nd			nd	nd	nd
trans-1,2-Dichloroethene	1.0	nd			nd	nd	nd
1,1-Dichloroethane	1.0	nd			nd	nd	nd
2-Butanone (MEK)	10.0	nd			nd	nd	nd
cis-1,2-Dichloroethene	1.0	nd			nd	nd	nd
2,2-Dichloropropane	1.0	nd			nd	nd	nd
Chloroform	1.0	nd	129%	129%	nd	nd	nd
Bromochloromethane	1.0	nd			nd	nd	nd
1,1,1-Trichloroethane	1.0	nd			nd	nd	nd
1,2-Dichloroethane (EDC)	1.0	nd			nd	nd	nd
1,1-Dichloropropene	1.0	nd			nd	nd	nd
Carbon tetrachloride	1.0	nd			nd	nd	nd
Benzene	1.0	nd	123%	122%	nd	nd	nd
Trichloroethene (TCE)	1.0	nd	127%	125%	nd	nd	nd
1,2-Dichloropropane	1.0	nd	*147%	*145%	nd	nd	nd
Dibromomethane	1.0	nd			nd	nd	nd
Bromodichloromethane	1.0	nd			nd	nd	nd
4-Methyl-2-pentanone (MIBK)	1.0	nd			nd	nd	nd
cis-1,3-Dichloropropene	1.0	nd			nd	nd	nd
Toluene	1.0	nd	96%	100%	nd	nd	nd
trans-1,3-Dichloropropene	1.0	nd			nd	nd	nd
1,1,2-Trichloroethane	1.0	nd			nd	nd	nd
2-Hexanone	1.0	nd			nd	nd	nd
1,3-Dichloropropane	1.0	nd			nd	nd	nd
Dibromochloromethane	1.0	nd			nd	nd	nd
Tetrachloroethene (PCE)	1.0	nd	87%	87%	nd	nd	nd
1,2-Dibromoethane (EDB)	1.0	nd			nd	nd	nd
Chlorobenzene	1.0	nd			nd	nd	nd
1,1,1,2-Tetrachloroethane	1.0	nd			nd	nd	nd
Ethylbenzene	1.0	nd	90%	91%	nd	nd	nd
Xylenes	3.0	nd	89%	90%	nd	nd	nd
Styrene	1.0	nd			nd	nd	nd
Bromoform	1.0	nd			nd	nd	nd
1,1,2,2-Tetrachloroethane	1.0	nd			nd	nd	nd
Isopropylbenzene	1.0	nd			nd	nd	nd
1,2,3-Trichloropropane	1.0	nd			nd	nd	nd
Bromobenzene	1.0	nd			nd	nd	nd

ESN NORTHWEST CHEMISTRY LABORATORY

Partner Engineering & Science, Inc.
PROJECT CASCADE VILLAGE
PROJECT #15-139176.3
Renton, Washington

ESN Northwest
1210 Eastside Street SE Suite 200
Olympia, WA 98501
(360) 459-4670 (360) 459-3432 Fax
lab@esnnw.com

Analysis of Volatile Organic Compounds in Water by Method 8260C/5030C

Analytical Results

	RL	MB	LCS	LCSD	MW-5	MW-5 Duplicate	Trip Blank
Date analyzed	(ug/L)	10/01/15	10/01/15	10/01/15	10/01/15	10/01/15	10/01/15
n-Propylbenzene	1.0	nd			nd	nd	nd
2-Chlorotoluene	1.0	nd			nd	nd	nd
4-Chlorotoluene	1.0	nd			nd	nd	nd
1,3,5-Trimethylbenzene	1.0	nd			nd	nd	nd
tert-Butylbenzene	1.0	nd			nd	nd	nd
1,2,4-Trimethylbenzene	1.0	nd			nd	nd	nd
sec-Butylbenzene	1.0	nd			nd	nd	nd
1,3-Dichlorobenzene	1.0	nd			nd	nd	nd
1,4-Dichlorobenzene	1.0	nd			nd	nd	nd
Isopropyltoluene	1.0	nd			nd	nd	nd
1,2-Dichlorobenzene	1.0	nd			nd	nd	nd
n-Butylbenzene	1.0	nd			nd	nd	nd
1,2-Dibromo-3-Chloropropane	1.0	nd			nd	nd	nd
1,2,4-Trichlorobenzene	1.0	nd			nd	nd	nd
Naphthalene	1.0	nd			nd	nd	nd
Hexachloro-1,3-butadiene	1.0	nd			nd	nd	nd
1,2,3-Trichlorobenzene	1.0	nd			nd	nd	nd
Surrogate recoveries							
Dibromofluoromethane		110%	110%	108%	108%	109%	110%
Toluene-d8		87%	81%	83%	88%	89%	89%
4-Bromofluorobenzene		108%	99%	101%	108%	107%	112%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
Acceptable Recovery limits: 65% TO 135%
Acceptable RPD limit: 35%
* Analysis of LCS and LCSD yielded high recoveries for these analytes, because these analytes were not detected in samples, no further action was taken.

ESN NORTHWEST, INC. | Environmental Services Network

CHAIN-OF-CUSTODY RECORD

CLIENT: Partner Engineering & Science, Inc
ADDRESS: 3607 1st Ave NW, Seattle, WA
PHONE: 206-947-8875 FAX:
CLIENT PROJECT #: 15-139176-3 PROJECT MANAGER: Eric Engelhardt

DATE: 9/29/15 PAGE 1 OF 1
PROJECT NAME: Cascade Village
LOCATION: 16950 116th Ave SE, Renton, WA
COLLECTOR: Hunter White DATE OF COLLECTION: 9/29/15

Sample Number	Depth	Time	Sample Type	Container Type	TPH - HCID	TPH - Diesel & Oil	TPH - Gasoline	BTEX	VOC 8260CL	VOC 8260	SemiVol 8270	PAH's 8270	PCB's 8082	CL Pesticides 8081	RCRA 8 Metals	MTCA 5 Metals	Pb	Asbestos - PLM	GRO Suite	DRO Suite	WO Suite	NOTES	Total Number of Containers	Laboratory Note Number
1. B4-5	5	0930	S	VOC					X													HOLD	2	
2. B4-9	9	0935	S	VOC					X													HOLD	2	
3. B4-12	12	0940	S	VOC					X													HOLD	2	
4. B5-5	5	1005	S	VOC					X													Hold	2	
5. B5-9	9	1010	S	VOC					X													Hold / Hot	2	
6. B5-12	12	1015	S	VOC					X													Hold / Hot	2	
7. B6-5	5	1100	S	VOC					X													Hold	2	
8. B6-9	9	1105	S	VOC					X													Hold	2	
9. MW-5	10	1130	Water	VOC					X													RUSH	2	
10.																								
11.																								
12.																								
13.																								
14.																								
15.																								
16.																								
17.																								
18.																								

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
[signature]	9/29/15 1200		
[signature]	9/29/15 12:00	[signature]	9-29-15 1400

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	18
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES:
Run 1 GW Sample
HWhite@partnerest.com

Turn Around Time: 24 HR 48 HR (5 DAY)

1210 Eastside Street SE, Suite 200
Olympia, Washington 98501
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Fax: 360-459-3432
Website: www.esnnw.com
E-Mail: info@esnnw.com

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Analysis of Chlorinated Volatile Organic Compounds in Soil by Method 8260C/5035

	RL	MB	LCS	B4-5	B4-9	B4-12	B5-5	B5-9	B5-12
Date extracted		10/08/15	10/08/15	09/29/15	09/29/15	09/29/15	09/29/15	09/29/15	09/29/15
Date analyzed	(mg/Kg)	10/08/15	10/08/15	10/08/15	10/08/15	10/08/15	10/08/15	10/08/15	10/08/15
Dichlorodifluoromethane	0.05	nd		nd	nd	nd	nd	nd	nd
Chloromethane	0.05	nd		nd	nd	nd	nd	nd	nd
Vinyl chloride	0.02	nd	81%	nd	nd	nd	nd	nd	nd
Chloroethane	0.05	nd		nd	nd	nd	nd	nd	nd
Trichlorofluoromethane	0.05	nd		nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.05	nd	65%	nd	nd	nd	nd	nd	nd
Methylene chloride	0.05	nd		nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	0.05	nd		nd	nd	nd	nd	nd	nd
1,1-Dichloroethane	0.05	nd		nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	0.05	nd		nd	nd	nd	nd	nd	nd
2,2-Dichloropropane	0.05	nd		nd	nd	nd	nd	nd	nd
Chloroform	0.05	nd	107%	nd	nd	nd	nd	nd	nd
Bromochloromethane	0.05	nd		nd	nd	nd	nd	nd	nd
1,1,1-Trichloroethane	0.05	nd		nd	nd	nd	nd	nd	nd
1,2-Dichloroethane (EDC)	0.05	nd		nd	nd	nd	nd	nd	nd
1,1-Dichloropropene	0.05	nd		nd	nd	nd	nd	nd	nd
Carbon tetrachloride	0.05	nd		nd	nd	nd	nd	nd	nd
Trichloroethene (TCE)	0.02	nd	81%	nd	**0.02**	nd	nd	nd	nd
1,2-Dichloropropane	0.05	nd	103%	nd	nd	nd	nd	nd	nd
Bromodichloromethane	0.05	nd		nd	nd	nd	nd	nd	nd
cis-1,3-Dichloropropene	0.05	nd		nd	nd	nd	nd	nd	nd
trans-1,3-Dichloropropene	0.05	nd		nd	nd	nd	nd	nd	nd
1,1,2-Trichloroethane	0.05	nd		nd	nd	nd	nd	nd	nd
1,3-Dichloropropane	0.05	nd		nd	nd	nd	nd	nd	nd
Dibromochloromethane	0.05	nd		nd	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	0.02	nd	70%	**6.7**	**14**	**78**	nd	nd	nd
Chlorobenzene	0.05	nd	106%	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	0.05	nd		nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	0.05	nd		nd	nd	nd	nd	nd	nd
1,2,3-Trichloropropane	0.05	nd		nd	nd	nd	nd	nd	nd
2-Chlorotoluene	0.05	nd		nd	nd	nd	nd	nd	nd
4-Chlorotoluene	0.05	nd		nd	nd	nd	nd	nd	nd
1,3-Dichlorobenzene	0.05	nd		nd	nd	nd	nd	nd	nd
1,4-Dichlorobenzene	0.05	nd		nd	nd	nd	nd	nd	nd
1,2-Dichlorobenzene	0.05	nd		nd	nd	nd	nd	nd	nd
1,2-Dibromo-3-Chloropropane	0.05	nd		nd	nd	nd	nd	nd	nd
1,2,4-Trichlorobenzene	0.05	nd		nd	nd	nd	nd	nd	nd
Hexachloro-1,3-butadiene	0.05	nd		nd	nd	nd	nd	nd	nd
1,2,3-Trichlorobenzene	0.05	nd		nd	nd	nd	nd	nd	nd
Surrogate recoveries									
Dibromofluoromethane		106%	105%	90%	94%	90%	91%	93%	85%
Toluene-d8		102%	105%	105%	104%	108%	103%	107%	105%
4-Bromofluorobenzene		101%	99%	99%	103%	96%	95%	95%	101%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
Acceptable Recovery limits: 65% TO 135%
Acceptable RPD limit: 35%

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Analysis of Chlorinated Volatile Organic Compounds in Soil by Method 8260C/5035

	RL	B6-5	B6-9
Date extracted		09/29/15	09/29/15
Date analyzed	(mg/Kg)	10/08/15	10/08/15
% Moisture			
Dichlorodifluoromethane	0.05	nd	nd
Chloromethane	0.05	nd	nd
Vinyl chloride	0.02	nd	nd
Chloroethane	0.05	nd	nd
Trichlorofluoromethane	0.05	nd	nd
1,1-Dichloroethene	0.05	nd	nd
Methylene chloride	0.05	nd	nd
trans-1,2-Dichloroethene	0.05	nd	nd
1,1-Dichloroethane	0.05	nd	nd
cis-1,2-Dichloroethene	0.05	nd	nd
2,2-Dichloropropane	0.05	nd	nd
Chloroform	0.05	nd	nd
Bromochloromethane	0.05	nd	nd
1,1,1-Trichloroethane	0.05	nd	nd
1,2-Dichloroethane (EDC)	0.05	nd	nd
1,1-Dichloropropene	0.05	nd	nd
Carbon tetrachloride	0.05	nd	nd
Trichloroethene (TCE)	0.02	nd	nd
1,2-Dichloropropane	0.05	nd	nd
Bromodichloromethane	0.05	nd	nd
cis-1,3-Dichloropropene	0.05	nd	nd
trans-1,3-Dichloropropene	0.05	nd	nd
1,1,2-Trichloroethane	0.05	nd	nd
1,3-Dichloropropane	0.05	nd	nd
Dibromochloromethane	0.05	nd	nd
Tetrachloroethene (PCE)	0.02	**0.06**	**0.19**
Chlorobenzene	0.05	nd	nd
1,1,1,2-Tetrachloroethane	0.05	nd	nd
1,1,2,2-Tetrachloroethane	0.05	nd	nd
1,2,3-Trichloropropane	0.05	nd	nd
2-Chlorotoluene	0.05	nd	nd
4-Chlorotoluene	0.05	nd	nd
1,3-Dichlorobenzene	0.05	nd	nd
1,4-Dichlorobenzene	0.05	nd	nd
1,2-Dichlorobenzene	0.05	nd	nd
1,2-Dibromo-3-Chloropropane	0.05	nd	nd
1,2,4-Trichlorobenzene	0.05	nd	nd
Hexachloro-1,3-butadiene	0.05	nd	nd
1,2,3-Trichlorobenzene	0.05	nd	nd
Surrogate recoveries			
Dibromofluoromethane		97%	96%
Toluene-d8		104%	102%
4-Bromofluorobenzene		100%	101%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
Acceptable Recovery limits: 65% TO 135%
Acceptable RPD limit: 35%