ENVIRONMENTAL ASSOCIATES, INC.

2122 - 112th Avenue North East, Suite B-100
Bellevue, Washington 98004
(425) 455-9025
FAX: (425) 455-2316

April 26, 1999

JN 9048-1

Woodmen Accident and Life Company
c/o Ms. Jenny Mills
Seattle Mortgage Company
1800 112th Avenue Northeast Suite 300
Bellevue, Washington 98004

Fax (425) 453-0961

Subject: **Preliminary Subsurface Sampling and Testing**
Marketplace Plaza Gas Station & Dry Cleaner
18001 Bothell-Everett Highway Southeast
Bothell, Washington 98012

Dear Gentlemen and Ladies:

In response to the telephone request of April 26, 1999, Environmental Associates, Inc. is pleased to grant to Woodmen Accident and Life Company authorization to read and to rely upon the above-referenced report (plus plates) prepared by us and presented to Mr. Skip Slavin of Seattle Mortgage Company on March 24, 1999. As with Mr. Skip Slavin, in releasing this report to Woodmen Accident and Life Company the same limitations and covenants expressed in the proposal and report shall also apply, and Environmental Associates, Inc., will understandably accept no liability for misinterpretations, divergent opinions, review comments, etc., of third parties or their consultants.

We appreciate the opportunity to assist Woodmen Accident and Life Company in this small way. We hope that Woodmen Accident and Life Company will keep Environmental Associates, Inc., in mind for possible future environmental or geotechnical engineering service requirements.

Respectfully submitted,
ENVIRONMENTAL ASSOCIATES, INC.

Don W. Spencer, M.Sc., P.G., R.E.A.
Principal

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Principal

PRELIMINARY SUBSURFACE SAMPLING & TESTING

Marketplace Plaza Gas Station & Dry Cleaner
18001 Bothell-Everett Highway Southeast
Bothell, Washington

SEATTLE MORTGAGE COMPANY

ENVIRONMENTAL ASSOCIATES, INC.

2122 - 112th Avenue North East, Suite B-100
Bellevue, Washington 98004
(425) 455-9025
FAX: (425) 455-2316

March 24, 1999

JN 9048-1

Seattle Mortgage Company
1800 112th Avenue Northeast, Suite 300
Bellevue, Washington 98004

Attention: Mr. Skip Slavin

Subject: **PRELIMINARY SUBSURFACE SAMPLING & TESTING**
Marketplace Plaza Gas Station & Dry Cleaner
18001 Bothell-Everett Highway Southeast
Bothell, Washington

Dear Mr. Slavin:

Environmental Associates, Inc. (EAI) has completed preliminary subsurface sampling and analysis of soil and groundwater from selected locations at the subject property located in Bothell, Snohomish County, Washington. This report, prepared in accordance with the terms of our proposal dated February 25, 1999, summarizes our approach to the project along with results and conclusions.

The contents of this report are confidential and are intended solely for your use and the use of your representatives. Four (4) copies of this report are being distributed to you. No other distribution or discussion of this report will take place without your prior approval in writing. Additional copies are available for a small fee.

Based upon the results of this investigation, which included subsurface sampling of soil along with laboratory analysis of selected soil samples for the presence of petroleum hydrocarbon and halogenated volatile organic compound (VOC) contamination, it would appear that:

- Soil in the vicinity of the underground storage tanks and pump island at the Plaid Pantry gasoline station have not been significantly impacted by petroleum hydrocarbons (all concentrations were below the Method A cleanup level found in the Model Toxics Control Act (MTCA), Chapter 173-340 WAC). With the exception of a trace concentration of benzene present in soil at a depth of approximately 17.5 to 23 feet adjacent to the underground storage tanks, gasoline-range petroleum hydrocarbons and gasoline constituents benzene, toluene, ethylbenzene and xylenes (BTEX) were not detectible in soil samples analyzed as a part of this project.

- It appears that soil in vicinity of the Prime Cleaners (dry cleaner) contains detectible concentrations of tetrachloroethene, confirming a release at the dry cleaner, however, the concentrations are relatively "low," and slightly exceed the Method A cleanup level published in the Model Toxics Control Act (MTCA), Chapter 173-340 WAC at only one of the localities sampled as a part of this project (adjacent to the dry cleaning machine).

Based upon the findings summarized above, it would appear that the subject site has been impacted by a release of tetrachloroethene to soil in the immediate vicinity of the Prime Cleaners. The extremely slight difference between the concentration detected and the WDOE cleanup guideline suggests that the release may not be of significant size. Based upon the information developed thus far, no additional characterization of soil quality beneath the site would appear to be warranted at this time. The findings of this study do obviously confirm that a release has occurred at Prime Cleaners as a result of current conditions and/or management practices relating to dry cleaning fluids (tetrachloroethene). It may be prudent for the operator of the dry cleaner to immediately modify current practices in terms of management of process water and dry cleaning solvents in an effort to minimize the potential for future release(s). This could include discontinuing any discharges of process water generated at the site into the site sewer, such as restricting use of sinks and toilets to hand washing and related activities. The owner may also wish to complete a review of sewer line integrity and to repair breaches (if any) as needed. Additional information regarding the findings of this study with respect to the dry cleaning facility along with expanded discussion of management of dry cleaning issues is provided for your consideration in the Conclusions/ Recommendations section of the attached report.

We appreciate the opportunity to be of service on this assignment. If you have any questions or if we may be of additional service, please do not hesitate to contact us.

Respectfully submitted,
ENVIRONMENTAL ASSOCIATES, INC.

Don W. Spencer

Don W. Spencer, M.Sc., P.G., R.E.A.
Principal

EPA-Certified Asbestos Inspector/Management Planner
I.D. # AM 48151
Registered Site Assessor/Licensed UST Supervisor
State Certification #947458636

License: W000010	(Washington)
License: 876	(California)
License: 11464	(Oregon)
License: 5195	(Illinois)
License: Pending	(Mississippi)

PRELIMINARY SUBSURFACE SAMPLING & TESTING

Marketplace Plaza Gas Station & Dry Cleaner
18001 Bothell-Everett Highway Southeast
Bothell, Washington

Prepared for:

Seattle Mortgage Company
1800 112th Avenue Northeast, Suite 300
Bellevue, Washington 98004

Questions regarding this investigation, the conclusions reached and the recommendations given should be addressed to one of the following undersigned.

David Holmes, Project Manager
Geologist
EPA-Certified AHERA Building Inspector,
I.D. No. J&J951005-BIR-03
Registered Site Assessor

Don W. Spencer, M.Sc., P.G., R.E.A.
Principal

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Reference Job Number: JN 9048-1

March 24, 1999

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INTRODUCTION/SCOPE OF WORK

SITE/PROJECT DESCRIPTION

The subject property includes an irregular-shaped parcel of land covering approximately 132,422 square feet. Improvements to the property include an L-shaped retail building, a convenience store with gasoline sales, and a free-standing bank building. The buildings are single-story wood-framed structures, with a concrete block exterior rear wall on the retail building. All buildings have concrete slab floors. Several tenants are located in the retail building, but the primary tenants of concern for this study include the Plaid Pantry convenience store, which dispenses Shell-brand gasoline, and Prime Cleaners, located at the extreme western edge of the retail building. Prime cleaners provides on-site dry cleaning using tetrachloroethene, a suspected carcinogenic volatile organic compound. A large parking area is located to the north and west of the retail building, with an asphalt paved drive located along the south and east "wings" of the building. The Plaid Pantry is surrounded by asphalt paving with a concrete pad located beneath the pump island canopy, and a separate concrete pad located over the underground storage tank installation south and east of the pump island canopy. Two pumps are located on a single island. Underground storage tanks (USTs) at the Plaid Pantry include two (2) 12,000 gallon capacity USTs and one 10,000 gallon capacity UST, all containing various grades of unleaded gasoline. The approximate location of the site is shown on the Topographic Map, Plate 1, appended herewith.

BACKGROUND/SCOPE OF WORK

On February 25, 1999, EAI presented the findings of a Phase I Environmental Audit of the subject property to Seattle Mortgage. Two (2) issues of potential environmental significance were identified at the site including the suspected presence of asbestos-containing sheet vinyl and vinyl tile flooring, and unknown/unassessed potential for impacts to site soil and/or groundwater possibly resulting from the presence of Prime Cleaners and the Plaid Pantry gasoline station at the property.

Your expressed interests, which included the desire to conduct a preliminary evaluation of subsurface conditions to assess the potential for the presence of petroleum and volatile organic compound (dry cleaning solvent) contamination, formed the basis for the following scope of work:

- Drilling four (4) borings along with soil and groundwater (if present and retrievable) sampling in accessible areas, with two (2) borings completed in the vicinity of the dry cleaner, and two (2) borings completed in the vicinity of the gasoline storage and dispensing installations. These borings were completed using hollow-stem auger drilling techniques.

- Completion of two (2) borings using a hand-operated Geoprobe sampling system along with soil sampling within the Prime Cleaners tenant space following coring of the concrete slab for access to subsurface soils.

- Laboratory analysis of selected soil and groundwater (if present and retrievable) samples for gasoline-range total petroleum hydrocarbons (TPH) and associated benzene, toluene, ethylbenzene, and xylenes (BTEX) gasoline constituents using gas chromatography (GC) by Method WTPH-G for TPH as gasoline and EPA Method 8020 for BTEX constituents. These samples were obtained from the vicinity of the gasoline station.

- Laboratory analysis selected soil and groundwater (if present and retrievable) samples for the presence of halogenated volatile organic compounds using GC and mass spectroscopy (MS) performed in accordance with EPA Method 8260B. These samples were obtained from the vicinity of the dry cleaner.

- Preparation of this summary report documenting the methodology and results of the investigation.

FINDINGS

GEOLOGIC SETTING

Physiographically, the site is situated on a gently rolling elevated plain which was formed during the last period of continental glaciation that ended approximately 13,500 years ago.

Published geologic maps for the site vicinity (Minard, 1985) suggest that much of the material underlying the subject site is glacial till, a dense heterogeneous mixture of silt sand and gravel. Soils encountered in this study (described below) are consistent with glacial till.

Topographically, the site is situated on a gentle west-facing slope approximately 290 feet above sea level. The site is relatively flat, however, a rockery and/or a steep slope is present along the west edge of the site (along Bothell Everett Highway), with the site situated approximately 10 feet higher than the adjacent highway at the southwest edge of the property, and approximately four to six feet higher than the adjacent highway the northwest edge of the property. Based upon inference from topography and local drainage patterns, it appears that shallow-seated groundwater in the vicinity of the subject property may flow in an southwesterly direction. Groundwater was not encountered in any of the borings completed as a part of this project to the maximum depth explored of 24 feet.

METHODOLOGY/SUBSURFACE INVESTIGATION

Drilling and Soil Sampling

Four (4) soil borings were completed by us on March 9, 1999 at the approximate locations noted as B-1, B-2, B-3 and B-4 on the Site Exploration Plan, Plate 2. The boring locations were chosen based upon the proximity to the dry cleaning machine and restrooms at the dry cleaner (boring B-1), a potential receptor area along a utility corridor near the dry cleaner (boring B-2), proximity to the underground storage tanks at Plaid Pantry (boring B-3), and proximity to the

pump islands at Plaid Pantry (boring B-4). All borings were placed west to southwest of the areas of concern (dry cleaner and gas station) based upon the inferred shallow-seated groundwater flow direction to the southwest, in the event that groundwater was encountered. The boring locations are indicated on the Site Exploration Plan, Plate 2.

A B-61 truck-mounted drilling unit equipped with 4-inch inner diameter hollow-stem augers was employed to accomplish drilling of the borings outside the buildings. Under the supervision of our staff geologist, the drilling unit was brought into position over each selected drilling location, blocked up, and leveled before drilling.

Following set-up preparations, the drilling technique consisted of advancing each boring with the auger string to the desired depth, then lowering the sampler and connecting rods through the center of the hollow-stem augers. The inner rod/sampler assembly was then driven eighteen inches at each designated sampling interval using a 140-pound hammer in general accordance with ASTM Method D-1586. The sampler was then withdrawn and opened for examination.

For the interior space borings/soil probes (SP), a 1-inch diameter Geoprobe sampling system with a 2-foot length, one and one-eighth inch inner diameter stainless steel core sampler was employed (designated as SP-1 and SP-2 on the Site Exploration Plan, Plate 2). The sampling methodology consisted of completion of a four inch concrete core through the slab floor. Next, an unused (sterilized) plastic liner was inserted into the core sampler, a steel extension rod was attached to the sampling unit, and the core sampler was then manually driven 2 feet into undisturbed soil using a fence-post driver. The sampler and connecting rod were then removed from the bore hole, and the plastic liner containing the soil sample was removed for sample examination and transfer of the soil to laboratory-prepared glassware supplied by the project laboratory.

The core sampler was then triple washed using a solution of Alconox detergent and de-ionized water, and thoroughly rinsed with de-ionized water. An unused (new) plastic liner was then inserted into the core sampler, and the sampling process was repeated with the boring being advanced two feet deeper with each sample. Using this method, boring SP-1 was advanced to a total depth of 6 feet, however, insufficient soil was driven into the sampler in the intervals from zero to two feet and from two feet to four feet, therefore no samples were obtained in these depth ranges. Refusal was encountered at a depth of approximately 6.25 feet, and the boring was abandoned. Soil probe SP-2 was advanced to a total depth of 2 feet, where refusal was encountered. It is thought that a cobble in site soil was responsible for the refusal of the sampler at each location.

Samples were transferred from the sampler directly to sterilized glassware with Teflon-sealed lids furnished by the project laboratory. In an effort to preserve sample integrity, samples were stored in an iced chest, at or below 4 degrees centigrade, during field sampling and transfer to the project laboratory. Each sample was clearly identified with respect to boring number, sample depth, date, time, etc. EPA-recommended sample management protocol including maintenance of chain-of-custody documentation was observed at each stage of the project.

During sampling, a field log was made by the project geologist for each boring. Information recorded versus corresponding depth included soil classification (Unified Soil Classification System), color, texture, apparent moisture content, odors (if present), seepage zones (if present), etc.

A portion of each soil sample obtained from the hollow-stem auger borings was subjected to "headspace" measurements using a portable Photovac Microtip MP-100 photo-ionization detector (PID). The procedure consisted of placing a portion of each sample in a glass jar, and waiting for a short period of time (approximately 5 to 10 minutes) for volatile organic compounds (if present) to vaporize. A small probe attached to the meter was then inserted into each jar via an access hole in the jar lid, and a reading of volatile organic vapor concentrations in parts per million (ppm) was made for each soil sample. The PID was calibrated according to manufacturer specifications prior to use, and was "zeroed" prior to each measurement. Headspace concentrations for the hollow stem auger borings are included on the boring logs attached to this report as Plates 3, 4, 5 and 6. There was insufficient sample retrieval to enable PID headspace measurement of the soil probe samples.

Subsurface Conditions

Soils encountered during drilling of the hollow-stem auger borings included a few inches to 2 feet of sandy gravel fill over brown gravelly sand/sandy gravel, typically fine to coarse grained with gravel clasts up to six inches in diameter. This gravel unit was encountered in all borings to a depth of approximately 7 to 20 feet. Beneath the gravelly sand, we encountered silty sand with gravel to approximately 22 feet in borings B-1 and B-2, beneath which was sandy gravel to the maximum depth explored of approximately 24 feet. At borings B-3 and B-4, beneath the upper gravel, we encountered the silty fine sand to the maximum depth explored at each boring of approximately 23.5 feet. The lower gravel encountered at B-1 and B-2 was not present at borings B-3 and B-4. Soils were consistently brown to brownish gray, with moisture content at B-1 ranging from slightly moist to moist. At B-2, B-3 and B-4, soils were slightly moist in the upper approximately 20 feet, becoming very moist below this depth. Soils were very dense at each sampling locality/depth. As mentioned earlier, these soil types are consistent with the mapped geology of glacial till. Groundwater was not encountered in any of the borings completed by us at the site, however,

nearly saturated soil was encountered at a depth of 22.5 feet in boring B-2, and very moist soils were encountered at 22.5 feet in boring B-1, B-3, and B-4. It is therefore conceivable that shallow groundwater (possibly "perched") may lie at depths of approximately 25 to 30 feet beneath the ground surface. Odors suggestive of petroleum or halogenated VOCs were not noted in any of the soil samples obtained as a part of this project. Please refer to the Test Boring Logs attached to this report as Plates 3, 4, 5 and 6 for a description of specific subsurface conditions encountered during drilling of each hollow stem auger boring.

At the interior soil probe boring locations, we encountered structural fill consisting of brown medium grained sand with minor gravel to approximately 2 inches in diameter to the maximum depth explored at each boring. As noted earlier, at soil probe SP-1, a gravel clast was apparently being driven in front of the sampler from ground surface to four feet, and insufficient soils were retrieved to obtain a sample in this depth range. A sample was obtained from the 4 feet to 6 feet depth range (sample SP-1-4'). Refusal was encountered at a depth of approximately 6.25 feet at SP-1. At SP-2, adjacent to the dry cleaning machine, refusal was encountered at a depth of 2 feet, following retrieval of the sample interval from ground surface to 2 feet (SP-2-0'-2').

LABORATORY ANALYSES

Analysis was performed on selected soil samples for the presence of halogenated volatile organic compounds (VOCs) in accordance with EPA Method 8260B, due to the presence of the dry cleaner at the site which uses tetrachloroethene. Samples obtained from borings B-1, B-2, SP-1 and SP-2 were submitted for analysis with the deepest sample obtained from boring B-1 and a composite sample of the deepest two samples from B-2 submitted for analysis. The composite sample was submitted for analysis due to the presence of very moist to nearly wet soils at the bottom of the boring, and since the next higher sample (obtained beginning at a depth of 17.5 feet) had a slightly "higher"headspace measurement than samples from other depths in the boring. Each of the samples obtained from the interior soil probe borings were submitted for analysis. We refer the reader to the Site Exploration Plan, Plate 2, for the locations of borings in relation to site developments.

As the subject property has been a gasoline station since approximately 1985, analytical testing for the presence of petroleum hydrocarbons as gasoline range total petroleum hydrocarbons (TPH) was also performed on selected samples obtained from the Plaid Pantry using gas chromatography (GC) in accordance with Washington Department of Ecology (WDOE) Method WTPH-G, with analysis for gasoline constituents benzene, toluene, ethylbenzene, xylenes using EPA Method 8020. The deepest two samples obtained from borings B-3 and B-4 were submitted for analysis, due to relatively "elevated" headspace measurements in these samples in comparison to samples obtained from shallower depths. Again, we refer the reader to the Site Exploration Plan, Plate 2, for the locations of borings in relation to site developments.

The laboratory report is included as the Appendix at the end of this report. The following brief tables summarize the results of laboratory testing. Table 1 summarizes the results of analyses for halogenated VOCs, and Table 2 summarizes the results of petroleum hydrocarbon analyses. Only those analytes that were detected are presented in Table 1. We refer the reader to the Appendix for a complete listing of all analytes included in the EPA Method 8260B analysis, along with the analyte detection limits for each analysis.

TABLE 1. Results of EPA 8260B Analyses[1]

Sample	Depth (ft)	cis-1,2-Dichloroethene	Tetrachloroethene
B-1-5	22.5	0.33	0.2
B-2-4/B-2-5 Composite	17.5/22.5	<0.057	<0.057
SP-1-4'	4 to 6	<0.054	0.24
SP-2-0'-2'	0 to 2	<0.053	**0.56**
Cleanup Guideline[2]		NA[A] / 800[B]	0.5[A] / 19.6[B]

Notes: Gray shading and bold typeface indicates an exceedance of the Method A cleanup level.
1 - All soil detection limits, results, and cleanup guidelines are presented in milligrams per kilogram (mg/kg or parts per million (ppm)).
2 - Guideline cleanup standards are published in the Model Toxics Control Act (MTCA), Chapter 173-340 WAC. "NA" indicates that the cleanup level for the MTCA Method is "not available." The "A" superscript indicates the Method A cleanup level, while the "B" superscript indicates the Method B cleanup level. Method A level is presented first.

As summarized in Table 1 above, tetrachloroethene was detected in samples obtained from borings B-1, SP-1, and SP-2. B-1 was located just west of the restrooms at the dry cleaner, SP-1 was located in the restroom of the dry cleaner, and SP-2 was located adjacent to the dry cleaning machine. Cis-1,2,-dichloroethene, a degradation product of tetrachloroethene, was detected only in the sample obtained from boring B-1. No volatile organic compounds were detected in boring B-2. With the exception tetrachloroethene in sample SP-2-0'-2', obtained from adjacent to the dry cleaning machine, all reported concentrations are below the Method A cleanup level. Sample SP-2-0'-2' contained a concentration of tetrachloroethene slightly in excess of the Method A cleanup level. Please note that the concentration at SP-2 is below the Method B cleanup level (19.6 mg/kg).

TABLE 2. Results of Petroleum Hydrocarbon Analyses[1]

Sample	Depth (feet)	TPH as Gasoline	Benzene	Toluene	Ethylbenzene	Total Xylenes
B-3-4/B-3-5 Composite	17.5/22.5	ND	0.065	ND	ND	ND
B-4-4/B-4-5 Composite	17.5/22.5	ND	ND	ND	ND	ND
Practical Quantitation Limit (PQL)		5.6	0.056	0.056	0.056	0.056
Method A Cleanup Levels[2]		100.0	0.5	40.0	20.0	20.0

Notes: 1 - Total petroleum hydrocarbons are abbreviated as TPH. All soil detection limits, results, and cleanup guidelines are presented in milligrams per kilogram (mg/kg or parts per million (ppm)). ND indicates the analyte was not present above the stated PQL.
2 - Method A soil and groundwater cleanup levels as published in the Model Toxics Control Act (MTCA), Chapter 173-340 WAC.

The laboratory testing results of the submitted soil samples and groundwater sample for the presence of petroleum hydrocarbons as summarized in the table above and as included in the Appendix reveal that with the exception of a trace concentration of benzene in the composite sample obtained from boring B-3, gasoline-range petroleum hydrocarbons and BTEX constituents were not detectible in soil, and are therefore well below WDOE Method A cleanup levels in the soil samples analyzed as a part of this project. The concentration of benzene is barely above the detection limit or PQL, and is well below the Method A cleanup level of 0.5 mg/kg.

CONCLUSIONS/RECOMMENDATIONS

As noted in the introductory letter and elsewhere in this report, relying solely upon the results of drilling, sampling of soil, and laboratory analysis of selected soil samples, it appears that soil at boring localities B-3 and B-4 has not been impacted by petroleum hydrocarbons or BTEX gasoline constituents at concentrations above their respective cleanup levels. No gasoline-range petroleum hydrocarbons or BTEX constituents were detected in samples obtained from borings B-3 and B-4, with the exception of a trace concentration of benzene at boring B-3. The reported concentration (0.065 mg/kg)is only slightly above the detection limit for the analysis (0.056 mg/kg).

With respect to soil conditions in the vicinity of Prime Cleaners, based solely upon the results of analysis of soil samples obtained from the vicinity of the dry cleaner, it appears that tetrachloroethene is present in low concentrations in the vicinity of the dry cleaning machine and restrooms at the site. Only one sample obtained as a part of this project, sample SP-1-0'-2' obtained from immediately beneath the slab floor of Prime Cleaners, contained a concentration of tetrachloroethene in excess of the Method A cleanup level, however, the reported concentration of 0.56 mg/kg in the sample is only slightly above the Method A cleanup level of 0.5 mg/kg. The concentration is well below the Method B cleanup level of 19.6 mg/kg. A degradation product of tetrachloroethene, cis-1,2-dichloroethene was present in sample B-1-5 (at a depth of 22.5 feet), but the concentration reported (0.33 mg/kg)is well below the Method B cleanup level of 800 mg/kg (no Method A cleanup level has been established for this compound). These findings confirm that a release has occurred at the Prime Cleaners facility, however, it does not appear that soil at the site has been significantly impacted, based upon the low concentrations reported.

Determination of a release mechanism for the tetrachloroethene present in site soils was clearly beyond the scope of this preliminary effort. Our experience at dry cleaners over the years has demonstrated that a variety of release mechanisms including sewer, incidental dumping, or accidental spillage with resulting infiltration through process area floors/drains are possible. In our experience, some dry cleaner operators will pour water separated from tetrachloroethene in the dry cleaning machine into a sink or toilet for disposal, even though sewage treatment facilities typically do not allow volatile organic compounds in any concentration to be discarded in this manner. Release via the sewer system is a plausible release mechanism which could account for these findings.

In an effort to prevent any additional release through the sewer system at the property, we would strongly recommend that all process water waste (with the exception of regular water-based washing machine, toilet and hand washing wastewater) be considered to contain tetrachloroethene, be handled as a regulated (hazardous) waste, and be lawfully recycled by an EPA-registered hazardous waste handler and transporter (for example, Safety-Kleen). Additionally, it may be prudent to consider a review of site sewer integrity via a video camera "sewer survey" in an effort to document the condition of the sewer lines, and to repair any documented breaches in the sewer system as needed. The owner of the property should monitor to assure compliance.

With regard to the presence of tetrachloroethene in soil in the vicinity of Prime Cleaners, the Model Toxics Control Act (MTCA), Chapter 173-340(3)(a) WAC notes that Method A tables may be applicable to routine cleanups or at sites where the cleanup involves relatively few hazardous substances. Considering that location of the contamination at the site is beneath the building, and along the west side of the building in the vicinity of sewer, water, and natural gas utility corridors, it would appear that a cleanup at the site (not recommended here) could sensibly be construed as somewhat more than "routine." Chapter 173-340(3)(b) notes that the Method B cleanup levels are the "Standard method," and are based upon the upper bound of the estimated excess lifetime cancer risk of on in one million. Chapter 173-340-705(1) also notes that "Method B is applicable to all sites," while 173-340-704(4), Use of Method A, notes that the Method A cleanup levels may not be appropriate for defining cleanup levels at all sites, and that the Method A values "...should not automatically be used to define cleanup levels that must be met for financial, real estate, insurance coverage or placement, or similar transaction purposes. Exceedances of the values in these tables *(i.e., the Method A tables)* do not necessarily trigger requirements for cleanup actions under this chapter (our underlining and italics)." It is therefore our opinion that use of Method B value may be the appropriate cleanup level at this site. This opinion is supported by the fact that the tetrachloroethene concentration in site soil at a depth of approximately 22.5 feet at our B-1 locality in close proximity to the dry cleaner are below the Method A cleanup level, and tetrachloroethene was not detectible at boring B-2.

No evidence to suggest significant impacts to groundwater beneath the site was identified in this preliminary study. This statement predicated upon our observation that groundwater beneath the site lies at a depth of over approximately 23 feet, and since tetrachloroethene was identified at relatively "low" concentrations in subsurface soil at the site. Relying solely upon the results of soil sampling and analysis completed as a part of this project, it would appear that no additional investigation of soil quality beneath the site would be warranted at this time.

LIMITATIONS

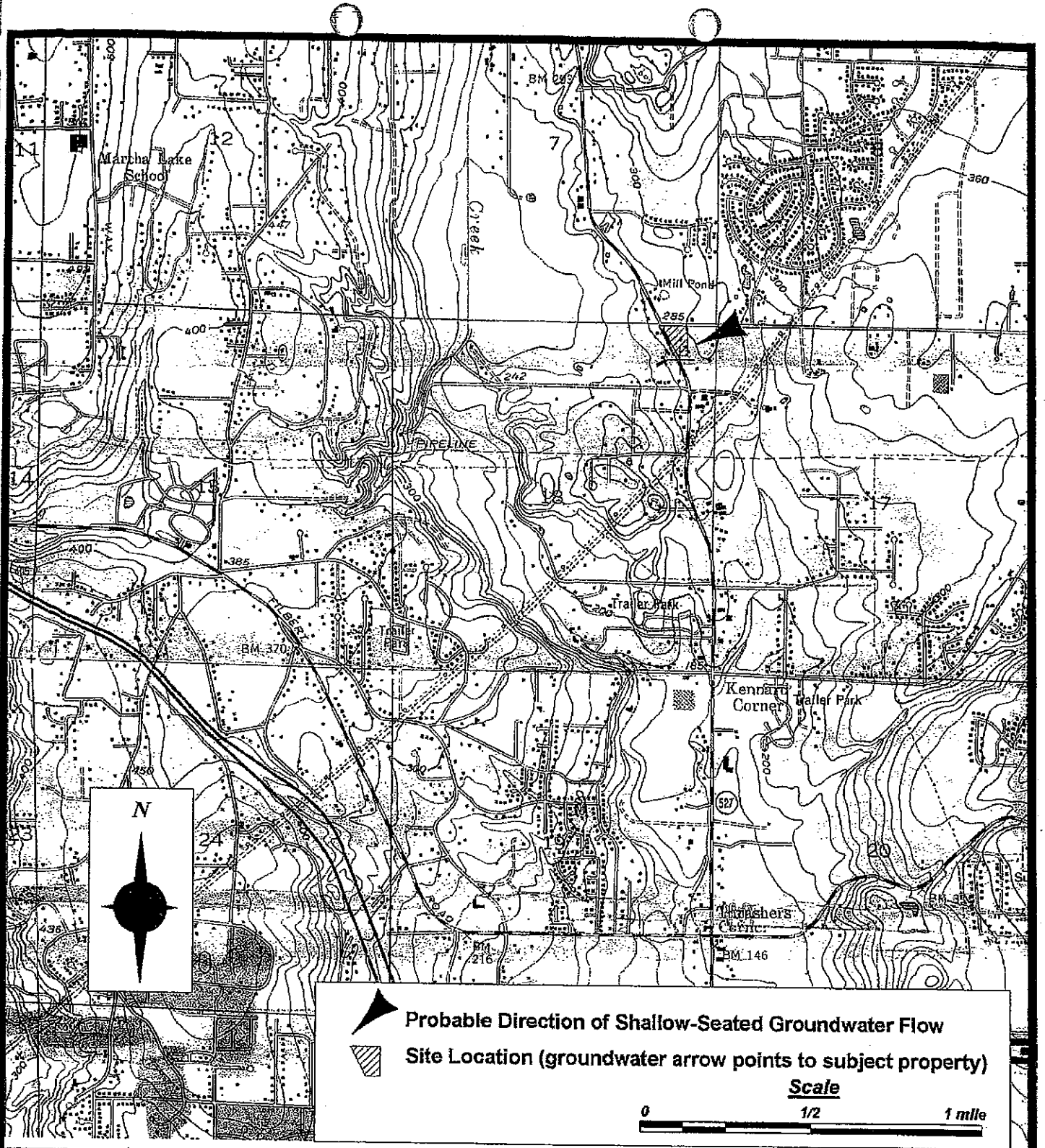
This report has been prepared for the exclusive use of Seattle Mortgage Company, along with their several representatives, for specific application to this site. Our work for this project was conducted in a manner consistent with that level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in the area, and in accordance with the terms and conditions set forth in our proposal dated February 25, 1999. The opinions offered here rely solely upon observations and assessment of conditions encountered at separated boring/sampling localities and depths. Conditions may vary at other localities and/or depths. No other warranty, expressed or implied, is made. If new information is developed in future site work which may include excavations, borings, studies, etc., Environmental Associates, Inc., must be retained to reevaluate the conclusions of this report and to provide amendments as required.

REFERENCES

Environmental Associates, Inc., February 25, 1999, Phase I Environmental Audit, Marketplace Plaza, 18001 Bothell-Everett Highway Southeast, Bothell, Washington 98012. Prepared for Seattle Mortgage Company, 22 pps., 4 plates, appendices.

Minard, J.P., 1985, Geologic Map of the Bothell Quadrangle, Snohomish and King Counties, Washington. U.S. Geological Survey Miscellaneous Field Studies Map MF-1747, 1 sheet.

United States Geologic Survey, 1953, Bothell, Washington 7.5x15 Minute (1:25,000 scale) Topographic Quadrangle Map. 1 sheet.



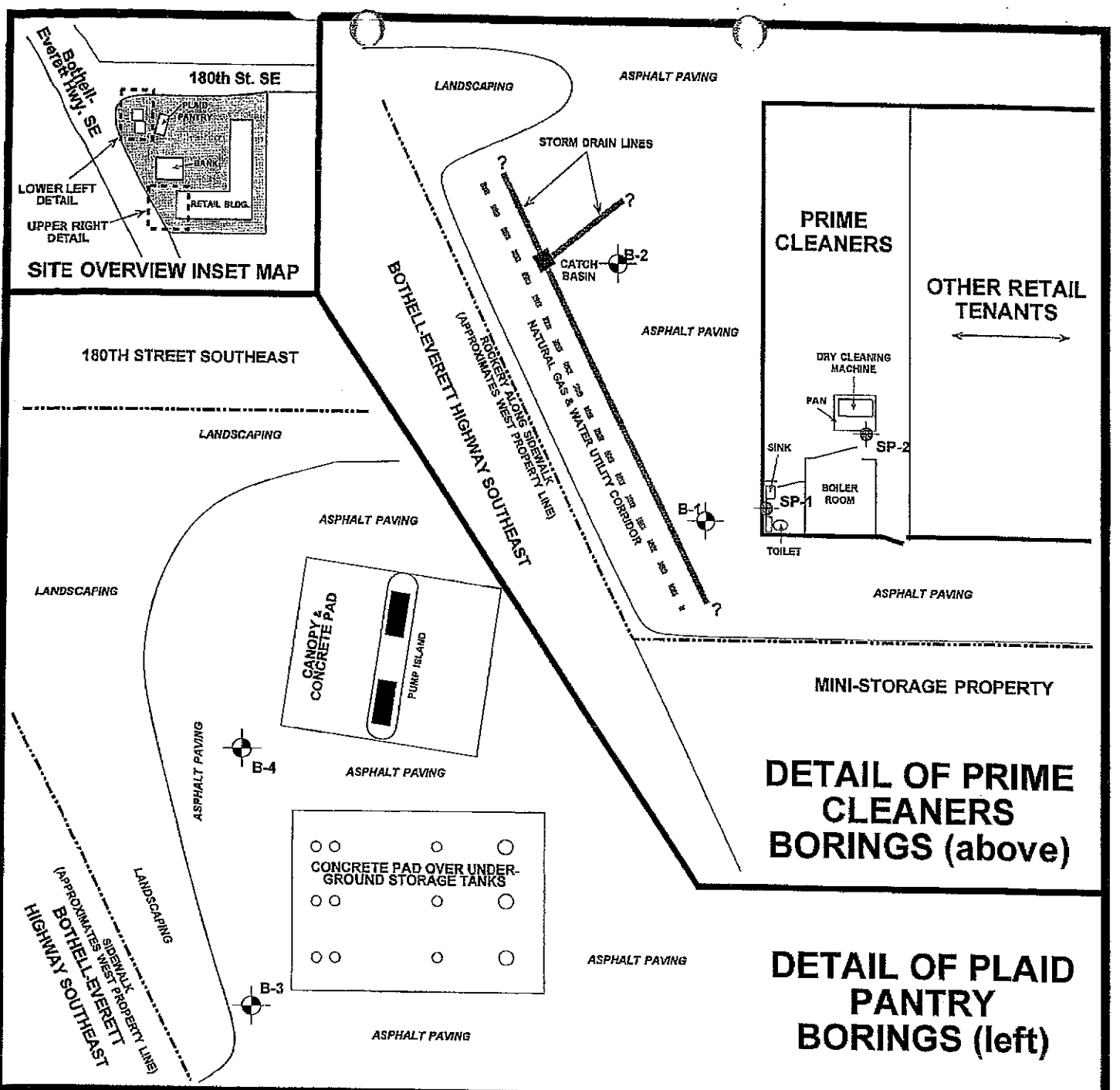
ENVIRONMENTAL ASSOCIATES, INC.

2122 - 112th Avenue N.E., Ste. B-100
Bellevue, Washington 98004

TOPOGRAPHIC MAP

Marketplace Plaza Gas Station & Dry Cleaner
18001 Bothell-Everett Highway Southeast
Bothell, Washington 98012

Job Number:	Date:		Plate:
JN 9048-1	March 1999		1



Legend

- Developments/buildings
- Subject property boundary
- SP-1 Location of EAI soil probe (geoprobe) borings
- B-1 Location of EAI hollow-stem auger boring

Note: All borings completed on March 9, 1999

Probable direction of shallow-seated groundwater flow

Approximate Scale (detail maps)

0 50 ft.

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ENVIRONMENTAL ASSOCIATES, INC.

2122 - 112th Avenue N.E., Ste. B-100
Bellevue, Washington 98004

SITE EXPLORATION PLAN

Marketplace Plaza Gas Station & Dry Cleaner
18001 Bothell-Everett Highway Southeast
Bothell, Washington

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