VCP# NW0580

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Final Report
Addendum Phase II Subsurface Soil Characterization
Havers Trust
The Barg French Dry Cleaning Facility
Seattle, Washington
File ID No.: E99-1414-T

Prepared for:

Ms. Cynthia C. Wagner
Union Bank of California as Trustee
Hazardous Materials Section
500 South Main Street, Suite 370
Orange, CA 92868

Prepared by:

Kleinfelder Inc.
2405 140th Avenue, NE
Suite A101
Bellevue, WA 98005

Phone: (425) 562-4200
Fax: (425) 562-4201

November 2, 1999

November 2, 1999
Kleinfelder File Number 60-1996-02

Ms. Cynthia C. Wagner
Vice President
Union Bank of California
Hazardous Materials Section
500 South Main Street, Suite 370
Orange, California 92868

Subject: **Final Report**
Addendum Phase II Subsurface Soil Characterization
Havers Trust
The Barg French Dry Cleaning Facility
1929 3rd Avenue
Seattle, Washington
File ID# E99-1414

Dear Ms. Wagner:

Transmitted with this letter is Kleinfelder's final report summarizing the findings of our additional Phase II subsurface soil characterization performed at the above-referenced property. The characterization work was performed at the request of Union Bank of California to provide additional information concerning the distribution of PCE-impacted soil previously identified beneath the subject property.

Kleinfelder appreciates the opportunity to be of assistance on this project. Please contact us if you have any questions or require additional information.

Sincerely,
KLEINFELDER, INC.

Dennis J. O'Neill
Senior Project Manager

1.0 INTRODUCTION AND BACKGROUND

This report summarizes the findings and presents recommendations developed during Kleinfelder's additional Phase II Subsurface Soil Characterization performed at the Barg French Dry Cleaning Facility in Seattle, Washington. The subject property consists of a three-story commercial building located in the downtown business district of Seattle, Washington (Figure 1). The building was constructed in 1914 of brick and masonry walls supported on conventional shallow concrete spread footings. The floor of the building is wood, except for a recently installed concrete pad beneath the existing dry cleaning machinery. There is no basement in the building.

The first level of the building is subdivided into three main sections. The western portion of the first floor is occupied by a dry cleaning facility (The Barg French Dry Cleaners); the central and eastern portion is occupied by a bookstore (Figure 2). The second and third floors of the building are occupied by commercial businesses. The subject property is bordered to the north by a two-story parking structure, to the east by 3rd Avenue, to the south by a 7-story commercial building, and to the west by an alleyway. Land use in the site vicinity is primarily commercial/retail in character.

As part of the process of assessing the potential environmental impact of the dry cleaning operations on the subject property, two phases of subsurface soil sampling were performed in the dry cleaner's portion of the building (Webster; June 1999 and Kleinfelder; September 1999). The initial phase (conducted by Webster) consisted of completing one hand auger boring (S-1) which revealed shallow PCE-impacted soil adjacent to the existing dry cleaning machinery (Figure 3). To assess the potential presence of other chlorinated solvents and halogenated aromatics one sample was analyzed for volatile organic compounds (VOCs) by EPA Method 8260. Analytical results indicated no detectable concentrations of VOCs, except for the reported PCE. The second phase of soil sampling (conducted by Kleinfelder) consisted of completing a total of five strataprobe borings (SP-1 through SP-5) in the immediate vicinity of the dry cleaning machinery and an existing floor drain to further assess the presence of PCE-impacted soil.

Based on the analytical results obtained from the previous subsurface investigations, the presence of PCE-impacted soil was confirmed in the vicinity of the former and current dry-cleaning machinery beneath the western portion of the existing building (Figure 3). A summary of the previous analytical results is presented on Table 1. PCE concentrations range from 630 to 8,900

ug/kg, which are above the Washington State Department of Ecology (Ecology) Model Toxics Cleanup Act (MTCA) Method A cleanup level of 500 ug/kg, but below the Method B cleanup level of 19,600 ug/kg.

The PCE-impacted soil appears to reach the maximum concentration at approximately 7 to 8 feet below ground surface (bgs), or about 1½ feet above the zone where a limited amount of localized perched groundwater was encountered. These results suggest that the PCE-impacted soil appears to be limited in vertical extent and has not migrated significantly into the underlying denser glacial till at depths greater than 12 feet bgs.

Based on the previous subsurface soil sampling results, Union Bank of California requested additional subsurface soil sampling be performed to further assess the distribution of PCE-impacted soil beneath the subject property.

2.0 OBJECTIVE AND SCOPE OF SERVICES

The primary objective of the additional subsurface soil sampling was to further evaluate the distribution of PCE-impacted soil previously identified beneath the subject property.

To accomplish this objective, Kleinfelder performed the following scope of services:

- Revised a previously prepared Site Specific Health & Safety Plan regarding the additional Phase II soil sampling;
- Conducted a remote video camera inspection of the underground floor drain and sewer line piping to assess for potential leaks;
- Completed seven additional soil borings (SP-6 through SP-12) in the western and central portion of the existing building;
- Analyzed representative soil samples from various depths in the borings for PCE and other halogenated and aromatics by EPA Method 8021B;
- Furthered assessed the potential presence of PCE-impacted shallow groundwater; and
- Prepared this report summarizing the methodology and findings of the additional subsurface soil sampling and provided recommendations.

3.0 FIELD PROCEDURES

The subsurface soil characterization described herein was conducted in general accordance with Ecology's Voluntary Cleanup Program and other applicable local, state and federal guidelines and regulations.

3.1 Health and Safety Plan

In accordance with federal Occupational Safety and Health Administration (OSHA) and state regulations, a revised site specific-Health and Safety Plan was developed to address the additional field activities described herein. All field personnel reviewed the plan and implemented the procedures while conducting the on-site field activities.

3.2 Floor Drain and Sewer Line Inspection

To assess the potential release of PCE to the subsurface soil via the underground floor drain and sewer line, a remote video camera system was used to observe for evidence of broken lines or corrosion points. The remote camera system was operated by Northwest Cascade, Inc of Seattle, Washington. The underground floor drain and sewer lines were access via the sanitary sewer line located in the southwest corner of the building. The video camera was placed in the sanitary line and directed down the line with a cable. A color picture was projected on a monitor placed within the building. The Kleinfelder geologist and Northwest Cascade technician observed the picture for evidence of cracks, holes or weathering. The approximate location of the sewer line is shown on Figure 3. The line was inferred to be located at approximately 1½ feet bgs. The sewer line was interpreted to be cast-iron. The field personnel observed no evidence of cracks or leaks. Based on these findings, it does not appear that the underground floor drain and sewer line was a source of PCE to the subsurface soil.

3.3 Subsurface Soil Sampling

On September 18 and 19, 1999, additional subsurface soil sampling was performed at the subject property. During that period, the dry cleaning equipment was not operating. The subsurface soil sampling program consisted of completing seven exploratory borings (SP-6 through SP-12) using a hand-operated percussion-hammer drilling unit operated by Sonic Soil Sampling (Sonic) of Vancouver, British Columbia, Canada. Prior to advancing the boring, the overlying concrete was cored by Sonic using an electric concrete corer fitted with a diamond bit. In some cases, sections of the wooden floor were removed to provide access to the underlying soil.

A Kleinfelder geologist was present during the drilling to observe and document soil conditions. The drilling unit was positioned at the desired location, and a split-spoon sampler connected to metal extension rods was advanced. The sampler was removed from the boring and opened, the contents were inspected, and soil samples were collected. Following collection of the representative soil samples from each bore hole, the bore holes were back filled with bentonite, chips, hydrated and capped with concrete (approximately 4 to 6 inches thick) flush with the surrounding ground surface. At sample locations where sections of the wooden floor were removed, the wooden floor was replaced.

Probe holes were advanced to depths ranging from 7½ to 16½ feet below ground surface. Soil was collected continuously in each probe hole using a split-spoon sampler of 30-inch length (although the entire length of the spoon was not always driven). Collected soil was field screened for contamination, and soil types were classified according to the Unified Soil Classification System. Field sampling protocol, decontamination procedures, and sample handling procedures were performed in general accordance with EPA and Ecology protocol. Field procedures are summarized in Appendix A. Copies of the soil boring logs are presented in Appendix B.

Soil borings SP-6 through SP-10 and SP-12 were completed in the dry cleaner's portion of the building. Soil boring SP-11 was completed in the central portion of the overall building within Bookstore. The approximate sampling locations are shown on Figure 4.

To penetrate more dense material, continuous coring was performed. Soil samples were collected at regular intervals in an effort to assess the distribution of PCE-impacted soil. The on-site geologist documented soil conditions and visually inspected the soil for staining or discoloration. "Head-space" screening was also performed for the presence of volatile organic compounds by using a photoionization detector (PID). PID readings are shown on Table 1. Selected soil samples were transported to Transglobal Environmental Geosciences (TEG) of Bellevue, Washington for laboratory analysis.

3.4 Localized Perched Groundwater Sampling

During subsurface investigations, localized perched groundwater was encountered at a depth of approximately 8 to 9 feet below ground surface. A monitoring well was installed in Boring SP-1, during the previous investigation, but we were unable to collect a groundwater sample due to the limited volume of water available and limited recharge. As part of the additional subsurface soil sampling program described herein, we attempted to collect a groundwater sample from the pre-established well; however, no groundwater was recovered from the well.

Based on available groundwater information, groundwater in the site vicinity is believed to be located at depths greater than 40 feet bgs. Potable drinking water for the City of Seattle is provided by METRO, which is collected from a series of reservoirs located in the Puget Sound Area. There are no domestic water wells within a one-mile radius of the subject property.

4.0 CHEMICAL ANALYTICAL PROGRAM

Selected soil samples were submitted to TEG, a state-certified laboratory. Each sample was analyzed for PCE by EPA Method 8021B. In addition, other chlorinated solvents (i.e., trichloroethene and vinyl chloride) and halogenated aromatics were reported. Quality Assurance/Quality Control (QA/QC) for the presented scope of work included generally accepted procedures for sample collection, storage, tracking, and documentation. All sampling equipment was washed and rinsed prior to the collection of samples. All samples were labeled with a sample number, date, time of collection, and sampler name. The samples were placed in an ice chest for storage and transport to the project laboratory under chain-of-custody documentation. Detailed information regarding the field sampling protocol and decontamination procedures are presented in Appendix A. Copies of the laboratory-reported analytical results and completed chain-of custody forms are presented in Appendix C, and summarized in Table 1.

In general, soil samples that were suspected of having the highest potential for being impacted were selected for analytical testing (e.g., exhibited elevated head-space readings, or were collected from depths known to be impacted based on previous investigations). A minimum of two soil samples were collected from each boring at various depths in an effort to assess the vertical extent of PCE. The sampling depths are presented on Table 1.

5.0 SUBSURFACE FINDINGS AND ANALYTICAL RESULTS

As stated above, borings were advanced to depths ranging from 7½ to 16½ feet bgs, whereupon the borings were terminated due to refusal of the dense soil. The total depths of the borings were as follows: SP-6, SP-9 and SP-10 were advanced to a depth of approximately 10½ feet bgs where refusal was encountered. Boring SP-7 was terminated at a depth of approximately 7½ feet bgs due to refusal. Boring SP-11 was advanced to a depth of approximately 16½ feet bgs. Boring SP-12 was advanced to a depth of approximately 11½ feet bgs.

5.1 Subsurface Conditions

Subsurface soil conditions were relatively consistent with the previous subsurface findings. In general, the upper 8 to 9 feet of soil consisted of dense, damp, light gray, poorly graded fine to medium grained sand. This material has been interpreted to be imported fill. At approximately 9 to 10 feet bgs the fill material graded to a dense silty fine to medium grained sand. This deeper material has been characterized as a till. The majority of the shallow fill material was characterized as damp, except near the contact between fill material and underlying till, which became moist to wet. We suspect the saturated conditions reflect localized perched groundwater accumulating near the contact between the imported fill material and less permeable underlying till. As stated above, attempts to collect a sample of the localized perched groundwater were not successful. Consequently, it appears the volume of water associated with perched groundwater conditions is minimal.

5.2 Analytical Results

Analytical results for revealed PCE concentrations ranged from less than 50 ug/kg to 3,300 ug/kg, which are below the Method B Cleanup Level of 19,600 ug/kg (Table 1 and Figure 4). In general, PCE concentrations decreased with depth with the highest levels located at depths ranging from 7 to 8 feet bgs. For example, boring SP-11 revealed PCE concentrations decreased from 3200 ug/kg to 82 ug/kg from 8 to 16½ feet bgs, respectively. The elevated PCE concentrations correlate well with the depth of the limited and localized perched groundwater conditions detected in the vicinity of the existing dry cleaning machinery. We believe the presence of the higher PCE concentrations and limited localized groundwater reflects changes in the permeability between the fill material and underlying denser till. Consequently, this process appears to have minimized the vertical migration of PCE.

PCE concentrations detected in the 7 to 8-foot sample intervals in the perimeter borings SP-6 (690 ug/kg), SP-7 (1,000 ug/kg), SP-8 (less than 50 ug/kg), SP-9 (780 ug/kg) and SP-10 (1,900 ug/kg) indicate that the level of PCE-impacted soil decreases significantly relative to distance from the existing dry cleaning machinery (Figure 4). For example, PCE concentrations decrease from 3,500 ug/kg to 690 ug/kg in the 7 to 8-foot sample intervals in boring SP-3 and SP-6, respectively. A similar trend can be observed in borings SP-2 and SP-8 as well as SP-4 and SP-9. The lateral distribution of the PCE concentrations suggests that the point of release of the PCE is associated with the dry cleaning machinery.

As part of the analytical testing program, the laboratory reported additional chlorinated solvents and halogenated aromatics. Trace levels of trichloroethene (TCE) ranging from 87 ug/kg to 170 ug/kg were detected in borings SP-6 and SP-11 (Appendix C). These trace levels are well below the MTCA Method B cleanup level and likely reflect a degradation product of the PCE. Another common degradation product of PCE and of particular environmental concern is vinyl chloride. No evidence of vinyl chloride was detected in the subsurface samples.

Trace levels of halogenated aromatics were detected at concentrations well below the MTCA Methods A and B cleanup levels in several soil samples. The specific compounds included trace levels of xylene at 320 ug/kg in soil boring SP-6 and trace levels of dichlorobenzene ranging from 64 ug/kg to 340 ug/kg in soil borings SP-6, SP-7, SP-8, SP-10 and SP-11.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the analytical results of our subsurface investigations, PCE-impacted soil was detected in shallow soils (less than 12½ feet bgs) in the vicinity of the dry-cleaning machinery at concentrations above the MTCA Method A cleanup level of 500 ug/kg, but less than the Method B cleanup level of 19,100 ug/kg. The PCE-impacted soil appears to reach maximum concentration at approximately 7 to 8 feet depth below the facility, or about 1½ feet above the zone where a limited amount of localized perched groundwater was encountered. These results suggest that PCE in the vadose zone has not reached a degree of saturation where capillary forces in the fine-grained sand overlying the localized perched groundwater have been overcome and thus have not migrated into the less permeable underlying till.

The distribution of PCE-impacted soil detected in the perimeter borings suggests that the PCE concentrations decrease laterally from the suspected point of release (dry cleaning machinery). A remote video camera inspection of the underground floor drain and sewer line did revealed evidence of a release of PCE to the subsurface soil. We suspect that the lateral migration of the PCE is likely occurring in the vapor phase rather than an immiscible product.

Trace levels of trichloroethene, xylene and dichlorobenzene were detected at concentrations well below the MTCA Methods A and B cleanup levels in several soil samples. The presence of trichloroethene likely reflects a degradation product of the PCE. No evidence of vinyl chloride was detected in the subsurface samples.

Based on the available information, we recommend deeper subsurface soil samples should be collected to further assess the vertical extent of the PCE-impacted soil near the dry cleaning machinery and the suspected point of release. Determining the vertical extent of the PCE-impacted soil in the vicinity of the release will be necessary for several reasons: (1) to further assess if shallow groundwater has been affected, (2) to assess applicability of using the MTCA Methods A and B cleanup levels to pursue a No Further Action (NFA) determination from Ecology, and (3) to estimate the volume of PCE-impacted soil and selection of applicable remedial alternatives, if deemed necessary.

7.0 LIMITATIONS

Our work was intended to provide a further assessment of the PCE-impacted soil previously detected on the subject property. This work was not designed to identify all potential concerns or to eliminate all risk associated with the subject property. Even the most rigorous of professional assessments may fail to identify all existing conditions. The work will not provide a guarantee regarding site contamination and may not generate sufficient data to accurately define the lateral and vertical extent of contamination.

Property activities and regulations beyond Kleinfelder's control could change at any time after the completion of our investigations. Therefore, Kleinfelder's observations, findings and opinions can be considered valid only as of the date of the investigations and at the locations where samples were collected and tested.

Our report may be used only by the client and only for the purposes stated, within a reasonable time from its issuance. Land use, site conditions (both on site and off site) or other factors may change over time, and additional work may be required with the passage of time. Any party other than the client who wishes to use the generated report shall notify Kleinfelder of such intended use by executing the "Application for Authorization to Use" included as Appendix D to this report. Based on the intended use of the report, Kleinfelder may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements by the client or anyone else will release Kleinfelder from any liability resulting from the use of the report by any unauthorized party.

No warranty, express or implied, is made.

8.0 REFERENCES

Galster, Richard W., and LaPrade, William T., 1991, Geology of Seattle, Washington, United States of America, bulletin of the association of engineering geologists, College Station, Texas, Volume XXVIII, Number 3, August.

Kleinfelder Inc., 1999, "Environmental Assessment and Phase II Subsurface Soil and Shallow Groundwater Characterization", Haver's Trust, The Barg French Dry-Cleaning Facility, Seattle, Washington.

U.S. Geological Survey (USGS), 1949, revised in 1968 and 1973, 7.5-minute topographic map of Seattle South Quadrangle, Washington: Denver, Colorado, scale 1:24,000.

Washington Department of Ecology, 1996, The Model Toxics Control Act cleanup regulation, chapter 173-340 WAC: Olympia, Wash., Publication No. 94-06, January.

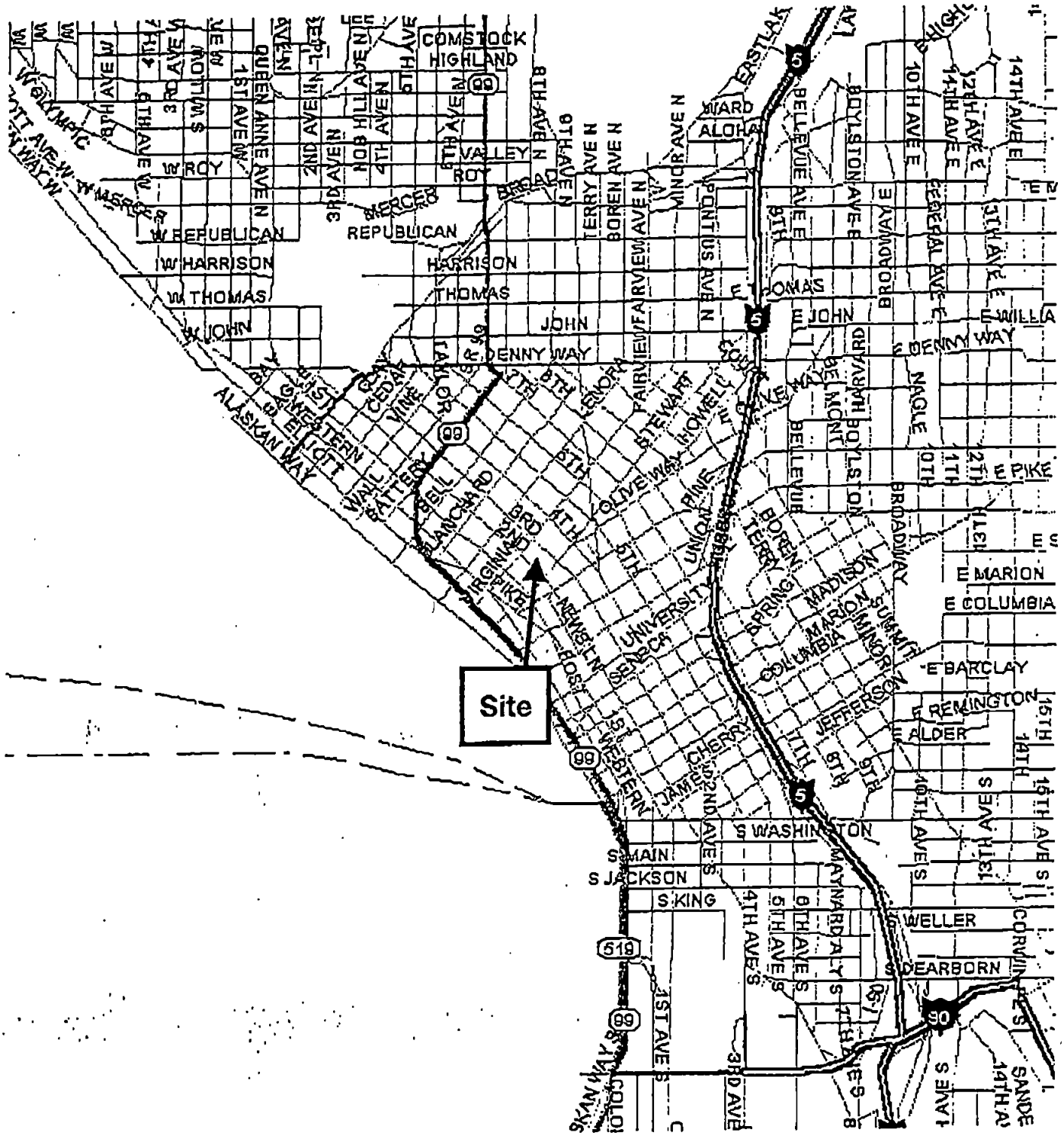
Websters' Inc., 1999, Phase I ESA, Limited Phase II ESA, and Asbestos "Good Faith Investigation", 1929 3rd Avenue Building, Seattle, Washington, report prepared for Mr. Stuart Silk, Stuart Silk Architects, June.

TABLE 1

SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
THE BARG FRENCH DRY-CLEANING FACILITY

SAMPLE ID	DEPTH (feet bgs)	PID Reading	PCE (ug/kg)
SP-1	9 ½	ND	2,600
SP-1	12 ½	ND	<50
SP-2	2 ½	ND	3,800
SP-2	7	500	8,900
SP-2	10	TRACE	1,800
SP-3	4 ½	ND	5,200
SP-3	9	ND	3,500
SP-4	3	300	4,400
SP-4	7	80	4,400
SP-4	9	ND	1,300
SP-5	5	ND	630
SP-6	8	200	690
SP-6	10	ND	1,500
SP-7	7 ½	36	1,000
SP-8	8	15	<50
SP-9	8	38	780
SP-9	10½	23	610
SP-10	8	10	1,900
SP-10	10	6	1,400
SP-11	8	80	3,300
SP-11	16½	ND	82
SP-12	8	97	2,300
SP-12	11	ND	1,600
MTCA Method A Cleanup Level	NA	NA	**500**
MTCA Method B Cleanup Level	NA	NA	**19,600**

Notes: The Sample ID consists of the boring designation with the depth of a sample.
PCE = perchlorethylene
ppb = parts per billion (equivilant to ug/kg)
<50 = PCE was not found at a concentration exceeding the reporting limit shown.
ND = Not Detected
NA = Not Applicable



Reference: Delorme Street Atlas USA Version 4.0

APPROXIMATE SCALE

0 0.25 0.5

1 inch = 0.5 miles

N

KLEINFELDER

PROJECT NO. 60-1996-02 October, 1999

Site Location Map

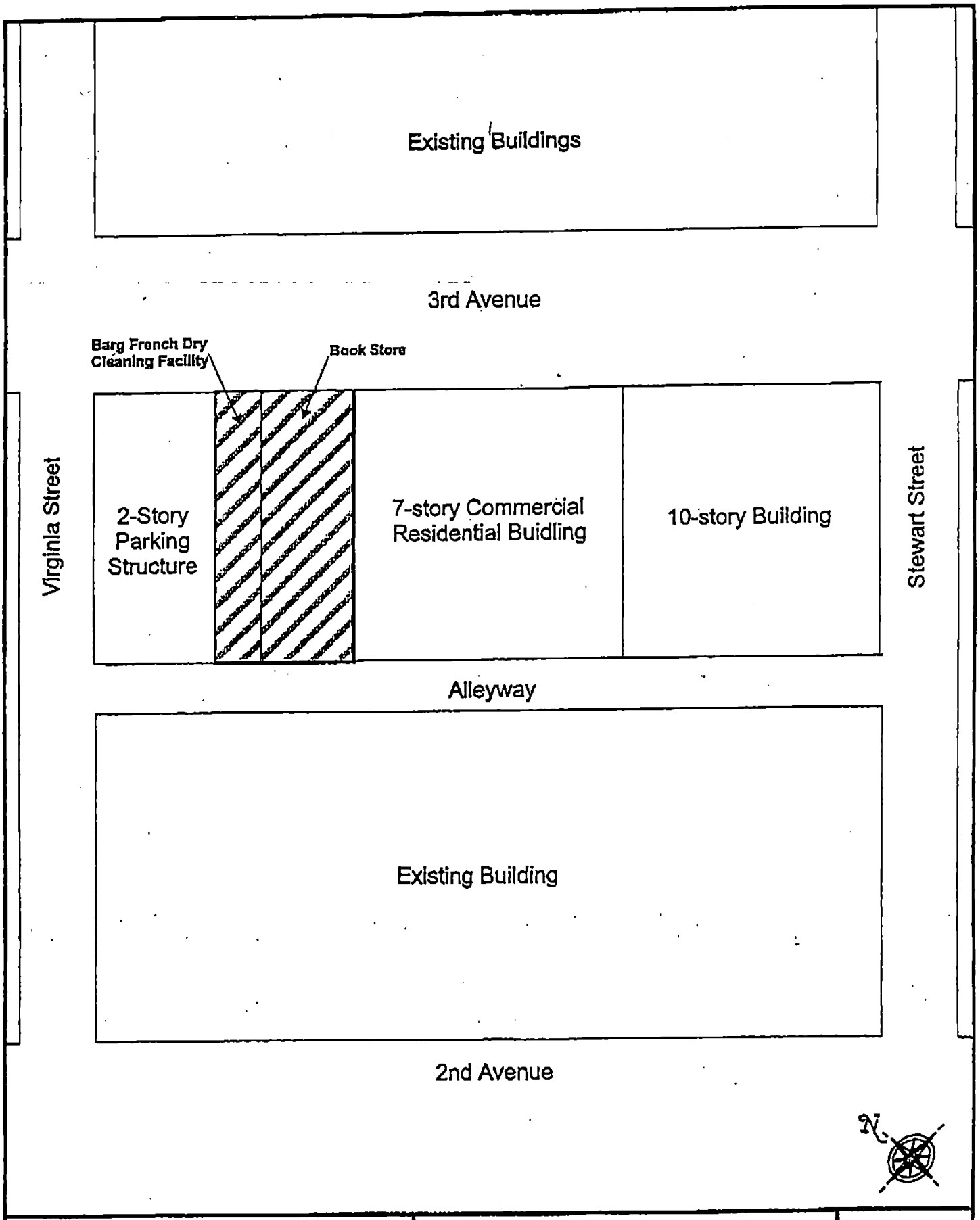
Barg French Dry - Cleaning Facility

1929 3rd Ave

Seattle, Washington

FIGURE

1



KLEINFELDER

PROJECT NO. 60-1996-02 October, 1999

Plot Plan

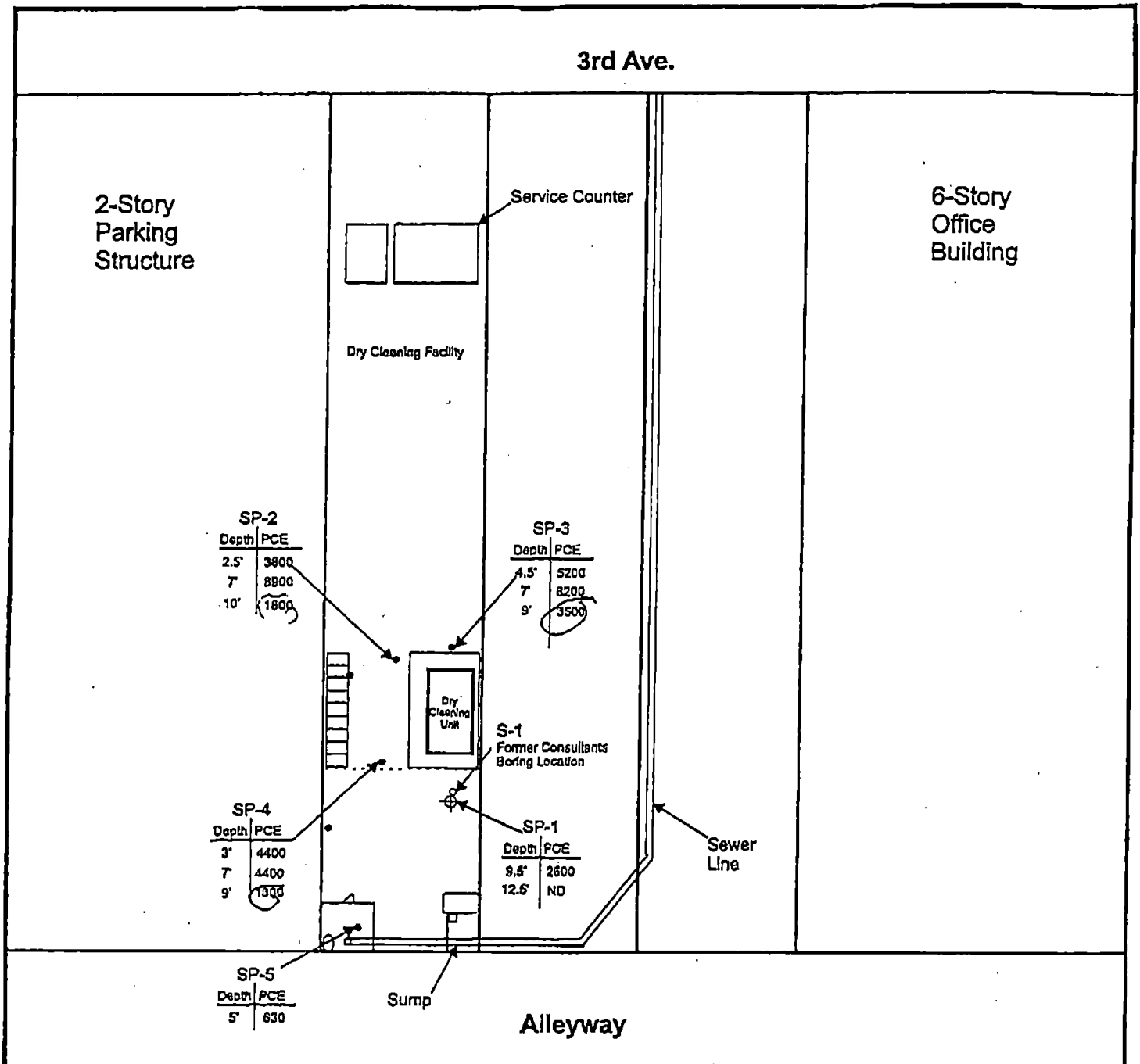
Barg French Dry - Cleaning Facility

1929 3rd Ave

Seattle, Washington

FIGURE

2



Legend

PCE = Perchloroethylene (ppb)
ppb = parts per billion (or ug/kg)
○ S-1 = Hand Auger by Webster, Inc: June, 1999
• SP-1 = Soil Boring by Kleinfelder Inc. September, 1999
• = Boring Location
⊕ = Monitoring Well Location

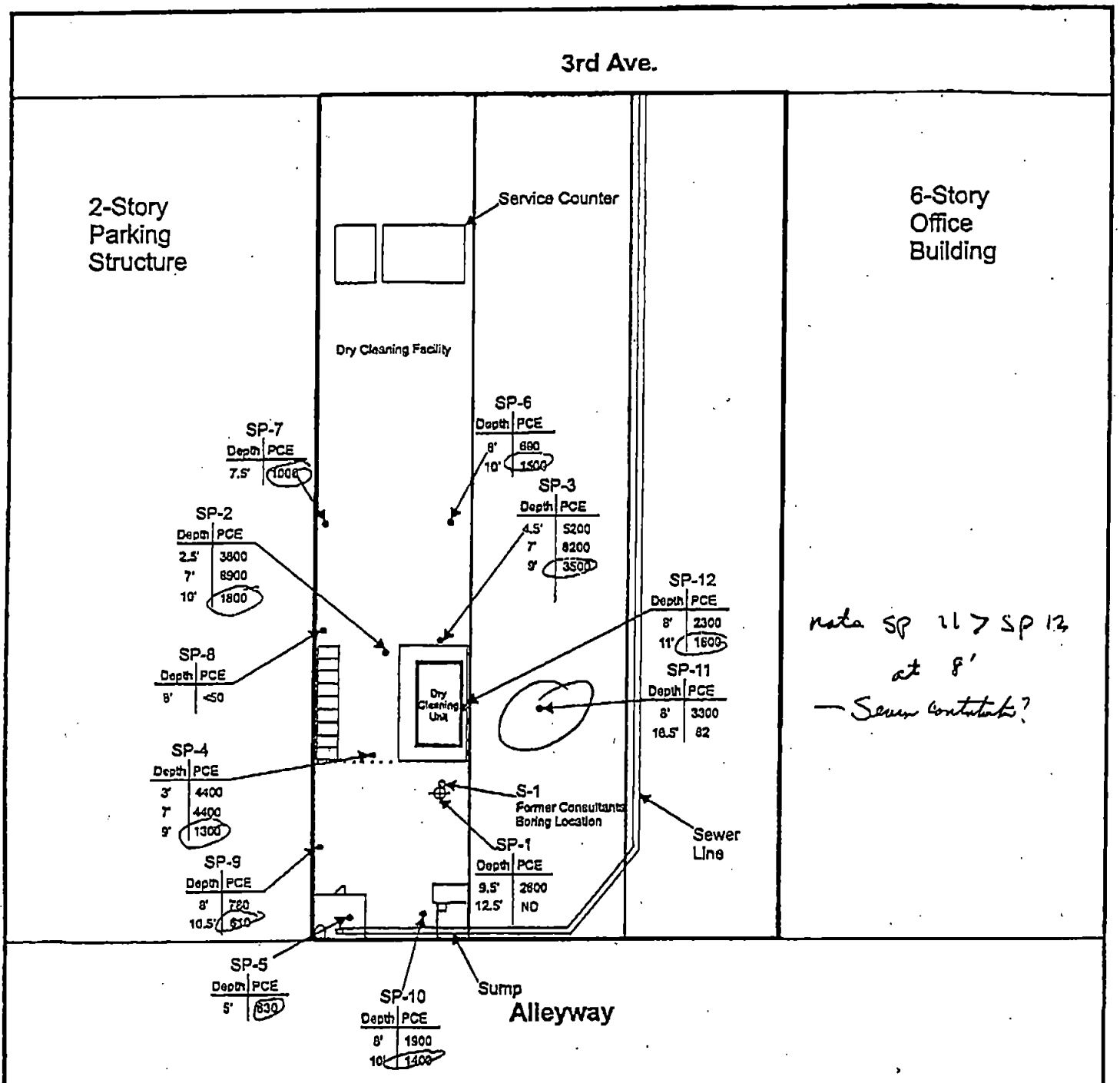
0 20
Approximate Scale In Feet

KLEINFELDER

PROJECT NO. 60-1996-01 September, 1999

Previous Soil Sample Locations
Barg French Dry - Cleaning Facility
1929 3rd Ave
Seattle, Washington

FIGURE 3



Legend

PCE = Perchloroethylene (ppb)
ppb = parts per billion (or ug/kg)
o S-1 = Hand Auger by Webster, Inc. June, 1999
• SP-6 = Soil Boring by Kleinfelder Inc. October, 1999
• = Boring Location
⌖ = Monitoring Well Location

0 20
Approximate Scale In Feet

KLEINFELDER

PROJECT NO. 60-1996-01 September, 1999

Soil Sample Locations
Barg French Dry - Cleaning Facility
1929 3rd Ave
Seattle, Washington

FIGURE 4

Appendix A
Site Exploration Methods

APPENDIX A
SITE EXPLORATION METHODS

General

Kleinfelder developed a site specific Health and Safety Plan for this project prior to the start of fieldwork. The Health and Safety Plan included specifications for steel toe boots, hard hats, safety glasses, and protective clothing. For the protection of the crew, a photoionization detector (PID) was used to screen for the presence of volatile organic concentrations in the breathing zone during the drilling of the borings. The PID was a Thermo Environmental Model 580B OVM, or equivalent, with a 10.5 ev lamp. The instrument was calibrated to 100 parts per million by volume (ppmv) with an isobutylene gas standard. The PID measures volatile organic compounds (VOCs) in the air in ppmv, including PCE.

Subsurface Soil Sampling

Sonic Soil Sampling performed "drilling" at this site. A hand-operated, electrically powered percussion hammer fitted with a 2-inch diameter x 30-inch long split-spoon sampler with a drill-bit shoe (Pionjar 120) was used. Continuous core samples were obtained by driving the sampler to depth, removing the split-spoon and drive extensions from the bore hole, collecting the core sample, adding successive drive extensions to the split spoon, and repeating the process for each successive soil core.

Soil samples were transferred to sterilized glassware provided by the project laboratory. A label indicating the sample number, project number, sampler, and date and time of sampling, was affixed to each sample, and the sample was recorded on a chain-of-custody form. Samples were stored in an iced chest on site and during transport to the laboratory. To minimize potential cross-contamination, the sampling equipment was cleaned and rinsed between samples using laboratory-grade detergent and distilled water.

Upon completion of the boring, the borehole was filled with bentonite and sand, and surface patched with concrete.

Appendix B
Soil Boring Logs

DEPTH (feet)	WELL/PIEZO CONSTRUCTION	WATER LEVEL	TESTING PROGRAM: LABORATORY: MOISTURE CONTENT(%)	PLASTIC LIMIT(%)	LIQUID LIMIT(%)	% PASSING No. 200 SIEVE	OTHER TESTS	FIELD: PID (ppm)	BLOWS/6 in.* (uncorrected)	SAMPLER *	SAMPLE NUMBER	U.S.C.S. NAME	U.S.C.S. SYMBOL	SOIL DESCRIPTION
														Surface: Concrete Floor
0														Tile, Wood and Concrete 4" thick
													SP	SAND (SP) gray, moist, moderately dense, fine grained
								115			S-1			
5								49			S-2			Moist light gray poorly graded fine SAND, (SP)
								123			S-3			
														- grades to dense
								200			S-4			
													SM	Silty SAND (SM) gray, moist, very dense, (GLACIAL TILL)
10								0			S-5			
														Boring terminated at 10' bgs due to refusal on 9/19/99. Groundwater not encountered during drilling.

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

APPROV: _____

BY: _____

DATE DRILLED: 9-19-99
LOGGED BY: R. Yates
REVIEWED BY: Dennis O'Neill

SURFACE ELEVATION (feet):
TOTAL DEPTH (feet): 10.0
DIAMETER OF BORING (in): 2.5"

DRILLING METHOD: Percussion Hammer
DRILLER: Sonic Soil Sampling
CASING SIZE:

KLEINFELDER
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
SOILS AND MATERIALS TESTING

PROJECT NUMBER: 60-1996-01

Barg French Dry - Cleaning Facility
1929 3rd Avenue
Seattle, Washington
BORING LOG
SP-6

FIGURE
A - 1

PAGE 1 of 1

DEPTH (feet)	WELL/PIEZO CONSTRUCTION	WATER LEVEL	TESTING PROGRAM: LABORATORY: MOISTURE CONTENT(%)	PLASTIC LIMIT(%)	LIQUID LIMIT(%)	% PASSING No. 200 SIEVE	OTHER TESTS	FIELD: PID (ppm)	BLOWS/6 in.* (uncorrected)	SAMPLER *	SAMPLE NUMBER	U.S.C.S. NAME	U.S.C.S. SYMBOL	SOIL DESCRIPTION
														Surface: Concrete Floor
0.00														Concrete 6" thick
														SAND (SP) gray, moist, moderatly dense, fine grained
								4			SP-7-1		SP	
								68			SP-7-2			
5														Moist light gray poorly graded fine SAND with occasional iron rust streaks, (SP)
								66			SP-7-3			
								360			SP-7-4			
7.5														Boring terminated at 7.5' bgs due to refusal on 9/19/99. Groundwater not encountered during drilling.

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

APPROV: _____

BY: _____

DATE DRILLED: 9-19-99
LOGGED BY: R. Yates
REVIEWED BY: Dennis O'Neill

SURFACE ELEVATION (feet):
TOTAL DEPTH (feet): 7.5
DIAMETER OF BORING (in): 2.5"

DRILLING METHOD: Percussion Hammer
DRILLER: Sonic Soil Sampling
CASING SIZE:

KLEINFELDER
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
SOILS AND MATERIALS TESTING

PROJECT NUMBER: 60-1996-01

Barg French Dry - Cleaning Facility
1929 3rd Avenue
Seattle, Washington
BORING LOG
SP-7

FIGURE
A - 2
PAGE 1 of 1

DEPTH (feet)	WELL/PIEZO CONSTRUCTION	WATER LEVEL	TESTING PROGRAM: LABORATORY: MOISTURE CONTENT(%)	PLASTIC LIMIT(%)	LIQUID LIMIT(%)	% PASSING No. 200 SIEVE	OTHER TESTS	FIELD: PID (ppm)	BLOWS/6 in** (uncorrected)	SAMPLER *	SAMPLE NUMBER	U.S.C.S. NAME	U.S.C.S. SYMBOL	SOIL DESCRIPTION
														Surface: Tile and Wood Floor
0.0														Tile, Wood and Concrete 4" thick
														Silty SAND with fine Gravel (SM) gray, moist, dense
								24			SP-8-1	SM		
														- very dense
5								283			SP-8-2			
														Silty SAND (SM) gray, moist, dense to very dense
								16			SP-8-3	SM		
								0			SP-8-4			
8.5														Moist gray SILT very dense, (GLACIAL TILL)
														Boring terminated at 8.5' bgs due to refusal on 9/19/99. Groundwater not encountered during drilling.

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

APPROV: _____

BY: _____

DATE DRILLED: 9-19-99
LOGGED BY: R. Yates
REVIEWED BY: Dennis O'Neill

SURFACE ELEVATION (feet):
TOTAL DEPTH (feet): 8.5
DIAMETER OF BORING (in): 2.5"

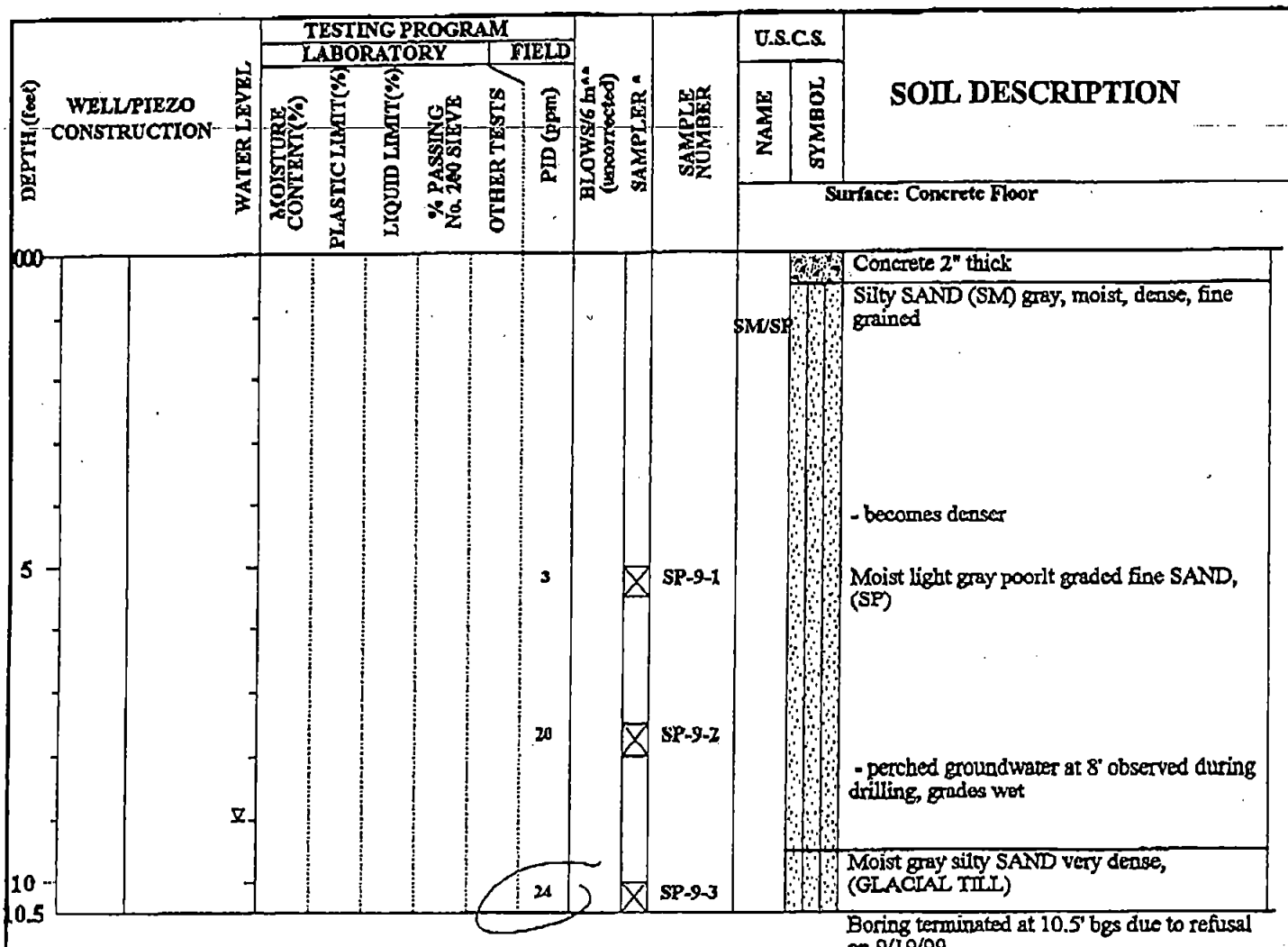
DRILLING METHOD: Percussion Hammer
DRILLER: Sonic Soil Sampling
CASING SIZE:

KLEINFELDER
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
SOILS AND MATERIALS TESTING

PROJECT NUMBER: 60-1996-01

Barg French Dry - Cleaning Facility
1929 3rd Avenue
Seattle, Washington
BORING LOG
SP-8

FIGURE
A - 3
PAGE 1 of 1



THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

APPROV: _____

BY: _____

DATE DRILLED: 9-19-99
LOGGED BY: R. Yates
REVIEWED BY: Dennis O'Neill

SURFACE ELEVATION (feet):
TOTAL DEPTH (feet): 10.5
DIAMETER OF BORING (in): 2.5"

DRILLING METHOD: Percussion Hammer
DRILLER: Sonic Soil Sampling
CASING SIZE:

KLEINFELDER
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
SOILS AND MATERIALS TESTING

PROJECT NUMBER: 60-1996-01

Barg French Dry - Cleaning Facility
1929 3rd Avenue
Seattle, Washington
BORING LOG
SP-9

FIGURE
A - 4

DEPTH (feet)	WELL/PIEZO CONSTRUCTION	WATER LEVEL	TESTING PROGRAM: LABORATORY: MOISTURE CONTENT(%)	PLASTIC LIMIT(%)	LIQUID LIMIT(%)	% PASSING No. 200 SIEVE	OTHER TESTS	FIELD: PID (ppm)	BLOWS/6 in.** (uncorrected)	SAMPLER *	SAMPLE NUMBER	U.S.C.S. NAME	U.S.C.S. SYMBOL	SOIL DESCRIPTION
														Surface: Concrete Floor
0.0														Concrete 6" thick, 2' void to soil
														VOID in upper 2 feet beneath flooring
												SP		SAND (SP) gray, moist, dense, fine grained
5								7			SP-10-1			Moist light gray poorly graded fine SAND with occasional iron streaks, (SP)
								6			SP-10-2			
								7			SP-10-3			- grades very dense
								10			SP-10-4			
								6			SP-10-5			Moist gray silty SAND, very dense, (GLACIAL TILL)
10														Boring terminated at 10' bgs on 9/19/99.
10.5														

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

APPROV: _____

BY: _____

DATE DRILLED: 9-19-99
LOGGED BY: R. Yates
REVIEWED BY: Dennis O'Neill

SURFACE ELEVATION (feet):
TOTAL DEPTH (feet): 10.5
DIAMETER OF BORING (in): 2.5"

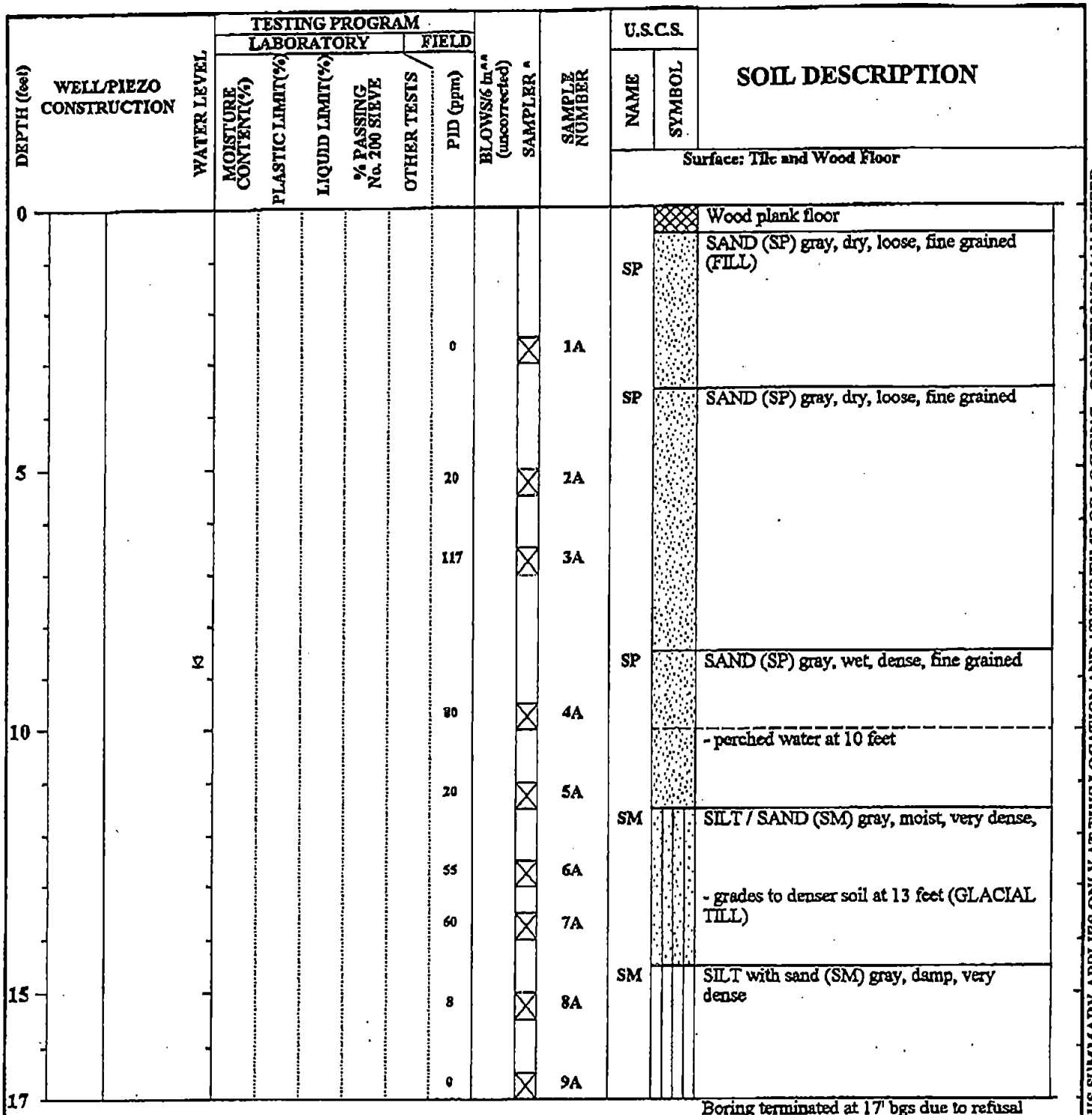
DRILLING METHOD: Percussion Hammer
DRILLER: Sonic Soil Sampling
CASING SIZE:

KLEINFELDER
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
SOILS AND MATERIALS TESTING

PROJECT NUMBER: 60-1996-01

Barg French Dry - Cleaning Facility
1929 3rd Avenue
Seattle, Washington
BORING LOG
SP-10

FIGURE
A - 5



THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

APPROV: _____

BY: _____

DATE DRILLED: 9-18-99
LOGGED BY: D. O'Neill
REVIEWED BY: Dennis O'Neill

SURFACE ELEVATION (feet):
TOTAL DEPTH (feet): 17.0
DIAMETER OF BORING (in): 2.5"

DRILLING METHOD: Percussion Hammer
DRILLER: Sonic Soil Sampling
CASING SIZE:

KLEINFELDER
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
SOILS AND MATERIALS TESTING

PROJECT NUMBER: 60-1996-01

Barg French Dry - Cleaning Facility
1929 3rd Avenue
Seattle, Washington
BORING LOG
SP-11

FIGURE
A - 6
PAGE 1 of 1

DEPTH (feet)	WELL/PIEZO CONSTRUCTION	WATER LEVEL	TESTING PROGRAM: LABORATORY: MOISTURE CONTENT(%)	PLASTIC LIMIT(%)	LIQUID LIMIT(%)	% PASSING No. 200 SIEVE	OTHER TESTS	FIELD: PID (ppm)	BLOWS/6 in.* (uncorrected)	SAMPLER *	SAMPLE NUMBER	U.S.C.S. NAME	U.S.C.S. SYMBOL	SOIL DESCRIPTION
														Surface: Concrete Floor
0														Concrete 6" thick
												SP		SAND (SP) gray, moist, dense, fine grained
								27			SP-12-1			
5												SM		Moist, light gray poorly graded fine SAND, (SM)
								46			SP-12-2			
								97			SP-12-3	SM		Wet, light gray silty SAND, (SM)
		▽						21			SP-12-4			
10												ML		Moist gray SILT, (ML), very dense, (GLACIAL TILL)
								7			SP-12-5			
11														Boring terminated at 11' bgs due to refusal on 9/19/99.

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

APPROV: _____

BY: _____

DATE DRILLED: 9-19-99
LOGGED BY: R. Yates
REVIEWED BY: Dennis O'Neill

SURFACE ELEVATION (feet):
TOTAL DEPTH (feet): 11.0
DIAMETER OF BORING (in): 2.5"

DRILLING METHOD: Percussion Hammer
DRILLER: Sonic Soil Sampling
CASING SIZE:

KLEINFELDER
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
SOILS AND MATERIALS TESTING

PROJECT NUMBER: 60-1996-01

Barg French Dry - Cleaning Facility
1929 3rd Avenue
Seattle, Washington

BORING LOG
SP-12

FIGURE
A - 7

PAGE 1 of 1

Appendix C

Laboratory Analytical Reports and Chain of Custody Forms

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

800 Sleater-Kinney SE, PMB #262
Lacey, Washington 98503-1127

Mobile Environmental Laboratories
Environmental Sampling Services

Telephone: 360-459-4670
Fax: 360-459-3432

September 24, 1999

Dennis O'Neill
Kleinfelder
2405 140th Ave. NE, #A101
Bellevue, WA 98005-1877

Dear Mr. O'Neill:

Please find enclosed the analytical data report for the Barg Trench Dry Cleaners Project in Seattle, Washington. Soil samples were analyzed for Specific Halogenated Hydrocarbons and BTEX by Method 8021B on September 20, 1999.

The results of these analyses are summarized in the attached table. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this analytical work is also enclosed.

TEG Northwest appreciates the opportunity to have provided analytical services to Kleinfelder for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Michael A. Korosec
President

TEG NW SEATTLE CHEMISTRY LABORATORY
(425) 957-9872, fax (425) 957-9904

TEG Job Number: S90920-1
Client: KLEINFELDER
Client Job Name: BARG TRENCH DRY CLEANERS
Client Job Number: 60-19996-02

Analytical Results

8021B, µg/kg		MTH BLK	LCS	SP6-4	SP6-5	SP7-4	SP8-4	SP9-2
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	09/20/99	09/20/99	09/20/99	09/20/99	09/20/99	09/20/99	09/20/99
Date analyzed	Limits	09/20/99	09/20/99	09/20/99	09/20/99	09/20/99	09/20/99	09/20/99
Moisture, %				9%	16%	7%	22%	11%
Chloromethane	250	nd		nd	nd	nd	nd	nd
Bromomethane	250	nd		nd	nd	nd	nd	nd
Vinyl chloride	250	nd		nd	nd	nd	nd	nd
Chloroethane	250	nd		nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	250	nd		nd	nd	nd	nd	nd
1,1-Dichloroethene	250	nd	101%	nd	nd	nd	nd	nd
Methylene Chloride	250	nd		nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	250	nd		nd	nd	nd	nd	nd
1,1-Dichloroethane	250	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
Carbontetrachloride	50	nd		nd	nd	nd	nd	nd
1,2-Dichloroethane	250	nd		nd	nd	nd	nd	nd
Trichloroethene	50	nd	94%	87	150	nd	nd	nd
1,2-Dichloropropane	250	nd		nd	nd	nd	nd	nd
Bromodichloromethane	250	nd		nd	nd	nd	nd	nd
cis-1,3-Dichloropropene	250	nd		nd	nd	nd	nd	nd
trans-1,3-Dichloropropene	250	nd		nd	nd	nd	nd	nd
Chlorobenzene	250	nd	98%	nd	nd	nd	nd	nd
1,1,2-Trichloroethane	50	nd		nd	nd	nd	nd	nd
Tetrachloroethene	50	nd		690	1,500	1,000	nd	780
Dibromochloromethane	250	nd		nd	nd	nd	nd	nd
Bromoform	250	nd		nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	250	nd		nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	250	nd		nd	nd	nd	nd	nd
Bromobenzene	250	nd		nd	nd	nd	nd	nd
1,2,3-Trichloropropane	250	nd		nd	nd	nd	nd	nd
Dibromomethane	250	nd		nd	nd	nd	nd	nd
m-Dichlorobenzene	50	nd		100	240	nd	nd	nd
p-Dichlorobenzene	50	nd		110	220	nd	nd	nd
o-Dichlorobenzene	50	nd		230	340	110	100	nd
Benzene	50	nd	98%	nd	nd	nd	nd	nd
Toluene	50	nd	96%	nd	nd	nd	nd	nd
Ethylbenzene	50	nd		nd	nd	nd	nd	nd
Xylenes	50	nd		nd	320	nd	nd	nd
Surrogate recoveries:								
Bromochloromethane		90%	101%	103%	103%	110%	106%	109%
1,4-Dichlorobutane		92%	101%	103%	104%	102%	104%	105%
Bromochloropropane		85%	98%	97%	99%	98%	98%	101%
Trifluorotoluene		93%	95%	90%	96%	99%	103%	100%
Bromofluorobenzene		89%	83%	86%	88%	89%	98%	96%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
na - not analyzed
C - coelution with sample peaks
M - matrix interference
J - estimated value
Results reported on dry-weight basis
Acceptable Recovery limits: 65% TO 135%
Acceptable RPD limit: 35%

TEG NW SEATTLE CHEMISTRY LABORATORY
(425) 957-9872, fax (425) 957-9904

TEG Job Number: S90820-1
Client: KLEINFELDER
Client Job Name: BARG TRENCH DRY CLEANERS
Client Job Number: 60-19996-02

Analytical Results

8021B, µg/kg		SP9-3	SP10-4	SP10-5	SP11-4A	SP11-9A	SP12-4	SP12-5
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	09/20/99	09/20/99	09/20/99	09/20/99	09/20/99	09/20/99	09/20/99
Date analyzed	Limits	09/20/99	09/20/99	09/20/99	09/20/99	09/20/99	09/20/99	09/20/99
Moisture, %		20%	14%	17%	16%	21%	16%	22%
Chloromethane	250	nd	nd	nd	nd	nd	nd	nd
Bromomethane	250	nd	nd	nd	nd	nd	nd	nd
Vinyl chloride	250	nd	nd	nd	nd	nd	nd	nd
Chloroethane	250	nd	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	250	nd	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	250	nd	nd	nd	nd	nd	nd	nd
Methylene Chloride	250	nd	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	250	nd	nd	nd	nd	nd	nd	nd
1,1-Dichloroethane	250	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
1,2-Dichloroethane	250	nd	nd	nd	nd	nd	nd	nd
Trichloroethene	50	nd	nd	nd	170	nd	nd	nd
1,2-Dichloropropane	250	nd	nd	nd	nd	nd	nd	nd
Bromodichloromethane	250	nd	nd	nd	nd	nd	nd	nd
cis-1,3-Dichloropropene	250	nd	nd	nd	nd	nd	nd	nd
trans-1,3-Dichloropropene	250	nd	nd	nd	nd	nd	nd	nd
Chlorobenzene	250	nd	nd	nd	nd	nd	nd	nd
1,1,2-Trichloroethane	50	nd	nd	nd	nd	nd	nd	nd
Tetrachloroethene	50	610	1,900	1,400	3,300	82	2,300	1,600
Dibromochloromethane	250	nd	nd	nd	nd	nd	nd	nd
Bromoform	250	nd	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	250	nd	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	250	nd	nd	nd	nd	nd	nd	nd
Bromobenzene	250	nd	nd	nd	nd	nd	nd	nd
1,2,3-Trichloropropane	250	nd	nd	nd	nd	nd	nd	nd
Dibromomethane	250	nd	nd	nd	nd	nd	nd	nd
m-Dichlorobenzene	50	nd	nd	nd	nd	nd	nd	nd
p-Dichlorobenzene	50	nd	nd	nd	nd	nd	nd	nd
o-Dichlorobenzene	50	nd	64	72	120	nd	nd	nd
Benzene	50	nd	nd	nd	nd	nd	nd	nd
Toluene	50	nd	nd	nd	nd	nd	nd	nd
Ethylbenzene	50	nd	nd	nd	nd	nd	nd	nd
Xylenes	50	nd	nd	nd	nd	nd	nd	nd
Surrogate recoveries:								
Bromochloromethane		107%	107%	106%	105%	108%	107%	110%
1,4-Dichlorobutane		103%	103%	104%	105%	104%	104%	105%
Bromochloropropane		101%	101%	102%	96%	102%	96%	101%
Trifluorotoluene		100%	98%	98%	99%	97%	94%	97%
Bromofluorobenzene		88%	97%	96%	96%	96%	94%	92%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
na - not analyzed
C - coelution with sample peaks
M - matrix interference
J - estimated value
Results reported on dry-weight basis
Acceptable Recovery limits: 65% TO 135%
Acceptable RPD limit: 35% .

TEG NW SEATTLE CHEMISTRY LABORATORY
(425) 957-9872, fax (425) 957-9904

TEG Job Number:	S90920-1
Client:	KLEINFELDER
Client Job Name:	BARG TRENCH DRY CLEANERS
Client Job Number:	60-19996-02

Analytical Results		MS	MSD	RPD
8021B, µg/kg		SP12-5	SP12-5	SP12-5
Matrix	Soil	Soil	Soil	Soil
Date extracted	Reporting	09/20/99	09/20/99	09/20/99
Date analyzed	Limits	09/20/99	09/20/99	09/20/99
Moisture, %		22%	22%	
Chloromethane	250			
Bromomethane	250			
Vinyl chloride	250			
Chloroethane	250			
cis-1,2-Dichloroethene	250			
1,1-Dichloroethene	250	108%	105%	3%
Methylene Chloride	250			
trans-1,2-Dichloroethene	250			
1,1-Dichloroethane	250			
Chloroform	50			
1,1,1-Trichloroethane	50			
Carbontetrachloride	50			
1,2-Dichloroethane	250			
Trichloroethene	50	96%	96%	0%
1,2-Dichloropropane	250			
Bromodichloromethane	250			
cis-1,3-Dichloropropene	250			
trans-1,3-Dichloropropene	250			
Chlorobenzene	250	100%	110%	9%
1,1,2-Trichloroethane	50			
Tetrachloroethene	50			
Dibromochloromethane	250			
Bromoform	250			
1,1,2,2-Tetrachloroethane	250			
1,1,1,2-Tetrachloroethane	250			
Bromobenzene	250			
1,2,3-Trichloropropane	250			
Dibromomethane	250			
m-Dichlorobenzene	50			
p-Dichlorobenzene	50			
o-Dichlorobenzene	50			
Benzene	50	102%	99%	3%
Toluene	50	100%	97%	3%
Ethylbenzene	50			
Xylenes	50			

Surrogate recoveries:			
Bromochloromethane	98%	102%	
1,4-Dichlorobutane	100%	101%	
Bromochloropropane	95%	96%	
Trifluorotoluene	100%	99%	
Bromofluorobenzene	97%	89%	

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
ns - not analyzed
C - coelution with sample peaks
M - matrix interference
J - estimated value
Results reported on dry-weight basis
Acceptable Recovery limits: 65% TO 135%
Acceptable RPD limit: 35%

QA/QC FOR ANALYTICAL METHODS

GENERAL

The TEG Northwest Laboratory quality assurance and quality control (QA/QC) procedures are conducted following the guidelines and objectives which meet or exceed certification/-accreditation requirements of California DOHS, Washington DOE, and Oregon DEQ. The Quality Control Program is a consistent set of procedures which assures data quality through the use of appropriate blanks, replicate analyses, surrogate spikes, and matrix spikes, and with the use of reference standards that meet or exceed EPA standards.

When analyses are taking place on-site with the mobile lab, the need for Field Blanks or Travel/Trip Blanks is eliminated. If there is going to be a delay before sample preparation for analysis, the sample is stored at 4^{o} C.

ANALYTICAL METHODS

TEG Northwest Labs use analytical methodologies which are in conformity with U. S. Environmental Protection Agency (EPA), Washington DOE, and Oregon DEQ methodologies. When necessary and appropriate due to the nature or composition of the sample, TEG may use variations of the methods which are consistent with recognized standards or variations used by the industry and government laboratories.

Purgeable Volatile Halocarbons
(Chlorinated Hydrocarbons, EPA 601/8021B)

A calibration standard is run at the beginning of the day. The standard must be within 15% of the continuing calibration curve value. The standard is rerun at the end of the day. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135%. At least 1 method blank is run per day.

S90920-1

teg TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES

CHAIN-OF-CUSTODY RECORD

CLIENT: Kleinfelder Inc.
ADDRESS: 2405 140th AVE NE Suite A101
PHONE (425)562-4200 FAX: (425)562-4201
CLIENT PROJECT #: 60-1996-02 PROJECT MANAGER: Dennis O'Neal

DATE: 9/20/99 PAGE 1 OF 1
PROJECT NAME: Barg Trench Dry Cleaners
LOCATION: Seattle, WA.
COLLECTOR: Robert Yates DATE OF COLLECTION 9/19/99

Sample Number	Depth	Time	Sample Type	Container Type	ASBESTOS	8021B	FIELD NOTES	Total Number of Containers	Laboratory Note Number
SP-6-4	8'	1700	Soil	4 oz. Jars	X		200		
SP-6-5	10'	1730			X				
SP-7-4	7'	1625			X		360		
SP-8-4	8'	1400			X				
SP-9-2	7.5'	1000			X				
SP-9-3	10.5'	1025			X				
SP-10-4	8.5'	1515			X				
SP-11-4	9'	1740			X		10		
SP-11-9	16.5'	1900			X				
SP-12-4	8'	1150			X		21		
SP-12-5	11'	1210			X		6.8		
SP-10-5	10'	1525			X				

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
[signature]	9/20/99/1130	[signature]	9/20/99 11
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

SAMPLE DISPOSAL INSTRUCTIONS
☐ TEG DISPOSAL @ $2.00 each ☐ Return ☐ Pickup

SAMPLE RECEIPT
TOTAL NUMBER OF CONTAINERS 30
CHAIN OF CUSTODY SEALS Y/N/NA
SEALS INTACT? Y/N/NA
RECEIVED GOOD COND./COLD
NOTES:

LABORATORY NOTES:
Regular Turnaround
STANDARD

Appendix D
Application for Authorization to Use

APPENDIX D

APPLICATION FOR AUTHORIZATION TO USE

Addendum Phase II Subsurface Soil Characterization
Havers Trust
The Barg French Dry-Cleaning Facility
Kleinfelder Project Number: 60-1996-01

November 2, 1999

TO: Kleinfelder, Inc.
2405 140th Avenue, Suite A101
Bellevue, Washington 98005

FROM:

Applicant _____ hereby applies for permission to:
[State here the use(s) contemplated]

for the purpose(s) of:
[State here why you wish to do what is contemplated as set forth above]

Applicant understands and agrees that the above identified report prepared by Kleinfelder, Inc. is the copyright owner and that unauthorized use or copying of the above identified report is strictly prohibited without the express written permission of Kleinfelder, Inc. and Kleinfelder's client. Applicant understands that Kleinfelder, Inc. and/or Kleinfelder's client, may withhold such permission at its sole discretion, or grant such permission upon such terms and conditions, as it deems acceptable.

Dated: _____

_____
Applicant

by _____

its _____

San Francisco Regional Office

6920 Koll Center Parkway, Suite 216
Pleasanton, CA 94566
(925) 426-2600
FAX (925) 426-0106

Clayton GROUP SERVICES

FACSIMILE COVER SHEET

To: Marcel **Fax No:** _____

Company: _____

From: Dwight

Date: _____

Number of Pages (including cover sheet): Many - 2nd Half

Please confirm receipt: ☐ YES ☑ NO

If you do not receive the number of pages specified, please call (925) 426-2600

COMMENTS

PL\Document2