November 4, 2008 1133-01

Mr. Terry Pyle
Plaid Pantries, Inc.
10025 SW Allen Boulevard
Beaverton, Oregon 97005-4124

Subject: **Supplemental Site Characterization Work Plan**
Former Plaid Pantries Store #324
10645 16th Avenue SW
Seattle, Washington
Ecology Site ID #97464

Dear Mr. Pyle:

PNG Environmental, Inc. (PNG) is pleased to present this proposal to conduct additional site characterization tasks at the subject property. PNG's proposed work scope is intended to provide supplemental subsurface characterization at the Plaid Pantries, Inc. (Plaid) site where gasoline impacts exceed Washington Department of Ecology (Ecology) cleanup criteria. Maps illustrating the former fueling system location and other pertinent site features are provided as Figures 1 and 2.

BACKGROUND

The site is located at the northwest corner of SW 107th Street and 16th Avenue SW in Seattle, Washington. The property is occupied by a convenience store and restaurant. Former site operations included a retail gasoline service station. The underground storage tank (UST) system was decommissioned in 2006.

Plaid operated the Store #324 retail gasoline station at the site between September 1986 and November 30, 1990. Plaid then sub-leased the store building and sold the UST system fixtures and equipment to Young Kil Kim and Chae Yop Kim. Plaid remained the primary lessee of the property until August 31, 2006. Fuel storage at the Plaid facility was provided by three gasoline USTs which were decommissioned by the sub-tenants in 2006:

- Two 12,000-gallon capacity USTs formerly containing gasoline.
- One 10,000-gallon capacity UST formerly containing gasoline.

During Plaid's operations (and that of the sub-tenants), only gasoline is known to have been stored and dispensed at the site. Leaded gasoline may have been dispensed at the site during phase-out of that product in the 1980s. PNG understands that neither Plaid nor their sub-tenants stored or dispensed other hydrocarbons such as diesel fuel, bulk motor oil, or other bulk solvents at any time during site operations.

Plaid and its tenants operated a leak detection system in accordance with Ecology requirements and no known system leaks were identified or reported to Plaid during the life of Plaid's lease. Tank decommissioning data provided to Plaid in 2007 by the property owner and subsequent investigations by Paid indicate that gasoline constituents

were identified in soil near the former UST system, as summarized below and illustrated in Figure 3.

UST Decommissioning Report (KEE, 2007)

UST closure activities were conducted on behalf of the current property owner, as documented in an UST Closure Action Report (January 10, 2007). That report was prepared by KEE Environmental, LLC, Redmond, WA (KEE). Information pertaining to UST closure activities is published in that report and summarized below.

- The service station was reportedly closed in March 2006, and UST decommissioning and removal activities were conducted in May 2006. Figure 2 illustrates the general site layout; including the locations of the UST closure soil samples designated S-1 through S-10.
- Groundwater was not encountered at maximum excavation depths of 16 feet below ground surface (bgs).
- Laboratory analytical results indicated that gasoline and BTEX (benzene, toluene, ethylbenzene, and total xylenes) constituents were not detected in nine of the ten confirmatory soil samples. Gasoline (310 milligrams per kilogram [mg/Kg]), benzene (0.23 mg/Kg), and other BTEX compounds were present in sample S-10, where residual fuel impacts were observed during excavation. Gasoline and benzene concentrations at the S-10 location exceeded Ecology's default Model Toxics Control Act (MTCA) Method A Cleanup Levels for Soil (30 and 0.03 mg/Kg, respectively).

Site Assessment Report (PNG, 2008a)

Based on the UST decommissioning results, Plaid requested that PNG conduct a site assessment to provide preliminary evaluation of the possible gasoline release. PNG's field activities included soil sampling at four boring locations in November 2007 and the Site Assessment Report was issued on January 25, 2008. Analytical results are summarized below and illustrated in Figure 4.

- The site surface is asphalt-paved in the former UST area, with perimeter landscaping. Shallow stratigraphy in the areas explored included an approximately ten-foot thickness of silt, underlain by a dense gravel unit extending to maximum drilling depths of 29 feet. Groundwater was not encountered within 29 feet bgs.
- Soil samples were collected from various depths in each of the four boreholes (designated B-1 through B-4).
- Gasoline was detected in five of the seven soil samples submitted, ranging (where detected) from 2.0 to 1,400 mg/Kg. Three of the samples exceeded the MTCA Method A soil cleanup level of 30 mg/Kg, including samples collected from B-1 at five feet (1,400 mg/Kg) and 23 feet bgs (50 mg/Kg), and B-3 at eight feet bgs (390 mg/Kg).
- BTEX compounds exceeded MTCA Method A soil cleanup levels in each of the same three samples which also exceeded MTCA criteria for gasoline. In particular, benzene in these samples from B-1 and B-3 ranged between 0.29 and

4.8 mg/Kg, exceeding the respective MTCA Method A soil cleanup level of 0.03 mg/Kg.

- Site-specific lead concentrations are below representative natural background concentrations and are not indicative of a leaded gasoline release.

Site Characterization and SVE Pilot Test Report (PNG, 2008b)

Based on the initial site assessment results, Plaid requested that PNG conduct additional delineation and testing to characterize the nature and extent of gasoline impacts, and for use in evaluating site cleanup options. These supplemental investigation tasks were conducted in July 2008.

Site characterization results indicated the following:

- Gasoline-range hydrocarbons and related constituents exceed MTCA Method A soil cleanup levels in an area that extends from the northeastern corner of the former UST cavity toward the north and northeast property boundaries.
- The greatest relative contaminant concentrations were measured at depths between four and ten feet bgs, which is generally consistent with prior investigations at the site by KEE (2007) and PNG (2008).
- The vertical extent of the gasoline impact has been determined for the subject site and appears limited to the fine-grained till unit. None of the samples from the deeper gravel unit exceeded MTCA Method A cleanup levels for gasoline or constituents. Due to the suspected depth to groundwater at the site (80 feet bgs), the release is unlikely to have impacted groundwater.
- The lateral extent of impacted soils north and east of the former tank cavity has not been fully delineated (see Figures 3 and 4). Further site characterization may also be required by Ecology to determine if offsite soils are affected and such evaluation would need to consider various utilities beneath the sidewalk along 16th Avenue.
- Based on site-specific SVE testing data, low permeability conditions were observed within the impacted soil zone and SVE is not recommended to address the identified soil contamination.

PROPOSED SCOPE OF WORK

The former UST system was removed and generally characterized in 2006 within the excavation area. Floor and sidewall samples collected during decommissioning did not contain gasoline or constituents above laboratory reporting limits, although residual fuel impacts appear to extend beyond the northeastern corner of the former UST cavity. Gasoline and benzene concentrations in shallow silts from that area exceed Ecology cleanup criteria, but the impacts do not extend vertically into the underlying gravel zone and groundwater impacts are not anticipated. Limited additional delineation is recommended to complete the on-site characterization. The current work scope does not include delineation of gasoline impacts at offsite areas to the east of the former Plaid parcel.

PNG's proposal consists of a phased approach intended to characterize gasoline impacts such that site-specific remedial options can be evaluated and implemented in a timely fashion. The proposed tasks include limited additional characterization of the shallow soil

unit at the subject parcel. Proposed boring locations are illustrated on Figure 4. Specific work scope tasks are described below.

- Update the existing Health and Safety Plan to guide field safety protocols, in accordance with rules established by the Occupational Safety and Health Administration (OSHA).
- Prepare a simple Site Sampling Plan as required by Ecology.
- Request utility identification through the public Utility Notification Service.
- Contract with a qualified local geophysics firm to perform mapping of identified onsite utility corridors to (1) clear the borehole locations for drilling and (2) evaluate potential contaminant migration pathways through utility trenches and related piping.
- Direct field operations for soil boring using direct-push "GeoProbe" drilling techniques for five onsite borings (approximately one field day). Proposed boring locations are illustrated on Figure 4, but all boring locations may be modified based on the results of utility mapping and other site access considerations. PNG will collect and log continuous soil samples if possible, field screen the soil samples for volatile hydrocarbons using a photo ionization detector (PID), and submit selected samples for laboratory gasoline and volatile organic compound (VOC) analyses (assume two to three samples per boring).
- Borings will be advanced using continuous GeoProbe sampling methods, extending into the upper surface of the gravel unit (anticipated completion depths of approximately 12 to 15 feet bgs).
- Based on current site characterization data, gasoline contamination appears limited to fine-grained silts present within approximately ten to 12 feet of the ground surface. Soil samples will be submitted for laboratory analysis based on field observations and PID screening measurements. In the absence of gross or obvious hydrocarbon impacts, we anticipate submitting samples from the following depths from each borehole for laboratory analyses: four feet, eight feet, and 12 feet bgs. Deeper soil samples will be collected (if possible) and analyzed if field observations indicate suspected fuel impacts at the 12 foot depth.
- Submit approximately 15 selected soil samples for laboratory analytical testing using the following analytical methods:
  - Gasoline range organics (GRO) by Method NWTPH-Gx.
  - VOCs by EPA Method 8260B.

Reporting

PNG will prepare a written site characterization report to include a discussion of all field work, an evaluation of the results, site maps depicting sampling locations, tabulated analytical results, copies of all analytical reports, chain-of-custody documentation, and recommendations for additional work (if warranted).

ASSUMPTIONS

The proposed work is recommended in accordance with Ecology's published UST guidance documents and PNG's experience at similar sites. Additional investigation or remedial actions may be required to fully address areas of concern, if identified.

Assumptions used to generate the work plan are as follows:

- Meetings, negotiations, and submittals to regulatory agencies are not included in the scope of work.
- Access to the subject property and negotiations with the property owner and/or tenants will be arranged by Plaid, and all fieldwork can be conducted during normal business hours.
- Unimpeded access to the drilling locations will be available, including no overhead power conflicts.
- PNG assumes borehole logging and sampling can be accomplished under one mobilization and will not exceed one day.
- No unreasonably difficult drilling conditions will be encountered requiring the use of alternative drilling equipment.
- All fieldwork can be performed using standard personal protective equipment and procedures (Level D).
- Other than Ecology drilling permits/start cards (which are included in this scope if necessary), no other permits are specified or included. If necessary, such permits would be obtained at an additional time and materials basis.
- A public utility locate notification will be conducted and PNG will contract a private utility locator in an effort to identify subsurface utilities at each proposed drilling location. The use of these methods does not guarantee that unidentified conduits/structures will not be encountered during drilling, but greatly minimizes the risk of doing so. PNG will not be responsible for damage to subsurface utilities not identified to us prior to initiating work.
- Expedited laboratory analyses are not included in this work scope but can be conducted within the required holding times for additional unit costs. Recommendations for additional analysis, if any, will be discussed prior to laboratory testing.
- Equipment decontamination rinsate, purge water, and soil cuttings will be generated as part of the proposed investigation. The investigation-derived wastes (IDW) will be contained in sealed and properly labeled 55-gallon steel drums (or in a covered steel drop box) and stored onsite. PNG will coordinate disposal of IDW. However, characterization and disposal costs for the IDW, if any, are not included under this proposal.

GENERAL CONDITIONS

The scope of services will be performed in accordance with PNG's existing contract with Plaid, which is hereby made part of this agreement. Both parties must agree upon any changes to the scope, cost, or general conditions.

PNG appreciates this opportunity to present this proposal. If you have any questions, please call (503) 620-2387.

Sincerely,

PNG ENVIRONMENTAL, INC.

Paul Ecker, R.G.
Project Manager

PE for

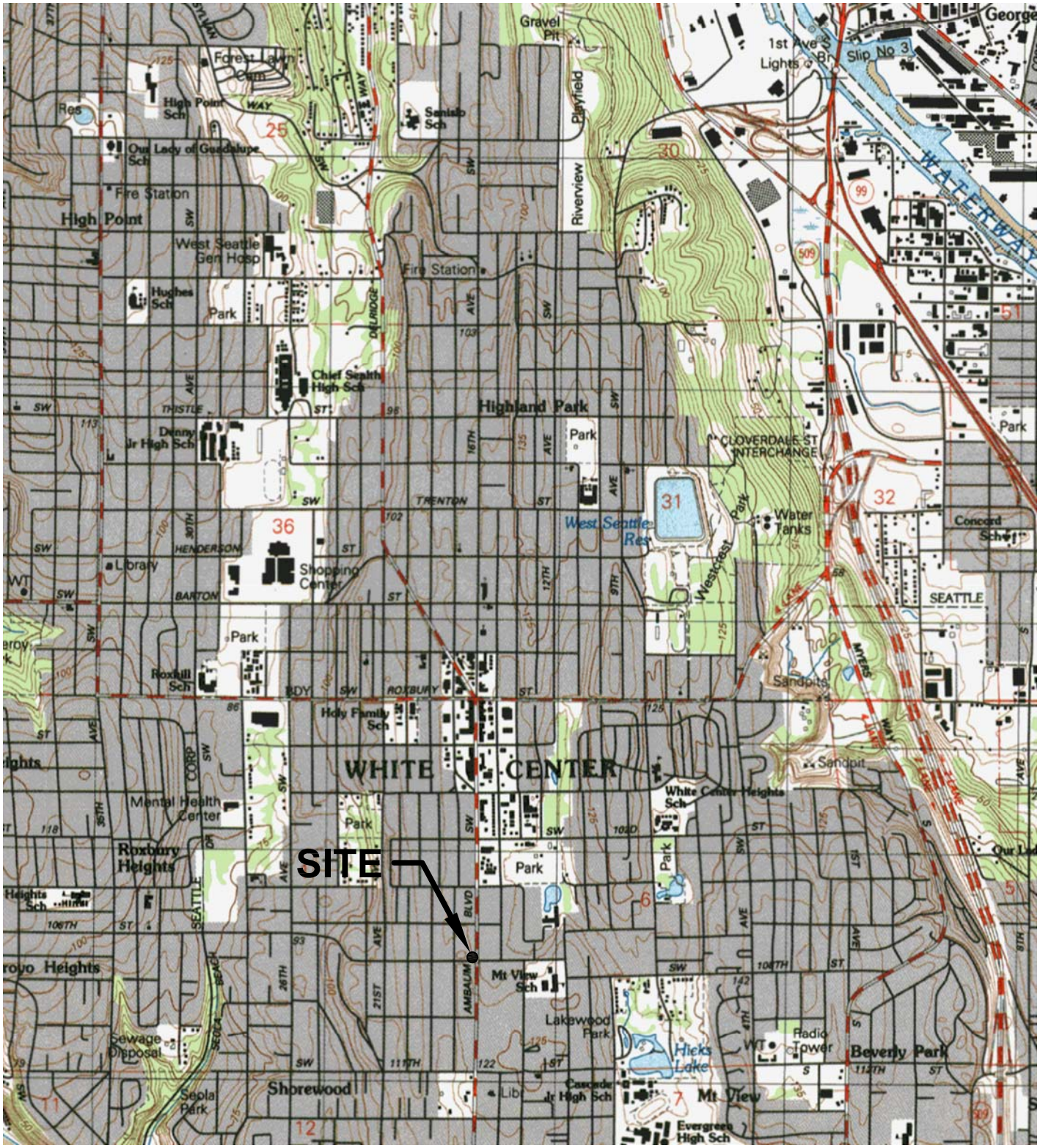
Paul McBeth, R.G.
President

State of Washington Hydrogeologist 693 Licensed Geologist
PAUL D. ECKER

State of Washington Hydrogeologist 2122 Licensed Geologist
PAUL A. McBETH

Attachments: Figure 1 – Site Location Map
Figure 2 – Site Features
Figure 3 – Gasoline and Constituents in Soil (2006 – 2008)
Figure 4 – Proposed Boring Locations

FIGURES

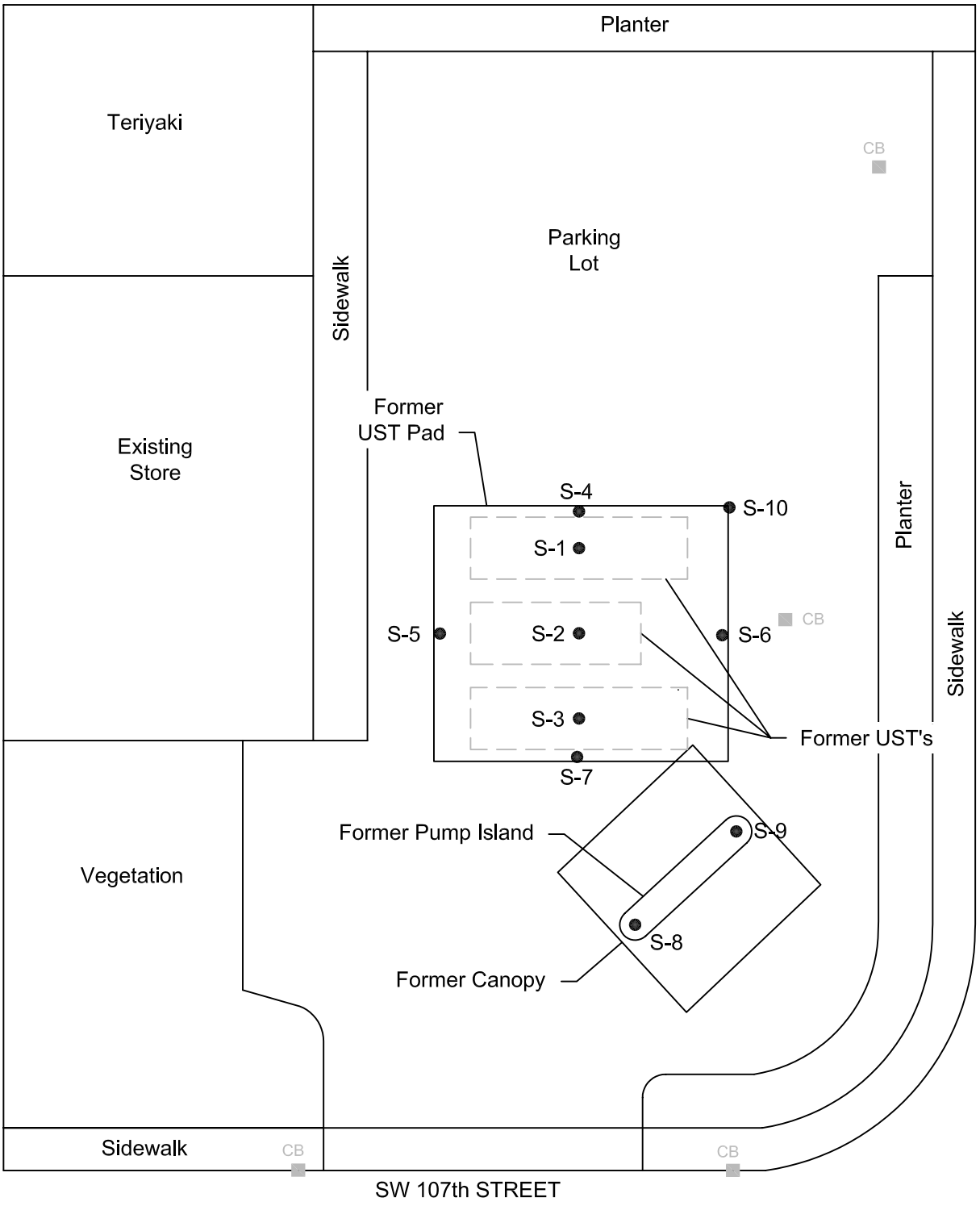


APPROXIMATE SCALE IN FEET

0 1000 2000 4000

NOTE: USGS, Seattle South Quadrangle
Washington - Snohomish Co.
7.5 x 15 Minute Quadrangle, 1983.
Base map provided by MapTech.

PNG ENVIRONMENTAL, INC. 6665 SW Hampton St., Ste. 101 TEL (503) 620-2387 Tigard, OR 97223 FAX (503) 620-2977	DATE: 9-24-08 FILE NAME: 1133-01 DRAWN BY: JJT APPROVED BY:	PLAID PANTRY #324 10645 16TH AVE. SW SEATTLE, WASHINGTON	SITE LOCATION MAP	Project No. 1133-01 Figure No. 1



LEGEND

- Existing Structures
- Former UST's (Removed May 2006)
- CB — Catch Basin
- S-6 — Soil Sample Location (KEE, May 2006)

APPROXIMATE SCALE IN FEET

0 20 40

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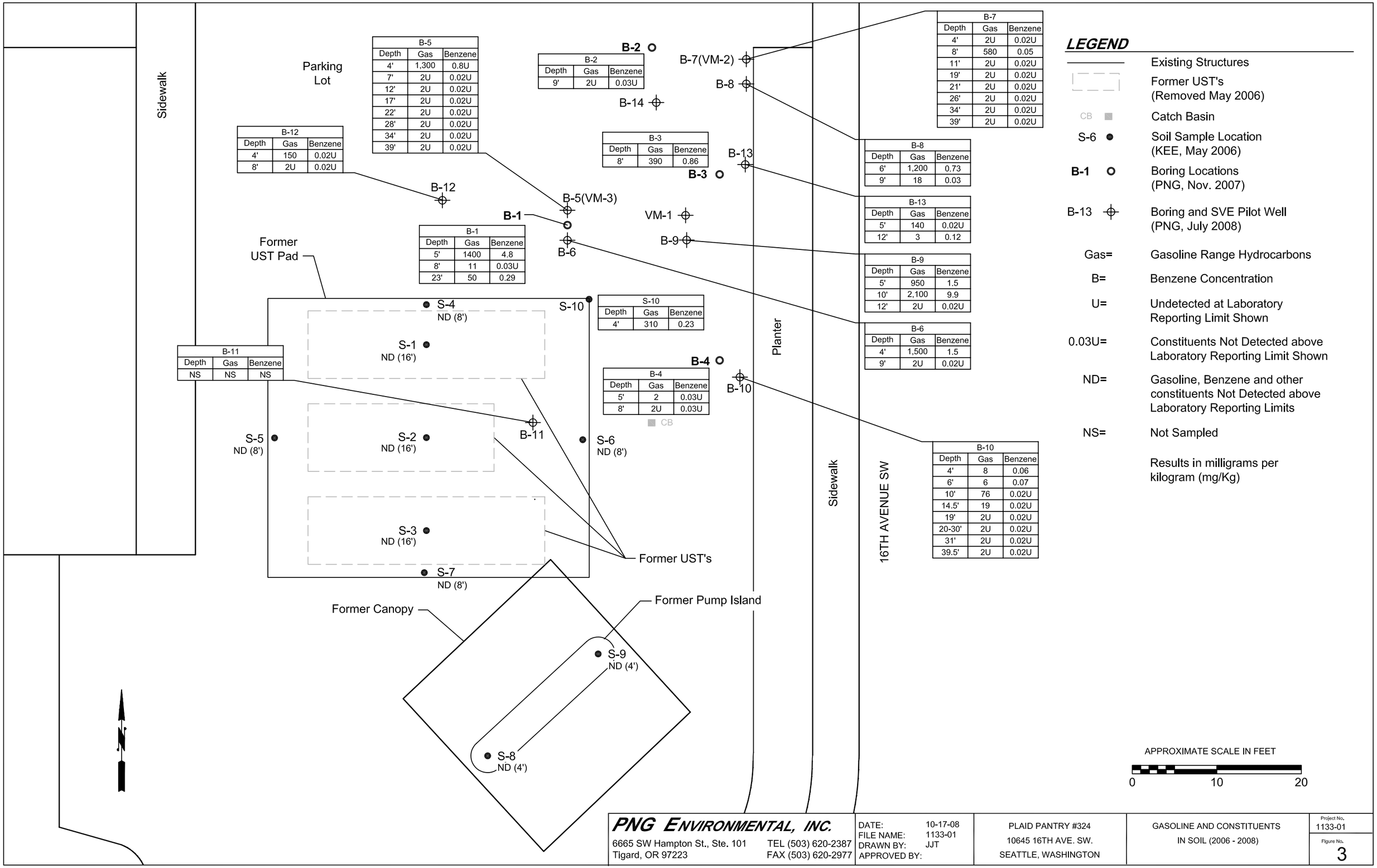
SITE FEATURES

Project No. 1133-01
Figure No. 2



B-1		
Depth	Gas	Benzene
5'	1400	4.8
8'	11	0.03U
23'	50	0.29

B-2		
Depth	Gas	Benzene
9'	2U	0.03U

B-3		
Depth	Gas	Benzene
8'	390	0.86

B-4		
Depth	Gas	Benzene
5'	2	0.03U
8'	2U	0.03U

B-5		
Depth	Gas	Benzene
4'	1,300	0.8U
7'	2U	0.02U
12'	2U	0.02U
17'	2U	0.02U
22'	2U	0.02U
28'	2U	0.02U
34'	2U	0.02U
39'	2U	0.02U

B-6		
Depth	Gas	Benzene
4'	1,500	1.5
9'	2U	0.02U

B-7		
Depth	Gas	Benzene
4'	2U	0.02U
8'	580	0.05
11'	2U	0.02U
19'	2U	0.02U
21'	2U	0.02U
26'	2U	0.02U
34'	2U	0.02U
39'	2U	0.02U

B-8		
Depth	Gas	Benzene
6'	1,200	0.73
9'	18	0.03

B-9		
Depth	Gas	Benzene
5'	950	1.5
10'	2,100	9.9
12'	2U	0.02U

B-10		
Depth	Gas	Benzene
4'	8	0.06
6'	6	0.07
10'	76	0.02U
14.5'	19	0.02U
19'	2U	0.02U
20-30'	2U	0.02U
31'	2U	0.02U
39.5'	2U	0.02U

B-11		
Depth	Gas	Benzene
NS	NS	NS

B-12		
Depth	Gas	Benzene
4'	150	0.02U
8'	2U	0.02U

S-10		
Depth	Gas	Benzene
4'	310	0.23

LEGEND

- Existing Structures
- Former UST's (Removed May 2006)
- CB — Catch Basin
- S-6 — Soil Sample Location (KEE, May 2006)
- B-1 — Boring Locations (PNG, Nov. 2007)
- B-13 — Boring and SVE Pilot Well (PNG, July 2008)
- Gas= Gasoline Range Hydrocarbons
- B= Benzene Concentration
- U= Undetected at Laboratory Reporting Limit Shown
- 0.03U= Constituents Not Detected above Laboratory Reporting Limit Shown
- ND= Gasoline, Benzene and other constituents Not Detected above Laboratory Reporting Limits
- NS= Not Sampled

Results in milligrams per kilogram (mg/Kg)

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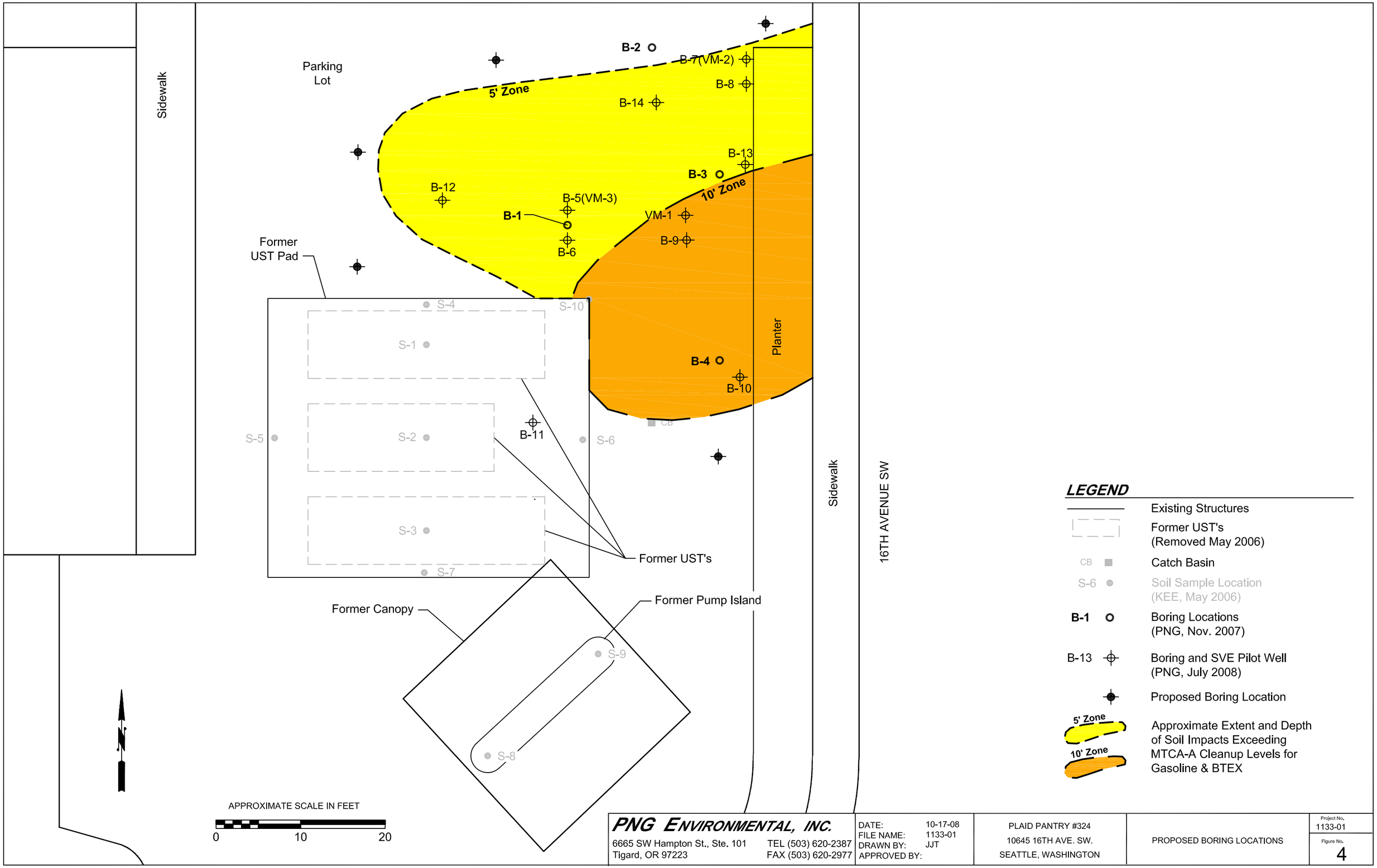
GASOLINE AND CONSTITUENTS IN SOIL (2006 - 2008)

Project No. 1133-01

Figure No. 3



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PROPOSED BORING LOCATIONS

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Figure No. 4