PHASE II ENVIRONMENTAL SITE ASSESSMENT AND SITE CHARACTERIZATION REPORT

SHORT STOP SITE
6317 CALIFORNIA AVENUE S.W.
SEATTLE, WASHINGTON
ECOLOGY SITE #101565

^
UST

PREPARED BY

PAUL W. STEMEN

STEMEN ENVIRONMENTAL, INC.

RECEIVED
JUL 0 2 2001
DEPT OF ECOLOGY

STEMEN ENVIRONMENTAL, INC.

P.O. BOX 3644
LACEY, WASHINGTON 98509-3644
CONTR. LIC. #STEMEEI081J9

Telephone 360-438-9521 Fax 360-412-1225

June 13, 2001

Mr. Vernon Pontius
7730 Cabrini Drive
Port Orchard, Washington 98367

Dear Mr. Pontius:

RE: PHASE II ENVIRONMENTAL SITE ASSESSMENT FOR COMMERCIAL PROPERTY LOCATED AT 6317 CALIFORNIA AVENUE S.W., SEATTLE, WASHINGTON. ECOLOGY SITE # 101565

SITE CHARACTERISTICS AND HISTORY

The subject property, Tax Parcel #762570, consists of 20,378 square feet of developed commercial property. The subject property is located in the northwest quarter of section 26, township 24 range 3 east, and is located within the boundaries of the City of Seattle and King County, Washington.

The subject property is bordered on the north by a residential building/property, on the west by residential properties, on the south by an asphalt surfaced roadway and a former full service vehicle fueling station, and on the east by California Avenue S.W., an asphalt surfaced public roadway.

The property is currently occupied by an approximately 3400 square foot commercial building. The commercial building is surrounded by asphalt surfaced parking lots of various sizes. An earthen surfaced area is present on the southwestern portion of the property.

The northern portion of the on-site building is currently and for several years been occupied by a convenience store, while the southern portion of the building is currently and for several years been occupied by a dry cleaning business.

In previous years a self service vehicle fueling station was operated in conjunction with the convenience store, on the eastern portion of the subject property. The vehicle fueling station was serviced by three underground gasoline storage tanks and their associated pump island.

In 1991, a "30 Day Notice of Intent to Close/Decommission Tanks" was filed with the Department of Ecology by O'Sullivan Construction. The document indicated that the two (2) 10,000 gallon, and one (1) 6,000 gallon capacity underground gasoline storage tanks present on this site were to be decommissioned on approximately April 15, 1991.

Available information indicates that the three (3) underground gasoline storage tanks were excavated and removed from this site as planned. During the tank removal project, an unknown quantity of petroleum impacted soils were removed from the tank excavation pit and stockpiled on the earthen surfaced area located on the southwestern portion of the property.

The excavation was then backfilled and the area was resurfaced using asphalt.

Eventually the soils present in the petroleum impacted soils stockpiles were distributed evenly across earthen surfaced portion of the site.

Recently, during a routine historical records search, it was learned that an Underground Storage Tank Removal/Decommissioning Site Assessment Report for this site had not been properly filed with the Department of Ecology and that the tanks were still listed on the Department of Ecology's database as being "in-use".

Additionally, the confirmed release of petroleum products (gasoline) to the soils and/or groundwaters beneath this site was not properly reported to the Department of Ecology.

During a recent on-site visit, I observed that most of the concrete pump island drive slabs and a capped abandoned steel pipe were still present in the asphalt surfaced parking lot located just east of the convenience store building. Additionally the outline of the asphalt patch placed over the former tank excavation/removal pit was still clearly visible.

I also observed liquids being discharged (dumped) outside the rear door of the dry cleaner's portion of the on-site building. These liquids flowed across the pavement and then pooled on the earthen surfaced portion of the property. These pooled liquids appeared to have suds on their surface. It should also be noted that the asphalt surface materials present in the discharged waters flow area appeared to be aged/distressed/etched to a greater extent than the asphalt in surrounding areas.

Native soils present on this site from just below the surface to an approximate depth of 20 feet b.g.s. (below ground surface) consisted of brownish colored medium grained sands.

Depth to groundwater beneath this site was approximately 12 to14 feet b.g.s. on the date of these on-site investigative sampling activities.

A body of surface waters, the Puget Sound, is present approximately 1 mile west of the subject property.

INVESTIGATIVE SOIL AND GROUNDWATER SAMPLING

The purpose of this on-site investigation of the subsurface soils and/or groundwaters beneath this site was to assess the impacts of current and/or past uses of the subject property on the current environmental integrity of the subject property and to provide additional information required for the proper closure of this underground fuel storage tank site.

On April 5, 2001, I proceeded to obtain eighteen (18) discreet soil samples and five (5) discreet groundwater samples from sixteen (16) separate selected sampling locations on the subject property.

Current soil and groundwater sampling locations were selected based on this consultant's on-site observations, and additional information obtained during on-site conversations with knowledgeable interested parties.

All soil samples were field screened using a water sheen test.

Soil samples selected to be submitted for laboratory analyses were chosen based on field screening results (a water sheen test), samples location in reference to the previous on-site U.S.T.'s burial locations, samples location in reference to the vehicle fuel dispensing islands former location, and this consultant's on-site observations.

Groundwater samples submitted for laboratory analyses were typically obtained from sampling locations where field screening results indicated the presence of petroleum contaminated soils.

SAMPLING LOCATION S-1

Soil sampling location S-1 was located approximately 36 feet west and 9 feet south of the northeast corner of the subject property. Soil samples obtained at various depths ranging from 1 to 14 feet b.g.s. exhibited no noticeable signs of petroleum contaminants when subjected to field screening (a water sheen test). Investigative soil sample S-1-12 was obtained from subsurface soils present at a depth of 12 feet b.g.s. at this sampling location and was submitted for appropriate laboratory analyses.

Groundwater sample S-1-W was obtained from waters present a depth of approximately 11.5 feet b.g.s. at this sampling location. Groundwater sample S-1-W was submitted for appropriate laboratory analyses.

SAMPLING LOCATION S-2

Sampling location S-2 was located approximately 13 feet south of sampling location #S-1. This sampling location is directly adjacent to the northern end of the remaining concrete drive slab and the capped metal pipe. Field screening results of soil samples obtained from subsurface soils present at depths ranging from 1 to 9 feet b.g.s., at this sampling location, indicated no noticeable presence of petroleum products. Investigative soil sample S-2-6 was obtained from subsurface soils present at a depth of 6 feet b.g.s. at this sampling location and was submitted for appropriate laboratory analyses.

SAMPLING LOCATION S-3

Soil sampling location S-3 was located approximately 20 feet west and 39 feet north of the southeast corner of the subject property. Soil samples obtained at various depths ranging from 1 to 16 feet b.g.s. exhibited no significant signs of petroleum contaminants when subjected to field screening (a water sheen test). A light sheen was observed when some of the samples were field screened using this method. Investigative soil sample S-3-10 was obtained from subsurface sandy fill materials present at a depth of 10 feet b.g.s. at this sampling location and was submitted for appropriate laboratory analyses.

Groundwater sample S-3-W was obtained from waters present a depth of approximately 13 feet b.g.s. at this sampling location and was immediately submitted for appropriate laboratory analyses.

SAMPLING LOCATION S-4

Soil sampling location S-4 was located approximately 21 feet east and 28 feet north of the southeast corner of the convenience store building. Soil samples obtained at various depths ranging from 1 to 15 feet b.g.s. exhibited no noticeable signs of petroleum contaminants when subjected to field screening (a water sheen test). Investigative soil sample S-4-15 was obtained from subsurface sandy fill materials present at a depth of 15 feet b.g.s. at this sampling location and was submitted for appropriate laboratory analyses.

SAMPLING LOCATION S-5

Soil sampling location S-5 was located approximately 38 feet north and approximately 3 feet east of the southeast corner of the convenience store building. Soil samples obtained at various depths ranging from 1 to 13.5 feet b.g.s. and at depths 16 feet b.g.s. or more exhibited no noticeable signs of petroleum contaminants when subjected to field screening (a water sheen test) while soils sampled at depths ranging between 14 to 15.5 feet b.g.s. produced a noticeable petroleum product type sheen during the water sheen test and possessed a faint odor of gasoline. Investigative soil sample S-5-15 was obtained from gray colored sands present at a depth of approximately 15 feet b.g.s. and soil sample S-5-16 was obtained from brownish colored sandy materials present at an approximate depth of 16 feet b.g.s, at this sampling location. These soil samples were immediately submitted for appropriate laboratory analyses.

SAMPLING LOCATION S-6

Soil sampling location S-6 was located approximately 41 feet north and approximately 17 feet east of the southeastern corner of the convenience store building. Soil samples obtained at depths less than 12 feet b.g.s. exhibited no noticeable signs of petroleum contaminants when subjected to field screening (a water sheen test) while soils sampled at depths ranging between 12 15 feet b.g.s. produced a noticeable petroleum product type sheen during the water sheen test. Investigative soil sample S-6-14 was obtained from gray colored sands present at a depth of approximately 14 feet b.g.s. at this sampling location and was immediately submitted for appropriate laboratory analyses.

Groundwater sample S-6-W was obtained from groundwaters present at a depth of approximately 13 feet b.g.s. at this sampling location. Groundwater sample S-6-W was immediately submitted for appropriate laboratory analyses.

SAMPLING LOCATION S-7

Soil sampling location S-7 was located approximately 10 feet east of sampling location S-6. Soil samples obtained at various depths ranging from 1 to 16 feet b.g.s. exhibited no noticeable signs of petroleum contaminants when subjected to field screening (a water sheen test). Investigative soil sample S-7-15 was obtained from subsurface soils/sands present at a depth of 15 feet b.g.s. at this sampling location and was submitted for appropriate laboratory analyses.

SAMPLING LOCATION S-8

Soil sampling location S-8 was located approximately 8 feet west and 6 feet south of the southeastern corner of convenience store building. Soil samples obtained at various depths ranging from 1 to 17 feet b.g.s. and 18 to 21 feet b.g.s. exhibited no noticeable signs of petroleum contaminants when subjected to field screening (a water sheen test) while soils sampled at depths between 16 and 18 feet b.g.s. produced a noticeable petroleum product type sheen during the water sheen test and possessed a faint odor of gasoline. Investigative soil sample S-8-17 was obtained from subsurface soils present at a depth of approximately 17 feet b.g.s. at this sampling location and was immediately submitted for appropriate laboratory analyses.

SAMPLING LOCATION S-9

Soil sampling location S-9 was located approximately 10 feet north and 5 feet west of the southwestern corner of the convenience store building. Soil samples obtained at various depths ranging from 1 to 17 feet b.g.s. and 18 to 21 feet b.g.s. exhibited no noticeable signs of petroleum contaminants when subjected to field screening (a water sheen test) while soils sampled at depths between 16 and 18 feet b.g.s. produced a noticeable petroleum product type sheen during the water sheen test and possessed a faint odor of gasoline. Investigative soil sample S-9-18 was obtained from subsurface soils present at a depth of approximately 18 feet b.g.s. at this sampling location and was immediately submitted for appropriate laboratory analyses.

SAMPLING LOCATION S-10

Soil sampling location S-10 was located approximately 28 feet north and 50 feet west of the southwestern corner of the convenience store building. Soil samples obtained at various depths ranging from 1 to 18 feet b.g.s. exhibited no noticeable signs of petroleum contaminants when subjected to field screening (a water sheen test). Investigative soil sample S-10-16 was obtained from subsurface soils present at a depth of 16 feet b.g.s. at this sampling location and was submitted for appropriate laboratory analyses.

Groundwater sample S-10-W was obtained from waters present a depth of approximately 13 feet b.g.s. at this sampling location and was immediately submitted for appropriate laboratory analyses.

SAMPLING LOCATION S-11

Soil sampling location S-11 was located approximately 20 feet west and 10 feet south of the northwest corner of the convenience store building. Soil samples obtained at various depths ranging from 1 to 15 feet b.g.s. exhibited no noticeable signs of petroleum contaminants when subjected to field screening (a water sheen test). Investigative soil sample S-11-8 was obtained from subsurface soils present at a depth of 8 feet b.g.s. at this sampling location and was submitted for appropriate laboratory analyses.

SAMPLING LOCATION S-12

Soil sampling location S-12 was located approximately 3 feet west and 5 feet south of the northeastern corner of the subject property. Soil samples obtained at various depths ranging from 1 to 18 feet b.g.s. exhibited no noticeable signs of petroleum contaminants when subjected to field screening (a water sheen test). Investigative soil sample S-12-10 was obtained from subsurface soils present at a depth of 10 feet b.g.s. at this sampling location and was submitted for appropriate laboratory analyses.

Groundwater sample S-12-W was obtained from waters present a depth of approximately 12 feet b.g.s. at this sampling location and was immediately submitted for appropriate laboratory analyses.

SAMPLING LOCATION RSS

Soil sampling location RSS was located approximately 30 feet west and 20 feet north of the southwest corner of the convenience store building. This sampling location is located where the waters discharged out the rear door of the dry cleaners pooled on the edge of the earthen portion of the property. Investigative soil sample RSS-1 was obtained from subsurface soils present on the surface and just below the surface while soil sample RSS-2 was obtained from soils present at a depth of 2 feet b.g.s. at this sampling location and was submitted for appropriate laboratory analyses.

It should be noted that a limited quantity of suds bearing liquids were discharged to the surface materials in this area during the performance of these on-site investigations.

SOIL SAMPLES RCS-1 AND RCS-2

Soil samples RCS-1 and RCS-2 were composited from soils present at various depths and locations on the earthen surfaced area of the subject property. This is the portion of the property where soils stockpiled during the U.S.T. project were eventually distributed at shallow depths.

SOIL SAMPLING AND LABORATORY ANALYSES

All discreet soil samples were obtained using a "Strata Probe Sampling System" provided and operated by factory trained technicians from Environmental Services Network Northwest, Lacey, Washington. Continuous soil corings were extended to a depths ranging from

approximately 1 to 20 feet below ground surface (b.g.s.). Continuous soil coring/samples (split spoon samplers) were laid out in order by depth on the surface to facilitate field screening and observation of the soils obtained from various depths.

All discreet groundwater samples were obtained using a parastaltic pump and the "Strata Probe Sampling System". The strataprope sampling tube was purged of all collected waters and then allowed to recharge prior to the collection of these water samples.

All sampling tools/devices were properly cleaned between individual samples to prevent cross sample contamination. All soil samples were then tightly packed in recommended sample jars with no head space, properly refrigerated and transported with proper chain of custody forms, to the on-site mobile laboratory supplied by Environmental Services Network Northwest Inc., for appropriate laboratory analyses.

All soil and/or groundwater samples were screened for gasoline range T.P.H. (total petroleum hydrocarbons) using method NWTPH-Gx and Volatile Organic Compounds (V.O.C.s) using EPA method 8021 B.

Groundwater elevations were measured using an electronic water level indicator. Depth to water was measured from the ground surface over the individual sampling location.

All laboratory analyses methods and quality controls meet or exceed current Department of Ecology recommendations for Site Checks and Site Assessments.

Laboratory analyses results for soil samples S-1-12, S-2-6, S-3-10, S-4-13, S-5-16, S-7-15, S-8-4, S-10-16, S-11-8, S-12-10, RSS-2, RCS-1, and RCS-2 indicated no presence of gasoline range T.P.H. and/or Specific Halogenated Hydrocarbons at levels that exceeded the Department of Ecology's Method "A" Clean Up Levels in their respective sampled soils.

Laboratory analyses results for soil samples S-5-15, S-6-14, S-9-18, and S-8-17 confirmed the presence of gasoline range T.P.H. and Specific Halogenated Hydrocarbons at levels that exceeded the Department of Ecology's Method "A" Clean Up Levels in their respective sampled soils.

Laboratory analyses results for soil sample RSS-1 confirmed the presence of Specific Halogenated Hydrocarbons at levels that exceeded the Department of Ecology's Method "A" Clean Up Levels in these sampled soils.

Laboratory analyses results for groundwater sample S-6-W, S-10-W, and S-12-W indicated no presence of gasoline range T.P.H. and / or Specific Halogenated Hydrocarbons at levels that exceeded the Department of Ecology's Method "A" Clean Up Levels in these sampled waters.

Laboratory analyses results for groundwater sample S-3-W confirmed the presence of gasoline range T.P.H. and Specific Halogenated Hydrocarbons at levels that exceeded the Department of Ecology's Method "A" Clean Up Levels in these sampled waters.

Laboratory analyses results for groundwater sample S-1-W confirmed the presence of Special Halogenated Hydrocarbons at levels that exceeded the Department of Ecology's Method "A" Clean Up Levels in these sampled waters.

CONCLUSIONS:

The results of this on-site investigation confirm the presence of gasoline range T.P.H. and/or Specific Halogenated Hydrocarbons, at levels that exceed the Department of Ecology's Method "A" Clean Up Levels, in the subsurface soils and groundwaters beneath this site at selected locations.

The majority of the impacted soils appear to be limited to soils present in an approximately 2 foot thick layer of gray colored sands which exists at depths greater than 13 feet b.g.s. at various locations on the subject property. This layer/band of impacted soils is present at depths below the current seasonal groundwater levels.

The results of this on-site investigation also confirmed the presence of Specific Halogenated Hydrocarbons (TETRACHLOROETHENE) in the surface and very shallow subsurface soils present on the rear (western) portion of the property.

HEALTH AND SAFETY

1. All on-site work was performed under the Health and Safety guidelines set forth in sections 29 CRF 1910.120 of the Federal Register and Chapter 296-62 WAC which provide regulations for individuals who are engaged in activities involving hazardous substances, including petroleum, and who perform confined space entry during field activities, also Chapter 296-155 WAC which provides State safety standards for construction work.

2. All on-site workers were 40 hour Hazmat certified.

3. A copy of the Site Safety Plan was provided to all on-site employees. The contents of this plan and all potential on-site hazards, were discussed during a personnel on-site safety meeting. Based on the contents of this safety plan all workers were required to wear at least Level D protection. First Aid materials and properly trained personnel were present on-site at all times.

4. The immediate perimeter of the work area was secured at all times by orange hazard cones.

CONCLUSIONS

The Phase II Environmental Site Assessment and Site Characterization Study performed on the subject property confirmed the presence of gasoline range Total Petroleum Hydrocarbons and/or Specific Halogenated Hydrocarbons at levels that exceed

the Department of Ecology's Method "A" Clean Up Levels in the soils and/or groundwaters present beneath selected locations of this site.

The results of this on-site investigation also confirmed the presence of Specific Halogenated Hydrocarbons in the surface and shallow subsurface soils present at selected locations on the rear (western) portion of the subject property (site).

In an attempt to identify the sources and/or release points of the substances containing Specific Halogenated Hydrocarbons, and to further characterize the impacts of the releases of Specific Halogenated Hydrocarbons and Petroleum Products to the soils and groundwaters beneath this site, I would recommend that additional inquries and/or on-site investigations be performed.

To assist in the further characterization of the groundwaters beneath this site, I would recommend the installation of a minimum of three (3) groundwater monitoring wells, at selected locations on the subject property, and the quarterly monitoring of the groundwaters beneath this site.

All opinions, observations, and recommendations set forth in this report are based on current available information and on-site conditions, and cannot predict or report on the impacts of future events and/or regulatory requirements on this site.

If you have any questions or need further information please feel free to contact us at the above phone number.

Sincerely,

Paul W. Stemen
Ecology-Registered Site Assessment Supervisor
ASTM Certified
IFCI #0874201-26

cc: Department of Ecology
File

SOIL LABORATORY ANALYSES CHARTS

TOTAL PETROLEUM
HYDROCARBONS (PPM)

SAMPLE NUMBER	SAMPLE DATE	SAMPLE DEPTH	GASOLINE
S-1-12	4-5-01	12'	ND
S-2-6	4-5-01	6'	ND
S-3-10	4-5-01	10'	ND
S-4-13	4-5-01	13'	ND
S-5-15	4-5-01	15'	8000
S-5-16	4-5-01	16'	ND
S-6-14	4-5-01	14'	3400
R-SS-1	4-5-01	0" - 3"	ND
S-7-15	4-5-01	15'	ND
S-8-4	4-5-01	4'	ND
S-8-17	4-5-01	17	2500
S-9-18	4-5-01	18	1300
S-10-16	4-5-01	16'	ND
S-11-8	4-5-01	8'	ND
R-SS-2	4-5-01	0 - 3'	ND
RLS-2	4-5-01	0' -1'	ND
RLS-1	4-5-01	0' -1'	ND
S-12-10	4-5-01	10'	ND

SOIL LABORATORY ANALYSES CHARTS

SPECIFIC HALOGENATED HYDROCARBONS (PPM)

SAMPLE-NUMBER	S-1-12'	S-2-6'	S-5-15'	S-6-14'	RSS-1	RSS-2	S-8-17'	S-9-18	S-5-16'	S-7-15	S-8-4
DATE	4-5-01	4-5-01	4-5-01	4-5-01	4-5-01	4-5-01	4-5-01	4-5-01	4-5-01	4-5-01	4-5-01
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZENE	ND	ND	3.6	2.6	ND	ND	4.2	4.4	ND	ND	ND
TOLUENE	ND	ND	148	6.2	0.09	ND	1.4	10	ND	ND	ND
ETHYLBENZENE	ND	ND	140	16	0.07	ND	1.6	30	ND	ND	ND
TOTAL-XYLENE	ND	0.13	520	50	0.32	0.05	5.5	120	ND	ND	ND
1,1 DICHLORETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS 1,1 DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1 DICHLOROETHANE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,2 DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1 TRICHLOROETHANE (TCA)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2 DICHLOROETHANE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE (TCE)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2 TRICHLOROETHANE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE (PCE)	ND	0.03	118	0.73	1.1	ND	0.23	ND	ND	ND	ND

SOIL LABORATORY ANALYSES CHARTS

SPECIFIC HALOGENATED HYDROCARBONS (PPM)

SAMPLE-NUMBER	S-10-16'	S-11-8	S-12-10'	RCS-1	RCS-2	S-3-10	S-4-13
DATE	4-5-01	4-5-01	4-5-01	4-5-01	4-5-01	4-5-01	4-5-01
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND	ND
BENZENE	ND	ND	ND	ND	ND	ND	ND
TOLUENE	ND	ND	ND	ND	ND	ND	ND
ETHYLBENZENE	ND	ND	ND	ND	ND	ND	ND
TOTAL-XYLENE	ND	ND	ND	ND	ND	ND	ND
1,1 DICHLORETHENE	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	ND	ND	ND	ND	ND	ND	ND
TRANS 1,1 DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND
1,1 DICHLOROETHANE	ND	ND	ND	ND	ND	ND	ND
CIS-1,2 DICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	ND	ND	ND	ND	ND	ND	ND
1,1,1 TRICHLOROETHANE (TCA)	ND	ND	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	ND	ND	ND	ND	ND	ND	ND
1,2 DICHLOROETHANE	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE (TCE)	ND	ND	ND	ND	ND	ND	ND
1,1,2 TRICHLOROETHANE	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE (PCE)	ND	ND	ND	ND	ND	ND	ND

WATER LABORATORY ANALYSES CHARTS

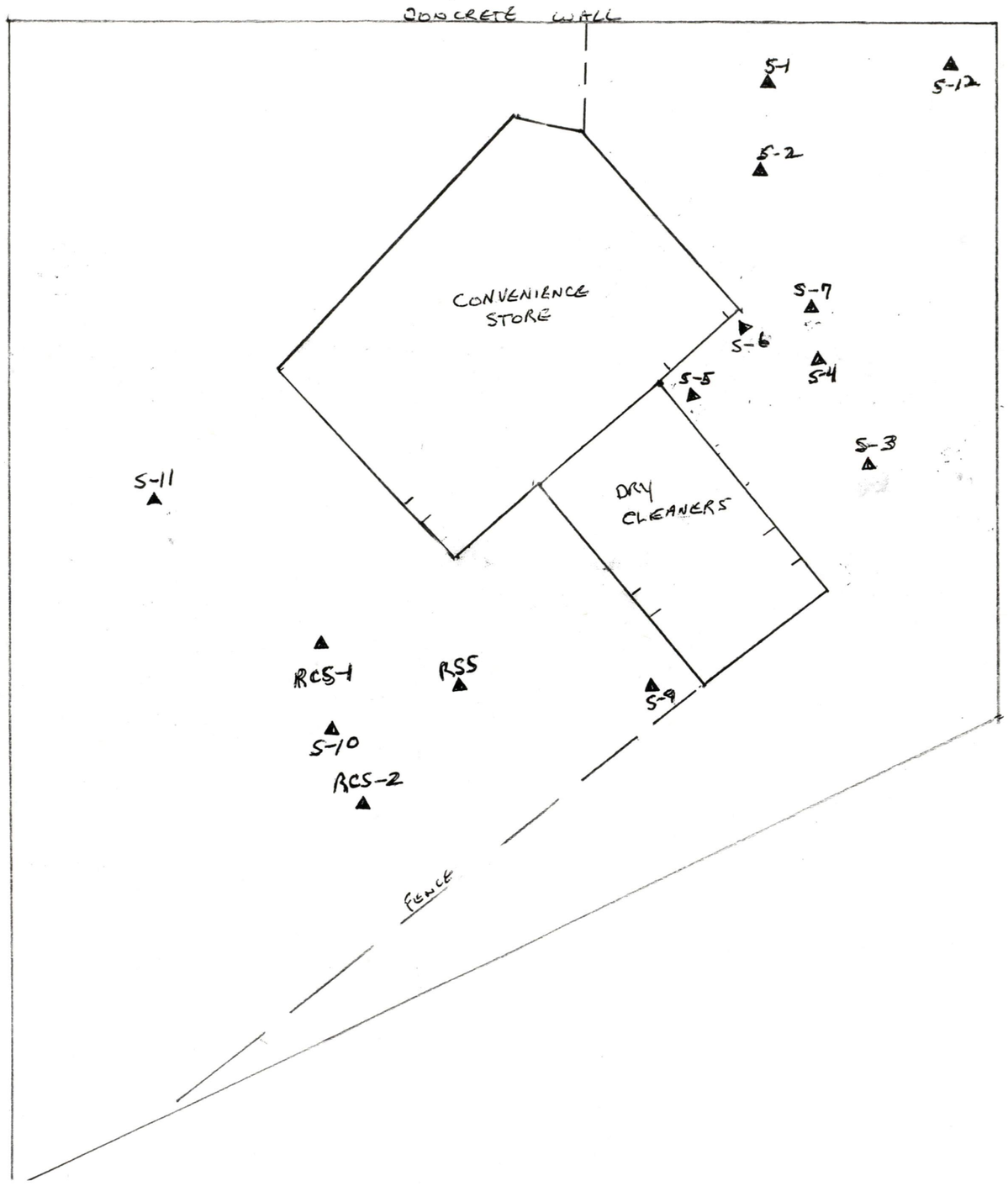
TOTAL PETROLEUM
HYDROCARBONS (PPB)

SAMPLE NUMBER	SAMPLE DATE	SAMPLE DEPTH	GASOLINE
S-1-W	4-5-01	11.5'	ND
S-3-W	4-5-01	13'	1300
S-6-W	4-5-01	13'	ND
S-10-W	4-5-01	13'	ND
S-12-W	4-5-01	12'	ND

WATER LABORATORY ANALYSES CHARTS

SPECIFIC HALOGENATED HYDROCARBONS (PPB)

SAMPLE-NUMBER	S-1-W	S-3-W	S-10-W	S-12-W	S-6-W
DATE	4-5-01	4-5-01	4-5-01	4-5-01	4-5-01
VINYL CHLORIDE	ND	ND	ND	ND	ND
BENZENE	ND	3.3	ND	ND	ND
TOLUENE	ND	82	ND	ND	1.8
ETHYLBENZENE	ND	30	ND	ND	4.5
TOTAL-XYLENE	ND	130	ND	12	20
1,1 DICHLORETHENE	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	ND	ND	ND	ND	ND
TRANS 1,1 DICHLOROETHENE	ND	ND	ND	ND	ND
1,1 DICHLOROETHANE	ND	ND	ND	ND	ND
CIS-1,2 DICHLOROETHENE	ND	ND	ND	ND	ND
CHLOROFORM	ND	ND	ND	ND	ND
1,1,1 TRICHLOROETHANE (TCA)	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	ND	ND	ND	ND	ND
1,2 DICHLOROETHANE	ND	ND	ND	ND	ND
TRICHLOROETHENE (TCE)	ND	ND	ND	ND	ND
1,1,2 TRICHLOROETHANE	ND	ND	ND	ND	ND
TETRACHLOROETHENE (PCE)	8.8	8.2	ND	ND	2.7



NORTH

SCALE - 1" = 20'

ESN NORTHWEST
Environmental Services Network

May 1, 2001

Paul Stemen
Stemen Environmental
5724 Puget Beach Road NE
Olympia, WA 98516

Dear Mr. Stemen:

Please find enclosed the analytical data report for the Short Stop Project in Seattle, Washington. Direct Push and Mobile Laboratory services were conducted on April 5, 2001. Soil and water samples were analyzed for Gasoline by NWTPH-Gx and Specific Halogenated Hydrocarbons and BTEX by Method 8021B.

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.

ESN Northwest appreciates the opportunity to have provided analytical services to Stemen Environmental 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

677 Woodland Square Lp. SE, Suite D ■ Lacey, Washington 98503 ■ 360.459.4670 ■ FAX 360.459.3432
Web Site: *www.ESN-USA.com* E-Mail: *esnnw@aol.com*

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.

TPH-Gasoline, TPH-Diesel
(Gasoline and/or Diesel, Modified EPA 8015, NWTPH-Gx and NWTPH-Dx)

A check standard is run at the beginning of the day. 1) A close standard is run at the end of the day. 2) Both open and close standards must be within 15% of the continuing calibration curve value. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135% unless high sample concentrations interfere with the determination of the recovery percentage. A duplicate sample is run at a rate of 1 per 10 samples. At least 1 method blank is run per 20 samples analyzed.

Purgeable Volatile Aromatics
(BTEX, EPA 8021B)

A check standard is run at the beginning of the day. The check standard is run at the end of the day. Both open and close standards must be within 15% of the continuing calibration curve value. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135% unless high sample concentrations interfere with the determination of the recovery percentage. At least 1 method blank is run per day.

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

SHORT STOP PROJECT
Seattle, Washington
Stemen Environmental, Inc.

Analyses of Gasoline (NWTPH-Gx) in Soil

Sample Number	Date Analyzed	Recovery (%)	Gasoline (mg/kg)
Method Blank	4/5/01	92	nd
Method Blank	4/9/01	91	nd
S-1-12	4/5/01	83	nd
S-2-6	4/5/01	95	nd
S-3-10	4/5/01	85	nd
S-4-13	4/5/01	96	nd
S-5-15	4/5/01	dil	8,000
S-6-14	4/5/01	dil	3,400
S-8-17	4/5/01	dil	2,500
S-8-17 Dupl	4/5/01	dil	2,600
S-9-18	4/5/01	dil	1,300
R-SS-1	4/5/01	78	nd
R-SS-2	4/5/01	93	nd
S-5-16	4/9/01	108	nd
S-7-15	4/9/01	104	nd
S-8-4	4/9/01	103	nd
S-10-16	4/9/01	104	nd
S-11-8	4/9/01	104	nd
S-12-10	4/9/01	98	nd
RCS-1	4/9/01	88	nd
RCS-2	4/9/01	96	nd
RCS-2 Dupl	4/9/01	94	nd
S-3-10	4/9/01	101	nd
S-4-13	4/9/01	103	nd
Method Detection Limits			10

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Chlorobenzene): 65% TO 135%

DATA REVIEWED BY: Sherry Chilcutt

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

SHORT STOP PROJECT
Seattle, Washington
Stemen Environmental, Inc.

Specific Halogenated and Aromatic Hydrocarbons (EPA 8021B) in Soil

Sample Description		S-1-12'	S-2-6'	S-5-15'	S-6-14'	RSS-1 0-3	RSS-2
Date Sampled		4/5/01	4/5/01	4/5/01	4/5/01	4/5/01	4/5/01
Date Analyzed		4/5/01	4/5/01	4/5/01	4/5/01	4/5/01	4/5/01
	MDL (mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Vinyl chloride	0.25	nd	nd	nd	nd	nd	nd
Benzene	0.05	nd	nd	3.6	2.6	nd	nd
Toluene	0.05	nd	nd	148	6.2	0.09	nd
Ethylbenzene	0.05	nd	nd	140	16	0.07	nd
Total Xylenes	0.05	nd	0.13	520	50	0.32	0.05
1,1-Dichloroethene	0.05	nd	nd	nd	nd	nd	nd
Methylene chloride	0.05	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	0.05	nd	nd	nd	nd	nd	nd
1,1-Dichloroethane	0.05	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	0.05	nd	nd	nd	nd	nd	nd
Chloroform	0.05	nd	nd	nd	nd	nd	nd
1,1,1-Trichloroethane (TCA)	0.05	nd	nd	nd	nd	nd	nd
Carbon tetrachloride	0.05	nd	nd	nd	nd	nd	nd
1,2-Dichloroethane	0.05	nd	nd	nd	nd	nd	nd
Trichloroethene (TCE)	0.05	nd	nd	nd	nd	nd	nd
1,1,2-Trichloroethane	0.05	nd	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	0.05	nd	0.03	118	0.73	1.10	nd
Surrogate Recovery %		92	66	int	int	82	96

"nd" Indicates not detected at listed detection limit.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE A164: 65%- 135%

ANALYSES PERFORMED BY: MICHAEL DEE

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

SHORT STOP PROJECT
Seattle, Washington
Stemen Environmental, Inc.

Specific Halogenated and Aromatic Hydrocarbons (EPA 8021B) in Soil

Sample Description		Method Blank	S-8-17'	S-9-18'	MS	MSD	RPD %
Date Sampled		4/5/01	4/5/01	4/5/01	4/9/01	4/9/01	
Date Analyzed		4/5/01	4/5/01	4/5/01	4/9/01	4/9/01	
	MDL (mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)			
Vinyl chloride	0.25	nd	nd	nd			
Benzene	0.05	nd	4.2	4.4	77%	70%	10%
Toluene	0.05	nd	1.4	10	78%	73%	7%
Ethylbenzene	0.05	nd	1.6	30			
Total Xylenes	0.05	nd	5.5	120			
1,1-Dichloroethene	0.05	nd	nd	nd			
Methylene chloride	0.05	nd	nd	nd			
trans-1,2-Dichloroethene	0.05	nd	nd	nd			
1,1-Dichloroethane	0.05	nd	nd	nd			
cis-1,2-Dichloroethene	0.05	nd	nd	nd			
Chloroform	0.05	nd	nd	nd			
1,1,1-Trichloroethane (TCA)	0.05	nd	nd	nd			
Carbon tetrachloride	0.05	nd	nd	nd			
1,2-Dichloroethane	0.05	nd	nd	nd			
Trichloroethene (TCE)	0.05	nd	nd	nd	84%	76%	10%
1,1,2-Trichloroethane	0.05	nd	nd	nd			
Tetrachloroethene (PCE)	0.05	nd	0.23	1.7			
Surrogate Recovery %		102	104	94	103	93	

"nd" Indicates not detected at listed detection limit.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE A27: 65%- 135%

ANALYSES PERFORMED BY: MICHAEL DEE

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

SHORT STOP PROJECT
Seattle, Washington
Stemen Environmental, Inc.

Specific Halogenated and Aromatic Hydrocarbons (EPA 8021B) in Soil

Sample Description		S-5-16'	S-7-15'	S-8-4'	S-10-16'	S-11-8'	S-12-10'
Date Sampled		4/9/01	4/9/01	4/9/01	4/9/01	4/9/01	4/9/01
Date Analyzed		4/9/01	4/9/01	4/9/01	4/9/01	4/9/01	4/9/01
	MDL (mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Vinyl chloride	0.25	nd	nd	nd	nd	nd	nd
Benzene	0.05	nd	nd	nd	nd	nd	nd
Toluene	0.05	nd	nd	nd	nd	nd	nd
Ethylbenzene	0.05	nd	nd	nd	nd	nd	nd
Total Xylenes	0.05	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.05	nd	nd	nd	nd	nd	nd
Methylene chloride	0.05	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	0.05	nd	nd	nd	nd	nd	nd
1,1-Dichloroethane	0.05	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	0.05	nd	nd	nd	nd	nd	nd
Chloroform	0.05	nd	nd	nd	nd	nd	nd
1,1,1-Trichloroethane (TCA)	0.05	nd	nd	nd	nd	nd	nd
Carbon tetrachloride	0.05	nd	nd	nd	nd	nd	nd
1,2-Dichloroethane	0.05	nd	nd	nd	nd	nd	nd
Trichloroethene (TCE)	0.05	nd	nd	nd	nd	nd	nd
1,1,2-Trichloroethane	0.05	nd	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	0.05	nd	nd	nd	nd	nd	nd
Surrogate Recovery %		107	104	103	104	103	97

"nd" Indicates not detected at listed detection limit.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE+A105: 65%- 135%

ANALYSES PERFORMED BY: MICHAEL DEE

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

SHORT STOP PROJECT
Seattle, Washington
Stemen Environmental, Inc.

Specific Halogenated and Aromatic Hydrocarbons (EPA 8021B) in Soil

Sample Description		RCS-1	RCS-2	Method Blank	S-3-10	S-4-13	LCS
Date Sampled		4/9/01	4/9/01	4/9/01	4/9/01	4/9/01	4/9/01
Date Analyzed		4/9/01	4/9/01	4/9/01	4/9/01	4/9/01	4/9/01
	MDL (mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Vinyl chloride	0.25	nd	nd	nd	nd	nd	
Benzene	0.50	nd	nd	nd	nd	nd	73%
Toluene	0.50	nd	nd	nd	nd	nd	76%
Ethylbenzene	0.50	nd	nd	nd	nd	nd	
Total Xylenes	0.50	nd	nd	nd	nd	nd	
1,1-Dichloroethene	0.50	nd	nd	nd	nd	nd	
Methylene chloride	0.50	nd	nd	nd	nd	nd	
trans-1,2-Dichloroethene	0.50	nd	nd	nd	nd	nd	
1,1-Dichloroethane	0.50	nd	nd	nd	nd	nd	
cis-1,2-Dichloroethene	0.50	nd	nd	nd	nd	nd	
Chloroform	0.50	nd	nd	nd	nd	nd	
1,1,1-Trichloroethane (TCA)	0.50	nd	nd	nd	nd	nd	
Carbon tetrachloride	0.50	nd	nd	nd	nd	nd	
1,2-Dichloroethane	0.50	nd	nd	nd	nd	nd	
Trichloroethene (TCE)	0.50	nd	nd	nd	nd	nd	79%
1,1,2-Trichloroethane	0.50	nd	nd	nd	nd	nd	
Tetrachloroethene (PCE)	0.50	nd	nd	nd	nd	nd	
Surrogate Recovery %		100	103	70	91	100	94

"nd" Indicates not detected at listed detection limit.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE A109 65%- 135%

ANALYSES PERFORMED BY: MICHAEL DEE

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

SHORT STOP PROJECT
Seattle, Washington
Stemen Environmental, Inc.

Analyses of Gasoline (NWTPH-Gx) in Water.

Sample Number	Date Analyzed	Surrogate Recovery (%)	Gasoline (ug/kg)
S-1-W	4/5/01	90	nd
S-3-W	4/5/01	93	1,300
S-6-W	4/5/01	103	nd
S-6-W Dupl	4/5/01	77	nd
S-10-W	4/5/01	103	nd
S-12-W	4/5/01	85	nd
Method Detection Limits			10

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Chlorobenzene): 65% TO 135%

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

SHORT STOP PROJECT
Seattle, Washington
Stemen Environmental, Inc.

Specific Halogenated and Aromatic Hydrocarbons (EPA 8021B) in Water

Sample Description		S-1-W	S-3-W	S-10-W	S-12-W	S-6-W
Date Sampled		4/5/01	4/5/01	4/5/01	4/5/01	4/5/01
Date Analyzed		4/5/01	4/5/01	4/5/01	4/5/01	4/5/01
	MDL (ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
Vinyl chloride	5.0	nd	nd	nd	nd	nd
Benzene	1.0	nd	3.3	nd	nd	nd
Toluene	1.0	nd	82	nd	nd	1.8
Ethylbenzene	1.0	nd	30	nd	nd	4.5
Total Xylenes	1.0	nd	130	nd	12	20
1,1-Dichloroethene	1.0	nd	nd	nd	nd	nd
Methylene chloride	1.0	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	1.0	nd	nd	nd	nd	nd
1,1-Dichloroethane	1.0	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	1.0	nd	nd	nd	nd	nd
Chloroform	1.0	nd	nd	nd	nd	nd
1,1,1-Trichloroethane (TCA)	1.0	nd	nd	nd	nd	nd
Carbon tetrachloride	1.0	nd	nd	nd	nd	nd
1,2-Dichloroethane	1.0	nd	nd	nd	nd	nd
Trichloroethene (TCE)	1.0	nd	nd	nd	nd	nd
1,1,2-Trichloroethane	1.0	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	1.0	8.8	8.2	nd	nd	2.7
Surrogate Recovery (%)		98	109	120	77	119

"nd" Indicates not detected at listed detection limit.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Chlorobenzene): 65%- 135%

ANALYSES PERFORMED BY: MICHAEL DEE

ENVIRONMENTAL GEOSCIENCES

CHAIN-OF-CUSTODY RECORD

CLIENT: Stemen Environmental

DATE: 4·5·01 PAGE 1 OF 2

ADDRESS:

PROJECT NAME:

PHONE: FAX:

LOCATION: West Seattle, WA

CLIENT PROJECT #: PROJECT MANAGER: Paul Stemen

COLLECTOR: Paul Stemen DATE OF COLLECTION 4/5

Sample Number	Depth	Time	Sample Type	Container Type	VOA 8010/8021B	VOA 8021B BTEX	VOA 8260	SEMI VOL 8270	TPH - HCID	TPH 8015 (gasoline)	TPH 8015 (diesel)	TPH 8015 (d & o)	PAH 8100	PCBs 8082	Pesticides 8081	TOTAL LEAD	pH	NOTES	Total Number of Containers	Laboratory Note Number
1. S-1-W			H_2O	VOA	X				X										4	
2. S-3-W			H_2O	VOA	X				X										4	
3. S-1-12'	12'		Soil	4oz Jar	X				X										1	
4. S-2-6'	6'		Soil	4oz Jar	X				X										1	
5. S-3-10'	10'		Soil	4oz Jar	X				X										1	
6. S-4-13	13'		Soil	4oz Jar	X				X										1	
7. S-5-15	15'		Soil	4oz Jar	X				X										1	
8. S-5 16	16'		Soil	4oz Jar	X				X										1	
9. S-6-14	14'		Soil	4oz Jar	X				X										1	
10. S-6-W			H_2O	VOA	X				X										4	
11. RSS-1 0-3	0-3'		Soil	4oz Jar	X				X										1	
12. S-7 15	15'		Soil	4oz Jar	X				X										1	
13. S-8 4'	4'		Soil	4oz Jar	X				X										1	
14. S-8 17'	17'		Soil	4oz Jar	X				X										1	
15. S-9 18	18'		Soil	4oz Jar	X				X										1	
16. S-10 16	16'		Soil	4oz Jar	X				X										1	
17. S-10-W			H_2O	VOA	X				X										4	
18. S-11-8	8'		Soil	4oz Jar	X				X										1	

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
[signature]	4/5/2001	[signature]	4/5/01
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	
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES:

Turn Around Time:

ENVIRONMENTAL GEOSCIENCES

CHAIN-OF-CUSTODY RECORD

CLIENT: STEMEN ENV.

ADDRESS:

PHONE: FAX:

CLIENT PROJECT #: PROJECT MANAGER: Paul Stemen

DATE: 4-5-01 PAGE 2 OF MRU

PROJECT NAME:

LOCATION: West Seattle, WA

COLLECTOR: Paul Stemen DATE OF COLLECTION 4/5

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES: VOA 8010/8021B	VOA 8021B BTEX	VOA 8260	SEMI VOL 8270	TPH - HCID	TPH 8015 (gasoline)	TPH 8015 (diesel)	TPH 8015 (d & o)	PAH 8100	PCBs 8082	Pesticides 8081	TOTAL LEAD	pH	NOTES	Total Number of Containers	Laboratory Note Number
1. R-SS-2				4oz Jar	X				X										1	
2. RLS-2	0-1				X				X										1	
3. RLS-1	0-1				X				X										1	
4. S-12-10	10				X				X										1	
5. S-12-W					X				X										1	
6.																				
7.																				
8.																				
9.																				
10.																				
11.																				
12.																				
13.																				
14.																				
15.																				
16.																				
17.																				
18.																				

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
		Stem	4/5/01
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

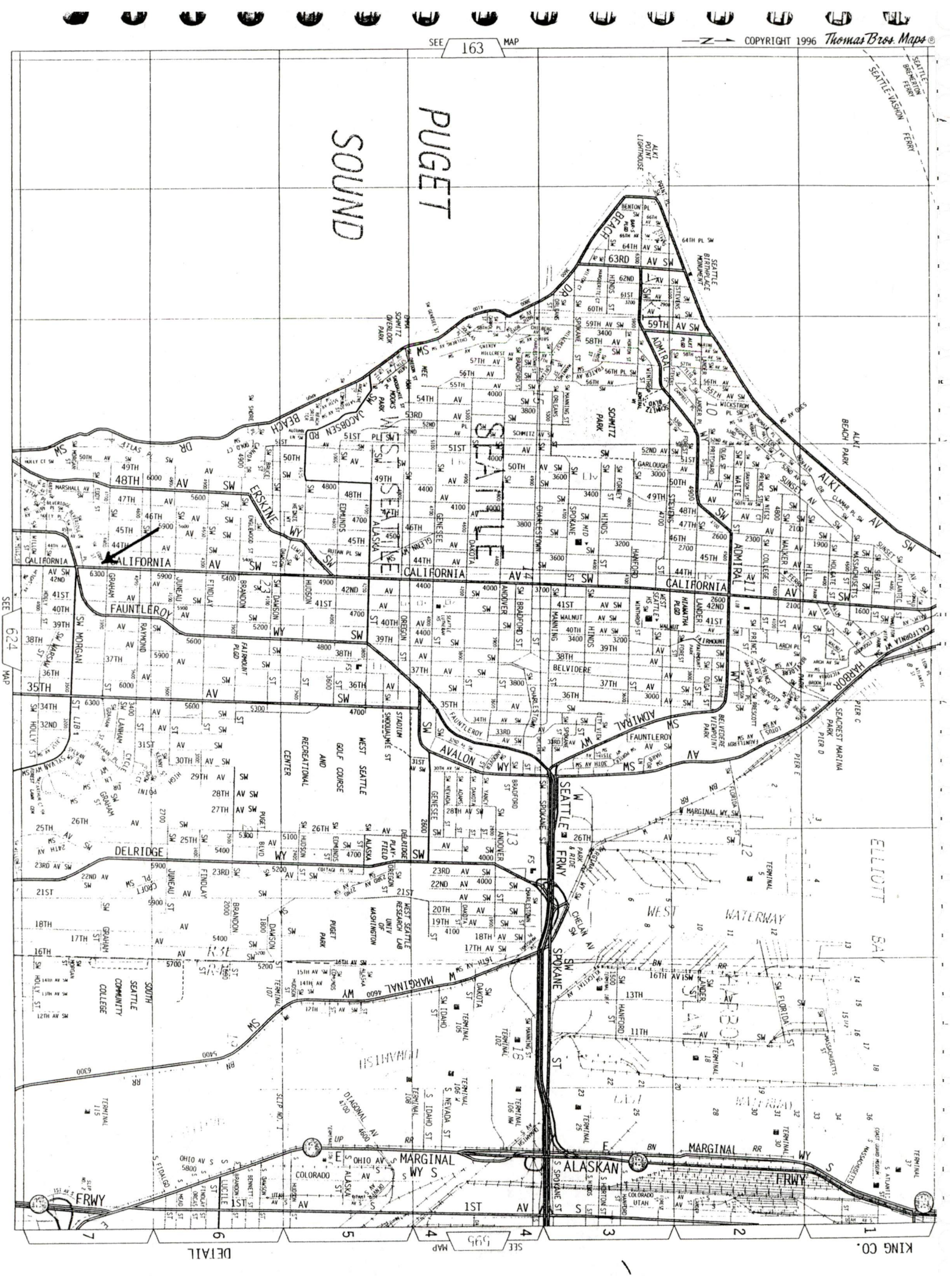
SAMPLE DISPOSAL INSTRUCTIONS

☐ *TEG DISPOSAL @ $2.00 each* ☐ *Return* ☐ *Pickup*

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

LABORATORY NOTES:

Turn Around Time:


SEE 163 MAP
COPYRIGHT 1996 Thomas Bros. Maps®
PUGET SOUND
SEATTLE-BREMERTON FERRY
SEATTLE-VASHON FERRY
ALKI POINT LIGHTHOUSE
SEATTLE BIRTHPLACE MONUMENT
ALKI BEACH PARK
SCHMITZ OVERLOOK PARK
SCHMITZ PARK
JACOBSEN BEACH DR
ALKI BEACH DR SW
ADMIRAL WAY SW
CALIFORNIA AV SW
FAUNTLEROY WAY SW
AVALON WAY SW
DELRIDGE WAY SW
W SEATTLE FRWY
SPOKANE ST
MARGINAL WAY SW
ALASKAN FRWY
1ST AV S
SEATTLE
WEST SEATTLE GOLF COURSE
WEST SEATTLE RECREATIONAL CENTER
PUGET PARK
SOUTH SEATTLE COMMUNITY COLLEGE
HARBOR
SEACREST MARINA PARK
PIER C
PIER D
PIER E
ELLIOTT BAY
WEST WATERWAY
SLIP NO. 1
TERMINAL 5
TERMINAL 18
TERMINAL 25
TERMINAL 30
TERMINAL 37
TERMINAL 102
TERMINAL 105
TERMINAL 106
TERMINAL 107
TERMINAL 108
TERMINAL 115
SEE 624 MAP
SEE 595 MAP
DETAIL
KING CO.