



# Final Closure Report

## Juanita Village Kirkland, Washington Prospective Purchaser Consent Decree 00-2-16556-1SEA

Prepared For:

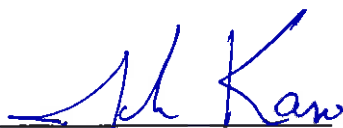
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**Project Number: 01007**

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## 1.0 INTRODUCTION

Kane Environmental, Inc. (Kane Environmental) is pleased to provide this *Closure Report* documenting the remedial actions and groundwater compliance monitoring results at Juanita Village (Property) in Kirkland, Washington (Figures 1 and 2). This report is written for closure of the Site under the Prospective Purchaser Consent Decree (PPCD) 00-2-16556-1SEA signed on November 7, 2000.

The stated purpose of the PPCD is as follows:

*"The purpose of this Decree is to resolve the potential liability of Juanita Village for known and suspected contamination at or near the Juanita Village Property in Kirkland, Washington (the "Site") arising from a release or threatened release of hazardous substances; to promote the public interest by expediting cleanup activities at the Site; and to facilitate the cleanup and redevelopment of contaminated commercial property in Kirkland, Washington".*

The PPCD described the remediation needed at the Property and stated that redevelopment of the Property would not be allowed to interfere with the remediation of the Property. The PPCD stated that the Property cleanup would be performed by:

- the excavation and off-site treatment of petroleum contaminated soils using thermal desorption and/or recycling where practicable;
- On-property, Soil Vapor (SVE) extraction for in-situ treatment of perchloroethene (PCE, also known as tetrachloroethylene) contaminated soils;
- In-situ Density Driven Convection (DDC) well treatment of PCE-contaminated groundwater, and;
- If soils with PCE concentrations above the MTCA Cleanup Level are discovered on the Property, the soils will be excavated for off-site disposal or contained on-site with a restrictive covenant following approval from the Washington State Department of Ecology (Ecology).
- After SVE and DDC treatment and if "polishing" is needed to remove the residual PCE concentration to achieve and confirm that cleanup has been accomplished, then Monitored Natural Attenuation (MNA) was conducted, see description in Cleanup Action Plan, Attachment A.
- BICHLOR modeling was also used to confirm that the SVE and DDC cleanup treatment will accomplish cleanup prior to and before the PCE plume migrates 200 feet southwest of the 97<sup>th</sup> Avenue NE right-of-way. The SVE, DDC, and MNA cleanup treatment protects down gradient resources, including: Lake Washington, Juanita Bay, and Juanita Creek. See description of Cleanup Action Plan, Attachment A.

The PPCD stated that compliance monitoring of soil and groundwater was required to confirm that contaminant concentrations had been reduced to below the applicable Washington State Model Toxics Control Act (MTCA) cleanup levels. Petroleum contaminated soil and groundwater was to be remediated to the MTCA Method A Cleanup Level or Interim TPH Policy. PCE contaminated soils were

to be remediated to the MTCA Method B Cleanup Level (19.6 parts per million (ppm)) and PCE contaminated groundwater was to be remediated to the MTCA Method A Cleanup Level (5 parts per billion (ppb)).

The purpose of this report is to describe the background and current conditions at the Property and to apply for a No Further Action Letter for the entire Property.

## 2.0 PROPERTY BACKGROUND

According to the King County Assessor's Department, the Property currently consists of two tax parcels (parcel tax identification number 3026059228 and 3757900005) situated on 2.88 acres of land located in the City of Kirkland, Washington. The Property is currently developed with a mixed-use area for both residential and retail use.

The City of Kirkland, Washington is located in the Puget Sound Basin, where the majority of geological and land features were formed during the Pleistocene Epoch which began approximately 1.5 million years ago. Soils in the Puget Sound Basin and specifically in the vicinity of the site generally consist of glacial till deposited by the retreat of the Vashon Glacier. Glacial till is a mixture of sand and gravel with silt and clay. Subsurface investigations at the Property indicated that the area is underlain by coarse sand and gravel at depth grading upward to medium sand, with a silty-clay overlying the sand in the northwestern portion of the property. The near surface clay extends in an east-west direction in the northern portion of the property from 97<sup>th</sup> Avenue NE to the central portion of the property. A dense glacial till underlies the soils described above. Surficial fill is located throughout the property.

Subsurface geologic conditions indicate that the Property is underlain by a single unconfined groundwater aquifer. Topographic maps indicate that the regional groundwater flow is to the southwest, towards Lake Washington. Calculations based on the groundwater elevations obtained during the groundwater sampling at the Property from 2001 until 2011 reveal that groundwater flow direction is to the southwest, toward Lake Washington.

According to the Environmental Partners, Inc. (EPI) *Cleanup Action Plan*, completed for the Property in April 2000, the northern portion of the Property had been developed with a small strip mall, a drive-through bank, a standalone Bank of America building, a vacant and former grocery store, and asphalt parking lots. An automotive repair facility (Juanita Auto Clinic, former Texaco service station) had been located on the east-central portion of the Property since the mid-1950s. The remaining portion of the Property included trees, shrubs, and a vacant, non-vegetated area.

## 2.1 Previous Investigations

Since 1994, the following investigations have been performed at the Property:

- April 1994 – Terra Associates, Inc. (Environmental Site Assessment)
- July 1998 – Terra Associates, Inc. (Environmental Site Assessment)
- September 1998 – Environmental Partners, Inc. (Limited Phase II Site Assessment)
- September 1998 – Environmental Partners, Inc. (Phase II Addendum 1)
- October 1998 – Environmental Partners, Inc. (Phase II Addendum 2)
- November 1998 – Environmental Partners, Inc. (Phase II Addendum 3)
- April 1999 – Environmental Partners, Inc. (Monitoring Well Sampling)
- July 1999 – Environmental Partners, Inc. (Geoprobe Ground Water Sampling)
- August 1999 – Environmental Partners, Inc. (Monitoring Well Installation & Sampling)
- October 1999 – Environmental Partners, Inc. (Strataprobe Soil Sampling)
- October 2001 – Kane Environmental, Inc.. (Utility Trench Soil Sampling)
- April 2001 to December 2011 – Kane Environmental, Inc. (Quarterly Groundwater Monitoring)

Terra Associates, Inc. (Terra) completed a Limited Level II Site Assessment at the Juanita Village site in April 1994 to determine the potential impacts to soil and ground water from the current Juanita Auto Clinic, which was previously a Texaco service station. The area for Terra's Limited Level II Site Assessment, included the former Chevron gasoline service station, a former furniture sales property, Evergreen Bark & Topsoil Yard, Juanita Auto Clinic and a vacant wooded fill yard directly west of the Juanita Auto Clinic. Terra reported that Juanita Auto Clinic and an adjacent barbershop shared a septic system located between the two buildings.

Terra installed and sampled six ground water monitoring wells (MW-1, MW-3, MW-4, MW-101, MW-102, and MW-103) and advanced seven soil borings (B-1 through B-7) in the vicinity of the former Texaco service station/Juanita Auto Clinic. Ground water monitoring well MW-2 was placed in the location of the former furniture store. Terra reported that the monitoring wells and soil borings were drilled in December 1993 and March 1994.

Terra reported that ground water samples collected from MW-101, MW-102 and MW-103 were analyzed for TPH-diesel, TPH-heavy oil, TPH-gasoline and volatile organic compounds (VOCs). Concentrations of TPH-heavy oil were found at MW-101 (2.2 parts per million (ppm)). MW-102 (1.8

ppm) and MW-103 (1.5 ppm) above the Washington Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Method A Ground Water Cleanup Level of 1.0 ppm. A 1,2-dichloroethane concentration of 6.0 parts per billion (ppb) was detected in ground water well MW-102, above the MTCA Method A Ground Water Cleanup Level of 5 ppb.

Terra reported that a total of 23 soil samples were collected from soil borings B-1 through B-7 and from wells MW-1 through MW-4. The sampling depths ranged from 2.5 feet below ground surface (bgs) to 10 feet bgs. All of the soil samples were analyzed for TPH-gasoline and BTEX. Soil samples collected at B-1, B-3, B-6, MW-2, MW-3 and MW-4 were also analyzed for TPH-diesel and heavy oil. Soil samples from B-2: 2.5 feet and 10 feet bgs, B-7: 10 feet bgs and MW-1: 7.5 feet bgs were also analyzed for total lead. A concentration of TPH-heavy oil (1,100 mg/kg) above the MTCA Method A Soil Cleanup Level was found in the soil sample collected from MW-2 at 2.5 feet bgs. The remaining analytical results were found to be either below their respective MTCA regulatory cleanup levels or below the analytical detection limits.

Terra completed an *Environmental Assessment* in July 1998. Terra identified the presence of two underground storage tanks, one for the waste oil storage and a second UST for heating oil. Terra did not report the volume of these two USTs. Terra reported that minor spillage of petroleum hydrocarbons may have occurred at the Juanita Auto Service location. Terra also reported that ground water sampling conducted in May 1998 revealed concentrations of TPH-heavy oil in MW-3 (2.4 ppm) above the MTCA Method A Ground Water Cleanup Level and recommended appropriate remedial action of soils in the vicinity of the USTs and concluded that based on current ground water testing results, ground water did not appear to require remediation at that time.

Terra identified the presence of two off-site, up-gradient dry cleaning facilities northeast of the Bank of America building and northeast across 98<sup>th</sup> Avenue NE from the Juanita Auto Clinic. A ground water sample collected from MW-102 collected in December 1993 resulted in a concentration of cis-1,2-dichloroethane of 6 ppb and a ground water sample from MW-101 collected in June 1998 resulted in a concentration of cis-1,2-dichloroethene of 5 ppb, below the MTCA Method B Ground Water Cleanup Level of 80 ppb. Terra reported concentrations of the dry cleaning solvent tetrachloroethylene (PCE) above the MTCA Method A Ground Water Cleanup Level from on-site ground water monitoring wells MW-201, MW-202, MW-203, and MW-204 sampled by Terra in May and June 1998. Ground water samples collected in 1998 from MW-103, MW-2, and MW-3 by Terra reportedly resulted in non-detectable concentrations of halogenated VOCs (including PCE). Terra identified the presence of an on-site dry cleaning facility at the Juanita Village property. At the time of their report, Terra stated that the on-site dry cleaning operation, Village Maytag Cleaners, was located in the on-site strip mall, and utilized a new, self-contained dry cleaning machine. Terra also reported that the Village Maytag Cleaners operator provided information that the previous tenant did not perform dry cleaning operations

on-site. Terra reported that there might have been a dry cleaning facility at that location prior to the previous owner, approximately 12 years prior (circa 1986).

Based on the ground water analytical results of an environmental investigation previously performed on the subject property by Terra Associates, Inc. of Kirkland, Washington in July 1998, EPI conducted a Limited Phase II Investigation to determine if halogenated VOCs were migrating onto the Property from off-site sources along the eastern Property boundary and if petroleum hydrocarbons were migrating onto the Property at the east-central and southeastern property boundary. On September 9, 1998 EPI collected 9 ground water samples along the eastern property boundary. Ground water sampling locations EPI-1, EPI-2, and EPI-3 were analyzed for halogenated VOCs to determine the presence or absence of chlorinated halogenated VOCs. Ground water sampling locations EPI-4, EPI-5, EPI-6, EPI-7, EPI-8, and EPI-9 were analyzed for halogenated VOCs, BTEX, TPH-gasoline, TPH-diesel, and TPH-Heavy Oil. PCE was found in ground water at concentrations above the MTCA Method A Ground Water Cleanup Level of 5 parts per billion (ppb) at the northeastern subject property boundary at EPI-1 (15 ppb), EPI-2 (92 ppb) and EPI-3 (310 ppb). A ground water sample, EPI-2A, was collected from 36-39 feet bgs at sampling location EPI-2 and reported non-detectable concentrations of halogenated VOCs. The ground water sample from EPI-8 reported a PCE concentration of 1 ppb, below the MTCA Method A Ground Water Cleanup Level. All six of the ground water samples collected from EPI-4 through EPI-9 reported non-detectable concentrations of PCE, TPH-gasoline, BTEX, TPH-diesel, and TPH-heavy Oil.

EPI conducted a *Phase II Addendum 1 Investigation* in September 1998. A total of 4 ground water samples were collected on the eastern side of 98<sup>th</sup> Avenue NE in the vicinity of the former Juanita Cleaners & Laundry (EPI-11, EPI-12, EPI-13 and EPI-14). Additional ground water samples (EPI-10 and EPI-15 through EPI-26) were collected to determine if PCE-impacted ground water was flowing off-site from the subject property. A round of ground water sampling was also performed on the existing on-site ground water wells installed by Terra (MW-1, MW-2, MW-3, MW-4, MW-101, MW-102, MW-103, MW-201, MW-202, MW-203 and MW-204).

Concentrations of PCE above the MTCA Method A Ground Water Cleanup Level were found adjacent to, and down-gradient from, the former Juanita Cleaners & Laundry. Furthermore, a concentration of PCE above the MTCA Method A Ground Water Cleanup Level at ground water sampling location EPI-22 revealed that PCE was flowing beyond the Property boundary to the southwest.

EPI conducted a *Phase II Addendum 2 Investigation* in October 1998, which included 1) ground water sampling in the deeper portion of the aquifer to determine if dense, non-aqueous phase liquid (DNAPL) was present adjacent to the on-site dry cleaning operation, and 2) the installation of four permanent ground water monitoring wells to determine the extent of PCE contamination in ground water on- and



off-site, and down-gradient from the subject property, and 3) one temporary monitoring well (EPI-MW-1) was advanced in the vicinity of the on-site dry cleaning operation.

Soil samples were collected from this location at depths ranging from 2.5 to 54 feet bgs. Only the soil sample collected from approximately 11 feet bgs detected a PCE concentration (0.15 mg/kg), the other 8 soil samples reported non-detectable concentrations of all halogenated VOCs. Groundwater samples were collected at the following intervals: 20-22 feet bgs, 30-32 feet bgs, 40-42 feet bgs, 48-50 feet bgs, and 52-54 feet bgs. PCE concentrations were detected in the groundwater samples collected from 20-22 feet bgs (23 ppb) and 52-54 feet bgs (14 ppb). No DNAPL was found in the lower portion of the aquifer.

Four permanent groundwater monitoring wells were installed on or down-gradient of the Property (EPI-MW-2, EPI-MW-3, EPI-MW-4, and EPI-MW-5). Two of the groundwater monitoring wells, EPI-MW-4 (290 ppb) and EPI-MW-5 (34 ppb), reported PCE concentrations above the MTCA Method A Ground Water Cleanup Level and two of the groundwater monitoring wells (EPI-MW-2, and EPI-MW-3) reported PCE concentrations below the MTCA Method A Ground Water Cleanup Level. The ground water analytical results indicated that PCE above the MTCA Method A Ground Water Cleanup Level was migrating from the Juanita Beach Property toward Lake Washington and/or Juanita Creek.

EPI conducted a *Phase II Addendum 3 Investigation* in November 1998 to determine if the silty clay layer and glacial till were continuous on and in the vicinity of the Property, to determine the horizontal extent of the off-site PCE concentrations, and to determine if concentrations of PCE were present in Juanita Creek. The Phase II Addendum 3 scope of work also included evaluating the nature and extent of PCE in the deeper portion of the on-site aquifer from the off-site PCE source.

Ground water analytical results indicated the potential that PCE-contaminated ground water above the MTCA Method A Ground Water Cleanup Level was flowing onto the Juanita Beach Development property from a potential off-site source. The horizontal extent of this PCE plume in the upper portion of the aquifer was found to reach an area adjacent and north of the on-site strip mall building at ground water monitoring well location MW-204. The horizontal extent of this PCE plume in the deeper portion of the aquifer was found extending to the center of the on-site strip mall building at EPI-MW-1.

EPI conducted a one-day ground water sampling investigation in April 1999 to determine the southern extent of PCE concentrations on the King County Juanita Beach property and determine if concentrations of PCE were found south of Juanita Drive NE. A total of 13 ground water samples were collected from the upper portion of the aquifer for analysis of halogenated VOCs. Concentrations of HVOCs were not found during this one-day investigation.

In July 1999, EPI collected 15 temporary ground water samples (EPI-27 through EPI-40). The detected PCE analytical results were used to aid in determining the extent of the PCE plume on and off the Property.

In August 1999, EPI installed three permanent ground water monitoring wells (RI-MW-1D, RI-MW-2D, and RI-MW-3D) in the deeper portion of the aquifer at the Property. Ground water was collected from the three deep wells and analyzed for halogenated VOCs. The concentrations of PCE detected in RI-MW-1D and RI-MW-3D were above the MTCA Method A Ground Water Cleanup Level for PCE and RI-MW-2D reported non-detectable concentrations for all halogenated VOCs. Ground water samples collected in October 1999 from RI-MW-2D and September and October from RI-MW-3D resulted in non-detectable concentrations of PCE. Other deep ground water samples (EPI-2A: 36-39'; EPI-17D: 30-33', EPI-MW-2D: 38-40' (Table 4-1), EPI-MW-3D: 58-60', EPIMW-4D: 51-53', EPI-MW-6D: 58-60'), reported low or non-detectable concentrations of PCE in the deeper portion of the aquifer. Ground water sampling results from September and October 1999 reveal that concentrations of PCE above the MTCA Method A Ground Water Cleanup Level were found in the deeper portion of the aquifer in the northeastern portion of the Juanita Village property at RI-MW-10. Ground water analytical results from RI-MW-2D and RI-MW-3D indicated that the PCE was not migrating off-site in the deeper portion of the aquifer.

All of the existing ground water wells, except for MW-102, were sampled in August 1999. Ground water wells MW-101, MW-201 through MW-204 and EPI-MW-2 through EPI-MW-5 were sampled for HVOCs. Ground water wells MW-1 through MW-4 and MW-101 and MW-103 were also analyzed for TPH-Diesel and Heavy Oil. Concentrations of PCE above the MTCA Method A Ground Water Cleanup Level were detected at existing wells MW-201 through MW-203, EPI-MW-4 and EPI-MW-5.

The groundwater results from samples collected in 1999 indicated that the PCE ground water plume was present in the northeast corner of the Property and central portion of the Property and was migrating in a southwesterly direction. The southern-most extent of the plume was found at the central portion of the Juanita Park parking lot approximately 100 feet south of well EPI-MW-5. The PCE plume did not extend south of Juanita Drive NE.

In October 1999, EPI advanced seven soil borings in the area of the former on-Property dry cleaner. All of the soil samples reported PCE concentrations below the MTCA Method B Cleanup Level for PCE. EPI also collected two ground water samples from SB-4 and SB-1 for analysis of halogenated VOCs. The ground water collected at SB-4 reported a PCE concentration of 190 ppb and the ground water sampled collected at SB-2 reported a PCE concentration of 800 ppb, with detectable concentrations of trichlorofluoromethane, cis-1,2 dichloroethene and trichloroethene below their respective MTCA ground water cleanup levels.

In October 2001, Kane Environmental cut the concrete floor next to the utility trenches located inside the former dry cleaner at the Property. Kane Environmental collected a total of seven (7) soil samples. Soil samples were collected using a decontaminated hand-held posthole digger. The soil samples were collected on the sidewalls adjacent to the utility trenches to determine if concentrations of PCE had spread radially from beneath the utility trenches. Soil sample CS-1 reported a PCE concentration of 0.90 mg/kg and soil sample CS-2 reported a PCE concentration of 0.51 mg/kg, both of which exceeded the MTCA Method A Cleanup Level for Unrestricted Use of 0.05 mg/kg. All other soil samples reported non-detectable concentrations of halogenated VOCs. The data results revealed that PCE migrated directly beneath the utility trenches inside the former dry cleaner.

From April 2001 until December 2011, Kane Environmental conducted eighteen rounds of groundwater monitoring at the Property. The groundwater sampling revealed TPH concentrations below applicable groundwater cleanup levels for at least four consecutive quarters following remediation. PCE concentrations below the MTCA Method A Cleanup Level for Groundwater were reported for at least four consecutive quarters following remediation using density-driven convection wells (DDC), soil vapor extraction (SVE) wells, and injection of emulsified vegetable oil. Several compliance wells reported fluctuating concentrations of PCE, but at reduced concentrations prior to the initial site remediation (see below). Following regular injection of emulsified vegetable oil in 2011, PCE concentrations were consistently below the MTCA Method A Cleanup Level for Groundwater (discussed below in Section 3.0). PCE concentrations in sentry wells located down-gradient and off-Property consistently reported PCE concentrations that were protective of Juanita Creek, Lake Washington, and of human health. The groundwater monitoring compliance sampling results are included as Attachment A.

## 2.2 Previous Remedial Actions

An on-property SVE system was installed and began operation in December 1999 and an array of on and off-Property DDC wells were installed and began operation in August 2001. The SVE system was briefly shutdown twice during Property purchase negotiations in 2000. The DDC and SVE system operated until August 2002. The on-Property system removed approximately 217 pounds of PCE from soil and groundwater. The off-Property system removed approximately 14 pounds of PCE from soil and groundwater.

In March 2001, Kane Environmental collected soil compliance sampling in support of excavation of TPH-heavy oil contaminated soils at the former Juanita Auto Service facility. Soil samples were collected from over-excavated areas in compliance with the PPCD and revealed no detectable concentrations of TPH-oil. The excavation occurred in the area of two hydraulic lifts and one used oil UST.

In April 2001, Kane Environmental conducted soil compliance sampling in support of the installation of storm water vaults on Juanita Village Lots 1 and 3 and in compliance with the PPCD. Five soil samples were collected during this scope of work and no detectable concentrations of TPH-diesel or TPH-heavy oil were reported in any of the soil samples.

On April 6, 2004, Kane Environmental provided oversight and Air Monitoring during soil excavation activities associated with the removal of PCE impacted soil from below the foundation of the dry cleaning facility formerly located at the Juanita Village Property. The objective of this portion of the project was to insure removal of PCE-impacted soil by overexcavation while monitoring air quality conditions.

Three trenches (Trenches T-1, T-2 and T-3) were present and visible through cuts on the concrete slab foundation of the former dry cleaning facility. The soil underlying the concrete slab was excavated and stockpiled. Prior to stockpiling, Kane Environmental evaluated selected portions of the excavated material for the potential presence of PCE using a PID. Based on visual observation and PID readings, Kane Environmental made a determination of the vertical and horizontal extents of the three trenches and the volume of soil to be removed. Ms. Maura O'Brien was present to observe the activities and provide concurrence with regards to the final dimensions of the trenches on behalf of Ecology.

Trenches T-1 and T-2 were located in the area known to have been impacted by activities at the former dry cleaning operation. Trench T-3 was located approximately 4 feet to the south of Trench T-2.

Approximately 100-cubic yards of soil was excavated from the three trenches and stockpiled on heavy plastic on the western portion of the Property. Five samples were collected from the stockpiled soil and analyzed for the presence of HVOCs. HVOCs were not detected in four of the five soil samples analyzed. Only one individual VOC component, Dibromochloromethane, was reported to present in one of the five soil samples analyzed. There is no established MTCA Method A Cleanup Level for Dibromochloromethane in soil. No PCE was detected in the soil samples collected from the stockpile.

On April 7, 2004, Kane Environmental provided oversight while four 55-gallon drums containing petroleum-impacted soil and additional impacted soil that had been placed in the area as temporary fill was relocated. The impacted soil material was reportedly excavated from an area where a leaking underground storage tank (LUST) had previously been decommissioned. During the excavation, PVC piping associated with the groundwater remediation system previously operated onsite was uncovered. Approximately 50 cubic yards of soil was excavated from the area and stockpiled on heavy plastic on the western portion of the Property.

On April 27, 2004, Kane Environmental responded to a call regarding the discovery of an abandoned UST that had been unearthed during the excavation of the future sublevel parking area located just

south of NE 120<sup>th</sup> Place. The UST was approximately 300-gallons in size and appeared to contain heating oil. A minor release from the UST had occurred. Kane Environmental provided oversight and direction to excavating personnel in order to remove the UST and associated impacted soils.

Kane Environmental screened selected soil samples from the sidewalls and bottom of the excavation and identified elevated PID readings associated with gray discoloration and petroleum odors in soil collected from the west and bottom of the excavation. Soil excavation encountered silty sand from the ground surface to approximately 4 feet bgs; silty clay was encountered from approximately 4 feet bgs to 12 feet bgs; fine- to medium-grained sand was encountered below approximately 12 feet bgs.

Kane Environmental collected six clearance soil samples from the UST excavation and analyzed them for the presence of TPH-diesel and heavy oil. All six soil samples were reported to contain non-detectable concentrations of TPH-diesel and heavy oil. The final dimensions of the excavation were approximately 12-feet by 16-feet by 15-feet deep.

The soil and groundwater compliance sampling results from the above activities are included as Attachment B.

### **2.3 Lot Specific No Further Action Letters**

Ecology has issued eight Lot Specific No Further Action or Notice of Completion Letters for the Property. These letters are included as Attachment C.

- On August 31, 2001 a *Notice of Completion for Soils Remediation at the Juanita Village Former Juanita Auto* Letter was issued. The letter stated that Ecology certified that soil cleanup at the former Juanita Auto Service and Stormwater Vaults had been completed as set forth in Consent Decree 00-2-16556-1SEA. The letter further stated that the cleanup resulted in the removal of contaminated soils to the specified levels in the Cleanup Action Plan, through removal and off-site thermal desorption. The letter stated that groundwater compliance monitoring was required to evaluate groundwater conditions.
- On January 23, 2002 a *Notice of Completion/No Further Action at Lot #1 of Juanita Village* Letter was issued. The letter stated that Ecology certified that cleanup of soil and groundwater at Lot #1 of the Juanita Village Site (former Chevron Facilities #9-2767 at 116-1 – 98<sup>th</sup> Avenue in Kirkland, Washington) had been completed as set forth in Consent Decree 00-2-16556-1SEA. The letter further stated that the cleanup resulted in contaminant concentrations in soil and groundwater below the concentrations specified in the Cleanup Action Plan and that no further action was required at Lot #1 of the Property.
- On January 23, 2002 a *Notice of Completion/No Further Action at Lot #2 of Juanita Village* Letter was issued. The letter stated that Ecology certified that cleanup of soil and groundwater

- at Lot #2 of the Juanita Village Site had been completed as set forth in Consent Decree 00-2-16556-1SEA. The letter further stated that the cleanup resulted in contaminant concentrations in soil and groundwater below the concentrations specified in the Cleanup Action Plan, that the cleanup had been followed by four quarters of groundwater compliance monitoring, and that no further action was required at Lot #2 of the Property.
- On January 23, 2002 a *Notice of Completion/No Further Action at Lot #3 of Juanita Village* Letter was issued. The letter stated that Ecology certified that cleanup of soil and groundwater at Lot #3 of the Juanita Village Site had been completed as set forth in Consent Decree 00-2-16556-1SEA. The letter further stated that the cleanup resulted in contaminant concentrations in soil and groundwater below the concentrations specified in the Cleanup Action Plan, that the cleanup had been followed by four quarters of groundwater compliance monitoring, and that no further action was required at Lot #3 of the Property.
  - On January 23, 2002 a *Notice of Completion/No Further Action at Lot #4 of Juanita Village* Letter was issued. The letter stated that Ecology certified that cleanup of soil and groundwater at Lot #4 of the Juanita Village Site had been completed as set forth in Consent Decree 00-2-16556-1SEA. The letter further stated that the cleanup resulted in contaminant concentrations in soil and groundwater below the concentrations specified in the Cleanup Action Plan, that the cleanup had been followed by four quarters of groundwater compliance monitoring, and that no further action was required at Lot #4 of the Property.
  - On January 23, 2002 a *Notice of Completion/No Further Action Letter at Lot #5 of Juanita Village* was issued. The letter stated that Ecology certified that cleanup of soil and groundwater at Lot #5 of the Juanita Village Site had been completed as set forth in Consent Decree 00-2-16556-1SEA. The letter further stated that the cleanup resulted in contaminant concentrations in soil and groundwater below the concentrations specified in the Cleanup Action Plan, that the cleanup had been followed by four quarters of groundwater compliance monitoring, and that no further action was required at Lot #5 of the Property.
  - On January 23, 2002 a *Notice of Completion/No Further Action at Lot #6 of Juanita Village* Letter was issued. The letter stated that Ecology certified that cleanup of soil and groundwater at Lot #6 of the Juanita Village Site had been completed as set forth in Consent Decree 00-2-16556-1SEA. The letter further stated that the cleanup resulted in contaminant concentrations in soil and groundwater below the concentrations specified in the Cleanup Action Plan, that the cleanup had been followed by four quarters of groundwater compliance monitoring, and that no further action was required at Lot #6 of the Property.

- On January 23, 2002 a *Notice of Completion/No Further Action at Lot #7 of Juanita Village* Letter was issued. The letter stated that Ecology certified that cleanup of soil and groundwater at Lot #7 of the Juanita Village Site had been completed as set forth in Consent Decree 00-2-16556-1SEA. The letter further stated that the cleanup resulted in contaminant concentrations in soil and groundwater below the concentrations specified in the Cleanup Action Plan, that the cleanup had been followed by four quarters of groundwater compliance monitoring, and that no further action was required at Lot #7 of the Property.
- On February 28, 2003, a *Notice of Completion for Soils Remediation at the Juanita Village Lots #8 and 9* Letter was issued. The letter stated that Ecology certified that cleanup of soil at Lots #8 and 9 of the Property had been completed as set forth in Consent Decree 00-2-16556-1SEA. The letter further stated that the cleanup, which included excavation where required, resulted in contaminant concentrations in soil below the concentrations specified in the Cleanup Action Plan. The letter also stated that no further action, other than groundwater compliance monitoring as stated in the Cleanup Action Plan, was required at Lots #8 and #9.

### 3.0 GROUNDWATER REMEDIATION & COMPLIANCE MONITORING – LOTS 8 & 9

#### 3.1 Cleanup Standards

The Property is a mixed-use residential and commercial development. According to the Cleanup Action Plan, concentrations of PCE in groundwater may not exceed the MTCA Method A Cleanup Level of 5 micrograms per liter ( $\mu\text{g/L}$ ) for four consecutive quarters of groundwater monitoring.

##### 3.1.1 Compliance Monitoring Plan Tasks

Groundwater monitoring was performed to determine concentrations of PCE in groundwater in the two monitoring wells, MW-7 and TW-1.

#### 3.2 Field Methodology

##### 3.2.1 Remedial Injection Methodology

Kane Environmental obtained an Underground Injection Control (UIC) Authorization from Ecology on December 9, 2009.

On August 9, 2011 Kane Environmental injected remediation product under pressure using a centrifugal pump into the aquifer. The remediation product consisted of 2.5 gallons of vegetable/soybean oil and

50 gallons of drinking water. Approximately 25 gallons of drinking water containing 0.5 liters of Vitamin B12 solution was added to the aquifer.

On November 10, 2011, Kane Environmental injected a second round of remediation product and vitamin B12 into the aquifer.

### **3.2.2 Groundwater Sampling Methodology**

The groundwater sampling procedure for each well, including Quality Assurance/Quality Control (QA/QC) procedures, is described below in detail. Groundwater monitoring wells MW-7 and TW-1 were sampled in January, May, September, and December 2011 as detailed in the groundwater monitoring reports submitted for each quarter.

- Depth to groundwater in each well was measured with a decontaminated electric water interface probe. The probe was cleaned withalconox and rinsed with de-ionized water between sampling activities.
- Groundwater collected from all of the wells was sampled using a peristaltic pump with new polyethylene tubing. The tubing was lowered to the bottom of the well screen, approximately one foot from the base of the well. Prior to sampling, each monitoring well was purged at a rate less than 0.5 – liters per minute. During purging, water quality parameters (pH, specific conductance, temperature, total dissolved solids) were monitored using a Hanna HI 991300 meter. Stabilization of field parameters (per EPA stabilization criteria) was used to indicate that conditions were suitable for sampling. Prior to sampling activities, the meter was calibrated with standard solutions.
- Once the water quality parameters stabilized, laboratory – supplied, pre-cleaned and preserved containers for analysis were filled directly from the pump discharge. Samples were labeled and placed into plastic bags to minimize the potential for cross-contamination and then placed into an ice-filled cooler.
- The groundwater samples were immediately placed into ice-filled coolers and transported to OnSite Environmental, Inc. (OnSite) in Redmond, Washington under standard chain-of-custody procedures.

### **3.3 Analytical Methodology**

Groundwater samples were submitted to the laboratory and analyzed for HVOCs using EPA Method 8260B.



All analyses were performed in accordance with OnSite's in-house Quality Assurance/Quality Control Plans. Sample analyses were performed in compliance with EPA analytical methods and Ecology guidelines. Samples were analyzed within specified holding times. All detection limits were within method requirements and no factors appeared to adversely affect data quality.

### 3.4 Groundwater Results

The findings of the four rounds of groundwater compliance sampling in 2011 are detailed below:

**Table 1. PCE Concentrations in Groundwater (ppb)**

| Sample Date    | MW-7 | TW-1 |
|----------------|------|------|
| January 2011   | 0.68 | 4.5  |
| May 2011       | 4.8  | 4.2  |
| September 2011 | 2.8  | 3.2  |
| December 2011  | 2.4  | 3.2  |

### 4.0 REQUEST FOR SITE CLOSURE

All soils on the Property containing concentrations of TPH and HVOCs that exceeded the applicable MTCA soil cleanup levels were remediated. This includes soils from the former Juanita Auto Service property, the former Texaco Service Station property, and the former on-Property drycleaner. The soil compliance sampling has fulfilled the requirements of the Juanita Village Compliance Monitoring Plan, Sections 8.4.1 through 8.4.7.

Kane Environmental completed a total of eighteen rounds of groundwater compliance sampling at the Property. The most recent four quarters of groundwater compliance sampling in 2011 resulted in PCE concentrations below the MTCA Method A Cleanup Level (see Table 1). Previous four consecutive rounds of groundwater compliance monitoring sampling resulted in TPH concentrations below respective MTCA Method A Groundwater Cleanup Levels. The groundwater compliance monitoring has fulfilled the requirements of the Juanita Village Compliance Monitoring Plan, Sections 8.5.1 through 8.5.5 and Section 8.6.

Closure Report  
Juanita Village  
May 21, 2012



Kane Environmental will completed the decommissioning of the remaining groundwater compliance monitoring wells following site closure and receipt of a No Further Action Letter for the Site.

Based on the above information, the owner has complied with the terms of PPCD 00-2-16556-1SEA. Kane Environmental understands a 30 day public comment period is required as part of this process.

## 5.0 LIMITATIONS AND EXCEPTIONS

Kane Environmental has performed this work in general accordance with generally accepted professional practices using the standard of the industry today, for the nature and conditions of the work completed in the same locality and at the same time as the work was performed, and with the terms and conditions as set forth in our proposal.

Kane Environmental shall not be responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed at the time the report was prepared. Facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time the work was performed. This Closure Report does not include other services not specifically described in the scope of work in Section 1.0 of this report. Conclusions were made within the operative constraints of the scope of work, budget, and schedule for this project.



**Figures**

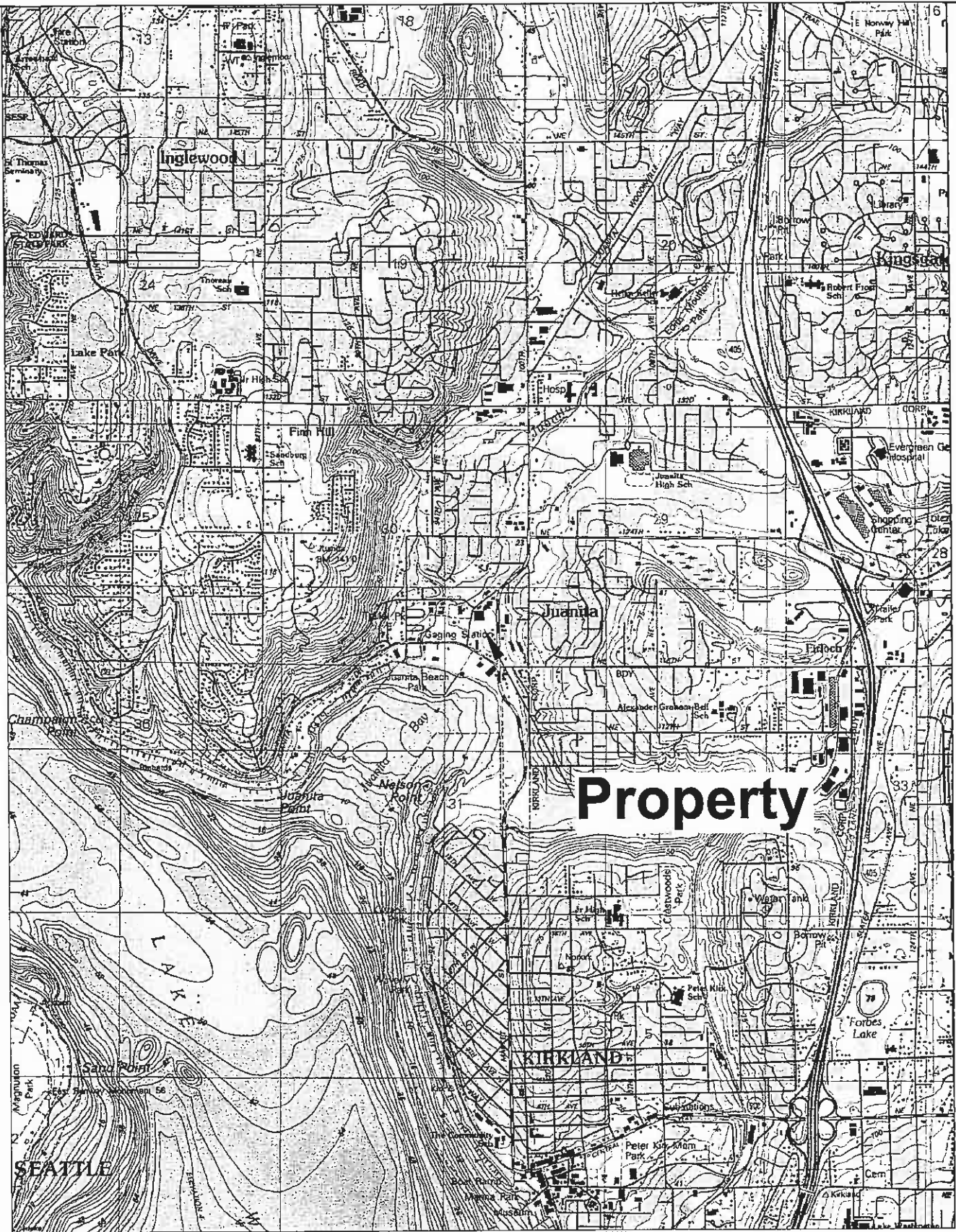
**Attachment A  
Groundwater Compliance  
Monitoring Documentation**

**Attachment B**  
**Lot Specific Soil & Groundwater**  
**Compliance Monitoring Documentation**

**Attachment C**  
**Lot Specific No Further Action and Notice of**  
**Completion Letters**

**Attachment D**  
**Well Closure Documentation**





TN° MN  
17°

0 1000 FEET 0 500 1000 METERS

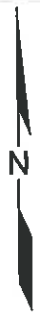
Map created with TOPO!® ©2002 National Geographic (www.nationalgeographic.com/topo)



Closure Report  
Juanita Village  
Kirkland, Washington

Figure 1  
Vicinity Map





LEGEND



Approximate Property  
Boundary

0 200 400

Approximate Scale in Feet



Closure Report  
Juanita Village  
Kirkland, Washington

Figure 2  
Current Site Plan



**Attachment A  
Groundwater Compliance  
Monitoring Documentation**



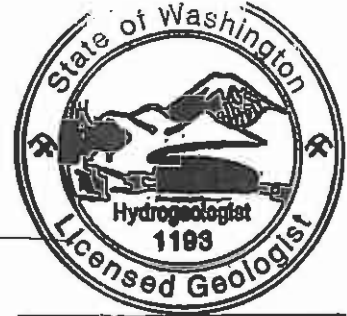
MEMORANDUM

To: Ms. Maura O'Brian, Site Coordinator  
Washington State Department of Ecology  
3190 160<sup>th</sup> Avenue SE  
Bellevue, WA 98008

From: Mr. John Kane, Principal, Kane Environmental, Inc.

Date: March 30, 2011

Re: Juanita Village Consent Decree Site  
Consent Decree No. 00-2-16558-1SEA  
Groundwater Compliance Monitoring Progress Memo



JOHN R. KANE

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Kane Environmental, Inc. (Kane Environmental) is pleased to present this memorandum regarding the groundwater compliance monitoring currently being conducted at the Juanita Village Consent Decree Site (the Site).

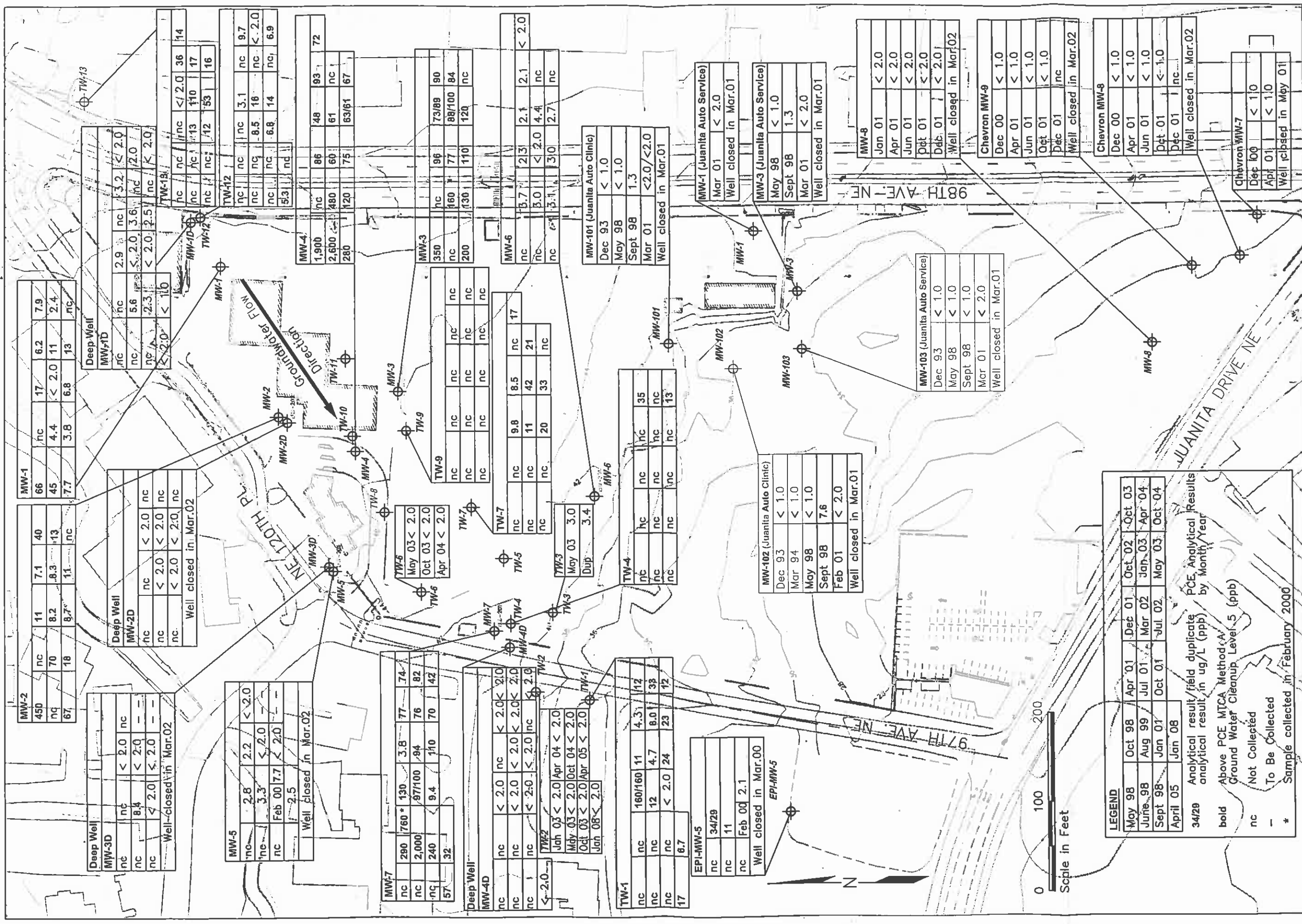
On January 6, 2011, Kane Environmental sampled monitoring well MW-7 (located on the exterior of the building occupying the Site). On January 27, 2011 Kane Environmental sampled monitoring wells MW-4D (incorrectly labeled as TW-4 on the Chain-of-Custody and located down-gradient of MW-7 and inside the building occupying the site) and TW-1 (incorrectly labeled as TW-2 on the Chain-of-Custody and located down-gradient of MW-7 and west of the building, across 97<sup>th</sup> Avenue Northeast). The groundwater samples were analyzed for halogenated volatile organic compounds (HVOCs) by Onsite Environmental, Inc. of Redmond, Washington.

The groundwater samples reported the following concentrations of tetrachloroethene (PCE): MW-7 reported a concentration of 0.68 micrograms per liter ( $\mu\text{g/L}$ ), TW-1 reported a concentration of 4.5  $\mu\text{g/L}$ , and MW-4D reported a concentration of 0.34  $\mu\text{g/L}$ . None of the reported concentrations exceeded the MTCA Method A Cleanup Level for Ground Water for PCE of 5  $\mu\text{g/L}$ . The laboratory analytical reports are included as Attachment A.

**ATTACHMENTS**

Attachment A –Laboratory Analytical Results

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**KANE Environmental, Inc.**

Juanita Village Property

Ground Water Compliance Monitoring Results

Kirkland, Washington

**Figure 3**

January 2008

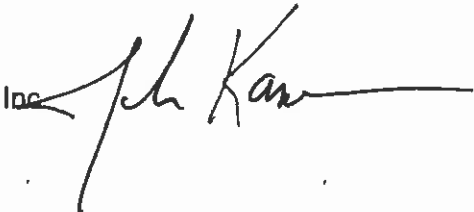
**HISTORIC AND COMPLIANCE MONITORING PCE**

**GROUND WATER ANALYTICAL RESULTS (ppb)**



**MEMORANDUM**

To: Ms. Maura O'Brien, Site Coordinator  
Washington State Department of Ecology  
3190 160<sup>th</sup> Avenue SE  
Bellevue, WA 98008

From: Mr. John Kane, Principal, Kane Environmental, Inc. 

Date: June 10, 2011

Re: Juanita Village Consent Decree Site  
Consent Decree No. 00-2-16558-1SEA  
Groundwater Compliance Monitoring Progress Memo

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Kane Environmental, Inc. (Kane Environmental) is pleased to present this memorandum regarding the groundwater compliance monitoring currently being conducted at the Juanita Village Consent Decree Site (the Site).

On May 6, 2011, Kane Environmental sampled monitoring well MW-7 (located on the exterior of the building occupying the Site) and TW-1 (down-gradient of MW-7 and west of the building, across 97<sup>th</sup> Avenue Northeast). The groundwater samples were analyzed for halogenated volatile organic compounds (HVOCs) by Onsite Environmental, Inc. of Redmond, Washington.

The groundwater samples reported the following concentrations of tetrachloroethene (PCE): MW-7 reported a concentration of 4.8 micrograms per liter ( $\mu\text{g/L}$ ), and TW-1 reported a concentration of 4.2  $\mu\text{g/L}$ . None of the reported concentrations exceeded the MTCA Method A Cleanup Level for Ground Water for PCE of 5  $\mu\text{g/L}$ . The laboratory analytical reports are included as Attachment A.

**ATTACHMENTS**

Attachment A –Laboratory Analytical Results

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cc: Michael Christ, President, SECO Development





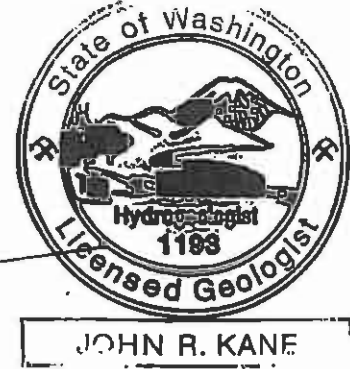
MEMORANDUM

To: Ms. Maura O'Brien, Site Coordinator  
Washington State Department of Ecology  
3190 160<sup>th</sup> Avenue SE  
Bellevue, WA 98008

From: Mr. John Kane, Principal, Kane Environmental, Inc.

Date: October 4, 2011

Re: Juanita Village Consent Decree Site  
Consent Decree No. 00-2-16558-1SEA  
Groundwater Compliance Monitoring Progress Memo



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Kane Environmental, Inc. (Kane Environmental) is pleased to present this memorandum regarding the groundwater compliance monitoring currently being conducted at the Juanita Village Consent Decree Site (the Site).

On September 7, 2011, Kane Environmental sampled monitoring well MW-7 (located on the exterior of the building occupying the Site) and TW-1 (down-gradient of MW-7 and west of the building, across 97<sup>th</sup> Avenue Northeast). The groundwater samples were analyzed for halogenated volatile organic compounds (HVOCs) by Onsite Environmental, Inc. of Redmond, Washington.

The groundwater samples reported the following concentrations of tetrachloroethene (PCE): MW-7 reported a concentration of 2.8 micrograms per liter ( $\mu\text{g/L}$ ), and TW-1 reported a concentration of 3.0  $\mu\text{g/L}$ . None of the reported concentrations exceeded the MTCA Method A Cleanup Level for Ground Water for PCE of 5  $\mu\text{g/L}$ . The laboratory analytical reports are included as Attachment A.

**ATTACHMENTS**

Attachment A –Laboratory Analytical Results

---

cc: Michael Christ, President, SECO Development



MEMORANDUM

To: Ms. Maura O'Brien, Site Coordinator  
Washington State Department of Ecology  
3190 160<sup>th</sup> Avenue SE  
Bellevue, WA 98008

From: Mr. John Kane, Principal, Kane Environmental, Inc.

Date: December 16, 2011

Re: Juanita Village Consent Decree Site  
Consent Decree No. 00-2-16558-1SEA  
Groundwater Compliance Monitoring Progress Memo



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Kane Environmental, Inc. (Kane Environmental) is pleased to present this memorandum regarding the groundwater compliance monitoring currently being conducted at the Juanita Village Consent Decree Site (the Site).

On December 8, 2011, Kane Environmental sampled monitoring well MW-7 (located on the exterior of the building occupying the Site) and TW-1 (down-gradient of MW-7 and west of the building, across 97<sup>th</sup> Avenue Northeast). The groundwater samples were analyzed for halogenated volatile organic compounds (HVOCs) by Onsite Environmental, Inc. of Redmond, Washington.

The groundwater samples reported the following concentrations of tetrachloroethene (PCE): MW-7 reported a concentration of 2.4 micrograms per liter ( $\mu\text{g/L}$ ), and TW-1 reported a concentration of 3.2  $\mu\text{g/L}$ . None of the reported concentrations exceeded the MTCA Method A Cleanup Level for Ground Water for PCE of 5  $\mu\text{g/L}$ . The laboratory analytical reports are included as Attachment A.

**ATTACHMENTS**

Attachment A –Laboratory Analytical Results

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cc: Michael Christ, President, SECO Development



**Attachment B**  
**Lot Specific Soil & Groundwater**  
**Compliance Monitoring Documentation**

**Attachment A**  
**Groundwater Compliance**  
**Monitoring Documentation**

# TERRA ASSOCIATES, Inc.

Consultants in Geotechnical Engineering, Geology  
and  
Environmental Earth Sciences

April 11, 1994  
Project No. T-2464-1

Mr. Dale Chandler  
Supermarket Development Corporation  
7890 South 188th Street  
Kent, Washington 98032

Subject: Limited Level II Site Assessment  
Proposed Market Place  
98th Avenue NE and Juanita Drive NE  
Kirkland, Washington

Dear Mr. Chandler:

As requested, we have completed a limited Level II Site Assessment at the proposed Market Place site in Kirkland, Washington. The purpose of our study was to determine potential impacts to soil and groundwater from former retail gasoline sale operations and current automotive service operations at two locations along the west side of the site.

## INTRODUCTION AND SUMMARY

There appears to be no significant contamination of the site soils or groundwater. We encountered localized areas of surficial soil contamination by petroleum product. In our opinion, project planning of site development should provide contingencies for localized near-surface soil remediation activities. A Chevron station previously existed in the southeast corner. Past remedial activities on the Chevron site have mitigated nearly all of the soils affected by past releases on this site. Additional evaluation and testing of groundwater is planned by Chevron in the near future.

## **SITE DESCRIPTION**

At the time of our study, the site consisted of several parcels of land in use for a variety of purposes. General site and adjacent land uses are shown schematically on the attached Exploration Location Plan, Figure 2. The south end of the site is a vacant fenced lot, formerly a Chevron gas station. West of the former Chevron station is an abandoned residential lot, most recently used as a furniture store. North of these lots is an undeveloped area in use by Evergreen Bark and Topsoil as a topsoil mixing yard. There is an abandoned, vacant tavern at the mid-east side of the site. The northeast portion of the site is shared by Juanita Auto Clinic and a barber shop. These businesses are served by a septic system located between the two buildings. Juanita Auto Clinic is a former Texaco Station. Off the southwest corner of the former Texaco Station there is a shed that is apparently being used by a foundation contractor. The remainder of the site is in use by Evergreen Bark and Topsoil for soil stockpiling and filling or is overgrown by brambles and alder trees.

## **SCOPE OF WORK**

Our Limited Level II Site Assessment consisted of constructing and sampling seven monitoring wells and seven test borings, predominantly around the former Texaco Station. We also collected three random surface soil samples from Evergreen Bark and Topsoil's fill yard. The locations of the monitoring wells and test borings are shown on Figure 2 and on the attached Site Detail Plan, Figure 3. These plans show the exploration locations in relation to existing site features.

A former Chevron gas station has been decommissioned at the south end of the site. We reviewed the Underground Storage Tank Decommissioning and Site Inspection Report for the Chevron station dated October 1993 by EMCON Northwest, Inc. (EMCON). We understand that Chevron plans to install three monitoring wells on the decommissioned lot for long-term groundwater monitoring.

## **SUBSURFACE EXPLORATION**

On December 9 and 10, 1993 and March 7 and 8, 1994, we retained GeoBoring and Development, Inc. of Puyallup to drill two test borings and install seven monitoring wells on-site. We also retained CN Drilling of Seattle to drill five test borings in limited access areas on March 8, 1994. The monitoring wells and Borings B-1 and B-2 were constructed using a truck-mounted B-61 mobile drill rig equipped with four inch hollow stem augers. A portable Acker drill rig drilled the five test borings located in limited access or low overhead areas.

A member of our staff continuously monitored the drilling and well construction activities. The borings and monitoring well locations were determined by several factors, including previous tank locations, existing utilities, anticipated groundwater gradients, and accessibility.

Soil samples were obtained at selected intervals using a standard split spoon sampler driven by a 140 pound hammer falling 18 inches. The number of blows required to drive the sampler the final 12 inches is recorded on the attached Boring Logs, Figures 5 through 18, as the N value. Each sample was carefully examined by our representative, promptly placed in laboratory-supplied glassware, and refrigerated pending delivery to the laboratory. During drilling, our representative kept a detailed log of each boring, noting changes in stratigraphy, classifying the soils in accordance with the Unified Soil Classification System, and noting seepage levels. The Unified Soil Classification System is shown on Figure 4.

During drilling, the soil cuttings and samples were monitored using a hand-held photo-ionization device (PID) equipped with a 10.0 electron volt lamp. This field screening was performed to monitor air quality for health and safety reasons and to help select soil samples for laboratory analysis. The drilling tools were steam cleaned prior to and between each boring to minimize the potential for cross-contamination between bore holes and project sites.

The monitoring wells were constructed in accordance with Washington State regulations. The monitoring wells were built using two-inch flush-threaded PVC materials. The screen has a slot size of 0.01 inches. The monitoring well as-builts are shown on the individual boring logs. Each monitoring well was provided with a tamper-resistant monument cover. Traffic-rated, flush-mounted monuments were installed in paved areas. Three to four foot high stick-up monuments were installed with protective bollards in undeveloped areas. Inside the monument cover, each wellhead is protected by a padlock.

The wellheads and the surrounding ground surface were surveyed to determine relative elevations for each monitoring well. Our level survey was referenced to the finish floor elevation at the northeast corner of the Juanita Auto Clinic building, Elev. 100. Water level measurements were taken on March 14, 1994. The groundwater gradient below Juanita Auto Clinic was calculated to flow west-southwest over a gradient of approximately 0.008 feet per foot. Relative elevations of the groundwater table at the time of our study are shown on Figure 3. Inferred water level elevation contours are also shown on Figure 3.

Following construction of the monitoring wells, they were developed and purged using disposable polyethylene bailers. Using the bailers eliminates the need to decontaminate the sampling equipment between monitoring wells and minimizes the potential for cross-contamination between samples and wells.

We monitored the specific conductivity of the water during well purging and development. We obtained water samples once the conductivity values stabilized. Well development information is listed on the Monitoring Well Field Reports which are attached as Appendix A. All water samples were placed in laboratory-prepared containers and stored in a refrigerated cooler pending delivery to the laboratory. Water samples obtained for Dissolved Lead analysis were field filtered through a Corning 45 micron filter. Total Lead analyses were performed on unfiltered samples.



Mr. Dale Chandler  
April 11, 1994

All soil and water samples were delivered within 24 hours of sampling to Pacific Northern Analytical, Inc. in Redmond, Washington. We followed chain of custody protocols.

### **ANALYTICAL TESTING**

Pacific Northern Analytical, Inc. tested selected soil samples for Total Petroleum Hydrocarbons (TPH). Soil samples from Monitoring Wells MW-101, MW-102, and MW-103 were qualitatively screened for gasoline, diesel, and lube oil range hydrocarbon identification using Ecology Method WTPH-HCID. Groundwater samples from these three monitoring wells were analyzed using WTPH-418.1 (TPH as Lube Oil), WTPH-D (TPH as Diesel Fuel), WTPH-G (TPH as Gasoline), and EPA Test Method 8240 for Volatile Organic Compounds, including common chlorinated and non-chlorinated solvents.

Selected soil samples obtained from the remaining test borings and monitoring wells were analyzed for TPH in the gasoline range WTPH-G with a benzene, ethylbenzene, toluene, and xylene distinction (WTPH-G/BETX). Depending on the proximity and contents of former underground storage tanks (USTs), several samples were also analyzed for diesel and motor oil range hydrocarbons using WTPH-DX (TPH as Diesel, extended to include heavy oils), or for Total Lead (EPA Test Method 6010).

Groundwater samples obtained from Monitoring Wells MW-1, MW-3, and MW-4 were analyzed for WTPH-DX and WTPH-G/BETX. These wells, except Monitoring Well MW-3, were sampled for Total Lead, Dissolved Lead (EPA Test Method 7421), and Turbidity (EPA Test Method 180.1).

The results of the analytical testing are listed on Tables A and B, attached as Appendix B. Pacific Northern Analytical's analytical test reports, complete with quality assurance data, are attached as Appendix C.

### **SURFACE SAMPLING AND TESTING**

Due to undocumented filling activities in the central portion of the site, we collected three random soil samples from the existing fill surface. These samples were labeled EBT-1, EBT-2, and EBT-3. These soil samples were placed in laboratory-prepared containers, stored in a refrigerated cooler, and delivered under chain of custody protocol to Pacific Northern Analytical. The soil samples were tested for TPH using Ecology Method WTPH-HCID to qualitatively screen for gasoline, diesel, and motor oil range hydrocarbons. When hydrocarbons are detected, this test is supplemented by Ecology Method WTPH-G or WTPH-DX as needed for quantification.

The soil samples were also tested for Total Lead, Total Cadmium, and Total Chromium (EPA Test Method 6010). The analytical test results are listed on Tables A and B.

## RESULTS OF EXPLORATION AND ANALYSIS

The tables in Appendix B summarize the analytical data developed for this project. Each table contains the current Washington State cleanup levels as presented in the Model Toxics Control Act (MTCA).

Total Petroleum Hydrocarbons were detected slightly above MTCA cleanup standards in water samples collected from Monitoring Wells MW-101, MW-102, and MW-103. In our opinion, these do not reflect motor oil concentrations in the groundwater, but are the results of organic interference caused by the thick organic topsoil layer leaching into the shallow groundwater. We also encountered a chlorinated solvent, 1,2-Dichloroethane, in Monitoring Well MW-2 at concentrations slightly above MTCA cleanup standards. We resampled this well in March 1994, and no EPA 8240 parameters were detected above the individual Reporting Limits.

None of the other chemical parameters tested for were encountered in groundwater samples obtained from Monitoring Wells MW-1, MW-2, MW-3, and MW-4.

Low levels of gasoline and Total Lead were detected in the soil samples obtained from Borings B-2 and B-6, and from Monitoring Well MW-1, which were sited in and around the former gasoline UST at the former Texaco Station. The gasoline and lead concentrations detected at the locations explored do not exceed MTCA cleanup standards.

The near-surface soil samples collected at Monitoring Well MW-2 were found to contain 1,100 parts per million (ppm) of TPH as motor oil. This soil sample was collected in shallow fills below an unpaved parking area. Hand auguring for protective bollards around the well monument did not encounter any obvious evidence of petroleum contaminated soils. This area will require further surface and near-surface soil sampling to confirm our findings.

Of the three random surface soil samples obtained from the Evergreen Bark and Topsoil's fill yard, one sample was found to contain petroleum hydrocarbons at concentrations exceeding MTCA cleanup standards for motor oil. All three samples contained low levels of chromium. These levels of chromium were below MTCA cleanup standards. Neither lead nor cadmium was detected above the Reporting Limits.

## REVIEW OF FORMER CHEVRON SITE

The south end of the subject site was formerly Chevron Station 60092767, located at 11601 - 98th Avenue NE. The Chevron station was decommissioned in 1993. As part of our study, we reviewed the following reports by EMCON Northwest, Inc. of Bothell.

- Subsurface Site Assessment, March 25, 1992
- Results of May 1992 Groundwater Sampling Event, July 10, 1992
- Underground Storage Tank Decommissioning and Site Inspection Report, October 1993

Mr. Dale Chandler  
April 11, 1994

These EMCON reports refer to a previous site assessment by EA Engineering, Science, and Technology (EA) of Redmond, dated January 1991. The EA report describes a confirmed release of heating oil to the soils, discovered during removal of a heating oil tank. The contaminated soils were subsequently removed.

EMCON performed field activities for their initial study in November 1991. Six soil borings completed as monitoring wells were drilled on-site to sample site soils and groundwater. Of all the constituents tested for, only one soil sample exceeded a MTCA maximum contaminant level (MCL), which was for gasoline. In the groundwater, concentrations of benzene and/or total xylenes were elevated slightly above the respective MCL in two of the monitoring wells. Several volatile organic compounds were also detected in soils near the former waste oil tank. However, concentrations did not exceed established MCLs. EMCON concluded that in five of the six borings, BTEX, volatile and semivolatile fuel hydrocarbons, Total Lead, and PCB concentrations in the soil were below MTCA Method A cleanup concentrations. The fuel hydrocarbons listed above were present above MTCA Method A cleanup concentrations in the southernmost well, downgradient of the gas station facilities.

As part of EMCON's May 1992 study, groundwater gradients were calculated to flow south at a gradient of 0.008 feet per foot. Results from groundwater sampling indicated that TPH (as gasoline), benzene, ethylbenzene total xylenes, and/or TPH (as diesel) exceeded MTCA Method A cleanup levels in three of the six monitoring wells.

Site decommissioning activities occurred in July and August 1993, and are described in EMCON's October 1993 report. For decommissioning, five known USTs and eight previously unknown USTs were removed from the site. Pipeline, pump islands, hydraulic hoists and sumps, a floor drain, and a septic tank were also removed.

As part of removal, the site soils were excavated six to eight feet down to the water table. About 3,500 cubic yards of petroleum contaminated soils were characterized for disposal by the Regional Disposal Company. It was determined that site groundwater was also impacted, and about 40,000 gallons were treated on-site prior to permitted disposal to the Kirkland sewer system. The excavation was backfilled to its original grade.

Chevron plans to install three monitoring wells on the remediated site for long-term monitoring of groundwater quality and to replace wells abandoned due to excavation activities.

## CONCLUSIONS AND RECOMMENDATIONS

A comparison of the results of on-site testing with MTCA cleanup criteria shows no indication of remedial requirements for groundwater on this site. Localized "hot spots" of diesel and/or motor oil contamination were encountered in surface or near-surface soils.

In general, we did not encounter any evidence of significant soil contamination at the locations explored. It is likely that localized zones of petroleum contaminated soils will be encountered during demolition of the former Texaco Station and during removal of the existing fills in the central part of the site. This should be considered during project planning. However, we do not believe that large amounts of contaminated soils will be observed.

Due to the sandy nature of the native site soils, it is possible that bioremediation of site soils will be feasible. As a contingency, we recommend setting aside an area outside of the proposed construction zone where soil may be bioremediated. We recommend planning to treat approximately 500 yards of soil for three months during summer, when conditions for bioremediation are optimal. Specific recommendations for microbial treatments and tilling frequencies may be determined at the onset of remediation activities.

### **ECOLOGY NOTIFICATION**

Due to the presence of several elevated TPH test results, the owner should report the findings in this report to Ecology as a confirmed release of petroleum product to the soils, as required by Chapter 173-340-WAC.

### **LIMITATIONS**

This report is the property of Terra Associates, Inc. We performed our work with a level of skill and care commonly practiced by other engineers in this area. We followed standard Ecology hydrocarbon site assessment procedures in performing this Limited Level II Site Assessment. This report is intended for specific application to the Juanita Market Place project, and for the exclusive use of Supermarket Development Corporation and their authorized representatives. No other warranty is expressed or implied.

It must be noted that environmental regulations change through time. Site conditions may vary as groundwater conditions change seasonally and as new sources may occur. The information contained in this report is based on conditions that existed on the Juanita Market Place site at the locations explored in December 1993 and March 1994, and do not represent conditions at other locations or at other times. Actual conditions, locations, and extents of contamination may not become apparent until the onset of site development.

### **SUMMARY**

There appears to be no significant subsurface contamination of the site soils or groundwater at the locations explored. However, we encountered localized areas of surficial petroleum product contamination of site soils. This contamination should be reported to Ecology within 90 days of the date of discovery, March 11, 1994.

Mr. Dale Chandler  
April 11, 1994

In our opinion, it is likely that demolition and site development activities will encounter small pockets of surface and subsurface contamination. Development planning should include provisions for bioremediation of site soils.

We trust the information presented in this report meets your current needs. Please call if you have any questions or if we may be of further assistance to you.

Sincerely yours,

**TERRA ASSOCIATES, INC.**

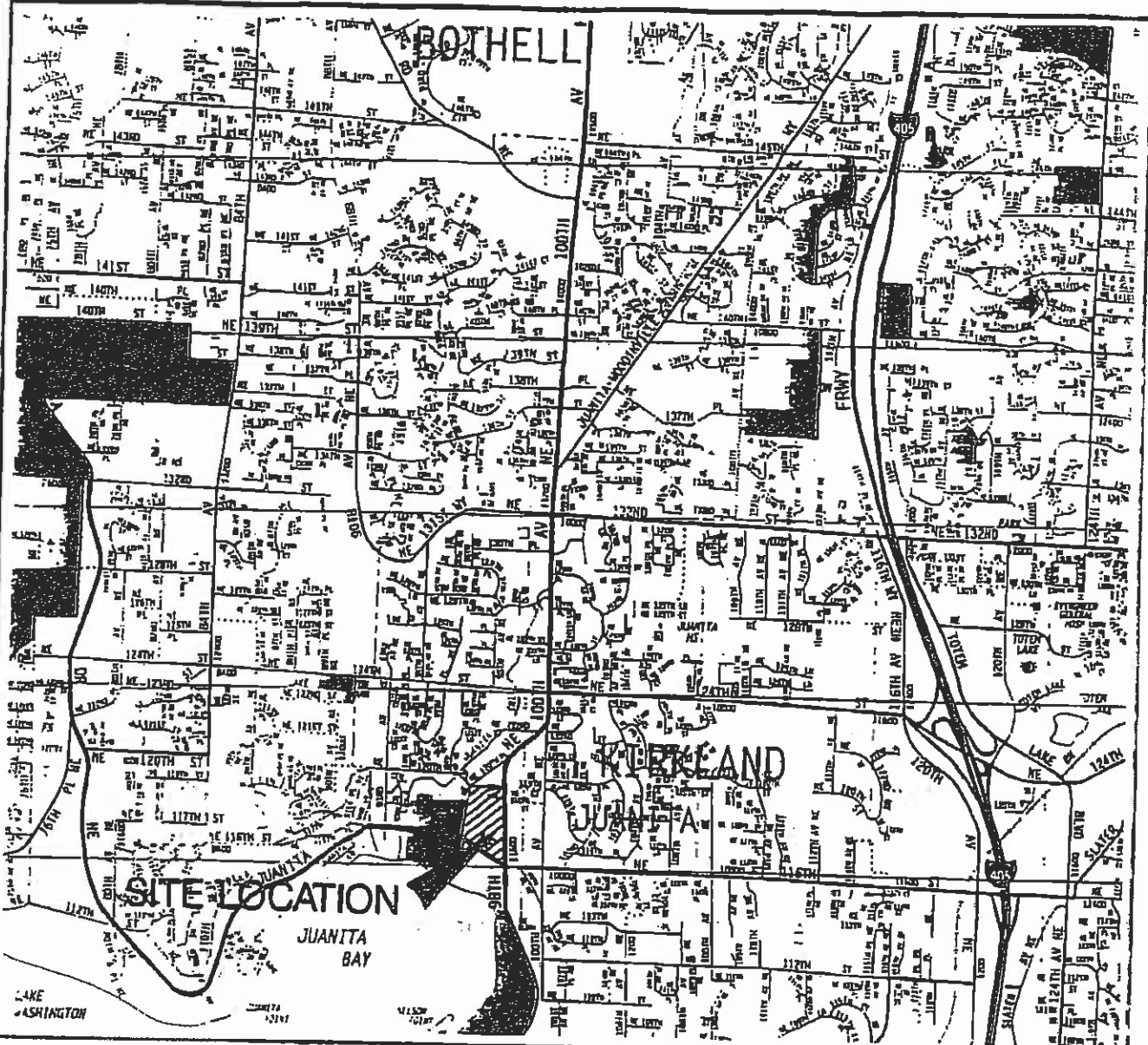
 4/11/94

Anil Butail, P.E.  
President

EXPIRES 12/09/95

DHG/AB:tm

Encl: Figure 1 - Vicinity Map  
Figure 2 - Exploration Location Plan  
Figure 3 - Site Detail Plan  
Figure 4 - Soil Classification System  
Figures 5 through 18 - Boring Logs  
Appendix A - Monitoring Well Field Reports  
Appendix B - Summary Tables of Analytical Testing  
Appendix C - Laboratory Analytical Testing Reports



REF: Thomas Brothers' Maps, 1992.

**TERRA ASSOCIATES**  
Geotechnical Consultants

VICINITY MAP  
Juanita Market Place  
Kirkland, Washington

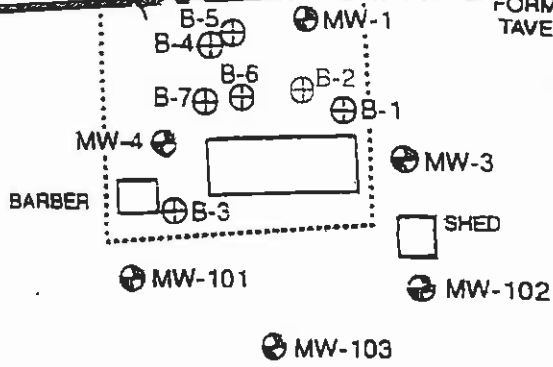
|                  |           |          |
|------------------|-----------|----------|
| Proj. No. 2464-1 | Date 4/94 | Figure 1 |
|------------------|-----------|----------|

SHOPS

JUANITA AUTO CLINIC  
(FORMER TEXACO)

98th Avenue NE

FORMER  
TAVERN



EVERGREEN  
BARK & TOPS  
YARD

EXISTING  
MARKET PLACE  
GROCERY STORE

VACANT  
WOODED  
FILL YARD

FORMER  
FURNITURE  
SALES

SKI BOAT  
SALES

RESTAURANT

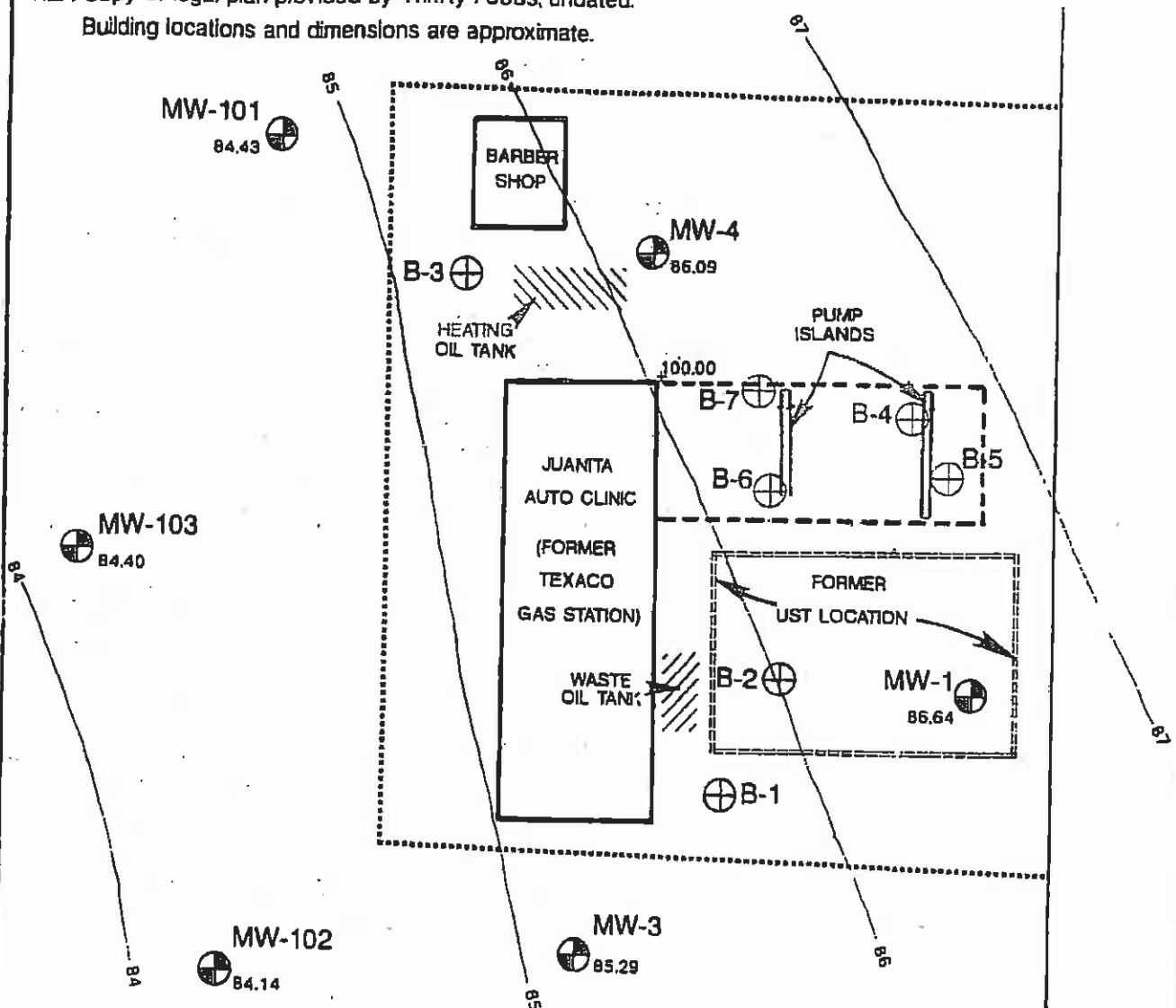
NE 120th  
Place

97th Avenue NE

KING COUNTY PARK

REF: Legal plan provided by Thrifty Foods, undated.  
Building locations and dimensions are approximate.  
See Site Detail Plan, Figure 3, for details of  
Juanita Auto Clinic site.

REF: Copy of legal plan provided by Thrifty Foods, undated.  
 Building locations and dimensions are approximate.



**LEGEND:**

NUMBER AND APPROXIMATE LOCATION OF MONITORING WELL

NUMBER AND APPROXIMATE LOCATION OF TEST BORING

84.83 RELATIVE ELEVATION OF GROUNDWATER TABLE ON MARCH 14, 1994, LEVEL SURVEY REFERENCED TO NORTHEAST CORNER OF AUTO CLINIC, CALLED ELEVATION 100.00 (FINISH FLOOR)

APPROXIMATE LOCATION OF EXISTING UST

APPROXIMATE BOUNDARY OF FORMER UST LOCATION. FORMER EXCAVATION BOUNDARIES MAY BE WIDER.

**SCALE:**



RELATIVE CONTOUR ELEVATIONS ARE IN FEET

**TERRA ASSOCIATES**

Geotechnical Consultants

**SITE DETAIL PLAN**  
 Juanita Market Place  
 Kirkland, Washington

Proj. No. 2464-1

Date 4/94

Figure 3



**APPENDIX B**

**SUMMARY TABLES OF ANALYTICAL TESTING**

**TABLE B  
ANALYTICAL TESTING  
SOIL SAMPLES  
Juanita Market Place  
Kirkland, Washington**

| Soil Sample and Depth | WTPH-HCID         |                 |                   | WTPH-DX         |                    | Total Cadmium (ppm) | Total Chromium (ppm) | Total Lead (ppm) |
|-----------------------|-------------------|-----------------|-------------------|-----------------|--------------------|---------------------|----------------------|------------------|
|                       | As Gasoline (ppm) | As Diesel (ppm) | As Lube Oil (ppm) | As Diesel (ppm) | As Motor Oil (ppm) |                     |                      |                  |
| MTCA A                | 100.0             | 200.0           | 200.0             | 200.0           | 200.0              | 2.0                 | 100.0                | 250.0            |
| MW-101/ 12.5'         | 20 U              | 50 U            | 100 U             |                 |                    |                     |                      |                  |
| MW-102 /7.5'          | 20 U              | 50 U            | 100 U             |                 |                    |                     |                      |                  |
| MW-103/ 10.0'         | 20 U              | 50 U            | 100 U             |                 |                    |                     |                      |                  |
| EBT-1                 | 20 U              | 50 U            | 100 U             |                 |                    | 5.0 U               | 17.8                 | 50.0 U           |
| EBT-2                 | 20 U              | Detected        | Detected          | 780             | 420                | 5.0 U               | 22.3                 | 50.0 U           |
| EBT-3                 | 20 U              | 50 U            | 100 U             |                 |                    | 5.0 U               | 29.2                 | 50.0 U           |

| Soil Sample and Depth | WTPH-DX         |                    | WTPH-G/BETX       |               |                     |               |                     | Total Lead (ppm) |
|-----------------------|-----------------|--------------------|-------------------|---------------|---------------------|---------------|---------------------|------------------|
|                       | As Diesel (ppm) | As Motor Oil (ppm) | As Gasoline (ppm) | Benzene (ppm) | Ethyl Benzene (ppm) | Toluene (ppm) | Total Xylenes (ppm) |                  |
| MTCA A                | 200.0           | 200.0              | 100.0             | 0.5           | 20.0                | 40.0          | 20.0                | 250.0            |
| B-1/ 7.5'             | 15 U            | 50 U               | 2.5 U             | 0.050 U       | 0.050 U             | 0.050 U       | 0.050 U             |                  |
| B-1/ 10.0'            | 15 U            | 50 U               | 2.5 U             | 0.050 U       | 0.050 U             | 0.050 U       | 0.050 U             |                  |
| B-2/ 2.5'             |                 |                    | 4.3               | 0.050 U       | 0.050 U             | 0.050 U       | 0.050 U             | 26.6 U           |
| B-2/ 7.5'             |                 |                    | 4.3               | 0.050 U       | 0.050 U             | 0.050 U       | 0.050 U             |                  |
| B-2/ 10.0'            |                 |                    | 20                | 0.050 U       | 0.050 U             | 0.050 U       | 0.050 U             | 26.6 U           |
| B-3/ 5.0'             | 15 U            | 50 U               | 2.5 U             | 0.050 U       | 0.050 U             | 0.050 U       | 0.050 U             |                  |
| B-3/ 10.0'            | 15 U            | 50 U               | 2.5 U             | 0.050 U       | 0.050 U             | 0.050 U       | 0.050 U             |                  |
| B-4/ 5.0'             |                 |                    | 2.5 U             | 0.050 U       | 0.050 U             | 0.050 U       | 0.050 U             |                  |
| B-4/ 7.5'             |                 |                    | 2.5 U             | 0.050 U       | 0.050 U             | 0.050 U       | 0.050 U             |                  |
| B-5/ 7.5'             |                 |                    | 2.5 U             | 0.050 U       | 0.050 U             | 0.050 U       | 0.050 U             |                  |
| B-5/ 10.0'            |                 |                    | 2.5 U             | 0.050 U       | 0.050 U             | 0.050 U       | 0.050 U             |                  |
| B-6/ 2.5'             |                 |                    | 2.5 U             | 0.050 U       | 0.050 U             | 0.050 U       | 0.050 U             |                  |
| B-6/ 7.5'             | 15 U            | 50 U               | 8.5               | 0.050 U       | 0.050 U             | 0.050 U       | 0.050 U             |                  |
| B-7/ 5.0'             |                 |                    | 2.5 U             | 0.050 U       | 0.050 U             | 0.050 U       | 0.050 U             |                  |
| B-7/ 10.0'            |                 |                    | 2.5 U             | 0.050 U       | 0.050 U             | 0.050 U       | 0.050 U             | 10.0 U           |
| MW-1/ 5.0'            |                 |                    | 5.3               | 0.050 U       | 0.050 U             | 0.050 U       | 0.050 U             |                  |
| MW-1/ 7.5'            |                 |                    | 18                | 0.050 U       | 0.050 U             | 0.050 U       | 0.050 U             | 52.7             |
| MW-2/ 2.5'            | 44              | 1100               | 2.5 U             | 0.050 U       | 0.050 U             | 0.050 U       | 0.050 U             |                  |
| MW-2/ 5.0'            | 15 U            | 50 U               | 2.5 U             | 0.050 U       | 0.050 U             | 0.050 U       | 0.050 U             |                  |
| MW-3/ 2.5'            | 15 U            | 50 U               | 2.5 U             | 0.050 U       | 0.050 U             | 0.050 U       | 0.050 U             |                  |
| MW-3/ 5.0'            | 15 U            | 50 U               | 2.5 U             | 0.050 U       | 0.050 U             | 0.050 U       | 0.050 U             |                  |
| MW-4/ 7.5'            | 15 U            | 50 U               | 2.5 U             | 0.050 U       | 0.050 U             | 0.050 U       | 0.050 U             |                  |
| MW-4/ 10.0'           | 15 U            | 50 U               | 2.5 U             | 0.050 U       | 0.050 U             | 0.050 U       | 0.050 U             |                  |

NOTES: 1. (ppm) signifies concentrations are reported in parts per million.  
 2. MTCA A signifies Method A cleanup criteria for soil.  
 3. Bold text signifies concentrations which exceed MTCA A cleanup criteria.  
 4. U signifies parameter not detected at the reported minimum detection value.  
 5. Blank denotes sample not tested for this analyte.  
 6. WTPH-HCID is Total Petroleum Hydrocarbon (TPH) as Hydrocarbon Identification.  
 7. WTPH-OX is TPH as Diesel Fuel (Dodecane to tetracosane) and as Motor Oil (beyond tetracosane).  
 8. WTPH-G/ BTEX is TPH as Gasoline (Toluene to dodecane), with benzene, ethylbenzene, toluene, and xylene distinction.

**TABLE A**  
**ANALYTICAL TESTING**  
**GROUNDWATER SAMPLES**  
 Juanita Market Place  
 Kirkland, Washington

| Groundwater Sample | EPA Test Method 8240         |                                     |                                |                  |                           |                  |                     |                   |                                      |                            |
|--------------------|------------------------------|-------------------------------------|--------------------------------|------------------|---------------------------|------------------|---------------------|-------------------|--------------------------------------|----------------------------|
|                    | WTPH-D<br>As Diesel<br>(ppb) | WTPH-418.1<br>As Motor Oil<br>(ppb) | WTPH-G<br>As Gasoline<br>(ppb) | Benzene<br>(ppb) | Ethyl<br>Benzene<br>(ppb) | Toluene<br>(ppb) | m,n-Xylene<br>(ppb) | o-Xylene<br>(ppb) | 12/93<br>1,2-Dichloroethane<br>(ppb) | 3/94<br>Turbidity<br>(NTU) |
| MTCA A             | 1000                         | 1000                                | 1000                           | 5.0              | 30.0                      | 40.0             | 20.0                | 20.0              | 5.0                                  | 5.0                        |
| MW-101             | 150 U                        | 2200                                | 50 U                           | 1 U              | 1 U                       | 2 U              | 2 U                 | 1 U               | 1 U                                  | 1 U                        |
| MW-102             | 150 U                        | 1800                                | 50 U                           | 1 U              | 1 U                       | 2 U              | 2 U                 | 1 U               | 6.0                                  | 1 U                        |
| MW-103             | 150 U                        | 1500                                | 50 U                           | 1 U              | 1 U                       | 2 U              | 2 U                 | 1 U               | 1 U                                  | 1 U                        |

| Groundwater Sample | WTPH-GIBETX                   |                       |                      |                  |                           |                  |                           | Total<br>Lead<br>(ppb) | Dissolved<br>Lead<br>(ppb) | Turbidity<br>(NTU) |
|--------------------|-------------------------------|-----------------------|----------------------|------------------|---------------------------|------------------|---------------------------|------------------------|----------------------------|--------------------|
|                    | WTPH-DX<br>As Diesel<br>(ppb) | As Motor Oil<br>(ppb) | As Gasoline<br>(ppb) | Benzene<br>(ppb) | Ethyl<br>Benzene<br>(ppb) | Toluene<br>(ppb) | Total<br>Xylenes<br>(ppb) |                        |                            |                    |
| MTCA A             | 1000                          | 1000                  | 1000                 | 5.0              | 30.0                      | 40.0             | 20.0                      | 5.0                    | 5.0                        | NA                 |
| MW-1               | 150 U                         | 500 U                 | 50 U                 | 1 U              | 1 U                       | 1 U              | 1 U                       | 5 U                    | 5 U                        | 300                |
| MW-2               | 150 U                         | 500 U                 | 50 U                 | 1 U              | 1 U                       | 1 U              | 1 U                       | 5 U                    | 5 U                        | 320                |
| MW-3               | 150 U                         | 500 U                 | 50 U                 | 1 U              | 1 U                       | 1 U              | 1 U                       | 5 U                    | 5 U                        | 210                |
| MW-4               | 150 U                         | 500 U                 | 50 U                 | 1 U              | 1 U                       | 1 U              | 1 U                       | 5 U                    | 5 U                        | 210                |

- NOTES: 1. (ppb) signifies concentrations are reported in parts per billion.  
 2. (NTU) signifies parameter is reported in Nephelometric Turbidity Units.  
 3. MTCA A signifies Method A cleanup criteria.  
 4. Bold text signifies concentrations which exceed MTCA A cleanup criteria.  
 5. U signifies parameter not detected at the reported minimum detection value.  
 6. Blank denotes sample not tested for this analyte.  
 7. WTPH-O is Total Petroleum Hydrocarbons (TPH) as Diesel Fuel (Dodecane to tetracosane).  
 8. WTPH-418.1 is TPH as Total Recoverable Petroleum Hydrocarbons.  
 9. WTPH-G is TPH as Gasoline (Toluene to dodecane).  
 10. EPA Test Method 8240 includes other volatile organic compounds (none detected) in addition to those listed here.  
 11. WTPH-DX is TPH as Diesel Fuel (Dodecane to tetracosane) and as Motor Oil (beyond tetracosane).  
 12. WTPH-GIBETX is TPH as Gasoline (Toluene to Dodecane) with benzene, ethylbenzene, toluene and xylene distinction.

| SB-6                                  |                      |       |                      |       |
|---------------------------------------|----------------------|-------|----------------------|-------|
| GROUND WATER LEVEL ATD NOT DETERMINED |                      |       |                      |       |
| ANALYTICAL RESULTS (PPM)              |                      |       |                      |       |
| COMPOUND                              | SAMPLE DEPTH - 1'-4' |       | SAMPLE DEPTH - 4'-7' |       |
|                                       | RESULT               | PQL   | RESULT               | PQL   |
| PCE                                   | 0.068                | 0.062 | ND                   | 0.067 |
| TCE                                   | ND                   | 0.062 | ND                   | 0.067 |
| 1,2-DCE                               | ND                   | 0.062 | ND                   | 0.067 |
| 1,1-DCE                               | ND                   | 0.062 | ND                   | 0.067 |
| VC                                    | ND                   | 0.062 | ND                   | 0.067 |

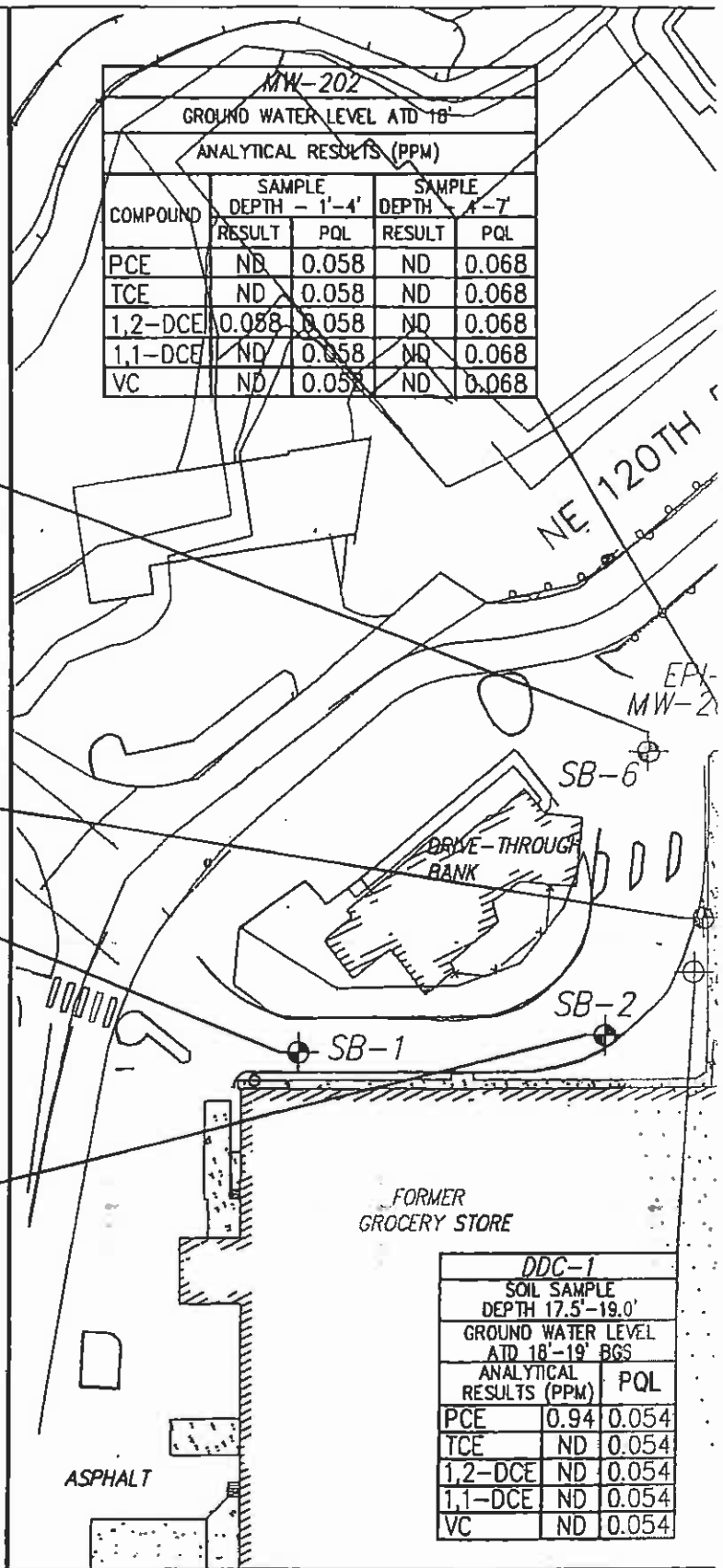
| MW-202                     |                      |       |                      |       |
|----------------------------|----------------------|-------|----------------------|-------|
| GROUND WATER LEVEL ATD 18' |                      |       |                      |       |
| ANALYTICAL RESULTS (PPM)   |                      |       |                      |       |
| COMPOUND                   | SAMPLE DEPTH - 1'-4' |       | SAMPLE DEPTH - 4'-7' |       |
|                            | RESULT               | PQL   | RESULT               | PQL   |
| PCE                        | ND                   | 0.058 | ND                   | 0.068 |
| TCE                        | ND                   | 0.058 | ND                   | 0.068 |
| 1,2-DCE                    | 0.058                | 0.058 | ND                   | 0.068 |
| 1,1-DCE                    | ND                   | 0.058 | ND                   | 0.068 |
| VC                         | ND                   | 0.058 | ND                   | 0.068 |

| SB-3                                  |                      |       |                      |       |
|---------------------------------------|----------------------|-------|----------------------|-------|
| GROUND WATER LEVEL ATD NOT DETERMINED |                      |       |                      |       |
| ANALYTICAL RESULTS (PPM)              |                      |       |                      |       |
| COMPOUND                              | SAMPLE DEPTH - 1'-4' |       | SAMPLE DEPTH - 4'-7' |       |
|                                       | RESULT               | PQL   | RESULT               | PQL   |
| PCE                                   | ND                   | 0.062 | ND                   | 0.065 |
| TCE                                   | ND                   | 0.062 | ND                   | 0.065 |
| 1,2-DCE                               | ND                   | 0.062 | ND                   | 0.065 |
| 1,1-DCE                               | ND                   | 0.062 | ND                   | 0.065 |
| VC                                    | ND                   | 0.062 | ND                   | 0.065 |

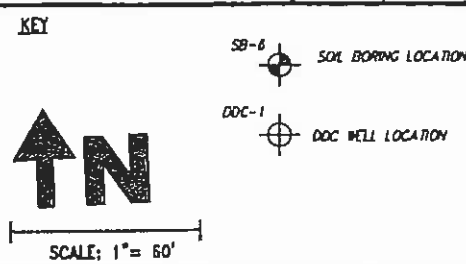
| SB-1                                  |                      |       |                      |       |
|---------------------------------------|----------------------|-------|----------------------|-------|
| GROUND WATER LEVEL ATD NOT DETERMINED |                      |       |                      |       |
| ANALYTICAL RESULTS (PPM)              |                      |       |                      |       |
| COMPOUND                              | SAMPLE DEPTH - 1'-4' |       | SAMPLE DEPTH - 4'-7' |       |
|                                       | RESULT               | PQL   | RESULT               | PQL   |
| PCE                                   | ND                   | 0.058 | ND                   | 0.066 |
| TCE                                   | ND                   | 0.058 | ND                   | 0.066 |
| 1,2-DCE                               | ND                   | 0.058 | ND                   | 0.066 |
| 1,1-DCE                               | ND                   | 0.058 | ND                   | 0.066 |
| VC                                    | ND                   | 0.058 | ND                   | 0.066 |

| SB-2                                  |                      |       |                      |       |
|---------------------------------------|----------------------|-------|----------------------|-------|
| GROUND WATER LEVEL ATD NOT DETERMINED |                      |       |                      |       |
| ANALYTICAL RESULTS (PPM)              |                      |       |                      |       |
| COMPOUND                              | SAMPLE DEPTH - 1'-4' |       | SAMPLE DEPTH - 4'-7' |       |
|                                       | RESULT               | PQL   | RESULT               | PQL   |
| PCE                                   | ND                   | 0.060 | ND                   | 0.065 |
| TCE                                   | ND                   | 0.060 | ND                   | 0.065 |
| 1,2-DCE                               | ND                   | 0.060 | ND                   | 0.065 |
| 1,1-DCE                               | ND                   | 0.030 | ND                   | 0.065 |
| VC                                    | ND                   | 0.060 | ND                   | 0.065 |

| DDC-1                              |      |       |
|------------------------------------|------|-------|
| SOIL SAMPLE DEPTH 17.5'-19.0'      |      |       |
| GROUND WATER LEVEL ATD 18'-19' BGS |      |       |
| ANALYTICAL RESULTS (PPM)           |      | PQL   |
| PCE                                | 0.94 | 0.054 |
| TCE                                | ND   | 0.054 |
| 1,2-DCE                            | ND   | 0.054 |
| 1,1-DCE                            | ND   | 0.054 |
| VC                                 | ND   | 0.054 |



| #   | U/D/Y | EXPLANATION |
|-----|-------|-------------|
|     |       |             |
|     |       |             |
| REV | DATE  | DESCRIPTION |
|     |       |             |
|     |       |             |



PQL - PRACTICAL QUANTITATION LIMIT  
 ND - NOT DETECTED  
 PPM - PARTS PER MILLION



1200-112th Avenue N.E.  
Suite C-146  
Bellevue, Washington 98004-6931  
425/450-7726  
FAX: 425/450-8837

February 1, 2001  
Project CW92-767-A.4C01

Mr. Brett Hunter  
Chevron Products Company  
6001 Bollinger Canyon Road  
Building V, Room 1144  
San Ramon, California 94583-0904

Re: Environmental Investigation  
Former Chevron Service Station 9-2767  
11601 98<sup>th</sup> Avenue Northeast  
Kirkland, Washington

Dear Mr. Hunter:

This letter presents the results of an environmental investigation conducted by Delta Environmental Consultants, Inc. (Delta) at former Chevron Service Station 9-2767, located at the address referenced above (Figure 1). Delta is performing this investigation as part of a cleanup action plan issued by the Department of Ecology for the Juanita Village Property. The purpose of this investigation was to further assess and document the soil and groundwater quality with respect to petroleum hydrocarbons and volatile organic compounds (VOCs) at the site.

The scope of work for the environmental investigation was performed between December 21, 2000 and January 2, 2001 and consisted of the following tasks:

- Prepare a Site Safety Plan.
- Drill seven exploratory soil borings (SB-1 through SB-4 and MW-7 through MW-9).
- Install a two-inch diameter groundwater monitoring well in three of the soil borings (MW-7 through MW-9).
- Collect soil samples from selected intervals in the soil borings.
- Field screen soil samples using a photo-ionization detector (PID).

- Develop the newly installed wells.
- Survey the elevations of the newly installed wells with respect to an arbitrary site datum established at the site.
- Collect groundwater samples from the newly installed wells.
- Submit groundwater samples from each well, and soil samples collected from the capillary fringe in each of the soil borings, and appropriate documentation to a Chevron approved laboratory for analysis.

## **SITE DESCRIPTION**

The site is located at the northwest corner of the intersection of Juanita Drive Northeast and 98<sup>th</sup> Avenue Northeast in Kirkland, Washington. The Chevron service station formerly occupied the southeast corner of what is now termed the Juanita Village Property. The Juanita Village Property is bordered to the north by NE 120th Place, to the east by 98<sup>th</sup> Avenue NE, to the west by 97<sup>th</sup> Avenue NE, and to the south by Juanita Drive NE. A large commercial and residential development is planned for the Juanita Village Property in 2001.

The former service station was decommissioned in 1993 and the site is now a vacant lot. The area surrounding the site is predominantly commercial. Lake Washington is located approximately 600 feet to the southwest.

## **PREVIOUS INVESTIGATIONS**

EA Engineering, Science, and Technology (EA) of Redmond, Washington performed an investigation at the Chevron site during removal of a 550-gallon heating oil underground storage tank (UST) on May 18, 1990. Groundwater was encountered within the heating-oil excavation at approximately 6.5 feet below grade during this investigation. Results of this investigation were presented to Chevron in a report titled "Report of Investigation", dated January 1991.

A subsurface soil and groundwater investigation was performed by EMCON Northwest Inc. (EMCON), in November and December, 1991. Six soil borings were drilled and completed as groundwater monitoring wells during this investigation. Depth to groundwater in these wells on December 3, 1991 ranged from approximately 5.4 feet to 6.7 feet below top of well casing. Results of this investigation were presented to Chevron in a report titled "Subsurface Site Assessment", dated March 25, 1992.

EMCON observed the decommissioning of the service station in July and August 1993. The service station building, USTs, pump islands and all associated appurtenances were

removed during the decommissioning activities. Approximately 3,500 cubic yards of hydrocarbon-impacted soil was excavated following removal of the station facilities. The majority of the site was excavated to the groundwater table. A total of approximately 40,000 gallons of groundwater was pumped from the excavation on site during decommissioning. The water was treated through carbon and discharged to the sanitary sewer following approval by the City of Kirkland, and according to Ecology guidelines. Results of this investigation were presented to Chevron in a report titled "Underground Storage Tank Decommissioning and Inspection Report", dated October 1993.

Environmental Partners, Inc. (EPI) performed an environmental investigation at the Juanita Village Property between August and October, 1999. A portion of their project included work performed at the former Chevron station. Five Strataprobe borings were installed on or adjacent to the Chevron site. One soil sample (EPI-18) collected between 7 and 10 feet below grade on site contained concentrations of total petroleum hydrocarbons (TPH) as gasoline at 190 parts per million (ppm). The soil sample collected between 10 and 13 feet below grade in EPI-18 was non-detect for TPH-gasoline. Concentrations of TPH-gasoline, TPH-diesel, TPH-oil, and BTEX compounds were not detected in the groundwater sample collected from EPI-18. The groundwater sample from EPI-18 contained concentrations of tetrachloroethene (PCE) at 8.0 parts per billion (ppb). PCE has been detected across the Juanita Village Property upgradient of the former Chevron facility. At least four possible PCE source areas have been identified upgradient or cross gradient to the Chevron site. Results of EPI's investigation were submitted to Juanita Village L.L.C. in a report titled "Draft Final Remedial Investigation Report", dated December 22, 1999.

#### SOIL BORING INSTALLATION AND SAMPLING

Seven exploratory soil borings (SB-1 through SB-4 and MW-7 through MW-9) were installed by Cascade Drilling, Inc. (Cascade) of Woodinville, Washington on December 21, 2000. Soil borings SB-1 through SB-4 were drilled to a total depth of approximately 11.5 feet below grade. Soil Boring SB-1 was drilled in the area of a former septic tank on site. Soil Borings SB-2 through SB-4 were drilled in the vicinity of EPI sample EPI-18 to further investigate this area, and to obtain field data prior to the installation of Well MW-9. Soil borings MW-7 through MW-9 were drilled to a total depth of approximately 20.5 feet below grade. Boring MW-7 was drilled on the east side of the property near the area of former USTs located on site. Boring MW-8 was drilled between the former UST complex and one of the former dispenser islands. Boring MW-9 was drilled in the approximate center of soil borings SB-2 through SB-4.

The soil borings were drilled using a hollow-stem auger drill rig, and the soil borings were logged by a Delta geologist using the Unified Soil Classification System. Soil

samples were collected continuously between five and eight feet below grade, at 10 to 11.5 feet below grade, and in 5-foot intervals thereafter to the total depths explored in the borings. Soil samples for chemical analysis were retained in laboratory-supplied glass jars with Teflon<sup>®</sup> lined lids. The soil samples were placed on ice for transport and submitted to North Creek Analytical, Inc. (NCA) in Bothell, Washington for chemical analyses. Sample preservation techniques are described in Attachment A.

The soil samples submitted for analysis were collected from the 5 to 6.5 foot interval in the borings. Based on the depth to water observed in the borings, these samples were collected from the capillary fringe.

Soil samples were field screened for the presence of hydrocarbons using a Thermo Environmental Instruments Inc. Model 580 B photo-ionization detector (PID) with a 10.0 electron volt (eV) lamp. Field screening methodology is described in Attachment A. PID results for the soil samples collected from the soil borings did not exceed detectable levels. The results of this field screening are also recorded on the soil boring logs included in Attachment B. It should be noted that the PID measurements are considered semi-quantitative data since the instrument detects all organic compounds with ionization potentials less than 10 eV. Approximately 2 tons of soil was generated during drilling and was stockpiled and covered with visqueen on site.

#### **MONITORING WELL INSTALLATION**

Three of the exploratory soil borings were converted to groundwater monitoring wells (MW-7 through MW-9) by the installation of 2-inch diameter, schedule 40 PVC casing with 0.020 inch factory slotted screen. The well screen was placed across the saturated zone in each well and extended from approximately 5 feet to 20 feet below grade. The annular space of each well was packed with a graded 10x20 silica sand. The sand pack was placed across the entire screened interval, extending approximately one foot above the top of the screens. The annular space of each well was then sealed with hydrated bentonite chips to approximately 1.5 feet below grade. A plug-type locking device and waterproof monument set in concrete were installed at the top of each monitoring well. Refer to the boring logs in Attachment B for specific information on well construction.

The elevations of Wells MW-7 through MW-9 were surveyed on December 21, 2000 to the nearest 0.01 foot with respect to an arbitrary datum established for the site. A survey reference mark was scribed on the lip of each monitoring well casing with a permanent marker. The arbitrary datum established at the site was assigned an elevation of 100.00 feet. Surveyed elevations are presented in Table 1. The survey field data sheet is presented in Attachment B.



## MONITORING WELL DEVELOPMENT

Monitoring wells MW-7 through MW-9 were developed on December 21, 2000 by bailing. Well development procedures are presented in Attachment A. The well development field data sheet is included in Attachment B.

## GROUNDWATER SAMPLING

Water level measurements and groundwater sampling were performed on December 26, 2000. Depths to groundwater in the wells on this date are presented in Table 1. Groundwater samples were collected from Wells MW-7 through MW-9. Well locations are shown on Figure 1. Groundwater monitoring Well MW-7 was re-sampled on January 2, 2001.

Prior to sampling, each well was visually checked for the presence of separate-phase hydrocarbons (SPH) using a clear single-use disposable bailer. SPH was not observed in any of the wells. The wells were then purged of three casing volumes of water with a single-use disposable bailer. Groundwater sampling procedures are described in detail in Attachment A. Field sampling data sheets are presented in Attachment B.

## ANALYTICAL PARAMETERS

Soil and groundwater samples were analyzed for one or more of the following parameters:

| <u>PARAMETER</u>   | <u>METHOD</u>                     |
|--|-----------------------------------|
| Total Petroleum Hydrocarbons (TPH) as gasoline               | Northwest Method NWTPH-Gx         |
| TPH as diesel and oil  | NWTPH-Dx with Silica Gel Clean-up |
| Benzene, toluene, ethylbenzene, and xylenes (BTEX compounds) | EPA Method 8021B                  |
| Methyl tert-butyl ether (MTBE)                               | EPA Method 8021B                  |
| Total Lead (Soil)  | EPA 6000/7000 Series Methods      |
| Volatile Organic Compounds (VOCs)                            | EPA Method 8260B                  |

Groundwater samples collected from Wells MW-7 through MW-9 were initially analyzed for diesel and oil using Northwest Method NWTPH-Dx. Well MW-7 was

later re-sampled using NWTPH-Dx with silica gel clean-up. The soil and groundwater samples were analyzed by North Creek Analytical, Inc., of Bothell, Washington.

### SOIL ANALYTICAL RESULTS

Concentrations of TPH-Gasoline and BTEX compounds were not detected above laboratory reporting limits in the soil samples submitted for analysis from any of the soil borings. The five foot sample collected from soil boring SB-2 contained a TPH-diesel concentration of 11.9 ppm. No other soil samples submitted for analysis contained concentrations of TPH-diesel or oil above laboratory reporting limits. Concentrations of PCE in particular and VOCs in general, were not detected above laboratory reporting limits in the soil samples submitted for analysis. The complete list of VOCs analyzed is presented on the attached laboratory analytical reports. Soil sample analytical results are presented in Table 2. Laboratory methods, analytical reports, and chain-of-custody documentation are contained in Attachment C.

### GROUNDWATER ANALYTICAL RESULTS

Concentrations of TPH-gasoline were detected in the groundwater sample collected from Well MW-7 at 175 ppb. Xylenes were detected in this sample at a concentration of 2.75 ppb, and in the sample collected from Well MW-9 at a concentration of 1.42 ppb. No other concentrations of TPH-gasoline or BTEX compounds were detected above laboratory limits in any of the samples submitted for analysis. Concentrations of MTBE, PCE, and all other VOCs analyzed were not detected above laboratory reporting limits in the three samples collected from Wells MW-7 through MW-9.

Initially, concentrations of TPH-diesel and TPH-oil utilizing Northwest Method NWTPH-D extended were detected in Well MW-7 at 723 ppb and 1,080 ppb, respectively. Concentrations of TPH-diesel and TPH-oil using this method were not detected in the groundwater samples collected from Wells MW-8 and MW-9. Well MW-7 was re-sampled for TPH-diesel and TPH-oil on January 2, 2001 using Northwest Method NWTPH-D extended with Silica Gel Clean-up. The TPH-diesel and TPH-oil concentrations on this date did not exceed Laboratory reporting limits. Natural organics present in soil may cause false positives or inflated concentrations when analyzing the soil for TPH as diesel and oil. The Silica Gel Clean-up method removes this organic interference from the total diesel and oil concentrations. Groundwater sample analytical results are presented in Table 3, and TPH-gasoline/Benzene/MTBE /PCE concentrations are presented on Figure 3. Analytical results for TPH-diesel and TPH-oil are also presented on Figure 4. Laboratory methods, analytical reports, and chain-of-custody documentation are contained in Attachment C.

## **SUBSURFACE CONDITIONS**

Soils encountered in the investigation consisted predominantly of medium dense to dense silty sand and sand. A layer of peat approximately one-foot thick was encountered in three of the soil borings. PID measurements in the soil samples did not exceed background levels of 0 ppm.

Groundwater was initially encountered in the borings between 6 and 7 feet below grade. Depth to groundwater was measured in Wells MW-7 through MW-9 on December 26, 2000. Depth to groundwater in the wells on this date ranged between 5.90 feet to 7.97 feet below top of well casing. Groundwater elevation contours are presented on Figure 2.

## **FINDINGS AND CONCLUSIONS**

Groundwater elevations on December 26, 2000 ranged from 91.10 feet to 92.46 feet. The groundwater elevations are based on an arbitrary project datum of 100.00 feet. The inferred groundwater migration direction on this date was towards the east-southeast. Previous data for the Chevron site and the Juanita Village Property indicate that the groundwater flow direction has predominantly been to the southwest.

Concentrations of TPH-gasoline, TPH-oil, BTEX compounds, and VOCs were not detected above laboratory reporting limits in the soil samples submitted for analysis. The detected concentration of TPH-diesel in the five-foot soil sample collected from Boring SB-2 did not exceed the Washington State Model Toxics Control Act (MTCA) Method A cleanup levels. Concentrations of TPH-diesel were not detected above laboratory reporting limits in any of the other soil samples submitted for analysis.

Concentrations of VOCs and MTBE were not detected above laboratory reporting limits in any of the groundwater samples submitted for analysis. The detected concentrations of TPH-gasoline and xylenes in Well MW-7, and xylenes in Well MW-9 did not exceed the MTCA Method A cleanup levels. No other concentrations of TPH-gasoline or BTEX compounds were detected above laboratory reporting limits in the groundwater samples submitted for analysis. Cleanup levels for MTBE have not yet been established in the State of Washington.

Tetrachloroethene (PCE) is a chemical of concern at the Juanita Village Property. In addition to being detected in numerous locations throughout the Juanita Village Property, PCE was detected in groundwater at a concentration of 8.0 ppb during a previous investigation conducted by Environmental Partners Inc. at sample location EPI-18. Concentrations of PCE were not detected above laboratory reporting limits in any of the soil or groundwater samples collected during this investigation. The

previously detected PCE may have been due to cross contamination of sampling equipment during the earlier investigation, or may represent the difference in sampling methodology between direct push samples and samples collected from groundwater monitoring wells.

#### **RECOMMENDED COMPLIANCE MONITORING SCHEDULE**

Chevron has scheduled the new wells to be sampled on a quarterly basis during 2001. The wells will be sampled for at least four consecutive quarters, as noted in the Cleanup Action Plan prepared for Juanita Village Property by EPI, dated April 21, 2000. The wells will continue to be sampled for TPH-gasoline, TPH-diesel and oil, BTEX compounds, MTBE, and VOCs. If the concentrations of these analytical parameters continue to be below MTCA Method A cleanup levels, Chevron proposes to abandon the wells after four consecutive events. The wells will be abandoned according to the requirements of the Washington State Department of Ecology, Model Toxics Control Act Cleanup Regulation (WAC 173-160-460).

Former Chevron 9-2767 Kirkland  
February 1, 2001  
Page 9

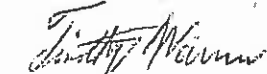
Delta appreciates this opportunity to be of continuing service. If you have any questions regarding the contents of this report, please call.

Sincerely,

**Delta Environmental Consultants, Inc.**

  
Matthew Miller

Project Manager

  
Timothy Warner

Timothy Warner

Chevron Portfolio Manager

Attachments: Table 1 - Groundwater Elevation Data  
Table 2 - Soil Analytical Results  
Table 3 - Groundwater Analytical Results  
Figure 1 - Site Map  
Figure 2 - Groundwater Contour Map  
Figure 3 - Groundwater Concentration Map  
Figure 4 - Groundwater Concentration Map  
Attachment A - Investigative Procedures  
Attachment B - Boring Logs/Field Data Sheets  
Attachment C - Laboratory Analytical Methods and Reports  
Chain-of-Custody Documentation

cc: Maura O'Brien, Department of Ecology  
Mr. John Kane, Kane Environmental, Inc.

**TABLE 1  
GROUNDWATER ELEVATION DATA**

Chevron Service Station 9-2767  
11601 98th Ave Northeast  
Kirkland, Washington

| <b>Well Number</b> | <b>Top of Casing<br/>Elevation<br/>(feet)</b> | <b>Depth to<br/>Groundwater<br/>(feet)</b> | <b>Groundwater<br/>Elevation<br/>(feet)</b> | <b>Separate-Phase<br/>Hydrocarbons<br/>(yes/no)</b> |
|--------------------|---|--|---|---|
| MW-7               | 99.07   | 7.97                                       | 91.10                                       | No  |
| MW-8               | 98.39   | 6.32                                       | 92.07                                       | No  |
| MW-9               | 98.36   | 5.90                                       | 92.46                                       | No  |

Elevations, in feet, are based on an arbitrary project datum of 100.00 feet assigned to the top of casing of the well located off site to the northwest  
Depth to groundwater measured on 12/26/00

TABLE 2  
SOIL ANALYTICAL RESULTS

Chevron Service Station 9-2767  
11601 98th Ave Northeast  
Kirkland, Washington

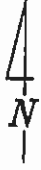
| Sample I.D.  | Date     | TPH-Gasoline (ppm) | TPH-Diesel (ppm) | TPH-Oil (ppm) | Benzene (ppm) | Toluene (ppm) | Ethylbenzene (ppm) | Xylenes (ppm) | PCE (ppm) | VOC (ppm) |
|--|----------|--------------------|------------------|---------------|---------------|---------------|--------------------|---------------|-----------|-----------|
| MW-7-5   | 12/21/00 | ND                 | ND               | ND            | ND            | ND            | ND                 | ND            | ND        | ND        |
| MW-8-5   | 12/21/00 | ND                 | ND               | ND            | ND            | ND            | ND                 | ND            | ND        | ND        |
| MW-9-5   | 12/21/00 | ND                 | ND               | ND            | ND            | ND            | ND                 | ND            | ND        | ND        |
| SB-1-5   | 12/21/00 | ND                 | ND               | ND            | ND            | ND            | ND                 | ND            | ND        | ND        |
| SB-2-5   | 12/21/00 | ND                 | 11.9             | ND            | ND            | ND            | ND                 | ND            | ND        | ND        |
| SB-3-5   | 12/21/00 | ND                 | ND               | ND            | ND            | ND            | ND                 | ND            | ND        | ND        |
| SB-4-5   | 12/21/00 | ND                 | ND               | ND            | ND            | ND            | ND                 | ND            | ND        | ND        |
| MTCA Method A Cleanup Levels:  |          | 100                | 200              | 200           | 0.5           | 40            | 20                 | 20            | 0.5       | -         |
| Laboratory Reporting Limits:   |          | 5.00               | 10               | 25            | 0.0500        | 0.0500        | 0.0500             | 0.100         | 0.1       | 1.0 - 0.1 |
| Concentrations in ppm (mg/kg)  |          |                    |                  |               |               |               |                    |               |           |           |
| ND = Not detected at the laboratory reporting limits                                   |          |                    |                  |               |               |               |                    |               |           |           |
| NA = Not Analyzed  |          |                    |                  |               |               |               |                    |               |           |           |
| Boring locations are shown on Figure 1   |          |                    |                  |               |               |               |                    |               |           |           |
| Certified Analytical Results are attached  |          |                    |                  |               |               |               |                    |               |           |           |
| TPH as Gasoline - Analysis by Northwest Method NWTPH-Gx                                |          |                    |                  |               |               |               |                    |               |           |           |
| TPH as Diesel and Oil - Analysis by Northwest Method NWTPH-Dx with Silica Gel Clean-up |          |                    |                  |               |               |               |                    |               |           |           |
| BTEX Compounds - Analysis by EPA Method 8021B  |          |                    |                  |               |               |               |                    |               |           |           |
| VOC's = Volatile Organic Compounds by EPA method 8260B                                 |          |                    |                  |               |               |               |                    |               |           |           |
| PCE = Tetrachloroethene by EPA method 8260B  |          |                    |                  |               |               |               |                    |               |           |           |

TABLE 3  
GROUNDWATER ANALYTICAL RESULTS

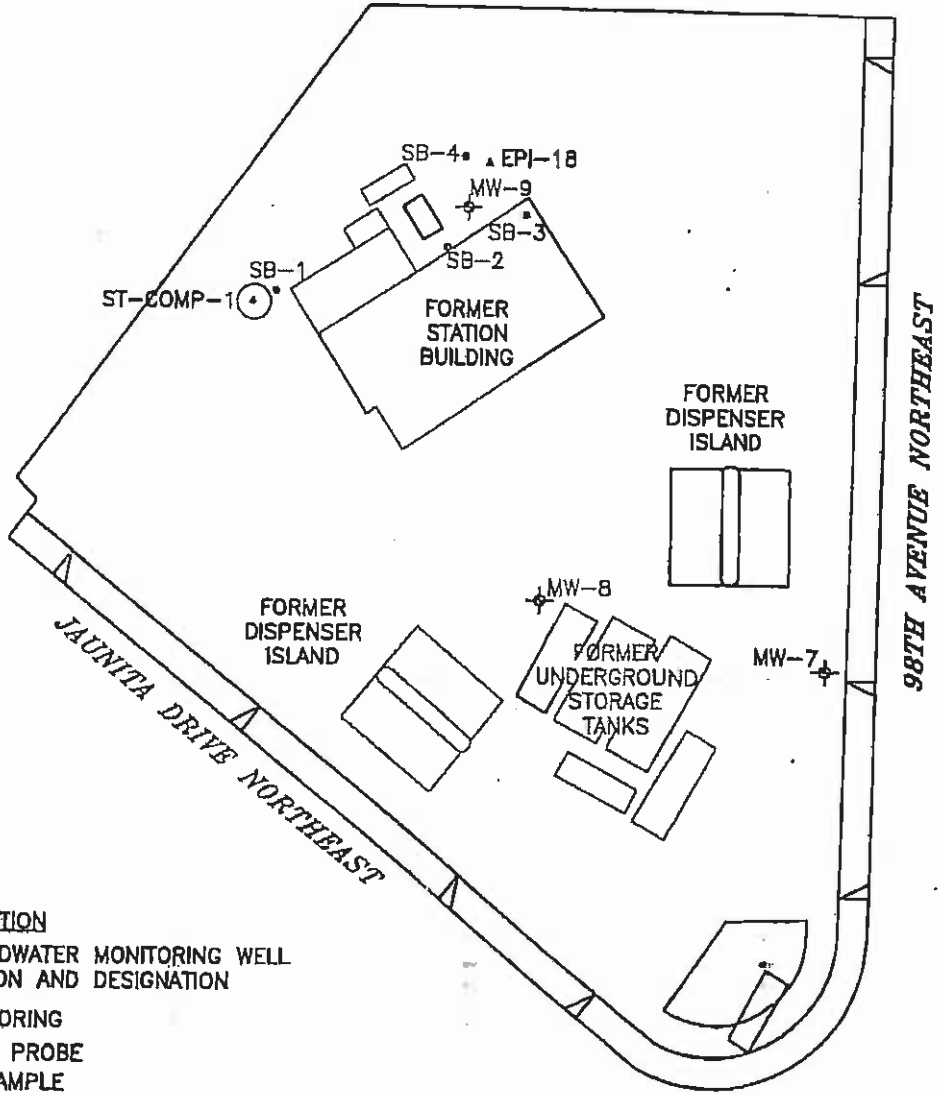
Chevron Service Station 9-2767  
11601 98th Ave Northeast  
Kirkland, Washington

| Sample I.D.   | Sample Date | TPH-Gasoline (ppb) | Benzene (ppb) | Toluene (ppb) | Ethylbenzene (ppb) | Xylenes (ppb) | TPH-Diesel (ppb) | TPH-Oil (ppb) | MTBE (ppb) | PCE (ppb)  | VOC (ppb)        |
|---|-------------|--------------------|---------------|---------------|--------------------|---------------|------------------|---------------|------------|------------|------------------|
| MW-7  | 12/26/00    | 175                | ND            | ND            | ND                 | 2.75          | 723              | 1,080         | ND         | ND         | ND               |
|   | 01/02/01    | NA                 | NA            | NA            | NA                 | NA            | ND*              | ND*           | NA         | NA         | NA               |
| MW-8  | 12/26/00    | ND                 | ND            | ND            | ND                 | ND            | ND               | ND            | ND         | ND         | ND               |
| MW-9  | 12/26/00    | ND                 | ND            | ND            | ND                 | 1.42          | ND               | ND            | ND         | ND         | ND               |
| MW-D  | 12/26/00    | ND                 | ND            | ND            | ND                 | ND            | ND               | ND            | ND         | ND         | ND               |
| <b>MTCA Method A Cleanup Levels:</b>  |             | <b>1,000</b>       | <b>5</b>      | <b>40</b>     | <b>30</b>          | <b>20</b>     | <b>1,000</b>     | <b>1,000</b>  | <b>-</b>   | <b>5.0</b> | <b>-</b>         |
| <b>Laboratory Reporting Limits:</b>   |             | <b>50</b>          | <b>0.500</b>  | <b>0.500</b>  | <b>0.500</b>       | <b>1.00</b>   | <b>250</b>       | <b>500</b>    | <b>5.0</b> | <b>0.1</b> | <b>0.1 - 1.0</b> |
| Concentrations in ppb (ug/l)  |             |                    |               |               |                    |               |                  |               |            |            |                  |
| ND = Not detected at the laboratory reporting limits  |             |                    |               |               |                    |               |                  |               |            |            |                  |
| NA = Not Analyzed   |             |                    |               |               |                    |               |                  |               |            |            |                  |
| MW-D = Duplicate sample collected from Well MW-9  |             |                    |               |               |                    |               |                  |               |            |            |                  |
| Sample locations are shown on Figure 1  |             |                    |               |               |                    |               |                  |               |            |            |                  |
| Certified Analytical Results are attached   |             |                    |               |               |                    |               |                  |               |            |            |                  |
| TPH as Gasoline - Analysis by Northwest Method WTPH-G   |             |                    |               |               |                    |               |                  |               |            |            |                  |
| TPH as Diesel and Oil - Analysis by Northwest Method NWTPH-Dx   |             |                    |               |               |                    |               |                  |               |            |            |                  |
| BTEX Compounds and Methyl tert-butyl ether (MTBE) - Analysis by EPA Method 802.1B                                       |             |                    |               |               |                    |               |                  |               |            |            |                  |
| VOC's = Volatile Organic Compounds by EPA method 8260B. See Laboratory Analytical Report for complete list of analytes. |             |                    |               |               |                    |               |                  |               |            |            |                  |
| PCE = Tetrachloroethene by EPA method 8260B   |             |                    |               |               |                    |               |                  |               |            |            |                  |
| * TPH-Diesel and Heavy Oil re-analyzed by Washington Method WTPH-D + Extended with silica gel cleanup                   |             |                    |               |               |                    |               |                  |               |            |            |                  |





SCALE (ft)



- EXPLANATION**
- MW-8 GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
  - SOIL BORING
  - ▲ STRATA PROBE
  - ◆ SOIL SAMPLE

Ref. CW92767/ellsmap.dwg  
Basemap from Emcon Northeast, Inc.

PREPARED BY

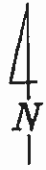


**Delta**  
Environmental  
Consultants, Inc.

**SITE MAP**

Former Chevron Service Station 9-2767  
11601 98th Avenue Northeast  
Kirkland Washington

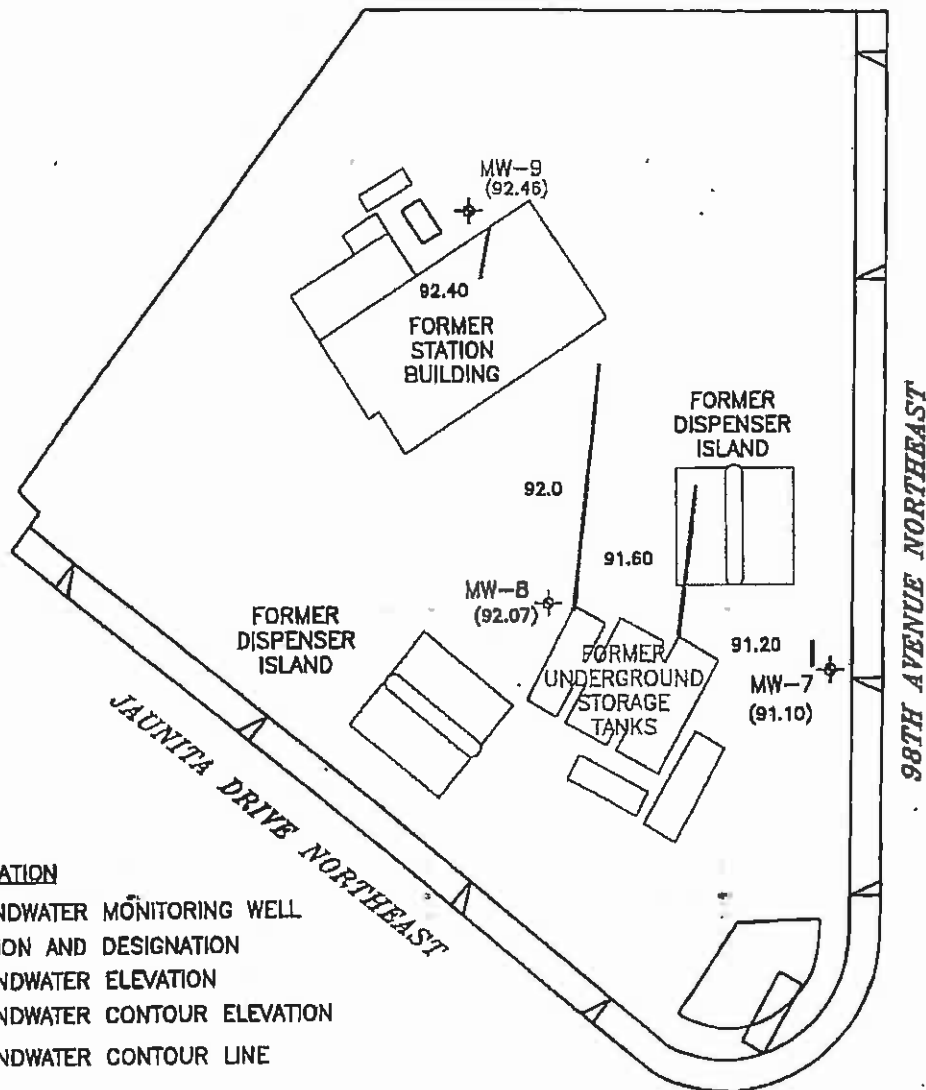
**FIGURE:**  
1  
**PROJECT:**  
CW92767



SCALE (ft)



INFERRED DIRECTION  
OF GROUNDWATER  
MIGRATION



**EXPLANATION**

- MW-1 GROUNDWATER MONITORING WELL
- LOCATION AND DESIGNATION
- (92.46) GROUNDWATER ELEVATION
- 92.40 GROUNDWATER CONTOUR ELEVATION
- GROUNDWATER CONTOUR LINE

Ref. CW92767/etlmap.dwg  
Base map from Emcon Northwest, Inc.

PREPARED BY



GROUNDWATER CONTOUR MAP 12/26/00

Former Chevron Service Station 9-2767  
11601 98th Avenue Northeast  
Kirkland Washington

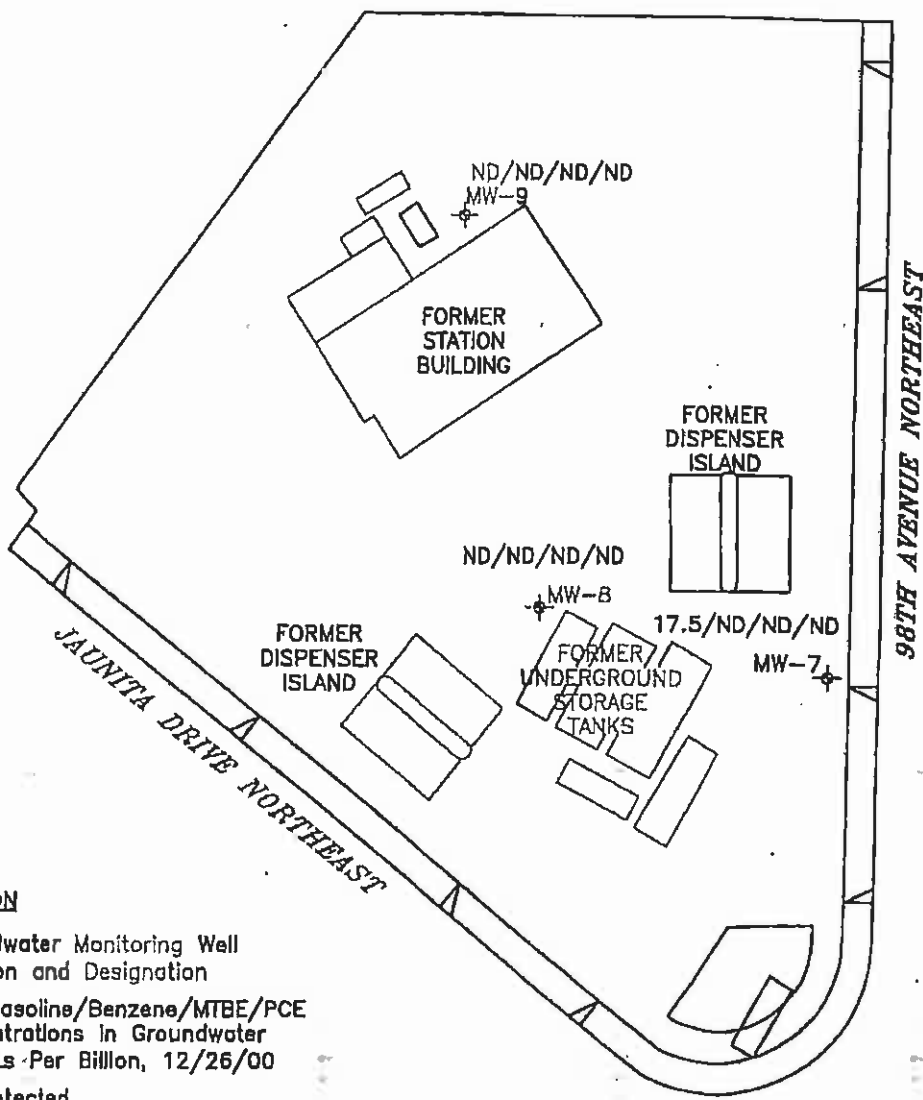
FIGURE:

2


PROJECT:  
CW92767



SCALE (ft)



**EXPLANATION**

- MW-8  Groundwater Monitoring Well Location and Designation
- ND/ND/ND/ND TPH—Gasoline/Benzene/MTBE/PCE Concentrations in Groundwater in Parts Per Billion, 12/26/00
- ND Not Detected

Ref. CW92767/aitamep.dwg  
Base map From Emcon Northwest, Inc.

PREPARED BY



**GROUNDWATER CONCENTRATION MAP 12/26/00**

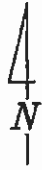
Former Chevron Service Station 9-2767  
11601 98th Avenue Northeast  
Kirkland Washington

FIGURE:

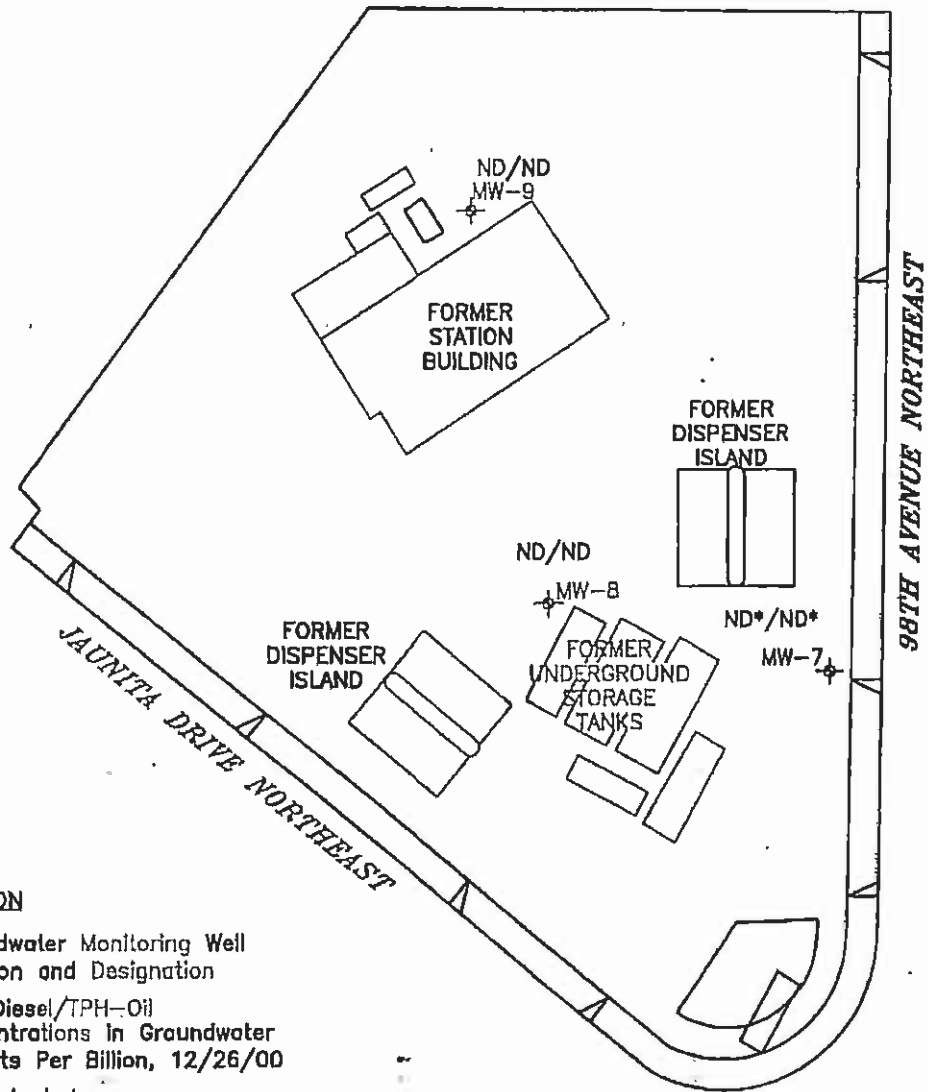
3

PROJECT:


CW92767



SCALE (ft)



**EXPLANATION**

MW-8  Groundwater Monitoring Well Location and Designation

ND/ND TPH-Diesel/TPH-Oil Concentrations in Groundwater in Parts Per Billion, 12/26/00

ND Not Detected

- TPH-Diesel/TPH-Oil re-analyzed with silica gel cleanup 1/2/01

Ref. CW92767/altemap.dwg  
Base map from Ercon Northwest, Inc.

PREPARED BY



**GROUNDWATER CONCENTRATION MAP 12/26/00**

Former Chevron Service Station 9-2767  
11601 98th Avenue Northeast  
Kirkland Washington

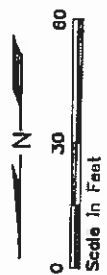
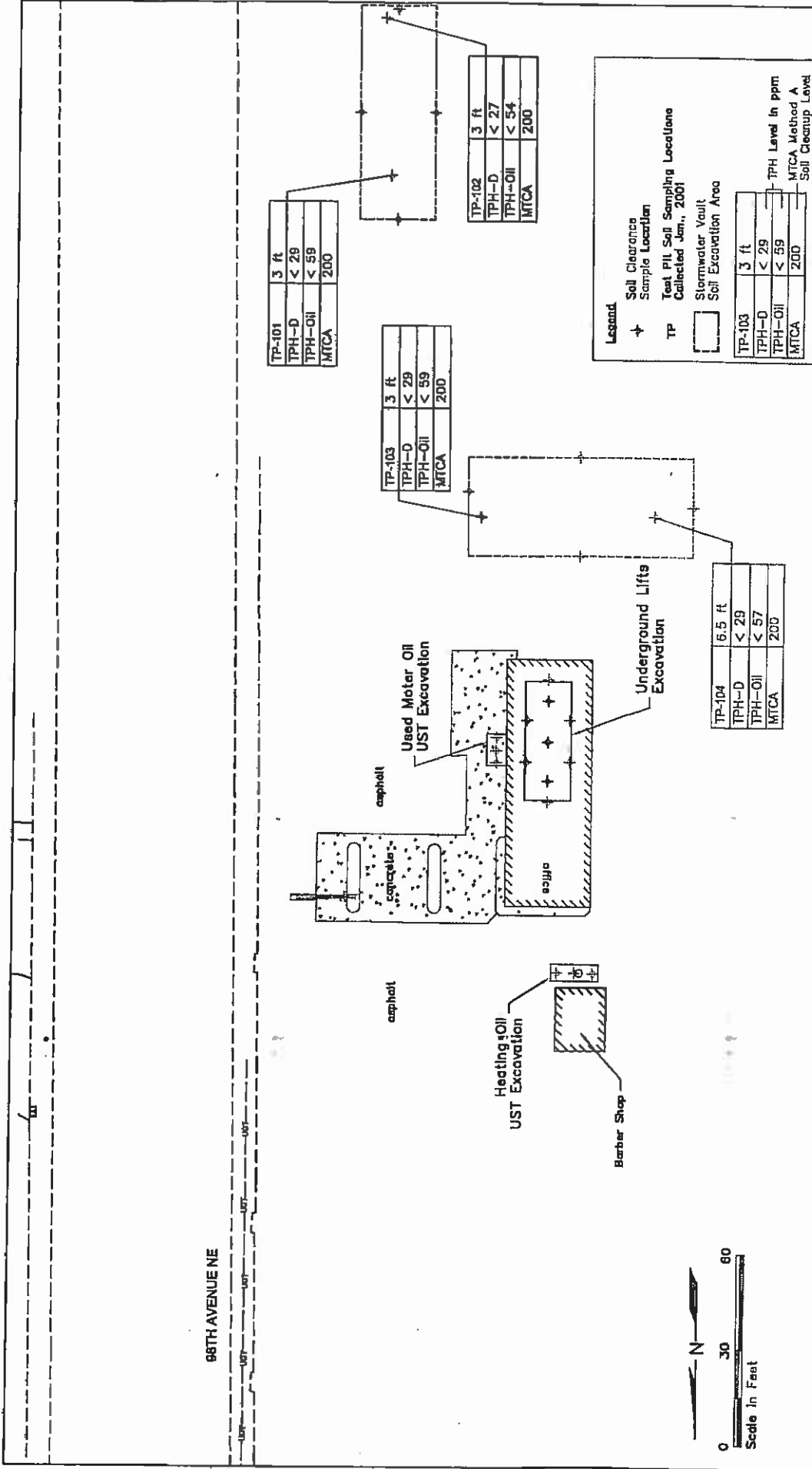
FIGURE:

4

PROJECT:

CW92767

98TH AVENUE NE

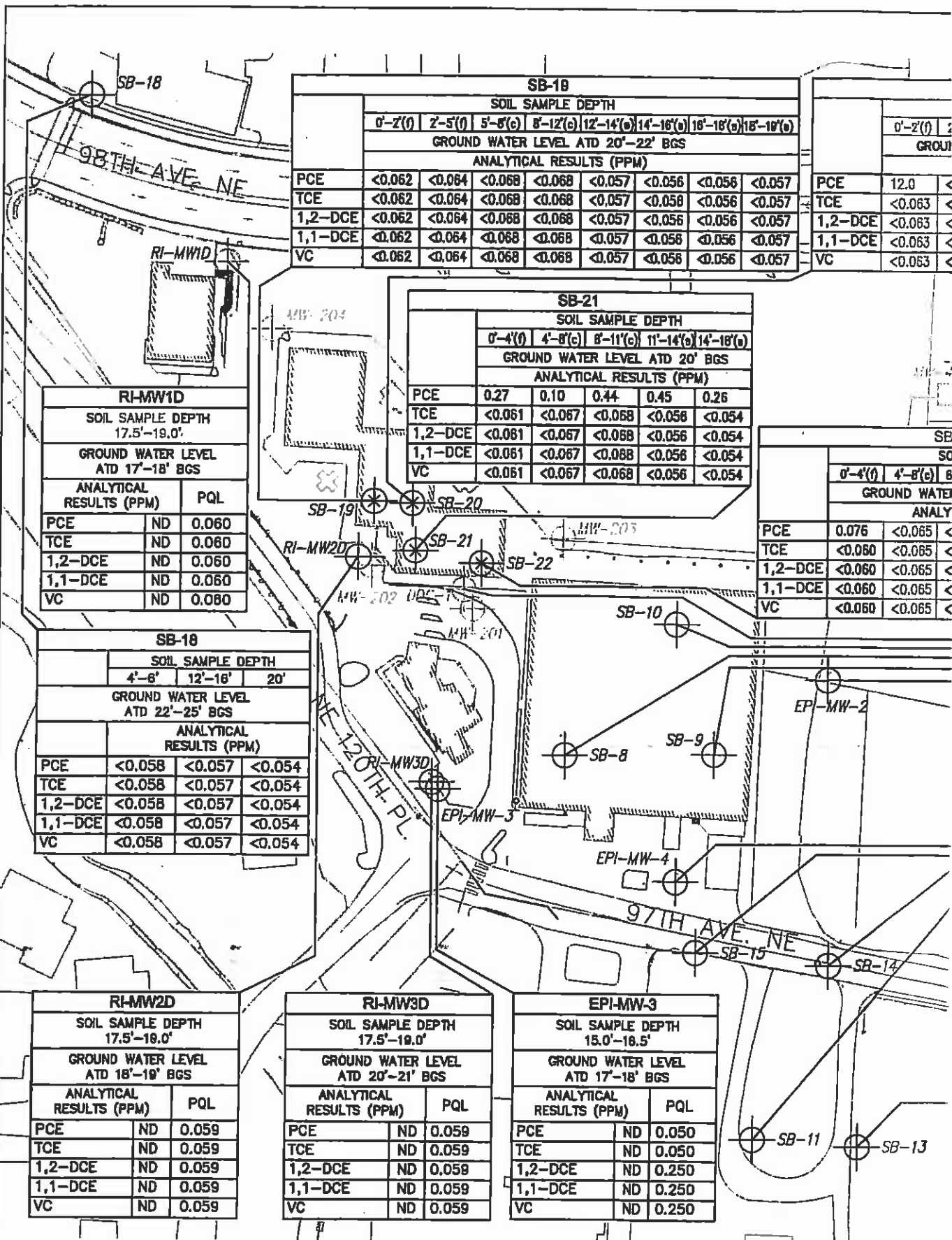


Note: Buildings and other structures will be demolished prior to starting any excavation activity.

KANE Environmental, Inc.

Juanita Auto Service  
Storm Water Vault Soil Total Petroleum Hydrocarbon Sampling Results and Proposed Soil Clearance Sample Locations

Appendix 8A-  
Figure 3



|         | SB-18                              |          |          |           |            |            |            |            |
|---------|------------------------------------|----------|----------|-----------|------------|------------|------------|------------|
|         | SOIL SAMPLE DEPTH                  |          |          |           |            |            |            |            |
|         | 0'-2'(f)                           | 2'-5'(f) | 5'-8'(c) | 8'-12'(c) | 12'-14'(e) | 14'-16'(e) | 16'-18'(e) | 18'-19'(e) |
|         | GROUND WATER LEVEL ATD 20'-22' BGS |          |          |           |            |            |            |            |
|         | ANALYTICAL RESULTS (PPM)           |          |          |           |            |            |            |            |
| PCE     | <0.062                             | <0.064   | <0.068   | <0.068    | <0.057     | <0.056     | <0.056     | <0.057     |
| TCE     | <0.062                             | <0.064   | <0.068   | <0.068    | <0.057     | <0.058     | <0.056     | <0.057     |
| 1,2-DCE | <0.062                             | <0.064   | <0.068   | <0.068    | <0.057     | <0.056     | <0.056     | <0.057     |
| 1,1-DCE | <0.062                             | <0.064   | <0.068   | <0.068    | <0.057     | <0.058     | <0.056     | <0.057     |
| VC      | <0.062                             | <0.064   | <0.068   | <0.068    | <0.057     | <0.058     | <0.056     | <0.057     |

|         | SB-19                              |          |
|---------|------------------------------------|----------|
|         | SOIL SAMPLE DEPTH                  |          |
|         | 0'-2'(f)                           | 2'-5'(f) |
|         | GROUND WATER LEVEL ATD 20'-22' BGS |          |
|         | ANALYTICAL RESULTS (PPM)           |          |
| PCE     | 12.0                               | <        |
| TCE     | <0.063                             | <        |
| 1,2-DCE | <0.063                             | <        |
| 1,1-DCE | <0.063                             | <        |
| VC      | <0.063                             | <        |

|         | SB-21                          |          |           |            |            |
|---------|--------------------------------|----------|-----------|------------|------------|
|         | SOIL SAMPLE DEPTH              |          |           |            |            |
|         | 0'-4'(f)                       | 4'-8'(c) | 8'-11'(c) | 11'-14'(e) | 14'-18'(e) |
|         | GROUND WATER LEVEL ATD 20' BGS |          |           |            |            |
|         | ANALYTICAL RESULTS (PPM)       |          |           |            |            |
| PCE     | 0.27                           | 0.10     | 0.44      | 0.45       | 0.26       |
| TCE     | <0.061                         | <0.067   | <0.068    | <0.058     | <0.054     |
| 1,2-DCE | <0.061                         | <0.067   | <0.068    | <0.056     | <0.054     |
| 1,1-DCE | <0.061                         | <0.067   | <0.068    | <0.056     | <0.054     |
| VC      | <0.061                         | <0.067   | <0.068    | <0.056     | <0.054     |

|         | SB-20                          |          |
|---------|--------------------------------|----------|
|         | SOIL SAMPLE DEPTH              |          |
|         | 0'-4'(f)                       | 4'-8'(c) |
|         | GROUND WATER LEVEL ATD 20' BGS |          |
|         | ANALYTICAL RESULTS (PPM)       |          |
| PCE     | 0.076                          | <0.065   |
| TCE     | <0.060                         | <0.065   |
| 1,2-DCE | <0.060                         | <0.065   |
| 1,1-DCE | <0.060                         | <0.065   |
| VC      | <0.060                         | <0.065   |

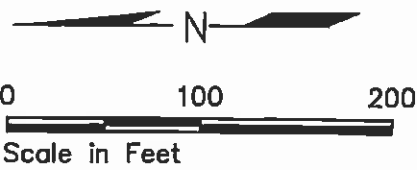
| RI-MW1D                            |    |       |
|------------------------------------|----|-------|
| SOIL SAMPLE DEPTH                  |    |       |
| 17.5'-19.0'                        |    |       |
| GROUND WATER LEVEL ATD 17'-18' BGS |    |       |
| ANALYTICAL RESULTS (PPM)           |    | PQL   |
| PCE                                | ND | 0.060 |
| TCE                                | ND | 0.060 |
| 1,2-DCE                            | ND | 0.060 |
| 1,1-DCE                            | ND | 0.060 |
| VC                                 | ND | 0.080 |

|         | SB-18                              |         |        |
|---------|------------------------------------|---------|--------|
|         | SOIL SAMPLE DEPTH                  |         |        |
|         | 4'-6'                              | 12'-16' | 20'    |
|         | GROUND WATER LEVEL ATD 22'-25' BGS |         |        |
|         | ANALYTICAL RESULTS (PPM)           |         |        |
| PCE     | <0.058                             | <0.057  | <0.054 |
| TCE     | <0.058                             | <0.057  | <0.054 |
| 1,2-DCE | <0.058                             | <0.057  | <0.054 |
| 1,1-DCE | <0.058                             | <0.057  | <0.054 |
| VC      | <0.058                             | <0.057  | <0.054 |

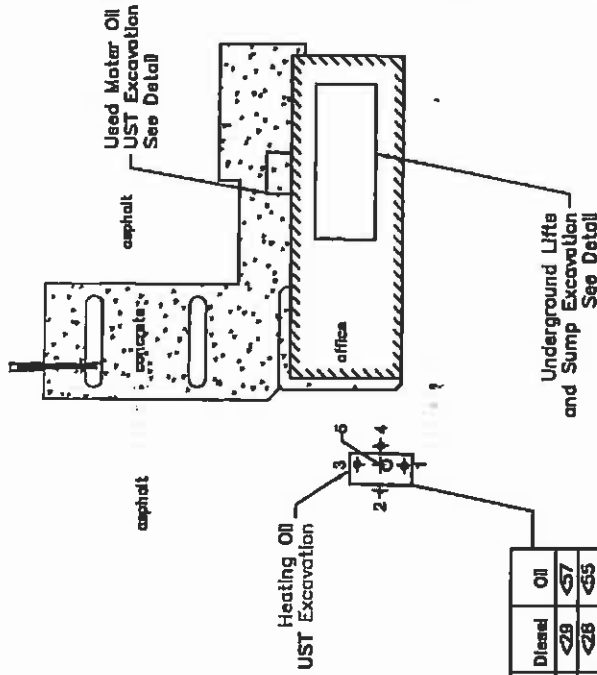
| RI-MW2D                            |    |       |
|------------------------------------|----|-------|
| SOIL SAMPLE DEPTH                  |    |       |
| 17.5'-18.0'                        |    |       |
| GROUND WATER LEVEL ATD 18'-19' BGS |    |       |
| ANALYTICAL RESULTS (PPM)           |    | PQL   |
| PCE                                | ND | 0.059 |
| TCE                                | ND | 0.059 |
| 1,2-DCE                            | ND | 0.059 |
| 1,1-DCE                            | ND | 0.059 |
| VC                                 | ND | 0.059 |

| RI-MW3D                            |    |       |
|------------------------------------|----|-------|
| SOIL SAMPLE DEPTH                  |    |       |
| 17.5'-19.0'                        |    |       |
| GROUND WATER LEVEL ATD 20'-21' BGS |    |       |
| ANALYTICAL RESULTS (PPM)           |    | PQL   |
| PCE                                | ND | 0.059 |
| TCE                                | ND | 0.059 |
| 1,2-DCE                            | ND | 0.059 |
| 1,1-DCE                            | ND | 0.059 |
| VC                                 | ND | 0.059 |

| EPI-MW-3                           |    |       |
|------------------------------------|----|-------|
| SOIL SAMPLE DEPTH                  |    |       |
| 15.0'-16.5'                        |    |       |
| GROUND WATER LEVEL ATD 17'-18' BGS |    |       |
| ANALYTICAL RESULTS (PPM)           |    | PQL   |
| PCE                                | ND | 0.050 |
| TCE                                | ND | 0.050 |
| 1,2-DCE                            | ND | 0.250 |
| 1,1-DCE                            | ND | 0.250 |
| VC                                 | ND | 0.250 |



**KANE**  
Environmental, Inc.



| (HO) Heating Oil UST (ppm) | Depth In feet | Type | Diesel | Oil |
|----------------------------|---------------|------|--------|-----|
| HO-CL-1                    | 6             | S    | <28    | <57 |
| HO-CL-2                    | 6             | S    | <28    | <55 |
| HO-CL-3                    | 6             | S    | <28    | <56 |
| HO-CL-4                    | 6             | S    | <27    | <54 |
| HO-CL-5                    | 10            | B    | <28    | <55 |



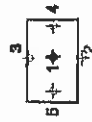
Legend  
 S = Sided Grab Sample  
 B = Bottom Sample  
 ppm = Parts per Million

| (UO) Used Oil UST (ppm) | Depth In feet | Type | Gas | Diesel | Oil    | B     | T     | E     | X     |
|-------------------------|---------------|------|-----|--------|--------|-------|-------|-------|-------|
| UO-CL-1                 | B             | B    | 410 | <280   | 17,000 | 0.28  | 0.28  | 0.28  | 6.88  |
| UO-CL-2                 | 6.5           | S    | NA  | <28    | <59    | NA    | NA    | NA    | NA    |
| UO-CL-3                 | 6.5           | S    | NA  | <28    | 57     | NA    | NA    | NA    | NA    |
| UO-CL-4                 | 10            | B    | <8  | <50    | <80    | <0.06 | <0.06 | <0.08 | <0.06 |
| UO-CL-5                 | 10            | B    | 180 | 150    | 6,700  | 0.1   | 0.059 | 0.52  | 1.98  |
| UO-CL-5A                | 12            | B    | <31 | <31    | <92    | <0.31 | <0.31 | 0.38  | 1.3   |

(UO) Used Oil UST Stockpile (ppm)

|               |    |       |       |        |    |     |    |       |    |    |    |
|---------------|----|-------|-------|--------|----|-----|----|-------|----|----|----|
| UO-SP-1 North | NA | <140  | 1,800 | NA     | NA | NA  | NA | NA    | NA |    |    |
| UO-SP-2 South | NA | <140  | 4,400 | NA     | NA | NA  | NA | NA    | NA |    |    |
|               |    | HVOCs | ND    | <0.057 | Aa | <11 | Cl | <0.57 | Cr | Zn | Pb |

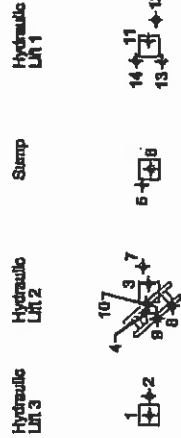
(UO) USED OIL UST SAMPLES (ppm)



| Hydraulic Lift Sump (ppm) | Depth In feet | Type | Diesel | Oil    |
|---------------------------|---------------|------|--------|--------|
| HL-CL-1                   | 7.5           | B    | <28    | <56    |
| HL-CL-2                   | 7.5           | B    | <28    | <56    |
| HL-CL-3                   | 5             | B    | <28    | 380    |
| HL-CL-4                   | 5             | B    | <27    | <54    |
| HL-CL-5                   | 3             | S    | <2800  | 13,000 |
| HL-CL-5A                  | B             | B    | <30    | <60    |
| HL-CL-6                   | 5             | B    | <28    | <55    |
| HL-CL-7                   | 5             | S    | <28    | <55    |
| HL-CL-8                   | 5             | S    | <28    | <55    |
| HL-CL-9                   | 5             | S    | <27    | <54    |
| HL-CL-10                  | 5             | B    | <27    | <54    |
| HL-CL-11                  | 6             | B    | <27    | 2,000  |
| HL-CL-11A                 | B             | B    | <53    | <88    |
| HL-CL-12                  | 6             | S    | <27    | 180    |
| HL-CL-13                  | 6             | S    | <28    | 360    |
| HL-CL-14                  | 6             | S    | <27    | <54    |



(HL) HYDRAULIC LIFT AND SUMP SAMPLES (ppm)



| Hydraulic Lift Stockpile (ppm) | Diesel | Oil   |
|--------------------------------|--------|-------|
| HL-SP-1                        | <28    | 430   |
| HL-SP-2                        | <29    | 1,000 |

KANE Environmental, Inc.

Juanita Auto Service  
 Soil Compliance  
 Sampling Location and Results

Figure 1

**DRAFT**  
**Notice of Completion for Soil**  
**Lots 1, 2 and 3**

**Juanita Village Property**  
**Kirkland, Washington**

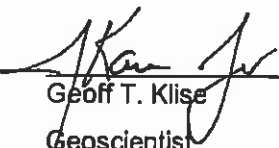
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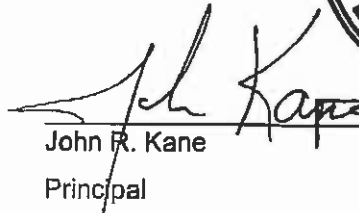
**Baldrige Development, Inc.**  
**11906 Manchester Road**  
**Suite 209**  
**St. Louis, Missouri 63131**

**October 19, 2001**

Prepared By:

Kane Environmental, Inc.  
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Figure 1 – Site Plan

Figure 2 – Investigation and Remediation Locations

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Figure 4 – Chevron Service Station Sample Locations

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Attachment B – Laboratory Analytical Data

## **1.0 INTRODUCTION**

The purpose of this report is to describe soil investigation and remediation activities for Lots 1, 2 and 3 at the Juanita Village property (Property). Kane Environmental, Inc. has completed soil compliance sampling at these lots in accordance with Compliance Monitoring Plan requirements established in the Juanita Village Prospective Purchaser Consent Decree 00-2-16556-1SEA dated November 7, 2000. A site plan showing relative locations for each lot is presented as Figure 1.

## **2.0 LOT 1**

Lot 1 is located on the southeast corner of the Property (Figure 1). According to the "Final Remedial Investigation Report" prepared by Environmental Partners, Inc. (EPI) of Bellevue, WA in December 1999, the property was utilized by Chevron as a service station from the mid-1950's to approximately 1993, when the Underground Storage Tanks (UST's) and associated transfer piping were decommissioned. According to the "Limited Level II Site Assessment" prepared by Terra Associates, Inc. (Terra) of Kirkland, WA in April 1994, Evergreen Bark and Topsoil, a landscaping firm, occupied the northern part of Lot 1 and southern part of Lot 3 and a former furniture retail sales company had once occupied the western part of Lot 1.

### **2.1 PSI Phase I Environmental Site Assessment**

A Phase I Environmental Site Assessment was performed on the north half (current location of Lot 8 and 9) of the Property by Professional Service Industries, Inc. (PSI) of Seattle, WA in January 1991. This report identified the former Chevron Service Station in Lot 1 and the former BP Service Station (currently Unocal) property located east of Lot 1, across 98<sup>th</sup> Avenue NE as UST sites.

Information regarding site conditions at the Unocal Service Station and the former Chevron Service Station was not discussed.

### **2.2 Terra Associates Level I Environmental Site Assessment**

A Level I Environmental Site Assessment was performed on the north half of the Property by Terra Associates, Inc. (Terra) of Kirkland, WA in February 1994. This report identified the former Chevron Service Station in Lot 1 and the Unocal Service Station located east of Lot 1, across 98<sup>th</sup> Avenue NE as Leaking Underground Storage Tank (LUST) sites.

Information regarding site conditions at the Unocal Service Station and the Chevron Service Station was not discussed.

## **2.3 Terra Associates Limited Level II Site Assessment**

A Limited Phase II Site Assessment was performed at the former furniture retail sales property located at the north and west portions of Lot 1 by Terra on April 1994. One monitoring well was installed to assess soil and groundwater conditions in the vicinity of the former Chevron Service Station. A summary of UST decommissioning activities performed at the service station is also included in this report.

### **2.3.1 Monitoring Well Installation**

Soil samples were collected during installation of groundwater monitoring well MW-8, located in Lot 1 at the Evergreen Bark and Topsoil property. See Figure 2 for location of MW-8. A more detailed description of sampling activities conducted by Terra is presented in the report entitled "Limited Level II Site Assessment", dated April 11, 1994.

Two soil samples were collected during installation of monitoring well MW-8 at depths of 2.5 and 5 feet below ground surface (bgs) and analyzed for total petroleum hydrocarbons (TPH) as gasoline, diesel and oil, and benzene, toluene, ethylbenzene and total xylenes (BTEX).

The soil sample collected from 2.5 feet bgs revealed concentrations of TPH-diesel and TPH-oil at 1100 and 44 parts per million (ppm), respectively, both below the Interim TPH Method A Cleanup Level for Soils at the Property (2,000 ppm). This sample was collected in an unpaved parking area and was probably derived from motor oil leaks by automobiles. The soil sample collected at 5 feet bgs had non-detectable concentrations of TPH-diesel and TPH-oil.

### **2.3.2 Chevron Service Station Decommissioning Review**

Terra stated in their 1994 report that EMCON Northwest, Inc. (EMCON) of Bothell, WA performed UST decommissioning activities at the former Chevron Service Station property located in Lot 1 in 1993.

According to Terra, EMCON installed six soil borings, which were completed as monitoring wells. One soil boring, located southwest and down gradient of the Service Station, had petroleum hydrocarbons above the MTCA Method A Cleanup Level for Soil of 200 ppm.

With oversight by EMCON, five known and eight previously unknown USTs were removed in July and August 1993. All associated piping, pump islands, hydraulic hoists and sumps, along with a septic tank, were removed.

Soil at the property was excavated to between six and eight feet bgs, just at the top of the water table. EMCON reported that approximately 3,500 cubic yards of petroleum contaminated soil were removed from the site and disposed of by Regional Disposal Company. The six monitoring wells were closed removed during soil excavation and UST removal activities.

## **2.4 EPI Phase II Addendum 1 Sampling Event**

To confirm previous investigation findings at the former Chevron Service Station EPI completed one soil boring, EPI-18, in Lot 1 during the Phase II Addendum 1 sampling event completed September 1998. Activities at the site were being completed as part of a remedial investigation to fill in data gaps at the Property prior to starting soil and groundwater remediation activities for the proposed Juanita Village development project. See Figure 2 for location details.

### **2.4.1 Investigation Activities**

Two soil samples were collected from soil boring EPI-18 at depths of 7-10 and 10-13 feet bgs and analyzed for TPH as gasoline, diesel and oil, and BTEX. A detailed description of sampling activities performed by EPI is described in the "Final Remedial Investigation Report", dated December 22, 1999.

The soil sample collected from soil boring EPI-18 at an interval of 7-10 feet bgs had a concentration of TPH-gasoline at 190 ppm, above the MTCA Method A Cleanup Level for soil of 100 ppm. Ethylbenzene and total xylenes were detected at concentrations of 0.059 ppm and 0.29 ppm respectively, both below MTCA Method A Cleanup Levels for soil of 20 ppm. The sample collected at 10-13 feet bgs had non-detectable concentrations for ethylbenzene and total xylenes. See Figure 4 for analytical results.

## **2.5 Additional Remedial Tasks Performed by EPI**

Soil boring EPI-39 was completed to determine the potential impact of petroleum hydrocarbons reportedly left in-place at the former Chevron service station and to determine whether releases of petroleum hydrocarbon products at the Unocal service station have the potential to impact soil and groundwater in Lot 1. A detailed description of sampling activities performed by EPI is described in the "Final Remedial Investigation Report", dated December 22, 1999.

A soil sample collected from EPI-39 at 8-10 feet bgs had non-detectable concentrations of TPH-gasoline, TPH-diesel, TPH-oil and BTEX. See Figure 4 for analytical results.

## **2.6 Delta Environmental Investigation**

In response to the discovery of TPH-gasoline concentrations above the MTCA Method A Cleanup Level for Soil in soil boring EPI-18, and to comply with cleanup activities as outlined in the Consent Decree for the Property, Delta Environmental, Inc. (Delta), of Bellevue, WA performed a subsurface investigation of both soil and groundwater at the former Chevron Service Station. Delta installed seven soil borings to a depth of approximately 11.5 feet bgs in December 2000. Three of the borings were completed as monitoring wells (Chevron MW-7, Chevron MW-8 and Chevron MW-9). See Figure 2 for location details.

The remaining four soil borings (SB-1, SB-2, SB-3 and SB-4) were completed south and west of soil boring EPI-18 described above, due to the detection of gasoline in the 7-10 foot sample by EPI in 1999. A more detailed description of sampling activities performed by Delta is described in their report entitled "Environmental Investigation, Former Chevron Service Station 9-2767", dated February 1, 2001.

Soil samples were collected from the seven borings and analyzed for: TPH-gasoline, TPH-diesel, TPH-oil, BTEX, and tetrachloroethylene (PCE).

All samples had non-detectable concentrations for analytes described above, with the exception of SB-2-5, which had a concentration of TPH-diesel at 11.9 ppm, below the Interim TPH Method A Cleanup Level for Soil of 2,000 ppm. See Figure 4 for analytical results.

Analytical results for soil from Delta soil borings SB-3 and SB-4 and Chevron monitoring well MW-8, which were collected around soil boring EPI-18, confirmed the absence of TPH-gasoline in that area.

## **2.7 South Storm Water Vault Soil Sampling**

Development activities at the Juanita Village Property included excavation of soil to construct two below grade storm water detention vaults for temporary storage of storm water runoff from the Property. The south storm water vault is oriented on a north-south axis and approximately 175 feet long by 40 feet wide by 10 feet deep. The vault is located predominately in Lot 1 and partially located in Lot 3. (Discussion of Lot 3 sampling activities is presented in Section 4.1). More details are available in the report entitled "Juanita Village Soil Compliance Monitoring Sampling Report, Former Juanita Auto Service & Storm Water Vaults", prepared by Kane Environmental, Inc., on July 19, 2001.

Kane Environmental performed soil clearance sampling activities in Lot 1 to assess the potential of soil contamination related to the former Chevron service station and the up-gradient former Juanita Auto Service. Two test pits were dug with two samples collected in the location of the south storm water vault

in January 2001. Soil samples had non-detectable concentrations of TPH-diesel and TPH-oil. See Figures 2 and 3 for test pit and sampling locations and results.

Six additional samples and one duplicate sample were collected during soil excavation activities for the southern storm water vault in April 2001. These samples were collected on the excavation floor and sidewalls. All six soil samples had non-detectable concentrations of TPH-diesel and TPH-oil (Figure 3).

### **3.0 LOT 2**

Lot 2 is located on the southern portion of the Property, adjacent and west of Lot 1 as described in Section 2.0. See Figure 2 for location details. A Phase I Environmental Site Assessment performed by Terra in February 1994 identified a boat retailer and former furniture sales business located on Lot 2. No recognized environmental conditions were observed within the delineated location of Lot 2 as reported by Terra, and as a result, subsurface investigation activities were not performed in this area in 1994. Terra identified Juanita Auto Service, formerly a Texaco service station south of their Phase I study area. A discussion of the Juanita Auto Service property in relation to Lot 2 is presented below.

Terra, EPI and Kane Environmental performed soil and groundwater investigations in the vicinity of the hydraulically and topographically up-gradient Juanita Auto Service property, located in Lot 6. See relationship between Lot 2 and 6 in Figure 1. Historic use of the Juanita Auto Service property included use as a Texaco service station and an auto repair garage. Soil samples were collected during groundwater monitoring well installation in the vicinity of the property, and no detectable concentrations of petroleum hydrocarbons were found in soil.

Kane Environmental performed soil compliance sampling in the vicinity of Juanita Auto Service in March 2001. Soil contaminated with TPH-oil was removed from the excavations of two hydraulic lifts and one used oil UST. Compliance samples were collected from overexcavated areas and revealed no detectable concentrations of TPH-oil.

Based on sampling described above, it was determined that soil impacted by petroleum hydrocarbons was limited in aerial extent to the physical locations of the hydraulic lifts and USTs located within the footprint of the Juanita Auto Service building in Lot 6.

### **4.0 LOT 3**

Lot 3 is located on the southeast portion of the Property, north of Lot 1. See Figure 2 for location details. According to the Phase I Environmental Site Assessment performed by Terra in February 1994,

Evergreen Bark and Topsoil occupied the lot. The site assessment did not reveal potential sources of contamination in this area of the Property.

#### **4.1 North and South Storm Water Vaults Soil Sampling**

As part of the Property development project, two storm water vaults were constructed on the southern and eastern portions of the Property near 98<sup>th</sup> Avenue NE. Kane Environmental performed soil clearance sampling activities in Lot 1 and Lot 3 to assess the potential of soil contamination related to the former Chevron Service Station and the up-gradient former Juanita Auto Service. More details are available in the report entitled "Juanita Village Soil Compliance Monitoring Sampling Report, Former Juanita Auto Service & Storm Water Vaults", prepared by Kane Environmental, Inc., on July 19, 2001.

##### **4.1.1 Southern Vault**

The southern vault, located predominately in Lot 1 and partially in Lot 3, is oriented on a north-south axis. Sampling locations for the south vault in Lot 1 are presented in Section 2.5.

One soil sample was collected during soil excavation activities for the south storm water vault in April 2001. The sample was located on the north sidewall of the southern vault excavation. No detectable concentrations of TPH-diesel or TPH-oil were observed in this soil sample. See Figures 2 and 3 for locations and results of these samples.

##### **4.1.2 Northern Vault**

The northern storm water vault is located on the north end of Lot 3 and is oriented on an east-west axis. The northern half of the vault is located on Lot 4. Dimensions of the vault are 135 feet long by 60 feet wide by 10 feet deep.

Four soil samples and one duplicate soil sample was collected from the southern half of the northern storm water vault during soil excavation activities. The samples were located on the sidewalls and bottom of the vault excavation. No detectable concentrations of TPH-diesel or TPH-oil were observed in these five samples. See Figures 2 and 3 for locations and results of these samples.

#### **5.0 CONCLUSIONS AND RECOMMENDATIONS**

##### **5.1 Lot 1**

Thirteen UST's and associated soil contaminated with petroleum hydrocarbon products at the former Chevron Service Station were removed during tank decommissioning activities in 1993. A soil boring

completed as monitoring well (MW-8) was installed north and adjacent to the former Chevron property by Terra in 1994. Analytical results for two soil samples collected at MW-8 revealed soil concentrations of TPH-diesel and TPH-oil below the Interim Method A Cleanup Levels for Soil at the Property. EPI completed two soil borings (EPI-18 and EPI-39) to further define the potential of petroleum hydrocarbon contaminated soil on Lot 1 in 1999. Analytical results for two soil samples collected at EPI-18 revealed concentrations of ethylbenzene and total xylenes below MTCA Method A Cleanup Levels in Soil and a concentration of TPH-gasoline above the MTCA Method A Cleanup Level. Analytical results for EPI-39 revealed non-detectable concentrations of TPH as gasoline, diesel and oil, and BTEX. A subsurface investigation at the former Chevron Service Station performed by Delta approximately 2 years later consisted of installation of seven soil borings, three of which were completed as monitoring wells. Only one soil sample had detectable concentrations of TPH-diesel at a level below the Interim Method A Cleanup Level for Soil of 2,000 ppm. No detectable concentrations of these analytes was observed in the other six samples. Nine soil samples were collected from soil excavated during a test pit investigation and storm water vault installation at the north end of Lot 1 in 2001. No detectable concentrations of TPH-diesel or TPH-oil were discovered in the soil samples.

In summary, a total of 21 soil samples were collected in Lot 1, with one sample from EPI-18 above the MTCA Method A Cleanup Level for Soil and the remaining 20 samples were either below the Cleanup Level or had non-detectable concentrations of petroleum hydrocarbons. Sampling conducted by Delta Environmental around EPI-18 confirmed the absence of TPH-gasoline above the Cleanup Level in that area. In conclusion, soil investigation and remediation activities at the site reveal that petroleum hydrocarbon products above MTCA Method A Cleanup Levels for Soil have been removed from Lot 1 and remaining soils are below MTCA Method A Cleanup Levels for Soil or at non-detectable concentrations.

Kane Environmental requests a Notice of Completion for Soil for Lot 1 based on site investigation and remediation activities completed for this lot. Kane Environmental requests a stand-alone letter for Lot 1 addressed to Baldrige Development, Inc.

## **5.2 Lot 2**

Based on past Phase I Environmental Site Assessments performed by PSI in 1991 and Terra in 1994 on the north end of the Juanita Village Property, no recognized environmental conditions have been identified in soil in Lot 2. Sampling in up-gradient Lot 6 did not reveal any environmental conditions that could impact soil in Lot 2.

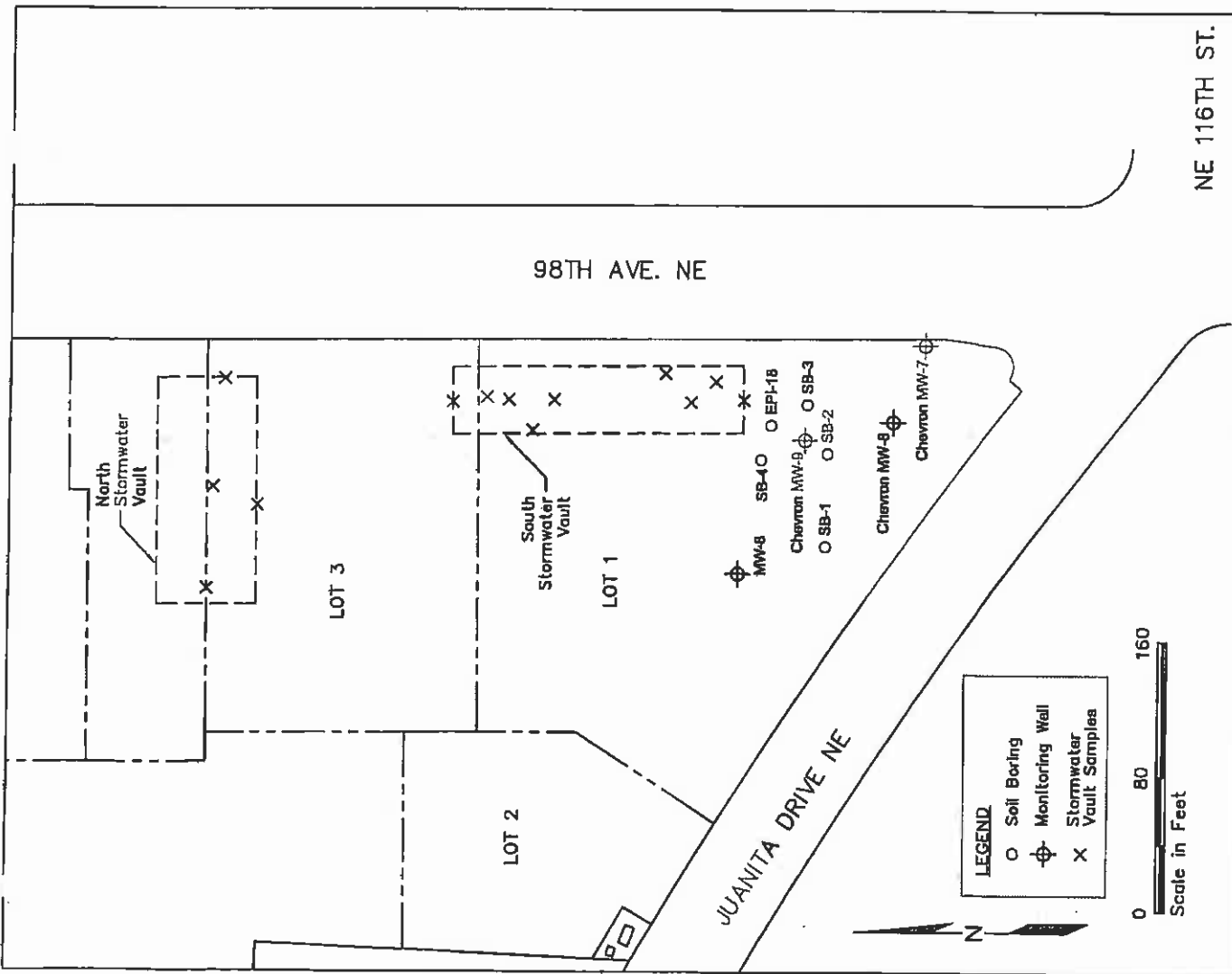
Kane Environmental requests a Notice of Completion for Soil for Lot 2 based on site investigation activities completed for this lot. Kane Environmental requests a stand-alone letter for Lot 2 to be sent to Baldrige Development, Inc.



### 5.3 Lot 3

The Phase I Environmental Site Assessment prepared by Terra stated that Evergreen Bark and Topsoil occupied the southern part of Lot 3 in 1994. No recognized environmental conditions were identified at the property and no further investigation work was performed after the Phase I was completed. Soil sampling was conducted during excavation activities for the northern and southern storm water vaults in 2001. One soil sample was collected from the north end of the southern storm water vault and analyzed for TPH-diesel and TPH-oil. Five soil samples were collected from the south end of the northern storm water vault and analyzed for TPH-diesel and TPH-oil. Analytical results for all six soil samples revealed non-detectable concentrations for TPH-diesel and TPH-oil.

Kane Environmental requests a Notice of Completion for Soil for Lot 3 based on site investigation activities completed for this lot. Kane Environmental requests a stand-alone letter for Lot 3 to be sent to Baldrige Development.



**KANE**  
Environmental, Inc.

Juanita Village Property  
Kirkland, Washington

Investigation and Remediation Locations

Figure 2

DATE: 10/29/07, 08:37 AM  
BY: JLM/MS & GPH/JKA (Checked/Prepared/Juanita Village)

LOT 1

South Stormwater Vault

98TH AVE. NE

JUANITA DRIVE NE

|         |        |      |
|---------|--------|------|
| MW-6    | 2.5 ft | 5 ft |
| TPH-D   | 1,100  | < 15 |
| TPH-Oil | 44     | < 50 |

|         |        |
|---------|--------|
| SB-4    | 5 ft   |
| TPH-G   | < 5    |
| TPH-D   | < 10   |
| TPH-Oil | < 25   |
| BTEX    | < 0.05 |
| PCE     | < 0.1  |

|         |        |
|---------|--------|
| MW-8    | 5 ft   |
| TPH-G   | < 5    |
| TPH-D   | < 10   |
| TPH-Oil | < 25   |
| BTEX    | < 0.05 |
| PCE     | < 0.1  |

|         |        |
|---------|--------|
| SB-1    | 5 ft   |
| TPH-G   | < 5    |
| TPH-D   | < 10   |
| TPH-Oil | < 25   |
| BTEX    | < 0.05 |
| PCE     | < 0.1  |

|         |        |
|---------|--------|
| SB-2    | 5 ft   |
| TPH-G   | < 5    |
| TPH-D   | 11.9   |
| TPH-Oil | < 25   |
| BTEX    | < 0.05 |
| PCE     | < 0.1  |

|         |        |
|---------|--------|
| MW-8    | 5 ft   |
| TPH-G   | < 5    |
| TPH-D   | < 10   |
| TPH-Oil | < 25   |
| BTEX    | < 0.05 |
| PCE     | < 0.1  |

|         |        |
|---------|--------|
| SB-3    | 5 ft   |
| TPH-G   | < 5    |
| TPH-D   | < 10   |
| TPH-Oil | < 25   |
| BTEX    | < 0.05 |
| PCE     | < 0.1  |

|         |        |
|---------|--------|
| MW-7    | 5 ft   |
| TPH-G   | < 5    |
| TPH-D   | < 10   |
| TPH-Oil | < 25   |
| BTEX    | < 0.05 |
| PCE     | < 0.1  |

|         |         |
|---------|---------|
| EPI-39  | 8-10 ft |
| TPH-G   | < 5     |
| TPH-D   | < 29    |
| TPH-Oil | < 58    |
| BTEX    | < 0.058 |

|              |         |          |
|--------------|---------|----------|
| EPI-18       | 7-10 ft | 10-13 ft |
| TPH-G        | 190     | < 5      |
| Ethylbenzene | 0.059   | < 0.050  |
| Total xylene | 0.28    | < 0.050  |

**LEGEND**

- Soil Boring
- ⊕ Monitoring Well

|         |        |                         |
|---------|--------|-------------------------|
| MW-9    | 2.5 ft | Sample Depth            |
| TPH-D   | 1,100  | Concentration in        |
| TPH-Oil | 44     | parts per million (ppm) |

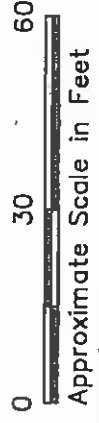
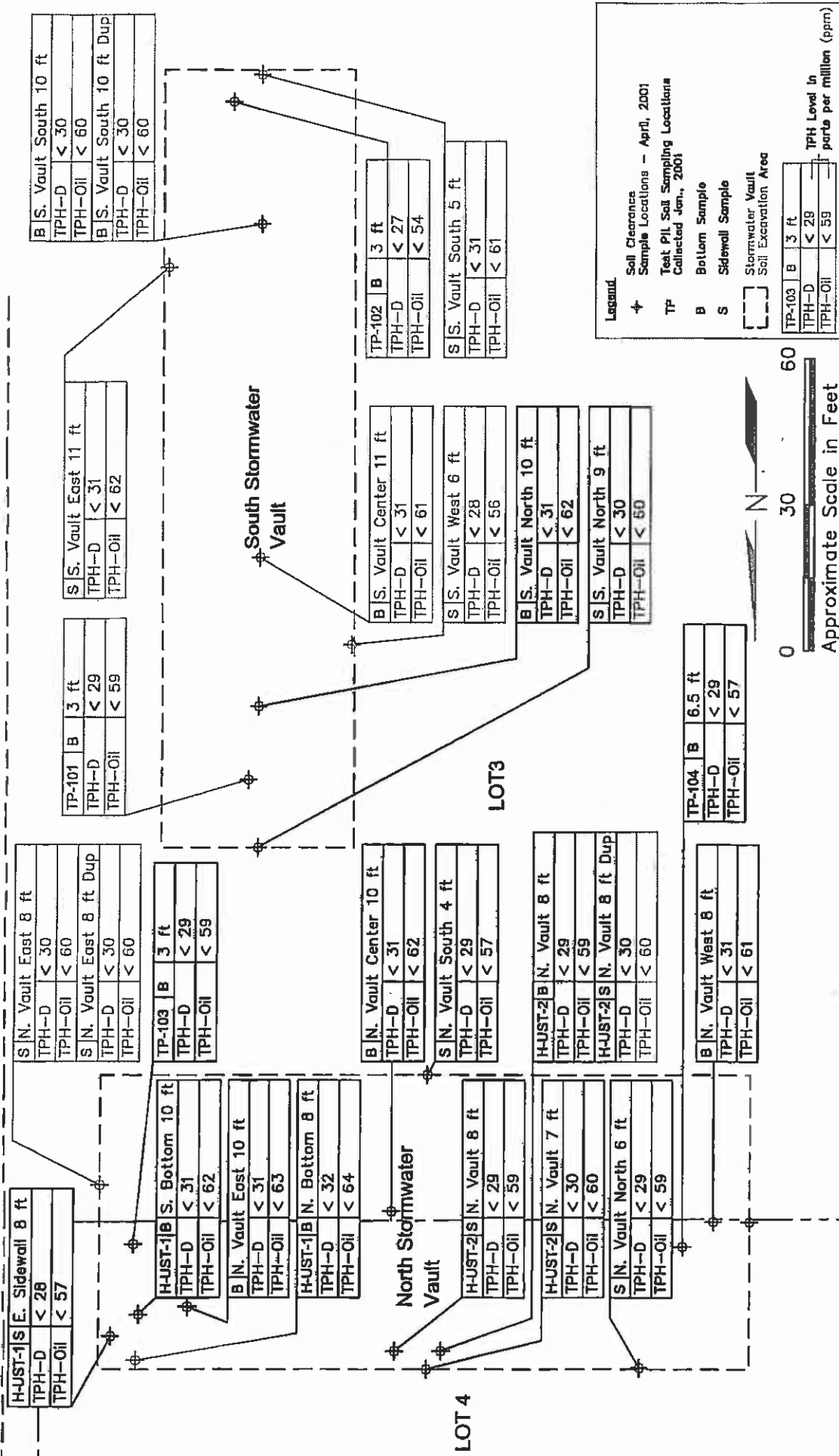


Figure 4  
Soil Borings  
Total Petroleum Hydrocarbons and  
Tetrachloroethylene Sampling Results

Juanita Village Property  
Kirkland, Washington

KANE  
Environmental, Inc.

98TH AVENUE NE



**Figure 3**  
Storm Water Vault Soil Total Petroleum Hydrocarbon Sampling Results

Juanita Village Property  
Kirkland, Washington

**KANE**  
Environmental, Inc.

DATE: 12/15/01  
BY: [Signature]  
PROJECT: [Signature]

98TH AVENUE NE

|         |   |             |      |
|---------|---|-------------|------|
| H-UST-1 | S | E. Sidewall | 8 ft |
| TPH-D   |   |             | < 28 |
| TPH-Oil |   |             | < 57 |

|         |   |           |       |
|---------|---|-----------|-------|
| H-UST-1 | B | S. Bottom | 10 ft |
| TPH-D   |   |           | < 31  |
| TPH-Oil |   |           | < 62  |

|         |          |      |       |
|---------|----------|------|-------|
| B       | N. Vault | East | 10 ft |
| TPH-D   |          |      | < 31  |
| TPH-Oil |          |      | < 63  |

|         |   |           |      |
|---------|---|-----------|------|
| H-UST-1 | B | N. Bottom | 8 ft |
| TPH-D   |   |           | < 32 |
| TPH-Oil |   |           | < 64 |

North Stormwater Vault

|         |   |          |      |
|---------|---|----------|------|
| H-UST-2 | S | N. Vault | 8 ft |
| TPH-D   |   |          | < 29 |
| TPH-Oil |   |          | < 59 |

|         |   |          |      |
|---------|---|----------|------|
| H-UST-2 | S | N. Vault | 7 ft |
| TPH-D   |   |          | < 30 |
| TPH-Oil |   |          | < 60 |

|         |          |       |      |
|---------|----------|-------|------|
| S       | N. Vault | North | 6 ft |
| TPH-D   |          |       | < 29 |
| TPH-Oil |          |       | < 59 |

|         |   |          |          |
|---------|---|----------|----------|
| H-UST-2 | B | N. Vault | 8 ft     |
| TPH-D   |   |          | < 29     |
| TPH-Oil |   |          | < 59     |
| H-UST-2 | S | N. Vault | 8 ft Dup |
| TPH-D   |   |          | < 30     |
| TPH-Oil |   |          | < 60     |

|         |   |  |        |
|---------|---|--|--------|
| TP-104  | B |  | 6.5 ft |
| TPH-D   |   |  | < 29   |
| TPH-Oil |   |  | < 57   |

LOT 4

LOT 3

**Legend**

- ⊕ Soil Clearance Sample Locations - April, 2001
- TP Test Pit Soil Sampling Locations Collected Jan., 2001
- B Bottom Sample
- S Sidewall Sample
- Stormwater Vault
- Soil Excavation Area

|         |   |      |
|---------|---|------|
| TP-103  | B | 3 ft |
| TPH-D   |   | < 29 |
| TPH-Oil |   | < 59 |

TPH Level in parts per million (ppm)



**Figure 3**  
North Storm Water Vault Soil  
Total Petroleum Hydrocarbon Sampling Results

Juanita Village Property  
Kirkland, Washington

**KANE**  
Environmental, Inc.

DATE: 02/19/01  
BY: [Signature]  
JOB NAME: [Signature]



Environmental, Inc.

---

**DRAFT**  
**Notice of Completion for**  
**Soil and Groundwater**  
**Lot 7**

**Juanita Village Property**  
**Kirkland, Washington**


Prepared For:

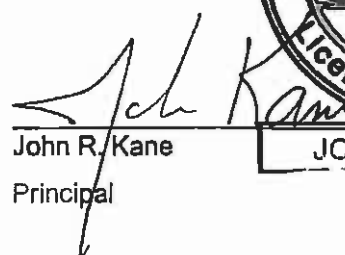
**Juanita Village L.L.C.**  
**10843 N.E. 8<sup>th</sup> Street**  
**Suite 200**  
**Bellevue, WA 98004**

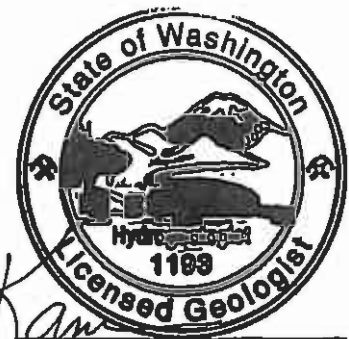
**November 28, 2001**

Prepared By:

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Geoff T. Klise  
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John R. Kane  
Principal



JOHN R. KANE

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Figure 1 – Site Plan

Figure 2 – Investigation Locations and Analytical Results

Attachment A – References Cited

Attachment B – Laboratory Analytical Data

## **1.0 INTRODUCTION**

The purpose of this report is to describe soil and groundwater investigation and groundwater monitoring activities in application for a Notice of Completion letter for soil and groundwater for Lot 7 at the Juanita Village property (Property). Kane Environmental, Inc. has completed this report in accordance with Compliance Monitoring Plan requirements established in the Juanita Village Prospective Purchaser Consent Decree 00-2-16556-1SEA dated November 7, 2000. A site plan showing Lot 7 in relation to other lots on the Property is presented as Figure 1.

## **2.0 LOT 7 INVESTIGATION ACTIVITIES**

Lot 7 is located on the middle to west half of the Property (Figure 1). Lot 8 bounds Lot 7 to the north and west, Lot 6 bounds Lot 7 to the east, Lot 5 bounds Lot 7 to the south and west.

### **2.1 PSI Phase I Environmental Site Assessment**

In 1991, Professional Service Industries, Inc. (PSI) of Seattle, WA performed a Phase I Environmental Site Assessment at the north end of the Juanita Village Property, currently identified as Lots 7, 8 and 9 and the north end of Lot 6 (Figure 1). PSI stated that the study area (referring to the location of Lot 7) was undeveloped, consisting of trees with dense underbrush located south of the former Market Place grocery store. PSI also noted that no potential sources of surface contamination were observed on Lot 7 and the surrounding parcels. While performing the site walkthrough, PSI identified a dry cleaner located in the retail strip mall building. (This former dry cleaner was located in the former location of the Maytag Laundry facility in the retail strip mall building). PSI reported, during an interview with the Property owner in 1991, that dry cleaning operations were not conducted at the location in the strip mall building and that the location was utilized only for drop off and pick up of items dry cleaned off-site (PSI, 1991).

### **2.2 Terra Associates Level I and II Environmental Assessments**

In 1994, Terra Associates, Inc. (Terra) of Kirkland, WA performed a Level I Environmental Assessment at the north end of the Juanita Village Property, currently identified as Lots 7, 8 and 9 and the north end of Lot 6 (Figure 1). Terra stated that property use to the north of Lot 7 consisted of retail operations including a Market Place grocery store and a small strip of retail shops. Terra also stated that the Juanita Auto Service (former Texaco service station) was located in Lot 6, downgradient and southeast of Lot 7. As part of a Phase II Environmental Assessment, Terra installed three groundwater monitoring wells in the vicinity of the Juanita Auto Service building to measure groundwater quality and determine groundwater flow direction. They reported that concentrations of TPH-Oil found in groundwater was



attributed to organic interference from overlying soils. Terra reported that the groundwater was flowing to the southwest, towards Lot 5. Based on investigation work performed by Terra, Lot 7 was located hydraulically up gradient from the former Juanita Auto Service property in Lot 6 (Terra, 1994).

### **2.3 Terra Associates Environmental Sampling & Testing - Preliminary Report**

In July 1998, Terra installed four monitoring wells in Lots 8 and 9 (north of Lot 7) to determine the extent of potential dry cleaning solvents (tetrachloroethylene (PCE)) contamination in groundwater from the former on-site dry cleaning operation. These groundwater wells were sampled in 1998 and revealed PCE contaminated groundwater above the MTCA Method A Groundwater Cleanup Level of PCE of 5 parts per billion (ppb). Terra confirmed that the groundwater flow direction was also to the southwest in this portion of the Property, away from Lot 7 (Terra, 1998).

### **2.4 EPI Environmental Investigations**

#### **2.4.1 Phase II Addendum 1 Investigation**

In September 1998, a Phase II Addendum 1 Investigation was conducted by Environmental Partners, Inc. of Bellevue, WA (EPI) to determine if PCE-impacted groundwater was flowing off-site from the Property. Groundwater was collected in Lot 8, southwest of Lot 7, (sampling location EPI-21) using a hydropunch drill rig (Strataprobe) and analyzed for dry cleaning solvents (Figure 2). Analytical results for EPI-21 revealed a PCE concentration of 64 parts per billion (ppb), above the MTCA Method A Groundwater Cleanup Level for PCE of 5 ppb. Other groundwater samples collected down-gradient from Lot 7 during the same investigation resulted in non-detectable concentrations of PCE. To confirm the presence or absence of PCE, permanent groundwater monitoring well EPI-MW-2 was installed in Lot 7. (Analytical results are presented in Table 1, Figure 2 and Appendix B).

#### **2.4.2 Monitoring Well EPI-MW-2 Analytical Results**

One soil sample was collected during the installation of permanent groundwater monitoring well EPI-MW-2. The soil sample was collected from the soil-water interface and analyzed for dry cleaning solvents. Analytical results revealed non-detectable concentrations of dry cleaning solvents in soil. This result revealed that dry cleaning solvents were not located in soil on Lot 7. Groundwater samples collected from EPI-MW-2 in October 1998 and August 1999 resulted in PCE concentrations of 3.7 ppb and 3.0 ppb, respectively, both below the MTCA Method A Groundwater Cleanup Level for PCE of 5.0 ppb (EPI, 1999).

Groundwater compliance monitoring results collected from EPI-MW-2 in January 2001 (Compliance Monitoring Baseline groundwater sampling) and April 2001 (First Round groundwater sampling) resulted

in PCE concentrations of 3.1 and 2.3 ppb, respectively, both below the MTCA Method A Groundwater Cleanup Level for PCE of 5 ppb. (For purposes of the Compliance Monitoring Reporting Nomenclature, EPI-MW-2 was changed to MW-6 starting with the Second Round groundwater sampling event in July 2001). In July 2001, groundwater collected from EPI-MW-2 (MW-6) resulted in non-detectable concentrations of PCE. In October 2001, groundwater collected from EPI-MW-2 (MW-6) resulted in a concentration of 3 ppb, below the MTCA Method A Cleanup Level for PCE in Groundwater of 5 ppb. Analytical results are presented in Table 1, Figure 2 and Appendix B.

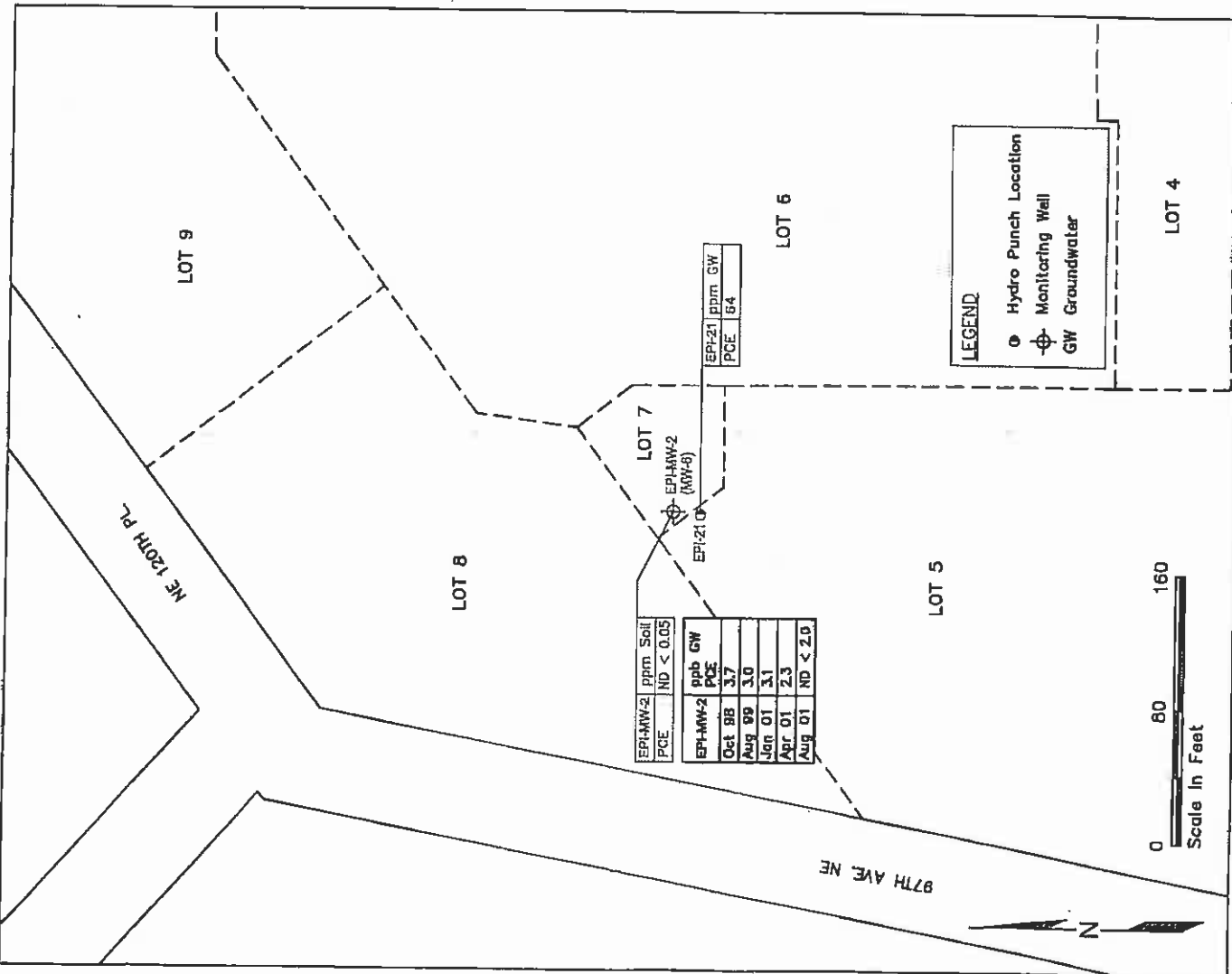
### 3.0 CONCLUSIONS

Phase I investigation activities performed by PSI in 1991 and Terra in 1994 revealed that historic land uses on Lots 7, 8 and 9 did not pose potential adverse impacts to soil and groundwater on Lot 7. In 1994, Terra identified the presence of a PCE plume from a former dry cleaning operation located in the strip mall building north of Lot 7, with the plume flowing southwest from the strip mall building, away from Lot 7.

EPI collected groundwater from a temporary boring (EPI-21) using a Strataprobe drill rig to sample groundwater in the southwestern portion of Lot 8 (Figure 2), resulting in a PCE concentration of 64 ppb, above the MTCA Method A Groundwater Cleanup Level of 5 ppb. EPI installed permanent groundwater monitoring well EPI-MW-2 (MW-6) in Lot 7 to further assess groundwater quality. Subsequent groundwater sampling events from 1998 through October 2001 revealed that all the groundwater analytical data collected from EPI-MW-2 (MW-6) resulted in PCE concentrations below the MTCA Method A Groundwater Cleanup level for PCE of 5 ppb.

A total of six (6) groundwater samples have been collected from EPI-MW-2 (MW-6) in Lot 7 since 1998, including the four consecutive quarters of groundwater sampling. All of the groundwater samples have resulted in PCE concentrations below the MTCA Method A Groundwater Cleanup Level for PCE of 5 ppb.

Based the soil and groundwater analytical results, Kane Environmental requests a Notice of Completion for Soil and Groundwater for Lot 7 and requests the closure of groundwater monitoring well EPI-MW-2 (MW-6).



| EPI-MW-2 | ppm Soil  |
|----------|-----------|
| PCE      | ND < 0.05 |

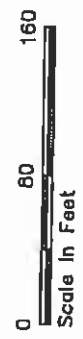
| EPI-MW-2 | ppb GW   |
|----------|----------|
| PCE      | 3.7      |
| Oct 88   | 3.0      |
| Aug 99   | 3.1      |
| Jan 01   | 2.3      |
| Aug 01   | ND < 2.0 |

| EPI-21 | ppm GW |
|--------|--------|
| PCE    | 54     |

**LEGEND**

- Hydro Punch Location
- ⊕ Monitoring Well
- GW Groundwater



|                                    |  |   |
|------------------------------------|--|---|
| <b>KANE</b><br>Environmental, Inc. | Juanita Village Property<br>Kirkland, Washington | Figure 2<br>Investigation Locations<br>and Analytical Results |
|------------------------------------|--|---|



Environmental, Inc.

**DRAFT**  
**Notice of Completion for**  
**Soil and Groundwater**  
**Lots 4 and 6**

**Juanita Village Property**  
**Kirkland, Washington**

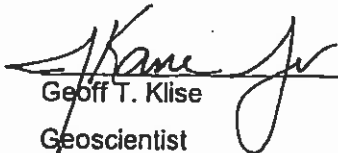
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Table 1 – Historic Groundwater Analytical Results

Table 2 – Hydropunch Sampling Analytical Results

Figure 1 – Site Plan

Figure 2 – Investigation and Remediation Locations

Figure 3 – Historic Groundwater Flow Map August 1999

Attachment A – References Cited

Attachment B – Laboratory Analytical Data

## 1.0 INTRODUCTION

The purpose of this report is to describe soil and groundwater investigation monitoring and remediation activities for Lots 4 and 6 at the Juanita Village property (Property). Kane Environmental, Inc. has completed this report in accordance with Compliance Monitoring Plan requirements established in the Juanita Village Prospective Purchaser Consent Decree 00-2-16556-1SEA dated November 7, 2000. A site plan showing relative locations for each lot is presented as Figure 1.

## 2.0 LOT 4

### 2.1 North Storm Water Vault Soil Sampling

As part of the Property development project, one storm water vault was constructed on the eastern portion of the Property. Kane Environmental performed soil clearance sampling activities in Lot 4 to assess the potential of soil contamination related to the up-gradient former Juanita Auto Service (Figure 2). More details are available in the report entitled "Juanita Village Soil Compliance Monitoring Sampling Report, Former Juanita Auto Service & Storm Water Vaults", prepared by Kane Environmental, Inc. of Seattle, WA on July 19, 2001. Ecology accepted this report and issued a Notice of Completion for Soil on August 31, 2001 for soil at the north storm water vault located in Lot 4.

## 3.0 LOT 6

Lot 6 is located on the east side of the Property, north and adjacent to Lot 4 (Figure 1). Phase I Environmental Site Assessments (ESA) were conducted on areas north and west of Lot 6 by Professional Service Industries, Inc. (PSI) of Seattle, WA in January 1991 and Terra Associates, Inc. (Terra) of Kirkland, WA in April 1994. Each investigation identified the Juanita Auto Service property, located south adjacent to 98<sup>th</sup> Ave NE. The property was formerly a Texaco Service Station.

### 3.1 Soil Investigation and Remediation

Terra performed a Limited Level II Site Assessment at the Juanita Auto Service property in 1994. The work consisted of installation of thirteen soil borings with six borings completed as monitoring wells. Selected soil samples from both the soil borings and monitoring wells were analyzed for TPH-diesel, TPH-oil, TPH-gasoline, and benzene, toluene, ethylbenzene and total xylenes (BTEX). Analytical results revealed concentrations of TPH-diesel and TPH-oil below the Interim MTCA Method A Cleanup Level for Soil of 2,000 parts per million (ppm), concentrations of TPH-gasoline and BTEX below MTCA Method A Cleanup Levels for Soil (100 ppm, 0.5 ppm, 20 ppm, 40 ppm and 20 ppm, respectively) and non-detectable concentrations of TPH-diesel, TPH-oil, TPH-gasoline and BTEX.

As part of the development activities at the Property, the Juanita Auto Service building was demolished. Kane Environmental performed soil clearance sampling activities in the vicinity of the former Juanita Auto Service property. See Figure 2 for sample locations. More details are available in the report entitled "Juanita Village Soil Compliance Monitoring Sampling Report, Former Juanita Auto Service & Storm Water Vaults", prepared by Kane Environmental, Inc. of Seattle, WA on July 19, 2001. Ecology accepted this report and issued a Notice of Completion for Soil on August 31, 2001 for soil at the Juanita Auto Service on Lot 6.

### **3.2 Groundwater Investigation**

Groundwater samples from six permanent monitoring wells were collected in the vicinity of the Juanita Auto Service building from December 1993 to March 2001. The samples were primarily analyzed for petroleum hydrocarbon products, including TPH-diesel, TPH-oil, TPH-gasoline, BTEX, and Methyl Tertiary Butyl Ether (MTBE). Selected groundwater samples were also analyzed for halogenated VOCs (HVOCs) due to the presence of a groundwater plume containing tetrachloroethylene (PCE) in the northern half of the Juanita Village Property.

#### **3.2.1 Terra Limited Level II Environmental Site Assessment**

Terra Associates completed six soil borings as monitoring wells in the vicinity of the Juanita Auto Service building (MW-1, MW-3, MW-4, MW-101, MW-102, MW-103). See Figure 2 for monitoring well locations. Initial groundwater sampling was conducted on the six wells in December 1993 and March 1994. Selected samples were analyzed for TPH-diesel, TPH-oil, TPH-gasoline, BTEX, total and dissolved lead and VOCs. Analytical results revealed the presence of TPH-oil in monitoring wells MW-101 (2200 ppb), MW-102 (1800 ppb), and MW-103 (1500 ppb) at concentrations above the MTCA Method A Cleanup Level for Oil in Groundwater of 1,000 ppb. All other analytes had non-detectable concentrations. Terra stated in their Level II Report that an organic topsoil layer was responsible for leaching of organics detected in monitoring wells MW-101, MW-102 and MW-103, which is not representative of TPH organics. See Table 1 for analytical results and Attachment B for analytical data.

#### **3.2.2 Terra Preliminary Report - Environmental Sampling and Testing**

Groundwater samples were collected from four monitoring wells, MW-3, MW-101, MW-102 and MW-103 and analyzed for TPH-diesel, TPH-oil, TPH-gasoline, BTEX and VOCs by Terra in May 1998. One sample collected from MW-3 had a concentration of TPH-oil of 2,400 ppb, above the MTCA Method A Cleanup Level for Oil in Groundwater of 1,000 ppb. TPH-diesel was found in monitoring wells MW-3, MW-102 and MW-103 at concentrations below the MTCA Method A Cleanup Level for Diesel in

Groundwater of 1,000 ppm. All other analytes had non-detectable concentrations. More details of this groundwater sampling event are presented in the "Preliminary Report - Environmental Sampling and Testing, Juanita Beach Development, Kirkland, Washington" prepared by Terra Associates, Inc. of Kirkland, WA in July 1998. See Table 1 for analytical results and Attachment B for analytical data.

### **3.2.3 EPI Final Remedial Investigation**

Environmental Partners, Inc. (EPI) performed two groundwater sampling events as part of the Remedial Investigation for the Juanita Village Property. The first investigation was conducted in September 1998 with groundwater samples collected from five monitoring wells; MW-1, MW-3, MW-4, MW-101 and MW-102, with duplicate samples from MW-3 and MW-102 and four hydropunch locations; EPI-4, EPI-5, EPI-6 and EPI-25.

Selected groundwater samples were analyzed for TPH-diesel, TPH-oil, TPH-gasoline, BTEX and VOCs. Analytical results revealed PCE in monitoring well MW-102 with a concentration of 7.6 ppb, above the MTCA Method A Cleanup Level of PCE in Groundwater of 5 ppb. PCE was discovered in monitoring wells MW-4 and MW-101, and in hydropunch location EPI-4 with concentrations of 2.6 ppm, 1.3 ppm and 1.3 ppm respectively, below the MTCA Method A Cleanup Level of PCE in Groundwater of 5 ppb. Total xylenes were discovered in MW-102 with a concentration of 2.3 ppb, below the MTCA Method A Cleanup Level for Total Xylenes in Groundwater of 20 ppb. All other analytes had non-detectable concentrations.

The second investigation was conducted in August 1999 with groundwater samples collected from five monitoring wells; MW-1, MW-3, MW-4, MW-101 and MW-103. Five samples and one duplicate sample from MW-101 were analyzed for TPH-diesel and TPH-oil. The sample from MW-101 was also analyzed for HVOCs due to its proximity to a known PCE plume on the northern end of the Property. Analytical results indicated non-detectable concentrations of TPH-diesel and TPH-oil in each monitoring well and non-detectable concentrations of HVOCs. See Tables 1 and 2 for analytical results and Appendix B for analytical data.

### **3.2.4 November 2000 Juanita Auto Service Groundwater Sampling**

Groundwater samples were collected from five monitoring wells in the vicinity of the Juanita Auto Service building at the request of Maura O'Brien, the Ecology representative for the Property in November 2000. Groundwater from monitoring wells MW-1, MW-3, MW-4, MW-101 and MW-103 was sampled and analyzed for TPH-diesel, TPH-oil, TPH-gasoline, BTEX and MTBE. This sampling event was the first time MTBE was analyzed in these wells. Analytical results indicated TPH-gasoline at a concentration of 110 ppb, below the MTCA Method A Cleanup Level for Gasoline in Groundwater of 1,000 ppb. All other



analytes had non-detectable concentrations. See Table 1 for analytical results and Appendix B for analytical data.

A figure indicating groundwater flow direction is presented in Figure 3 for reference purposes. Based on depth to water measurements, groundwater flow direction was to the southwest.

### **3.2.5 January 2001 Juanita Auto Service Groundwater Sampling**

Groundwater samples were collected from two monitoring wells in the vicinity of the Juanita Auto Service building at the request of Maura O' Brien, the Ecology representative for the Property in January 2001. Groundwater from monitoring wells MW-1 and MW-3 was sampled and analyzed for TPH-diesel, TPH-oil, TPH-gasoline, BTEX, MTBE and dissolved lead. Analytical results indicated non-detectable concentrations for all analytes. See Table 1 for analytical results and Appendix B for analytical data.

### **3.2.6 March 2001 Juanita Auto Service Groundwater Sampling**

Groundwater samples were collected from five monitoring wells in the vicinity of the Juanita Auto Service building at the request of Maura O' Brien, the Ecology representative for the Property in March 2001. Groundwater from monitoring wells MW-1, MW-3, MW-4, MW-101 and MW-103 was sampled and analyzed for PCE. Analytical results indicated non-detectable concentrations for PCE in each well. See Table 1 for analytical results and Appendix B for analytical data.

## **4.0 CONCLUSIONS AND RECOMMENDATIONS**

### **4.1 Lot 4 Soil and Groundwater**

Phase I investigation activities performed by PSI in 1991 and Terra in 1994 for Lot 4 revealed that historic land use did not pose a threat to soil and groundwater on Lot 4. Soil and groundwater results from investigation activities performed by Terra in 1993 and 1994 for Lot 6 revealed little to no impact of petroleum hydrocarbon products to soil and groundwater and therefore did not reveal any environmental conditions that could impact soil or groundwater in Lot 4. Terra also identified the presence of a PCE plume from up-gradient dry cleaning operations as flowing southwest, away from Lot 4.

Soil samples were collected during excavation activities for a storm water vault on the south end of Lot 4. Soil samples from the excavation revealed non-detectable concentrations of petroleum hydrocarbons. The Department of Ecology issued a Notice of Completion for the storm water vault area on Lot 4 on August 31, 2001.

Kane Environmental requests a Notice of Completion for Soil and Groundwater for Lot 4 based on site investigation activities completed for this lot.

## **4.2 Lot 6**

### **4.2.1 Soil**

The Department of Ecology issued a Notice of Completion for Soil for the Juanita Auto Service property on August 31, 2001. This letter addressed soil investigation and remediation activities performed at the property by Terra Associates and Kane Environmental.

### **4.2.2 Groundwater**

Terra Associates installed six groundwater monitoring wells in the vicinity of the Juanita Auto Service building in 1993 and 1994. Initial baseline analytical data revealed TPH-oil in monitoring wells MW-3, MW-101 and MW-103 above the MTCA Method A Cleanup Level for Oil in Groundwater of 1,000 ppb. Terra associated these high concentrations to the proximity of an organic soil layer that could leach into the groundwater, causing false positives of TPH-oil. Sampling by Terra in 1998, EPI in 1998 and 1999 and Kane Environmental in 2000 and 2001 revealed no detectable concentrations of TPH-oil in groundwater in MW-3, MW-101 and MW-103, and also in MW-1, MW-4 and MW-102.

TPH-diesel was detected in groundwater in monitoring wells MW-3, MW-102 and MW-103 during the 1998 sampling event by Terra at concentrations below the MTCA Method A Cleanup Level for Diesel in Groundwater of 1,000 ppb. Terra did not use the silica gel acid wash cleanup method in the analysis. Subsequent sampling by EPI in 1998 and 1999 and Kane Environmental in 2000 and 2001 revealed no detectable concentrations of TPH-diesel in groundwater in all six wells.

TPH-gasoline was detected in groundwater in monitoring well MW-1 during the 2000 sampling event by Kane Environmental at concentrations below the MTCA Method A Cleanup Level for Gasoline in Groundwater of 1,000 ppb. Subsequent sampling performed by Kane Environmental in 2001 revealed non-detectable concentrations of TPH-gasoline in monitoring well MW-1, and also in MW-3, MW-4, MW-101 and MW-103.

Total xylenes were detected in groundwater in monitoring well MW-102 during the 1998 sampling event by EPI at concentrations below the MTCA Method A Cleanup Level for Total Xylenes in Groundwater of 20 ppb. Subsequent sampling performed by Kane Environmental in 2001 revealed non-detectable concentrations of total xylenes in monitoring well MW-102.

PCE was detected in groundwater in monitoring well MW-102 during the 1998 sampling event by EPI at concentrations above the MTCA Method A Cleanup Level for PCE in Groundwater of 5 ppb. Monitoring wells MW-4 and MW-101 had detectable concentrations of PCE below the MTCA Method A Cleanup Level for PCE in Groundwater of 5 ppb. Subsequent sampling performed by Kane Environmental in 2001 revealed non-detectable concentrations of PCE in monitoring wells MW-4, MW-101 and MW-102, and also in MW-1, MW-3 and MW-103.

In summary, groundwater from monitoring wells MW-1, MW-3, MW-4, MW-101, MW-102 and MW-103 was sampled initially in 1993 and 1994. Periodic sampling was conducted from 1998 to 2001 to determine primarily if TPH from the Juanita Auto Service property had impacted groundwater and if a plume of PCE identified north and northwest of Lot 6 had the potential to impact groundwater on Lot 6. Analytical result trends reveal that there are no detectable concentrations of TPH or PCE on Lot 6 of the Juanita Village Property.

Kane Environmental requests a Notice of Completion for Groundwater for Lot 6 based on site investigation and monitoring activities completed for this lot.

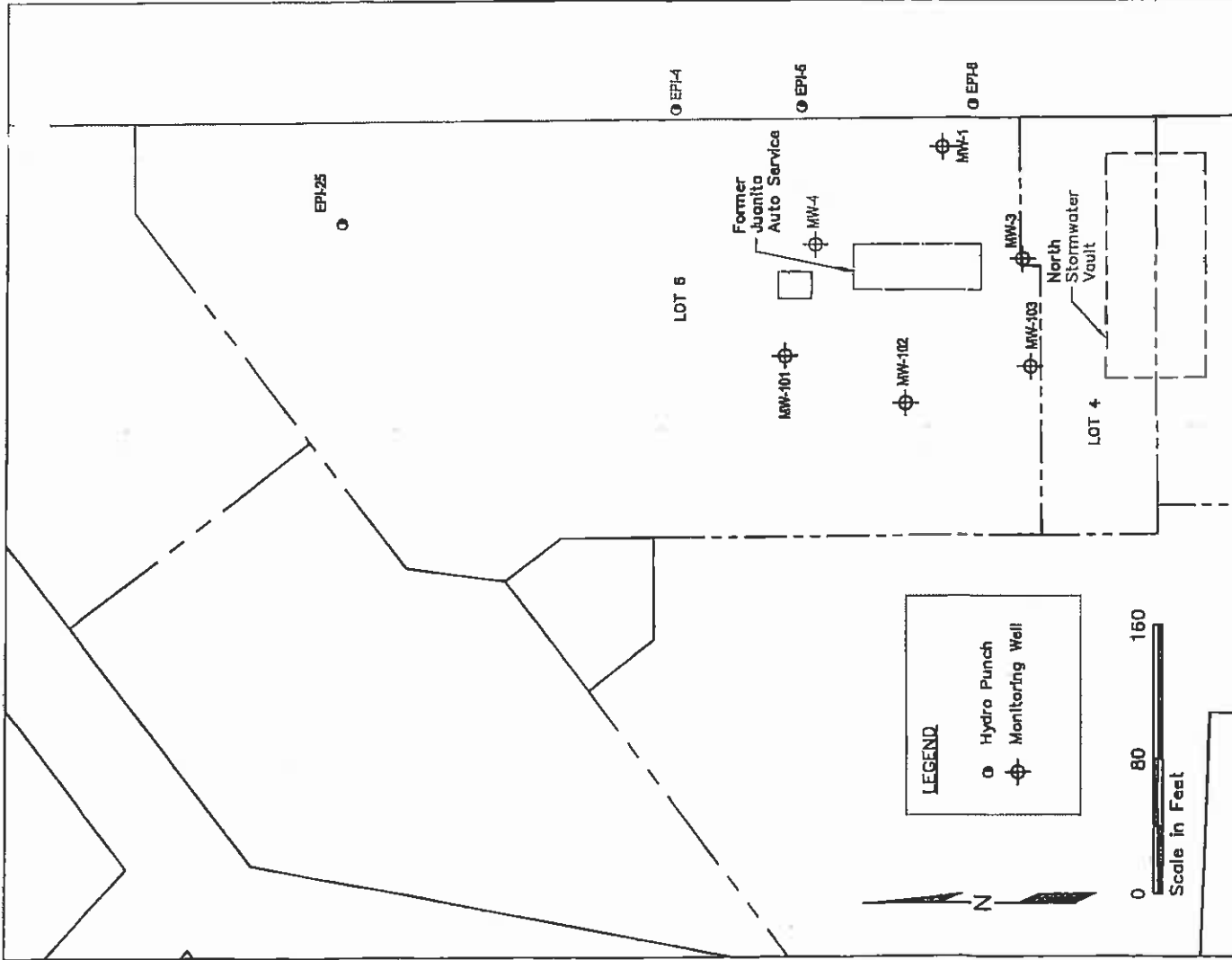


Figure 2  
Investigation and Remediation Locations

Juanita Village Property  
Kirkland, Washington

**KANE**  
Environmental, Inc.

DATE: 10/23/01 08:46:00  
C:\Project\Juanita\Juanita\Juan-02.dwg

# KANE

Environmental, Inc.

---

## DRAFT Notice of Completion for Soil and Groundwater Lot 5

### Juanita Village Property Kirkland, Washington

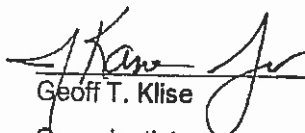
Prepared For:

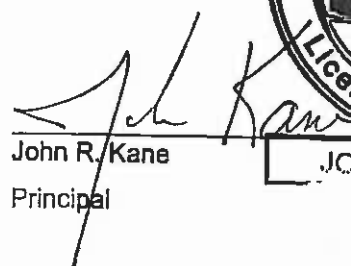
**Juanita Village L.L.C.**  
**10843 N.E. 8<sup>th</sup> Street**  
**Suite 200**  
**Bellevue, WA 98004**

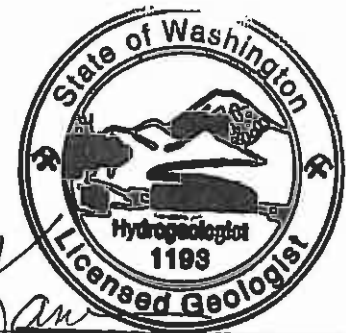
**January 21, 2002**

Prepared By:

Kane Environmental, Inc.  
2415 7<sup>th</sup> Avenue West  
Seattle, WA 98119

  
\_\_\_\_\_  
Geoff T. Klise  
Geoscientist

  
\_\_\_\_\_  
John R. Kane  
Principal



JOHN R. KANE

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## **1.0 INTRODUCTION**

The purpose of this report is to describe soil and groundwater investigation and monitoring activities for Lot 5 at the Juanita Village property (Property). Kane Environmental, Inc. has completed this report in accordance with Compliance Monitoring Plan requirements established in the Juanita Village Prospective Purchaser Consent Decree 00-2-16556-1SEA dated November 7, 2000. A site plan showing Lot 5 in relation to other lots on the Property is presented as Figure 1.

## **2.0 LOT 5 INVESTIGATION ACTIVITIES**

Lot 5 is located on the middle to west half of the Property (Figure 1). The western boundary of Lot 5 bounds 97th Avenue NE.

### **2.1 PSI Phase I Environmental Site Assessment**

Professional Service Industries, Inc. (PSI) performed a Phase I Environmental Site Assessment at the north end of the Juanita Village Property, north of Lot 5 on Lots 7, 8 and 9 and the north end of Lot 6 (Figure 1). PSI stated that south of the study area (referring to the location of Lot 5) consisted of an undeveloped area consisting of woods with dense underbrush. PSI also noted that no potential sources of surface contamination were observed on Lot 5 and surrounding parcels. While performing the site walkthrough, PSI stated that a dry cleaner was located on the study area (Lot 9). According to PSI, an interview with the current owner revealed that dry cleaning was not conducted at the site and that the site was utilized as a drop off and pick up location for items to be dry cleaned at a different location. More detailed information is presented in the report entitled "Environmental Site Assessment, Phase I at the Juanita Bay Village Shopping Center, Kirkland WA", prepared by PSI of Seattle, WA in January 1991.

### **2.2 Terra Associates Level I Environmental Assessment**

Terra Associates, Inc. (Terra) performed a Level I Environmental Assessment at the north end of the Juanita Village Property on Lots 7, 8 and 9 and the north end of Lot 6 (Figure 1). Terra did not specify property usage on Lot 5, but did indicate that the Juanita Auto Service (former Texaco service station) was located in Lot 6, east and adjacent to Lot 5. Terra installed three groundwater monitoring wells in the vicinity of the Juanita Auto Service building to measure groundwater quality and flow direction. Their report stated that TPH-oil in groundwater was present but could be attributed to organic interference from overlying soils. The groundwater gradient was observed as trending to the southwest (towards the south end of Lot 5). Terra stated that property use to the north of Lot 5 consisted of retail operations including a Market Place grocery store and a small strip of retail shops. More detailed information is presented in the

report entitled "Level I Environmental Assessment, Juanita Market Place, 11849 - 98<sup>th</sup> Avenue NE, Kirkland, WA", prepared by Terra of Kirkland, WA in February 1994.

### **2.3 Terra Associates Limited Level II Site Assessment**

Terra Associates performed a Limited Level II Site Assessment on Lots 1, 5 and 6 in 1994 (Figure 1). Fourteen soil borings were advanced into soil to investigate potential petroleum hydrocarbon contamination from the Juanita Auto Service property in Lot 6 and the former Chevron Service Station property in Lot 1. Seven of the soil borings were completed as permanent groundwater monitoring wells. Three of the seven wells were installed during Phase I investigation activities as discussed above in Section 2.2. The report identified concentrations of TPH-oil above the MTCA Method A Cleanup Level for Oil in Groundwater of 1,000 ppb in three wells on the Juanita Service Station property. As stated above in Section 2.2, Terra believed the TPH-oil concentrations were due to organic interference and not actually TPH-oil as derived from petroleum hydrocarbon products. The groundwater gradient was observed as trending towards the southwest (towards the south end of Lot 5).

Terra Associates collected three surficial soil grab samples from Lot 5 as indicated on Figure 2. This area was identified by Terra as a former fill yard for the former Evergreen Bark and Topsoil operation that was located partially on the east half of Lot 5 and in Lots 1 and 3. The soil grab samples were collected randomly from shallow fill below an unpaved parking area. The samples were designated as EBT-1, EBT-2 and EBT-3 and tested for TPH-diesel, TPH-gasoline, total lead, total cadmium and total chromium. Analytical results for EBT-2 revealed concentrations of TPH-diesel (780 ppm) and TPH-oil (420 ppm) below the Interim Method A Cleanup Level for Soil of 2,000 ppm. According to Terra, soil contamination in the vicinity of sample EBT-2 was localized to the upper foot of the unpaved parking area. Analytical results are presented in Table 1, Figure 2 and Appendix B. More detailed information is presented in the report entitled "Limited Level II Site Assessment, Proposed Market Place, 98<sup>th</sup> Ave NE and Juanita Drive NE, Kirkland, WA", prepared by Terra of Kirkland, WA in April 1994.

### **2.4 Terra Associates Environmental Sampling & Testing - Preliminary Report**

Terra installed four monitoring wells north of Lot 5 in Lots 7, 8 and 9 to evaluate the potential of tetrachloroethylene (PCE) contamination in groundwater from former on-site and off-site dry cleaning operations. The newly installed wells sampled in May and June 1998, revealed PCE contaminated groundwater above the MTCA Method A Cleanup Level of PCE in Groundwater of 5 parts per billion (ppb). Groundwater collected from previously installed monitoring wells in the vicinity of Juanita Auto Service was sampled and analyzed for PCE. No detectable concentrations of PCE were observed in these wells (Subsequent sampling by EPI and Kane Environmental in the vicinity of the Juanita Auto Service revealed non-detectable concentrations of petroleum products and PCE). Terra identified the



groundwater gradient as trending towards the southwest. More detailed information is presented in the report entitled "Preliminary Report, Environmental Sampling and Testing, Juanita Beach Development, Kirkland, WA", prepared by Terra of Kirkland, WA in July 1998.

## **2.5 EPI Final Remedial Investigation**

### **2.5.1 Phase II Addendum 1 Investigation**

The Phase II Addendum 1 Investigation was conducted by EPI in September 1998 to determine if PCE-impacted groundwater was flowing off-site from the Property. The samples were collected in four locations (EPI-21, EPI-23, EPI-24 and EPI-26) with a truck-mounted hydropunch sampler on Lot 5. See Figure 2 for sampling locations. Groundwater samples were collected and analyzed for VOCs. Analytical results revealed concentrations of PCE above the MTCA Method A Cleanup Level for PCE in Groundwater of 5 ppb in EPI-21, with a concentration of 64 ppb. Groundwater samples collected down gradient from EPI-21 included EPI-23, EPI-24 and EPI-26, which revealed non-detectable concentrations of PCE. To confirm the presence of PCE in the vicinity of EPI-21, monitoring well EPI-MW-2 was installed near that sample in Lot 7. Analytical results are presented in Table 2, Figure 2 and Appendix B. Groundwater sampling at EPI-MW-2 is discussed below in Section 2.5.2.

### **2.5.2 Monitoring Well EPI-MW-2**

To further define extents of the PCE plume and confirm the presence or absence of PCE in Lot 5, EPI installed monitoring well EPI-MW-2 in Lot 7 located north and adjacent to Lot 5 in 1998. The well was installed near EPI-21, which had a PCE concentration above the MTCA Method A Cleanup Level for PCE in Groundwater of 5.0 ppb. One soil sample (EPI-MW-2) was collected from the soil-water interface and analyzed for PCE. Analytical results revealed non-detectable concentrations for PCE. Groundwater samples collected from EPI-MW-2 in October 1998 and August 1999 revealed PCE concentrations of 3.7 ppb and 3.0 ppb, respectively, both below the MTCA Method A Cleanup Level for PCE in Groundwater of 5.0 ppb.

Groundwater compliance monitoring for EPI-MW-2 in January 2001 (Baseline sampling) and April 2001 (First Round sampling) revealed PCE concentrations of 3.1 and 2.3 ppb, respectively, both below the MTCA Method A Cleanup Level for PCE in Groundwater of 5 ppb. EPI-MW-2 was changed to MW-6 starting with the Second Round sampling event in July 2001. Analytical results revealed non-detectable concentrations of PCE in groundwater in MW-6 for the Second Round sampling event. Analytical results for the Third (October 2001) and Fourth Round (December 2001) sampling events revealed PCE concentrations of 3.0 ppb and 2.1 ppb, respectively, below the MTCA Method A Cleanup Level for PCE in groundwater of 5 ppb. Analytical results are presented in Table 2, Figure 2 and Appendix B.

### **3.0 JUANITA AUTO SERVICE NOTICE OF COMPLETION FOR SOILS**

Based on sampling and remediation activities completed at the Juanita Auto Service property, Kane Environmental, Inc. applied for a Notice of Completion for Soils Remediation for the former Juanita Auto Service property. Petroleum contaminated soil had been removed from the vicinity of two hydraulic lifts and one waste oil tank. The Washington State Department of Ecology issued a Notice of Completion for Soils Remediation on August 31, 2001. The Juanita Auto Service property is located east, adjacent to Lot 5 in Lot 6 and is up gradient relative to Lot 5.

### **4.0 CONCLUSIONS AND RECOMMENDATIONS**

Phase I investigation activities performed by PSI in 1991 and Terra in 1994 for Lots 7, 8 and 9 revealed that historic land use did not pose a threat to soil and groundwater on Lot 5. Soil and groundwater results from investigation activities performed by Terra in 1993 and 1994 for Lots 5 and 6 and groundwater sampling by EPI and Kane Environmental from 1998 to 2001 revealed no impact of petroleum hydrocarbon products and PCE to soil and groundwater and therefore did not reveal any environmental conditions that could impact soil or groundwater in Lot 5. Terra also identified the presence of a PCE plume from up gradient dry cleaning operations as flowing southwest, up gradient of Lot 5 to the north.

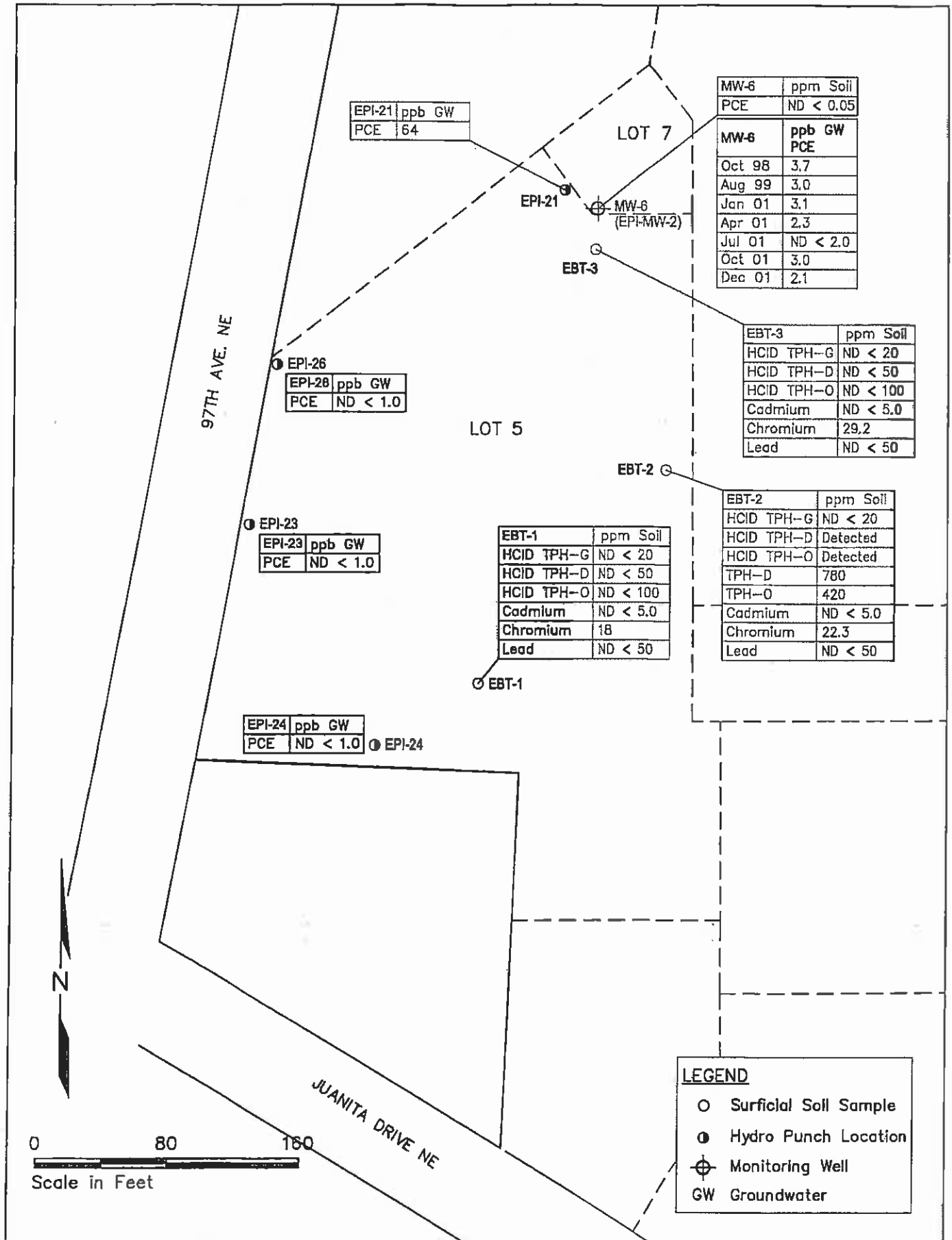
EPI installed four temporary borings to sample groundwater on Lot 5 (EPI-21, EPI-23, EPI-24, EPI-26). One sample (EPI-21) located at the north end of Lot 5 adjacent to Lot 7 had a PCE concentration of 64 ppb, above the MTCA Method A Cleanup Level for PCE in Groundwater of 5 ppb. The three perimeter borings located on the west half of Lot 5 (EPI-23, EPI-24 and EPI-26) revealed no impact to groundwater from PCE. EPI installed monitoring well EPI-MW-2 in Lot 7 to further assess groundwater quality in the vicinity of EPI-21. Subsequent monitoring events starting in 1998 and continuing as part of the Compliance Monitoring Plan for the Property revealed PCE concentrations below the MTCA Method A Cleanup level for PCE in Groundwater of 5 ppb. Groundwater Performance Sampling is currently being conducted on MW-6 (EPI-MW-2). Concentrations from the baseline sampling event to subsequent sampling events until December 2001 revealed concentrations below the MTCA Method A Cleanup Level of 5 ppb for PCE in groundwater and non-detectable concentrations of PCE in groundwater.

Recently, the Washington State Department of Ecology issued a Notice of Completion for Soils Remediation at the Juanita Auto Service property in August 2001. A potential source of contamination was removed when petroleum contaminated soil was removed from the vicinity of two hydraulic lifts and waste oil tanks. Because this property is in an up gradient location from Lot 5, it had the potential to impact soil and/or groundwater on Lot 5. Groundwater sampling conducted on wells in the vicinity of Juanita Auto Service revealed non-detectable concentrations of petroleum hydrocarbons in groundwater.

DRAFT Notice of Completion for Soil and Groundwater Lot 5  
January 21, 2002

Based on investigation activities performed on Lot 5 and surrounding Lots 6, 7, 8 and 9, there is no threat of contamination to soil and groundwater in Lot 5 from past use of Lot 5 and adjacent Lots 6, 7, 8 and 9.


Kane Environmental requests a Notice of Completion for Soil and Groundwater for Lot 5 based on site investigation activities completed for this lot.





Environmental, Inc.

---

**DATE:** May 16, 2002  
**TO:** Ms. Maura O'Brien  
Washington Department of Ecology  
**FROM:** John Kane   
Kane Environmental Inc.  
**RE:** Soil Sampling Results  
Former Dry Cleaners  
Juanita Village Property  
Kirkland, Washington

Kane Environmental Inc. (Kane Environmental) retained the services of Island Concrete & Cutting to cut the concrete floor next to the utility trenches located inside the former dry cleaner at the Juanita Village Property on October 11, 2001. The concrete was cut in 18-inch wide by 3-foot long slabs so the concrete could be lifted by hand to expose the underlying soil. The concrete thickness ranged from 4 to 6 inches. The interior non-load bearing walls and floor tile were removed prior to the concrete cutting to provide more access to the utility trenches for the indoor soil sampling activity. The concrete cuts were located adjacent to the utility trenches because the trenches were lined with steel and the concrete directly adjacent to the steel was over 6-inches thick.

Mr. John Kane and Ms. Maura O'Brien conducted a site visit on Tuesday, October 23 to review the proposed soil sampling locations inside the former dry cleaners. Kane Environmental collected a total of seven (7) soil samples on Thursday, October 25, 2001 (Figure 1). Soil samples were collected using a decontaminated hand-held posthole digger. The soil samples were collected on the sidewalls adjacent to the utility trenches to determine if concentrations of PCE had spread radially from beneath the utility trenches. Soil grab samples were immediately placed in laboratory-supplied glass jars and subsequently hand-delivered on October 25, 2001 to OnSite Environmental Inc. in Redmond, WA for analysis of Halogenated Volatile Organic Compounds (HVOCs).

The analytical results are provided in the Table 1. The analytical data is provided in Attachment A of this memorandum.

Table 1  
Soil Analytical Results  
parts per million (ppm)

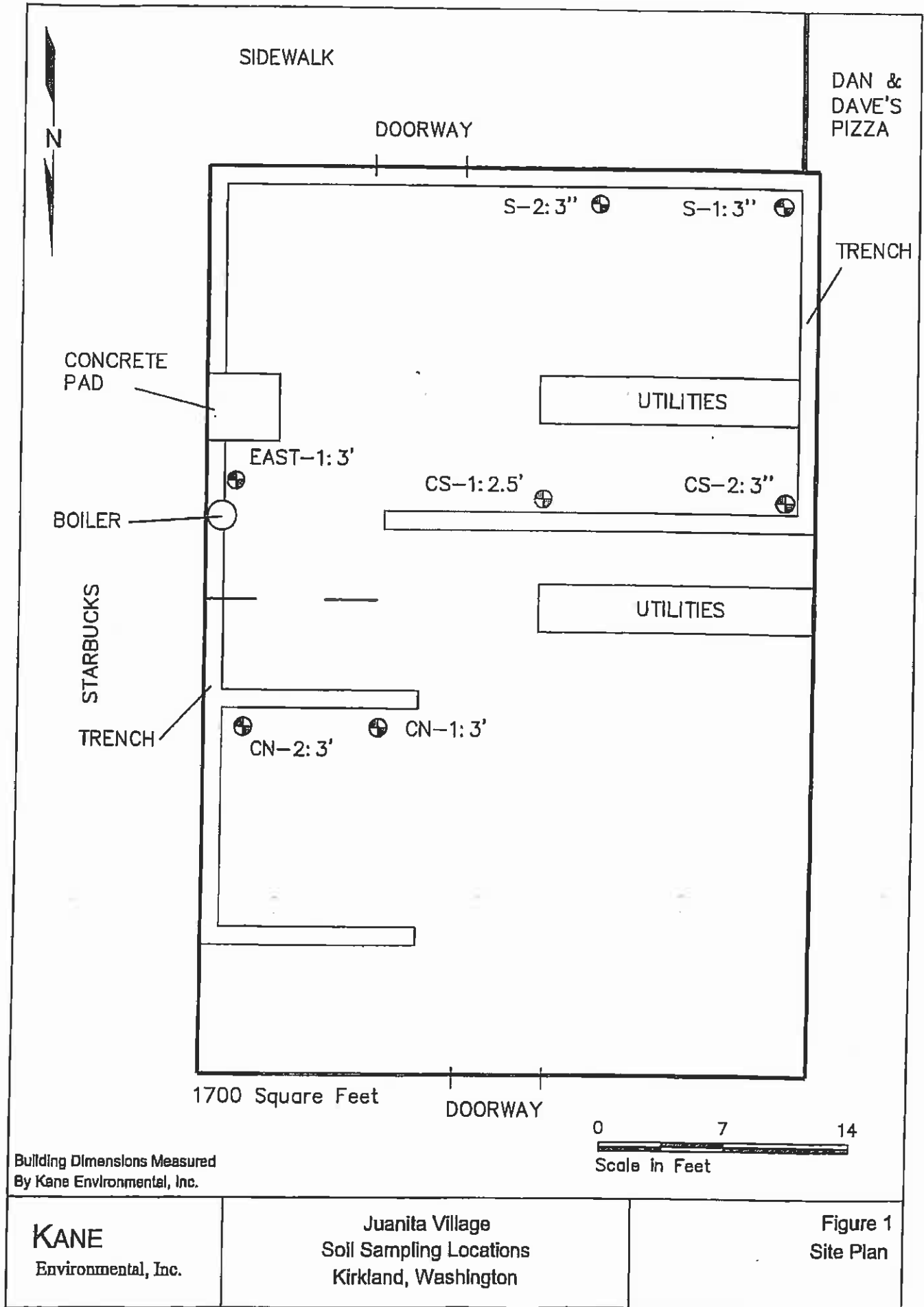
| Sampling Location | Depth<br>(in feet) | PCE Concentration |
|-------------------|--------------------|-------------------|
| CN-1              | 3                  | <0.25             |
| CN-2              | 3                  | <0.25             |
| CS-1              | 2.5                | 0.90              |
| CS-2              | 3                  | 0.51              |
| S-1               | 3                  | <0.25             |
| S-2               | 3                  | <0.25             |
| East-1            | 3                  | <0.25             |

Note: Percent moisture content of the soil samples ranged from 13 to 20%.

All other HVOCs resulted in non-detectable concentrations (Attachment A). All of the soil sample analytical results were below the PCE soil cleanup level of 19.6 ppm, which is consistent with all HVOC soil sampling conducted at the Juanita Village property.

The analytical results of the soil sampling inside the former dry cleaner revealed PCE concentrations at non-detectable concentrations or concentrations below the PCE soil cleanup level. The data results reveal that PCE migrated directly beneath the utility trenches inside the former dry cleaner.

Please call me at (206) 691-0476 if you have any questions.





MEMORANDUM

DATE: July 16, 2004

TO: Ms. Maura O'Brien  
Washington Department of Ecology

FROM: John Kane  
Kane Environmental, Inc.

RE: Juanita Village, LLC Property  
Soil Removal Activity  
Former Onsite Dry Cleaner/Lot 8  
Concrete/Asphalt Fill Material/Lot 5  
Former Petroleum-Impacted Soil Storage/Lot 5  
Underground Storage Tank (UST) Removal/Lot 8

---

On April 6, 2004, Kane Environmental provided oversight and air monitoring during soil excavation activities associated with the removal of tetrachloroethene (PCE) impacted soil from below the foundation of the former dry cleaning facility located at Lot 8 of the Juanita Village property. The objective of this portion of the project was to complete the removal of PCE-impacted soil by excavation, while monitoring air quality conditions. During the oversight activities, Kane Environmental, Inc. was accompanied by Ms. Maura O'Brien, Site Coordinator from the Washington State Department of Ecology (Ecology) Northwest Regional Office. The soil excavation was performed by Environmental Tank Service (ETS) of Auburn, Washington. Air monitoring was conducted by Kane Environmental, Inc. using a photoionization detector (PID).

A previous soil investigation conducted by Kane Environmental titled *Soil Sampling Results Former Dry Cleaners Juanita Village Property* dated May 16, 2002 included soil sample analytical results from soil sampling conducted inside the former dry cleaners, formally located in the strip mall on the Juanita Village property. Three trenches were cut through the concrete floor of the former dry cleaner to collect subsurface soil samples, resulting in non-detectable PCE concentrations in PCE concentrations well below the soil cleanup level.

The three previous trenches (Trenches T-1, T-2 and T-3) were present and visible through cuts on the concrete slab foundation of the former dry cleaning facility



(Photograph 1). ETS initially broke apart portions of the concrete slab adjoining the three trenches then excavated and stockpiled the underlying soil.

Prior to stockpiling, Kane Environmental evaluated selected portions of the excavated material for the potential presence of PCE using a photoionization detector (PID). Based on visual and olfactory observation and the PID readings, Kane Environmental, Inc. made a determination of the vertical and horizontal extents of the three trenches and the volume of soil to be removed. Ms. O'Brien was present to observe the activities and provide concurrence with regards to the final dimensions of the soil excavation trenches on behalf of Ecology.

Trenches T-1 and T-2 were located in the area known to have been impacted by activities at the former dry cleaning operation. Trench T-3 was located approximately 4 feet to the south of Trench T-2.

Soil was excavated to depths ranging from approximately 5.5 feet below ground surface (bgs) in Trench T-3 to 17.5-18.0 feet bgs in Trenches T-1 and T-2. Silty sand was encountered from the ground surface to approximately 5 feet bgs; silty clay was encountered from approximately 5 feet bgs to 10 feet bgs; fine- to medium-grained sand was encountered below approximately 10 feet bgs. Due to slope failure, the three trenches eventually coalesced into one irregularly-shaped excavation. The final dimensions of the excavation were approximately 22-feet by 14-feet (Figure 1).

Approximately 100-cubic yards of soil was excavated from the three trenches and stockpiled on heavy plastic sheeting on the western portion of the site. Five samples were collected from the stockpiled soil and analyzed for the presence of halogenated volatile organic compounds (HVOCs). HVOCs were not detected in four of the five soil samples analyzed. Only one HVOC, PCE, was reported to present in one of the five soil samples analyzed.

*The established soil cleanup level for PCE in soil at the property is 19.6 ppm. Because PCE was not detected in four of the five soil samples analyzed, and the one detected PCE concentration was 0.08 ppm, the excavated/stockpiled material appears to be suitable for reuse at the site.*

### **Fill Material Removal**

On April 5 and April 7, 2004, Kane Environmental provided oversight while ETS segregated assorted debris (concrete, asphalt and other building materials) from fill soil that had previously been placed along the southeast portion of Lot #5. Four solo truck loads of debris were removed and transported offsite on April 5, 2004. An additional double truck load was removed from the site on April 7, 2004. The soil component was left in place. This fill soil was not associated with any of the remedial actions on the Juanita Village property, but the removal of the fill is included in this report to fulfill our reporting requirements with Ecology.

### **Soil Removal from the Former Petroleum-Impacted Soil Storage Area**

On April 7, 2004, Kane Environmental provided oversight while ETS removed soil from the area that had previously been placed beneath the former location of the on-site remediation trailer. This soil had been temporarily placed in this area to provide level ground for the remediation trailer. The soil had been transported from the former on-site auto repair facility and had previously revealed detected concentration of petroleum hydrocarbons below applicable regulatory soil cleanup levels.

Approximately 50 cubic yards of soil was excavated from the area and stockpiled on heavy plastic sheeting on the western portion of the site (immediately south of the stockpiled soil removed from the area below the former dry cleaning facility, Photograph 3). Two samples were collected from the stockpiled soil and analyzed for the presence of Total Petroleum Hydrocarbons (TPH) as diesel, TPH as gasoline and Benzene, Toluene, Ethylbenzene and Xylenes (BTEX).

*Because TPH as diesel, TPH as gasoline and BTEX were not detected in any of the soil samples, the excavated/stockpiled material appears to be suitable for reuse at the site.*

### **Follow-up Monitoring**

On April 12, 2004, Kane Environmental provided additional oversight and air monitoring. Ms. Maura O'Brien, Ecology, was present during these activities. Ms. O'Brien appeared satisfied that the area between the southwest extent of the April 6, 2004 former dry cleaner excavation and the subsurface areas previously assessed by Kane Environmental did not contain soils with elevated concentrations of PCE. Ms. O'Brien stated that no additional air monitoring would be necessary unless visible contaminated soil or material exhibiting strong PCE-associated odor was uncovered.

### **Heating Oil UST Removal and Soil Excavation**

On April 27, 2004, Kane Environmental responded to a call from Mr. Dave Kanta (Avalon Bay) regarding the discovery of an 300-gallon heating oil UST. The UST was unearthed during the excavation of the future sublevel parking area located just south of NE 120<sup>th</sup> Place. Kane Environmental contracted Environmental Tank Service to decommission the UST. The UST was approximately 300-gallons in size and appeared to contain heating oil.

Upon arrival, Kane Environmental investigated the condition of the soil in the area of the UST and determined that a minor release had occurred. Kane Environmental then provided oversight and direction to ETS personnel in order to remove the UST and associated soil.

Kane Environmental screened selected soil samples from the sidewalls and bottom of the excavation. Kane evaluated the field screening of the soil and identified elevated PID readings associated with gray discoloration and petroleum odors in soil collected from the west and bottom of the excavation and; therefore, directed ETS personnel towards removing that material.

Silty sand was encountered from the ground surface to approximately 4 feet bgs; silty clay was encountered from approximately 4 feet bgs to 12 feet bgs; fine- to medium-grained sand was encountered below approximately 12 feet bgs.

Kane Environmental collected six soil samples from the UST excavation and analyzed them for the presence of TPH as diesel and oil. All six soil samples were reported to contain non-detectable concentrations of TPH as diesel and oil.


The final dimensions of the excavation were approximately 12-feet by 16-feet by 15-feet deep. Approximately 90 cubic yards of soil was excavated from the area and stockpiled on heavy plastic sheeting on the western portion of the site (immediately west of the previously-mentioned stockpiles). Four samples were collected from the stockpiled soil and analyzed for the presence of TPH as diesel and oil.

The soil samples collected from the NE, SE, and SW areas of the stockpile were reported to contain TPH as diesel (with concentrations of 110 mg/Kg, 110 mg/Kg, and 510 mg/Kg, respectively). The soil sample collected from the NW area of the stockpile was reported to contain 11,000 mg/Kg TPH as diesel, which is above Ecology's MTCA Method A Cleanup Level of 2,000 mg/Kg for diesel in soil

*Because TPH as diesel and oil were only detected in soil samples collected from the NW portion of the stockpile, other portions (NE, SE, and SW areas) of the excavated/stockpiled material appear to be suitable for reuse at the site.*

Please call me at (206) 691-6169 if you have any questions.

Sincerely,



John Kane  
Kane Environmental, Inc.

Attachment A- Laboratory Analytical Results

Attachment B- Photographs

Figure 1- Excavation and UST Locations

cc: Mr. Dan Selin, SECO Development, Inc.

NE 120TH PL.

Location of  
Abandoned UST &  
PCS Excavation

Location of Former  
Dry Cleaner &  
PERC Excavation

N

0 60 120  
Scale in Feet

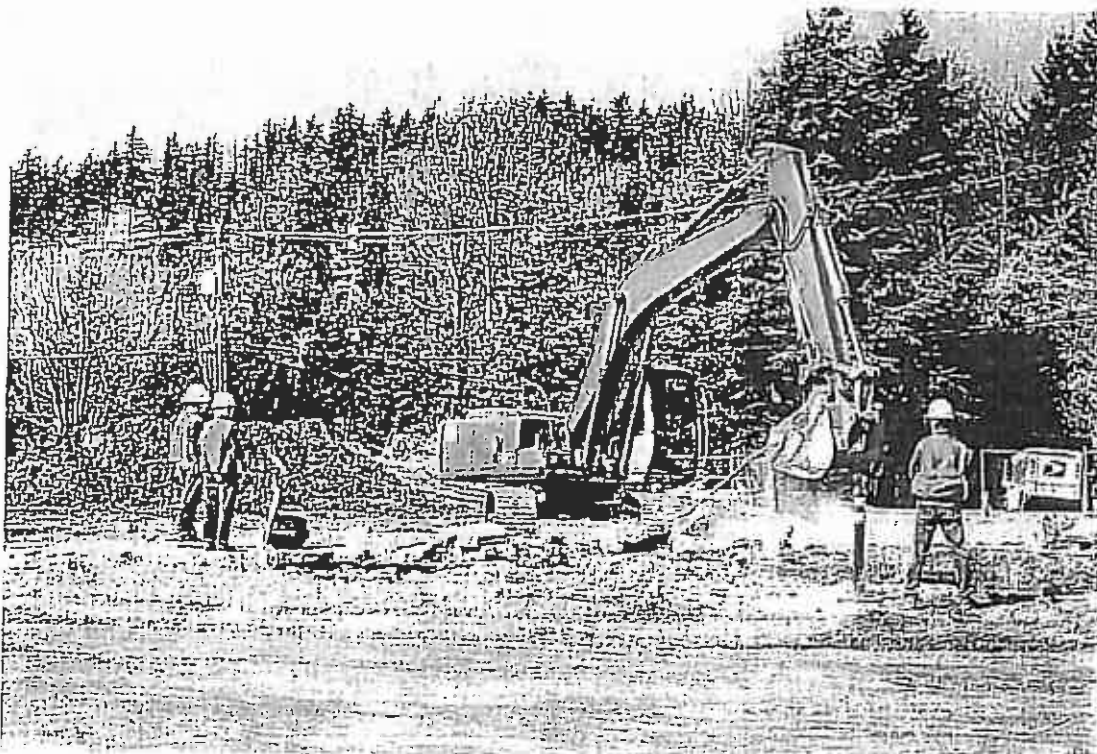
**KANE**  
Environmental, Inc.  
3831 Stone Way N., Seattle, WA  
www.kane-environmental.com

**Juanita Village Property  
Contaminated Soil & UST Removal  
Kirkland, Washington**

**Figure 1  
June 2004  
Excavation Location Map**



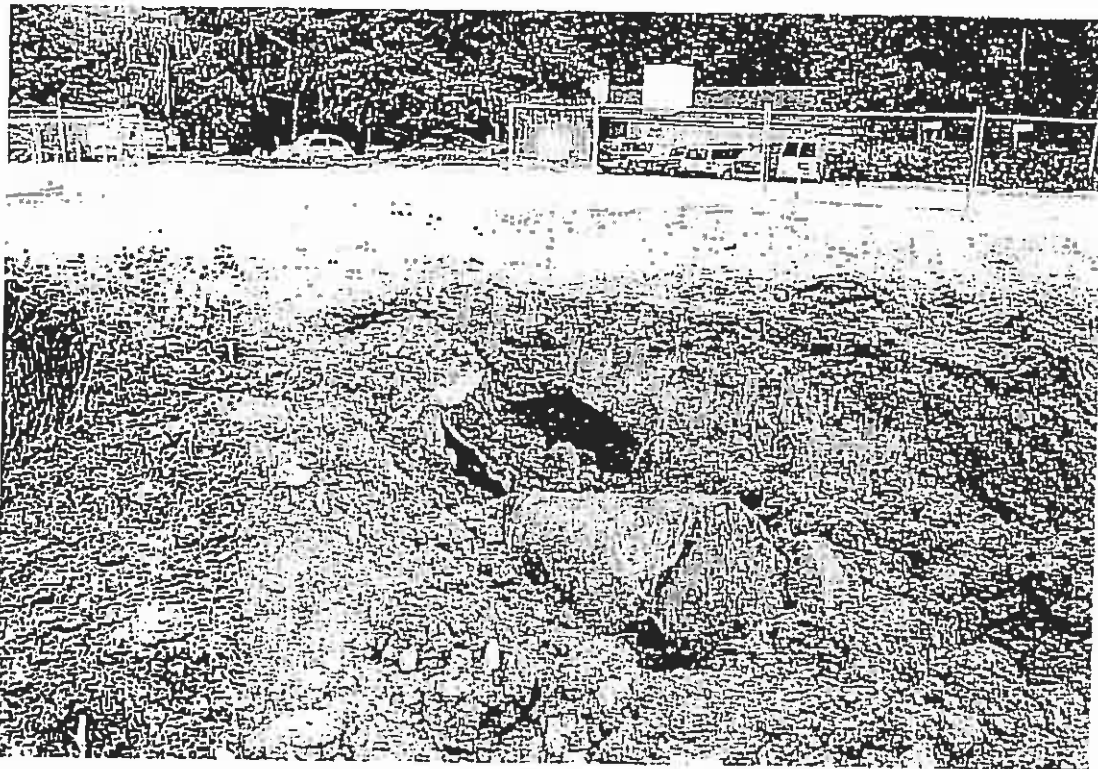
Photograph 1. View of the excavation in progress in the area of the former dry cleaners.



Photograph 2. Additional view of the excavation in the area of the former dry cleaners.



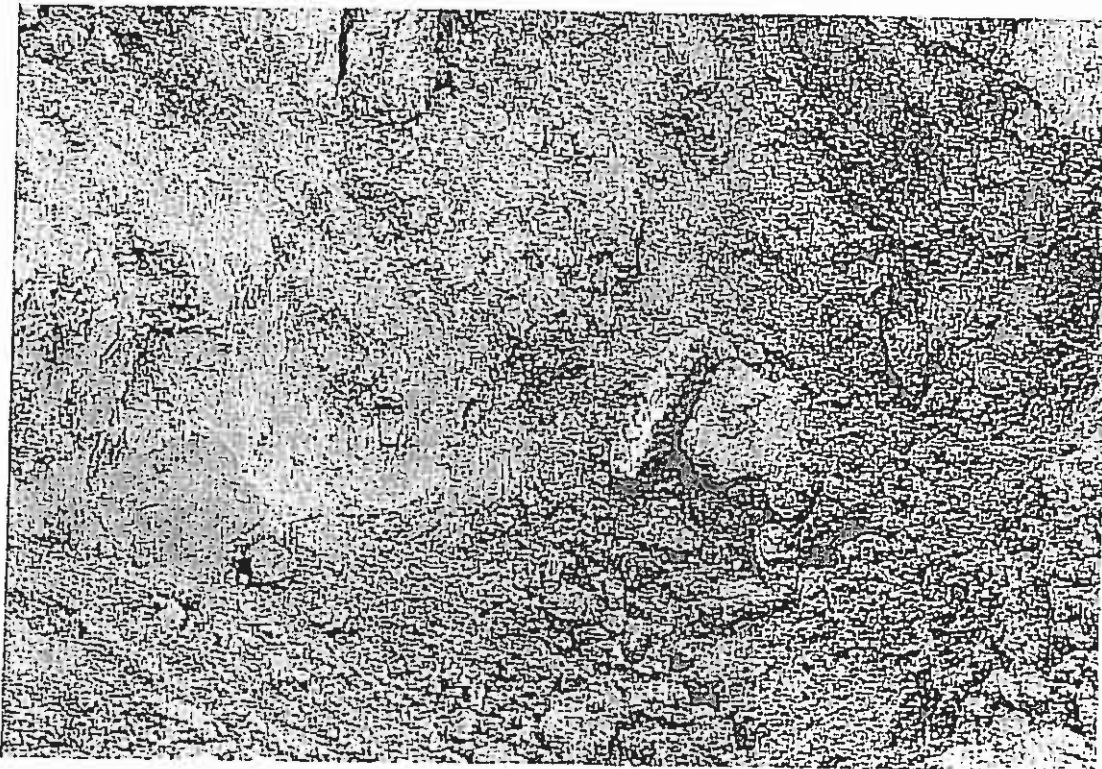
**Photograph 3. View of excavation in progress in the area of the previously stockpiled-PCS.**



**Photograph 4. View of the abandoned 300-gallon UST discovered on April 27, 2004.**

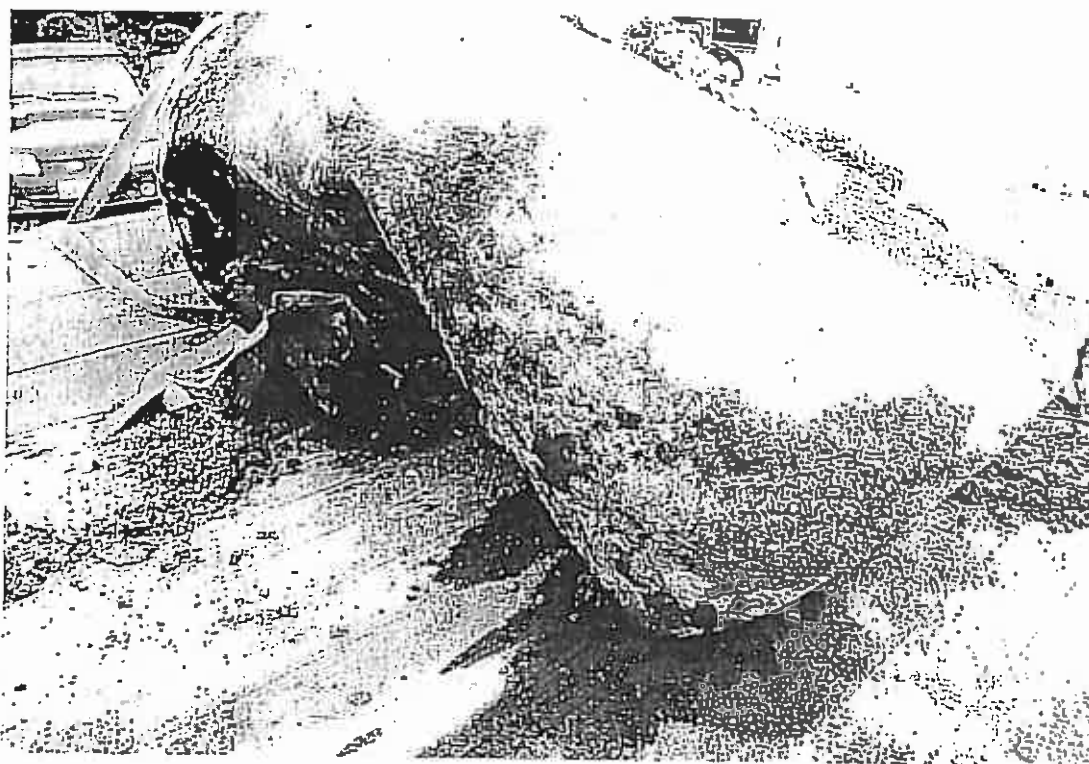


Photograph 5. View of the excavation after removal of the UST. Note area of gray-colored PCS.



Photograph 6. View of the final dimensions of the UST excavation.





Photograph 7. View of the UST prior to disposal.



Photograph 8. View looking over the area of stockpiled soil. The petroleum-impacted soil is in the foreground; soil excavated from the area of the former dry cleaner area is in the background. Soil from the UST excavation was later placed to the west of the visible stockpiles.

**Attachment C**  
**Lot Specific No Further Action and Notice of**  
**Completion Letters**





STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

Northwest Regional Office, 3190 - 160th Ave S.E. • Bellevue, Washington 98008-5452 • (425) 649-7000

August 31, 2001

Andrew W. Colquitt  
Juanita Village, LLC  
10843 - NE Eighth St, Ste 200  
Bellevue, WA 98004

Subject: Notice of Completion for Soils Remediation at the Juanita Village former Juanita Auto Service and Stormwater Vaults location, Kirkland, Washington

Dear Mr. Colquitt:

You are hereby notified that the Washington Department of Ecology certifies that the soils cleanup at the former Juanita Auto Service and Stormwater Vaults location of the Juanita Village Site located west of 98<sup>th</sup> Ave NE and north of NE 116<sup>th</sup> Ave, Kirkland, Washington, is completed as set forth in the requirements set forth in the Scope of Work in Consent Decree No. 00-2-16556-1SEA between the Department of Ecology and Juanita Village, LLC.

For soils, the cleanup resulted in the removal of contaminated soils to the specified levels in the Cleanup Action Plan. Specifically, for soils with petroleum hydrocarbon compounds, the cleanup resulted in removal and off-site thermal desorption treatment and recycling.

For groundwater, Juanita Village will conduct ground water compliance monitoring as specified in the Cleanup Action Plan in the above Consent Decree. At this time, Juanita Village and Ecology will evaluate site groundwater conditions and recommend action.

Sincerely,

A handwritten signature in black ink, appearing to read "Maura S. O'Brien", with a long horizontal line extending to the right.

Maura S. O'Brien,  
Site Manager,  
Toxics Cleanup Program

cc John Kane, Kane Environmental



STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

Northwest Regional Office • 3190 160th Avenue SE • Bellevue, Washington 98008-5452 • (425) 649-7000

January 23, 2002

Mr. Andrew W. Colquitt  
Executive Vice President,  
SECO Development, Inc.,  
Managing Member of  
Juanita Village LLC  
10843 NE Eighth St, Suite 200  
Bellevue, WA 98004

And

Mr. Kenneth Baldrige  
Boardwalk Development, Inc.  
11825 Manchester Rd  
St. Louis, MO 63131

Subject: Notice of Completion/No Further Action at Lot #1 of Juanita Village Site Cleanup,  
Former Chevron Facilities #9-2767 at 11601 - 98<sup>th</sup> Avenue NE, Kirkland, Washington

Dear Mr. Colquitt and Mr. Baldrige:

By this letter you are notified that the Washington State Department of Ecology certifies that the cleanup of soil and groundwater at Lot #1 at the southeast corner of the Juanita Village Site (former Chevron Facilities #9-2767 at 11601 - 98<sup>th</sup> Avenue NE, located west of 98<sup>th</sup> Avenue NE and north of Juanita Drive NE), in Kirkland, Washington is completed, as set forth in Consent Decree No. 00-2-16556-1 Seattle, dated November 7, 2000, between Washington State Department of Ecology and Juanita Village LLC, SECO Development, Inc. and Boardwalk Development, Inc.. The cleanup resulted in the testing of soil and groundwater and found no contamination in soil and groundwater at the specified levels in the Cleanup Action Plan. The cleanup was followed by four quarters of groundwater compliance monitoring also specified in the Cleanup Action Plan.

No further action is required at Lot #1 at this site.

Sincerely,

A handwritten signature in black ink, appearing to read "Maura S. O'Brien".

Maura S. O'Brien,  
Site Manager and Senior Hydrogeologist,  
Toxics Cleanup Program

cc Jay J. Manning, Attorney at Law, Marten Brown, Inc.  
John Kane, Kane Environmental, Inc.  
Gerald O'Regan, Chevron Products, Inc.  
Timothy Warner, Delta Environmental Consultants, Inc.



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

Northwest Regional Office • 3190 160th Avenue SE • Bellevue, Washington 98008-5452 • (425) 649-7000

January 23, 2002

Mr. Andrew W. Colquitt  
Executive Vice President,  
SECO Development, Inc.,  
Managing Member of  
Juanita Village LLC  
10843 NE Eighth St, Suite 200  
Bellevue, WA 98004

And

Mr. Kenneth Baldrige  
Boardwalk Development, Inc.  
11825 Manchester Rd  
St. Louis, MO 63131

Subject: Notice of Completion/No Further Action at Lot #2 of Juanita Village Site Cleanup  
Located west of Lot #1 and 98<sup>th</sup> Avenue NE, and north of Juanita Drive NE,  
Kirkland, Washington

Dear Mr. Colquitt and Mr. Baldrige:

By this letter you are notified that the Washington State Department of Ecology certifies that the cleanup of soil and groundwater at Lot #2 at the south-southeast portion of the Juanita Village Site located west of Lot #1 and 98<sup>th</sup> Avenue NE and north of Juanita Drive NE, in Kirkland, Washington is completed, as set forth in Consent Decree No. 00-2-16556-1 Seattle, dated November 7, 2000, between Washington State Department of Ecology and Juanita Village LLC, SECO Development, Inc. and Boardwalk Development, Inc.. The cleanup resulted in testing soil and groundwater and found no identification of contamination in the soils and groundwater at the specified levels in the Cleanup Action Plan. The cleanup was followed by four quarters of groundwater compliance monitoring also specified in the Cleanup Action Plan.

No further action is required at Lot #2 at this site.

Sincerely,

A handwritten signature in black ink, appearing to read "Maura S. O'Brien".

Maura S. O'Brien,  
Site Manager and Senior Hydrogeologist,  
Toxics Cleanup Program

cc Jay J. Manning, Attorney at Law, Marten Brown, Inc.  
John Kane, Kane Environmental, Inc.





STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

Northwest Regional Office • 3790 160th Avenue SE • Bellevue, Washington 98008-5452 • (425) 649-7000

January 23, 2002

Mr. Andrew W. Colquitt  
Executive Vice President,  
SECO Development, Inc.,  
Managing Member of  
Juanita Village LLC  
10843 NE Eighth St, Suite 200  
Bellevue, WA 98004

And

Mr. Kenneth Baldrige  
Boardwalk Development, Inc.  
11825 Manchester Rd  
St. Louis, MO 63131

Subject: Notice of Completion/No Further Action at Lot #3 of Juanita Village Site Cleanup  
Located west of 98<sup>th</sup> Avenue NE, and north of Lot #1, Kirkland, Washington

Dear Mr. Colquitt and Mr. Baldrige:

By this letter you are notified that the Washington State Department of Ecology certifies that the cleanup of soil and groundwater at Lot #3 within the southeast portion of the Juanita Village Site located west of 98<sup>th</sup> Avenue NE and north of Lot #1 and Juanita Drive NE, in Kirkland, Washington is completed, as set forth in Consent Decree No. 00-2-16556-1 Seattle, dated November 7, 2000, between Washington State Department of Ecology and Juanita Village LLC, SECO Development, Inc. and Boardwalk Development, Inc.. The cleanup resulted in the testing of the soil and groundwater and found no identification of contamination in the soil or groundwater at the specified levels in the Cleanup Action Plan. The cleanup was followed by four quarters of groundwater compliance monitoring also specified in the Cleanup Action Plan.

No further action is required at Lot #3 at this site.

Sincerely,

Maura S. O'Brien,  
Site Manager and Senior Hydrogeologist,  
Toxics Cleanup Program

cc Jay J. Manning, Attorney at Law, Marten Brown, Inc.  
John Kane, Kane Environmental, Inc.





STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

Northwest Regional Office • 3190 160th Avenue SE • Bellevue, Washington 98008-5452 • (425) 649-7000

January 23, 2002

Mr. Andrew W. Colquitt  
Executive Vice President,  
SECO Development, Inc.,  
Managing Member of  
Juanita Village LLC  
10843 NE Eighth St, Suite 200  
Bellevue, WA 98004

And

Mr. Kenneth Baldrige  
Boardwalk Development, Inc.  
11825 Manchester Rd  
St. Louis, MO 63131

Subject: Notice of Completion/No Further Action at Lot #4 of Juanita Village Site Cleanup  
Located west of 98<sup>th</sup> Avenue NE, and north of Lots #1 and 3 and Juanita Drive NE,  
Kirkland, Washington

Dear Mr. Colquitt and Mr. Baldrige:

By this letter you are notified that the Washington State Department of Ecology certifies that the cleanup of soil and groundwater at Lot #4 at the east-central portion of the Juanita Village Site located west of 98<sup>th</sup> Avenue NE and north of Lots #1, 3 and Juanita Drive NE, in Kirkland, Washington is completed, as set forth in Consent Decree No. 00-2-16556-1 Seattle, dated November 7, 2000, between Washington State Department of Ecology and Juanita Village LLC, SECO Development, Inc. and Boardwalk Development, Inc.. The cleanup resulted in testing soil and groundwater and found no identification of contamination in the soil or groundwater at the specified levels in the Cleanup Action Plan. The cleanup was followed by four quarters of groundwater compliance monitoring also specified in the Cleanup Action Plan.

No further action is required at Lot #4 at this site.

Sincerely,

A handwritten signature in black ink, appearing to read "Maura S. O'Brien".

Maura S. O'Brien,  
Site Manager and Senior Hydrogeologist,  
Toxics Cleanup Program

cc Jay J. Manning, Attorney at Law, Marten Brown, Inc.  
John Kane, Kane Environmental, Inc.





STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

Northwest Regional Office • 3190 160th Avenue SE • Bellevue, Washington 98008-5452 • (425) 649-7000

January 23, 2002

Mr. Andrew W. Colquitt  
Executive Vice President,  
SECO Development, Inc.,  
Managing Member of  
Juanita Village LLC  
10843 NE Eighth St, Suite 200  
Bellevue, WA 98004

And

Mr. Kenneth Baldridge  
Boardwalk Development, Inc.  
11825 Manchester Rd  
St. Louis, MO 63131

Subject: Notice of Completion/No Further Action at Lot #5 of Juanita Village Site Cleanup  
Located east of 97<sup>th</sup> Avenue NE and north of Spuds and Lot #2, Kirkland, Washington

Dear Mr. Colquitt and Mr. Baldridge:

By this letter you are notified that the Washington State Department of Ecology certifies that the cleanup of soil and groundwater at Lot #5 at the west central portion of the Juanita Village Site at Kirkland, Washington is completed, as set forth in Consent Decree No. 00-2-16556-1 Seattle, dated November 7, 2000, between Washington State Department of Ecology and Juanita Village LLC, SECO Development, Inc. and Boardwalk Development, Inc.. The cleanup resulted in testing soil and groundwater and found no contamination in the soil and groundwater at the specified levels in the Cleanup Action Plan. The cleanup was followed by four quarters of groundwater compliance monitoring also specified in the Cleanup Action Plan.

No further action is required at Lot #5 at this site.

Sincerely,

A handwritten signature in black ink, appearing to read "Maura S. O'Brien".

Maura S. O'Brien,  
Site Manager and Senior Hydrogeologist,  
Toxics Cleanup Program

cc Jay J. Manning, Attorney at Law, Marten Brown, Inc.  
John Kane, Kane Environmental, Inc.





STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

Northwest Regional Office • 3190 160th Avenue SE • Bellevue, Washington 98008-5452 • (425) 649-7000

January 23, 2002

Mr. Andrew W. Colquitt  
Executive Vice President,  
SECO Development, Inc.,  
Managing Member of  
Juanita Village LLC  
10843 NE Eighth St, Suite 200  
Bellevue, WA 98004

And

Mr. Kenneth Baldridge  
Boardwalk Development, Inc.  
11825 Manchester Rd  
St. Louis, MO 63131

Subject: Notice of Completion/No Further Action at Lot #6 of Juanita Village Site Cleanup,  
Former Juanita Auto Clinic/former Texaco Service Station located at  
11805 - 98<sup>th</sup> Avenue NE, Kirkland, Washington

Dear Mr. Colquitt and Mr. Baldridge:

By this letter you are notified that the Washington State Department of Ecology certifies that the cleanup of soil and groundwater at Lot #6 at the central eastern portion of the Juanita Village Site (former Juanita Auto Clinic and former Texaco Service Station at 11805 - 98<sup>th</sup> Avenue NE), in Kirkland, Washington is completed, as set forth in Consent Decree No. 00-2-16556-1 Seattle, dated November 7, 2000, between Washington State Department of Ecology and Juanita Village LLC, SECO Development, Inc. and Boardwalk Development, Inc.. The cleanup resulted in removal of contamination in soil and groundwater to the specified levels in the Cleanup Action Plan. The cleanup was followed by four quarters of groundwater compliance monitoring also specified in the Cleanup Action Plan.

No further action is required at Lot #6 at this site, other than the groundwater monitoring described in the Compliance Monitoring Plan.

Sincerely,

Maura S. O'Brien,  
Site Manager and Senior Hydrogeologist,  
Toxics Cleanup Program

cc Jay J. Manning, Attorney at Law, Marten Brown, Inc.  
John Kane, Kane Environmental, Inc.





STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

Northwest Regional Office • 3190 160th Avenue SE • Bellevue, Washington 98008-5452 • (425) 649-7000

January 23, 2002

Mr. Andrew W. Colquitt  
Executive Vice President,  
SECO Development, Inc.,  
Managing Member of  
Juanita Village LLC  
10843 NE Eighth St, Suite 200  
Bellevue, WA 98004

And

Mr. Kenneth Baldrige  
Boardwalk Development, Inc.  
11825 Manchester Rd  
St. Louis, MO 63131

Subject: Notice of Completion/No Further Action at Lot #7 of Juanita Village Site Cleanup  
Located at the north-central portion of the site, north of Lot #5, west of Lot #6 and west  
of 98<sup>th</sup> Avenue NE, Kirkland, Washington

Dear Mr. Colquitt and Mr. Baldrige:

By this letter you are notified that the Washington State Department of Ecology certifies that the cleanup of soil and groundwater at Lot #7 at the north-central portion of the Juanita Village Site, north of Lot #5, west of Lot #6 and west of 98<sup>th</sup> Avenue NE, in Kirkland, Washington is completed, as set forth in Consent Decree No. 00-2-16556-1 Seattle, dated November 7, 2000, between Washington State Department of Ecology and Juanita Village LLC, SECO Development, Inc. and Boardwalk Development, Inc.. The cleanup resulted in testing soil and groundwater and found no contamination in soil and groundwater at the specified levels in the Cleanup Action Plan. The cleanup was followed by four quarters of groundwater compliance monitoring also specified in the Cleanup Action Plan.

No further action is required at Lot #7 at this site.

Sincerely,

Maura S. O'Brige,  
Site Manager and Senior Hydrogeologist,  
Toxics Cleanup Program

cc Jay J. Manning, Attorney at Law, Marten Brown, Inc.  
John Kane, Kane Environmental, Inc.





STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

Northwest Regional Office • 3190 160th Avenue SE • Bellevue, Washington 98008-5452 • (425) 649-7001  
February 28, 2003

Mr. Andrew Colquitt  
Juanita Village, LLC  
10843 NE 8<sup>th</sup> Street, Suite 200  
Bellevue, Washington 98004

and

Mr. Dan Selin  
SECO Development, Inc.  
10843 NE Eighth Street, Suite 200  
Bellevue, WA 98004

Subject: Notice of Completion for Soils Remediation at the Juanita Village Site Lots #8 and 9  
Located south of 120<sup>th</sup> Place NE, west of 98<sup>th</sup> Avenue NE and east of 97<sup>th</sup> Avenue NE,  
Kirkland, King County, Washington

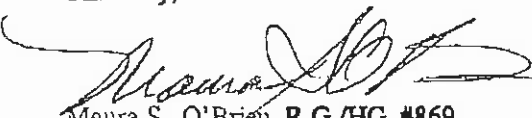
Dear Mr. Colquitt and Mr. Selin:

You are hereby notified that the Washington Department of Ecology certifies that the soils cleanup at Lots #8 and 9 at your property located south of 120<sup>th</sup> Place NE, west of 98<sup>th</sup> Avenue NE and east of 97<sup>th</sup> Avenue NE, in Kirkland, Washington, is completed as set forth in the requirements set forth in the Scope of Work in Consent Decree No. 00-2-16556-1 Seattle between the Department of Ecology and Juanita Village, LLC; SECO Development, Inc; and Boardwalk Development, Inc.

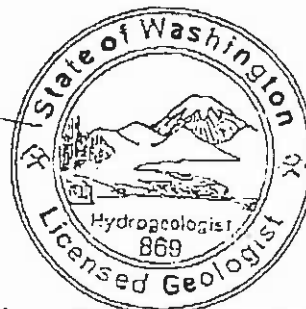
The cleanup resulted in testing and where required, the removal of contamination to the specified levels in the Cleanup Action Plan. For soils, the cleanup level is 19.6 mg/kg (microgram per kilogram or parts per million) for perchloroethene also called tetrachloroethylene, a common dry cleaning solvent. Removed soils were required to be disposed off-site at a certified landfill or treated and recycled where practical.

No further action is required at lots #8 and 9 of the Juanita Village, LLC site, other than the groundwater monitoring described in the Cleanup Action Plan.

Sincerely,

  
Maura S. O'Brien, R.G./HG. #869  
Registered Geologist/Hydrogeologist #869  
Toxics Cleanup Program

cc Jay Manning, Brown Reavis & Manning, LLP



MAURA SALAMAH O'BRIEN



**Attachment D**  
**Well Closure Documentation**

**Attachment C**  
**Lot Specific No Further Action and Notice of**  
**Completion Letters**



April 17, 2008

Ms. Maura O'Brien  
Site Coordinator  
Washington Department of Ecology  
3190 - 160th Avenue SE  
Bellevue, WA 98008

Re: Draft Groundwater Compliance Well Closure Documentation  
Compliance Monitoring Report  
Juanita Village Consent Decree Site  
Consent Decree No. 00-2-16556-1SEA

Dear Ms. O'Brien:

The purpose of this letter is to provide the closure documentation for groundwater wells and density driven convection treatment wells (DDC) as part of the completion of the Compliance Monitoring for the Juanita Village Site in accordance with the project Consent Decree. The well closure logs attached with this letter are designated with the capital letter "A" in the upper right hand corner of the page per Ecology's records. The Kane Environmental well identification is written in the lower right hand corner of the page. The following groundwater well and DDC well (Treatment Well) closure reports include:

| <u>Shallow wells</u> | <u>Deep Wells</u> | <u>Treatment Wells</u> |
|----------------------|-------------------|------------------------|
| MW-1                 |                   | TW-8                   |
| MW-2                 | MW-2D             | TW-9                   |
| MW-3                 | MW-3D             | TW-3 TW-10             |
| MW-4                 | MW-4D             | TW-4 TW-11             |
| MW-5                 |                   | TW-5 TW-13             |
| MW-6                 |                   | TW-7                   |

Please note that the following wells have not been closed: MW-1D, MW-7, TW-1, and TW-2. TW-6 was inadvertently removed during the construction of the underground parking garage for the northernmost building on the Juanita Village property, and therefore there is no closure documentation for TW-6. Furthermore, I checked well TW-12 today and the well was closed with concrete as shown up to top of the well (photograph Attachment B). I am checking with the well driller to obtain the well closure documentation and will forward it to you immediately upon receipt.



Please call me at (206) 691-0476 if you have any questions. Thank you.

Sincerely,

**KANE ENVIRONMENTAL, INC.**

A handwritten signature in black ink, appearing to read "John Kane". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

John Kane  
President/Principal

Attachment A – Well Closure Reports

Attachment B – TW-12 Photograph April 17, 2008

**Attachment A**  
**Well Closure Reports**

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

# RESOURCE PROTECTION WELL REPORT CURRENT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Notice of Intent No. A 61238

Construction/Decommission ("x" in circle)

Construction

145893

Type of Well ("x" in circle)

Resource Protection 26 SE-30R  
 Geotech Soil Boring

Decommission ORIGINAL INSTALLATION Notice of Intent Number \_\_\_\_\_

Consulting Firm Kane Environmental

Property Owner Sunita Shopping Center

Unique Ecology Well ID \_\_\_\_\_

Site Address 11849 95th AVE NE

Tag No: \_\_\_\_\_

City Kirkland County: King

WELL CONSTRUCTION CERTIFICATION. I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Location SE 1/4 SE 1/4 Sec 30 T20N R5E  circle or one WWM

Driller  Engineer  Trainee Name (Print) Andrew Flagan

Lat/Long (s, t, r still REQUIRED) Lat Deg \_\_\_\_\_ Lat Min/Sec \_\_\_\_\_ Long Deg \_\_\_\_\_ Long Min/Sec \_\_\_\_\_

Driller/Engineer/Trainee Signature [Signature]

Tax Parcel No. \_\_\_\_\_

Driller or Trainee License No. 2551

Cased or Uncased Diameter 2" Static Level N/A

If trainee, licensed driller's Signature and License no. \_\_\_\_\_

Work/Decommission Start Date 1/26/04

Work/Decommission Completed Date 1/27/04

| Construction/Design | Well Data                              | Formation Description |
|---------------------|--|-----------------------|
|                     | Well ID <u>4034</u>                    |                       |
|                     | CONCRETE SURFACE SEAL <u>1</u>         | 0 - _____ ft.         |
|                     | BACKFILL <u>abandon. w/ bent clips</u> | _____ ft.             |
|                     | DEPTH OF BORING <u>25'</u>             | _____ ft.             |

RECEIVED  
FEB 24 2004  
DEPT OF ECOLOGY

CLIENTS WELL ID #

MW 1

# RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT

Notice of Intent No. A 61238

Construction/Decommission ("x" in circle)

Construction

Decommission ORIGINAL INSTALLATION Notice of Intent Number 145892

Type of Well ("x" in circle)

Resource Protection 26-SE-30R  
 Geotech Soil Boring

Consulting Firm Kane Environmental

Unique Ecology Well ID

Tag No: \_\_\_\_\_

Property Owner Sunita Shopping Center

Site Address 11849 96th AVE NE

City Kirkland County: King

Location SE 1/4 SE 1/4 Sec 30 Twp 20N R5E  WWM circle of one

Lat/Long (s, t, r still REQUIRED) Lat Deg \_\_\_\_\_ Lat Min/Sec \_\_\_\_\_

Long Deg \_\_\_\_\_ Long Min/Sec \_\_\_\_\_

WELL CONSTRUCTION CERTIFICATION I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller  Engineer  Trainee Name (Print) Andrew Flagan

Driller/Engineer/Trainee Signature [Signature]

Driller or Trainee License No. 2551

Tax Parcel No. \_\_\_\_\_

Cased or Uncased Diameter 2" Static Level NA

Work/Decommission Start Date 1/26/04

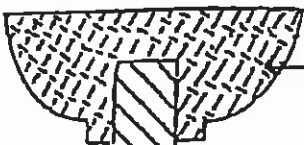
Work/Decommission Completed Date 1/27/04

If trainee, licensed driller's Signature and License no. \_\_\_\_\_

Construction/Design

Well Data 4034

Formation Description



CONCRETE SURFACE SEAL 1

BACKFILL abandon w/ bent chips

0 - ft.

- ft.

- ft.

RECEIVED

FEB 24 2004

DEPT OF ECOLOGY

CLIENTS WELL ID #

MW-2

DEPTH OF BORING 26' "

The Department of Ecology does NOT warrant the Data and/or the information on this Well Report.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

# RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT  
Notice of Intent No. A 61238

Construction/Decommission ("x" in circle) 145889  
 Construction  
 Decommission ORIGINAL INSTALLATION Notice  
of Intent Number \_\_\_\_\_

Type of Well ("x" in circle)  
 Resource Protection 26-SE-30R  
 Geotech Soil Boring

Consulting Firm Kare Environmental  
Unique Ecology Well ID \_\_\_\_\_  
Tag No: \_\_\_\_\_

Property Owner Sumita Shopping Center  
Site Address 11849 96th AVE NE  
City Kirkland County: King  
Location SE 1/4 SE 1/4 Sec 30 Twn 26N RE SE  circle  
or  one WWM  
Lat/Long (s, t, r still REQUIRED) Lat Deg \_\_\_\_\_ Lat Min/Sec \_\_\_\_\_  
Long Deg \_\_\_\_\_ Long Min/Sec \_\_\_\_\_

WELL CONSTRUCTION CERTIFICATION I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller  Engineer  Trainee Name (Print) Andrew Flagan  
Driller/Engineer/Trainee Signature \_\_\_\_\_  
Driller or Trainee License No. 2551

Tax Parcel No. \_\_\_\_\_  
Cased or Uncased Diameter 2" Static Level \_\_\_\_\_  
Work/Decommission Start Date 1/26/04  
Work/Decommission Completed Date 1/27/04

If trainee, licensed driller's Signature and License no. \_\_\_\_\_

| Construction/Design | Well Data                     | Formation Description |
|---------------------|-------------------------------|-----------------------|
|                     | CONCRETE SURFACE SEAL         | 0 - ft.               |
|                     | BACKFILL <u>w/berit chips</u> | - ft.                 |
|                     | DEPTH OF BORING <u>25'</u> "  | - ft.                 |

**RECEIVED**  
FEB 24 2004  
DEPT OF ECOLOGY

CLIENTS WELL ID #  
MW-3

# RESOURCE PROTECTION WELL REPORT CURRENT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Notice of Intent No. A 61238

Construction/Decommission ("x" in circle)

Construction 145891  
 Decommission ORIGINAL INSTALLATION Notice of Intent Number \_\_\_\_\_

Type of Well ("x" in circle)

Resource Protection 26 SE-30R  
 Geotech Soil Boring

Consulting Firm Kare Environmental  
 Unique Ecology Well ID \_\_\_\_\_  
 Tag No: \_\_\_\_\_

Property Owner Sanita Shopping Center  
 Site Address 11849 96th AVE NE  
 City Kirkland County: King  
 Location SE 1/4 SE 1/4 Sec 30 Twn 26N RSE W1/4 circle or W1/4 or W1/4

WELL CONSTRUCTION CERTIFICATION I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller  Engineer  Trainee Name (Print) Andrew Flagan  
 Driller/Engineer/Trainee Signature [Signature]  
 Driller or Trainee License No. 3551

Lat/Long (s, t, r) Lat Deg \_\_\_\_\_ Lat Min/Sec \_\_\_\_\_ still REQUIRED) Long Deg \_\_\_\_\_ Long Min/Sec \_\_\_\_\_

Tax Parcel No. \_\_\_\_\_

If trainee, licensed driller's Signature and License no. \_\_\_\_\_

Cased or  Uncased Diameter 2" Static Level N/A

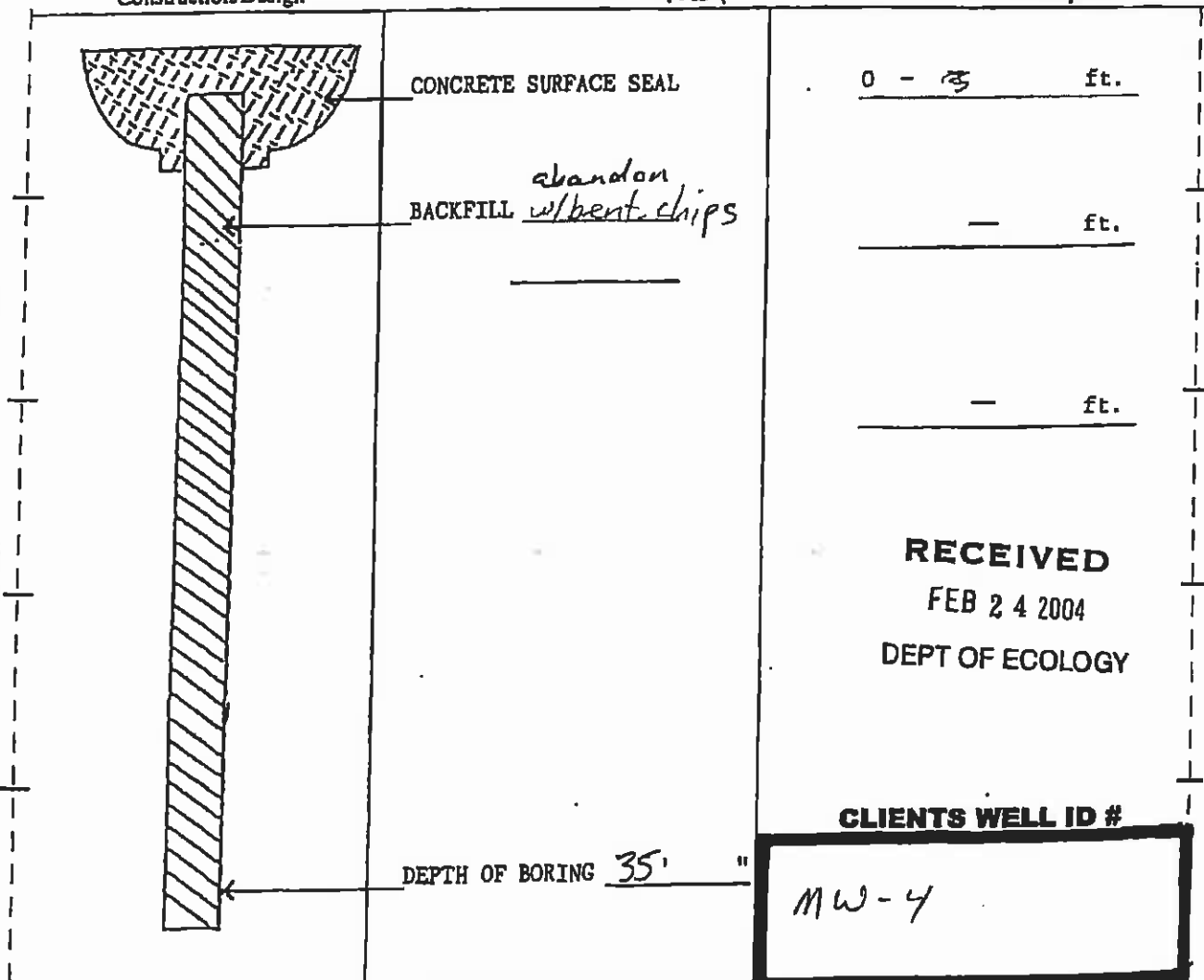
Work/Decommission Start Date 1/26/04

Work/Decommission Completed Date 1/27/04

Construction/Design

Well Data 4034

Formation Description



The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

111685

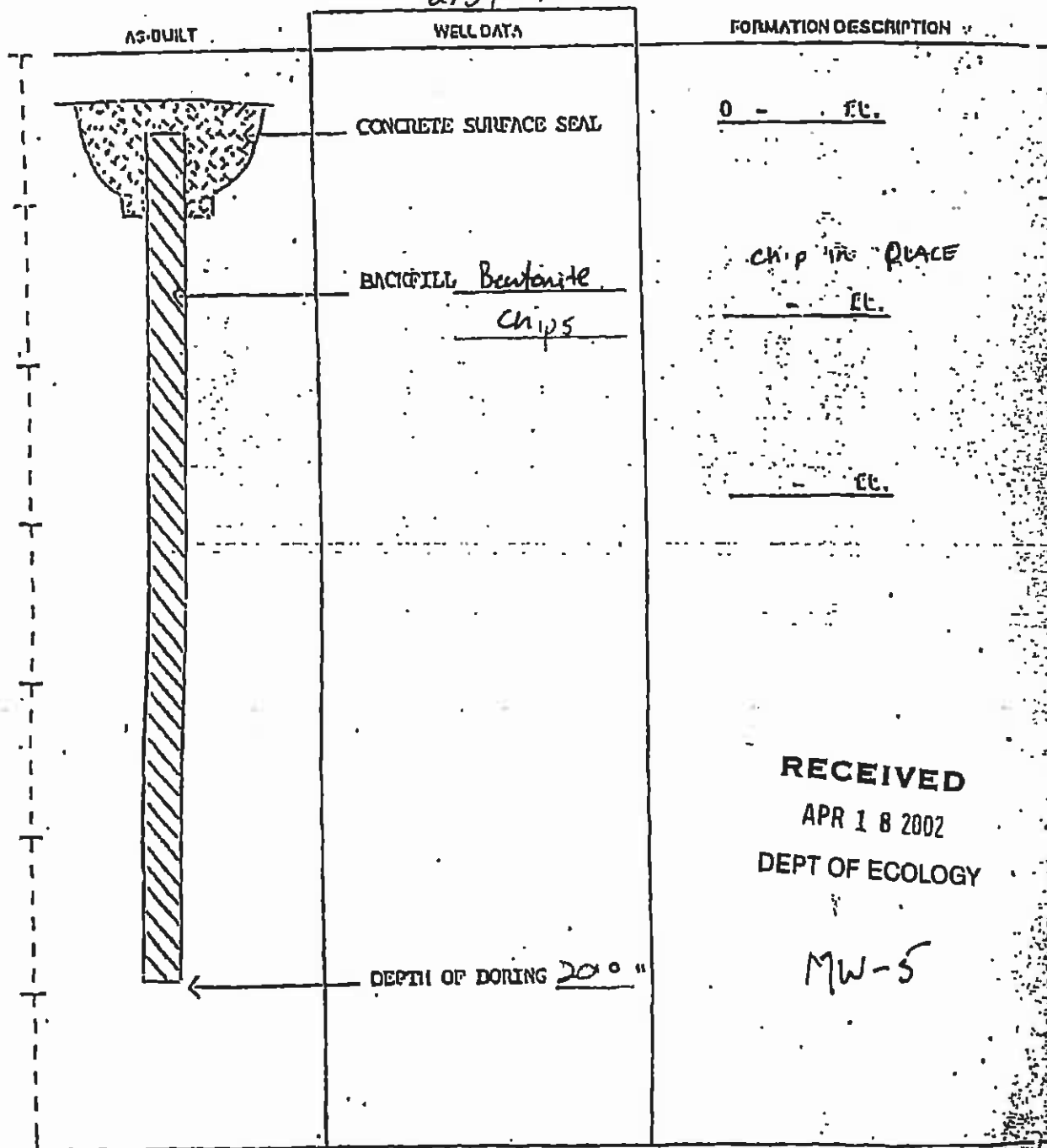
# RESOURCE PROTECTION WELL REPORT

STATE CASE NO. A47077

PROJECT NAME: Juanita Shopping Ctr.  
 WELL IDENTIFICATION NO. W1  
 DRILLING METHOD: Abandon  
 DRILLED BY: Kasey S. Goble  
 FIRM: Cascade Drilling, Inc.  
 SIGNATURE: [Signature]  
 CONSULTING FIRM: Delta Env.  
 REPRESENTATIVE: Shawn Madison

COUNTY: KING 26-3E-30R  
 LOCATION: SE 1/4 SE 1/4 Sec 30 T21N 26N R 5E  
 STREET ADDRESS OF WELL: 11849-98th Ave NE, Kirkland  
 WATER LEVEL ELEVATION: N/A  
 GROUND SURFACE ELEVATION: N/A  
 DATE: 3/19/02  
 DEVELOPER: N/A

2134



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MW-5

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

# RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT  
Notice of Intent No. A 61238

Construction/Decommission ("x" in circle) 145890

Type of Well ("x" in circle)  
 Resource Protection 26-SE-30R  
 Geotech Soil Boring

Construction  
 Decommission ORIGINAL INSTALLATION Notice  
of Intent Number \_\_\_\_\_

Consulting Firm Kare Environmental

Property Owner Sumita Shopping Center

Unique Ecology Well ID \_\_\_\_\_

Site Address 11849 96th AVE NE

Tag No: \_\_\_\_\_

City Kirkland County: King

WELL CONSTRUCTION CERTIFICATION. I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Location SE 1/4 SE 1/4 Sec 30 Twn 26N R2E  circle or WWM

Driller  Engineer  Trainee Name (Print) Andrew Filagan

Lat/Long (S, L, r) Lat Deg \_\_\_\_\_ Lat Min/Sec \_\_\_\_\_

Driller/Engineer/Trainee Signature \_\_\_\_\_

still REQUIRED) Long Deg \_\_\_\_\_ Long Min/Sec \_\_\_\_\_

Driller or Trainee License No. 2551

Tax Parcel No \_\_\_\_\_

If trainee, licensed driller's Signature and License no. \_\_\_\_\_

Cased  Diameter 2" Static Level \_\_\_\_\_

Work/Decommission Start Date 1/26/04

Work/Decommission Completed Date 1/27/04

| Construction/Design | Well Data                            | Formation Description |
|---------------------|--------------------------------------|-----------------------|
|                     | CONCRETE SURFACE SEAL                | 0 - ft.               |
|                     | BACKFILL <u>abandon w/bent chips</u> | - ft.                 |
|                     | DEPTH OF BORING <u>37'</u>           | - ft.                 |

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**CLIENTS WELL ID #**

MW-6



The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

112522

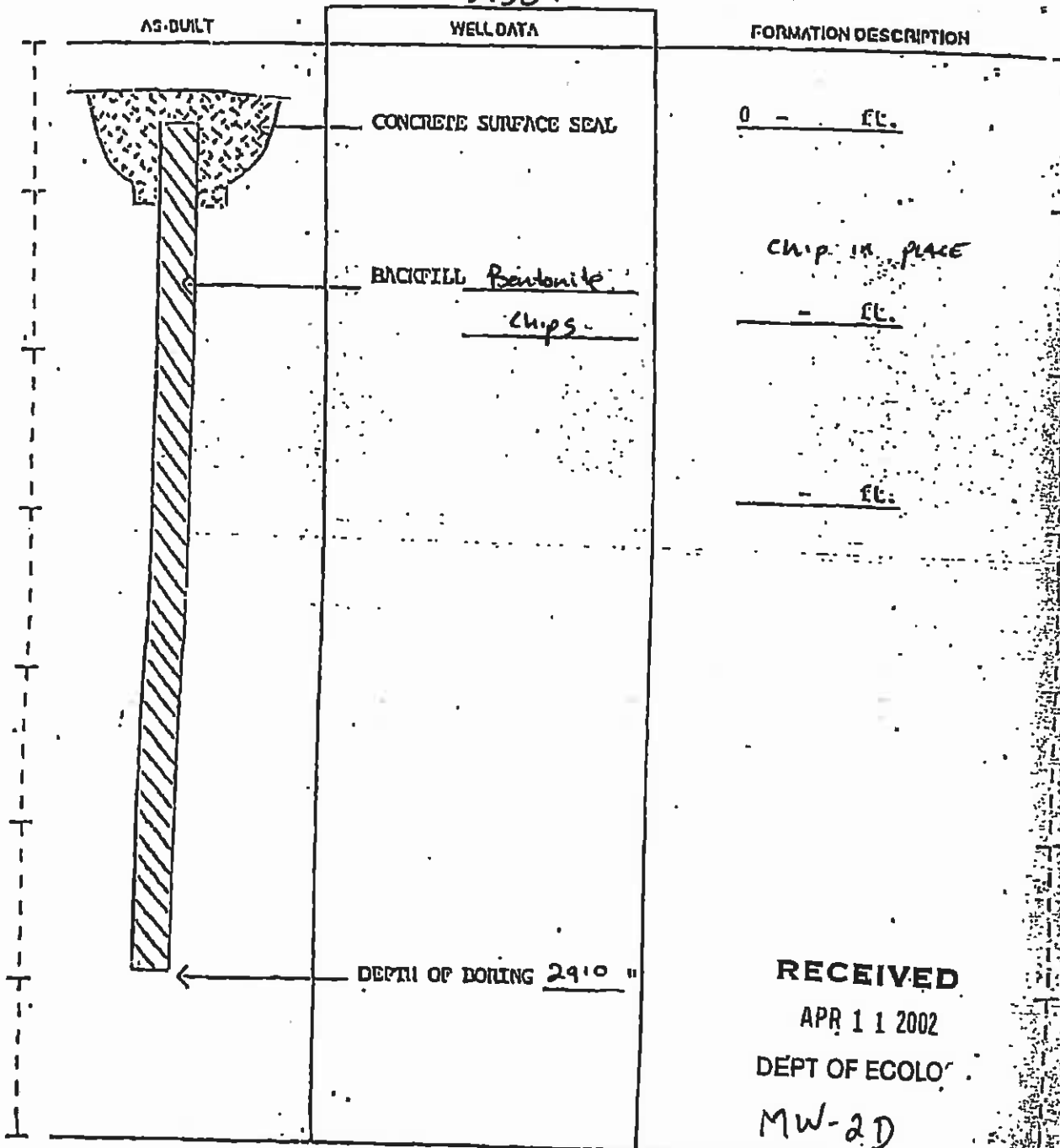
# RESOURCE PROTECTION WELL REPORT

START CARD NO. A47076

PROJECT NAME: Juanita Shopping Cntr.  
 WELL IDENTIFICATION NO. n/a  
 DRILLING METHOD: Abandon  
 DRILLER: Kasey S. Goble  
 FIRM: Cascade Drilling, Inc.  
 SIGNATURE: [Signature]  
 CONSULTING FIRM: Kane Env.  
 REPRESENTATIVE: John Kane

COUNTY: KING 26-SE-30R  
 LOCATION: SE 1/4 Sec 30 Twn 24N R 5E  
 STREET ADDRESS OF WELL: 11849-98th Ave NE Kirkland  
 WATER LEVEL ELEVATION: N/A  
 GROUND SURFACE ELEVATION: N/A  
 ABANDONED: 3/14/02  
 DEVELOPED: n/a

2135



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 DEPT OF ECOLO  
 MW-2D

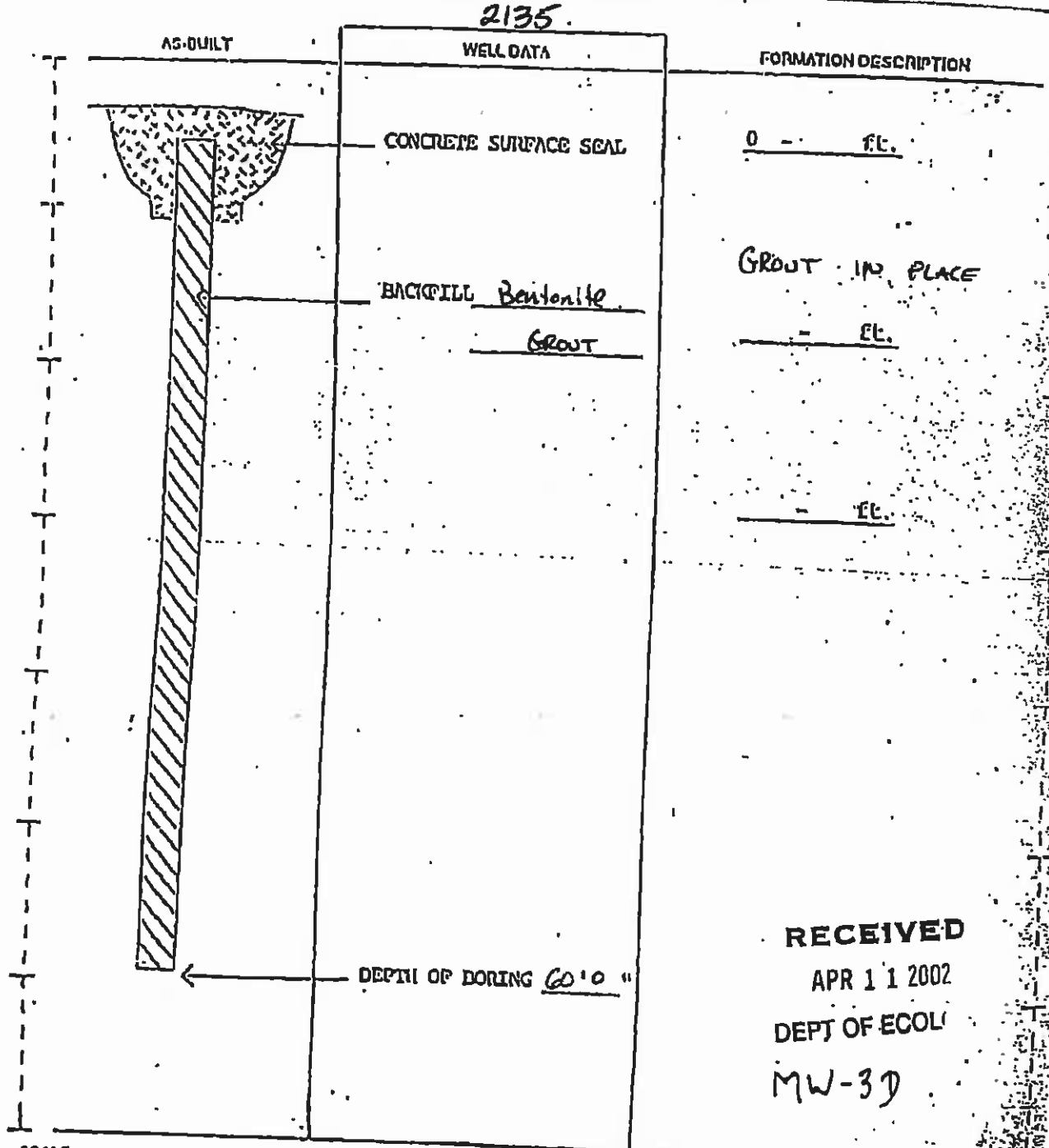
The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

112521

RESOURCE PROTECTION WELL REPORT

PROJECT NAME: Juanita Shopping Cntr.  
 WELL IDENTIFICATION NO. W1  
 DRILLING METHOD: Abandon  
 DRILLER: Kasey S. Goble  
 FIRM: Cascade Drilling, Inc.  
 SIGNATURE: [Signature]  
 CONSULTING FIRM: Kane Env.  
 REPRESENTATIVE: John Kane

START CARD NO. A47076  
 COUNTY: KING 26-5E-30R  
 LOCATION: SE 1/4 Sec 30 Twn 26N R5E  
 STREET ADDRESS OF WELL: 11849-98th Ave NE, Kirkland  
 WATER LEVEL ELEVATION: N/A  
 GROUND SURFACE ELEVATION: N/A  
Abandoned  
 INSTALLED: 3/14/02  
 DEVELOPED: n/a



2135

RECEIVED  
 APR 11 2002  
 DEPT OF ECOL  
 MW-3D

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

# RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT

Notice of Intent No. A 69887

Construction/Decommission ("x" in circle)

Construction 173019  
 Decommission ORIGINAL INSTALLATION Notice  
of Intent Number \_\_\_\_\_

Type of Well ("x" in circle) 265E-30

Resource Protection  
 Geotech Soil Boring

Consulting Firm: Kane Env.  
Unique Ecology Well ID \_\_\_\_\_  
Tag No: \_\_\_\_\_

Property Owner: 11849 98th AVENUE S

Site Address: Sumita Village

City: Kirkland County: King

Location: SE 1/4 SE 1/4 Sec 30 Twn 26N R5E E10 circle or one WWM

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller  Engineer  Trainee Name (Print) \_\_\_\_\_

Driller/Engineer/Trainee Signature: [Signature]

Driller or Trainee License No. 2682

Lat/Long (s, l, r) still REQUIRED) Lat Deg \_\_\_\_\_ Lat Min/Sec \_\_\_\_\_  
Long Deg \_\_\_\_\_ Long Min/Sec \_\_\_\_\_

Tax Parcel No. \_\_\_\_\_

Cased or Uncased Diameter 6" Static Level ~

Work/Decommission Start Date 5/4/05

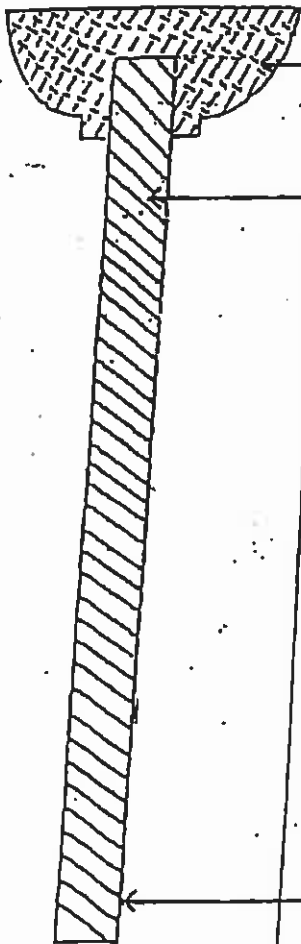
Work/Decommission Completed Date 5/4/05

If trainee, licensed driller's Signature and License no. Brian Gose 2332

Construction/Design

Well Data W05-257

Formation Description



CONCRETE SURFACE SEAL

BACKFILL Ben chips

0 - 42 ft.

\_\_\_\_\_ ft.

\_\_\_\_\_ ft.

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CLIENTS WELL ID #

MW-4D

The Department of Ecology does NOT Warranty the Data and/or the information on this Well Report.

# RESOURCE PROTECTION WELL REPORT

CURRENT  
Notice of Intent No. A 61238

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission ("x" in circle) 145882

Type of Well ("x" in circle)  
 Resource Protection 26-SE-30R  
 Geotech Soil Boring

Construction  
 Decommission ORIGINAL INSTALLATION Notice of Intent Number \_\_\_\_\_

Property Owner Suanita Shopping Center

Consulting Firm Kane Environmental

Site Address 11849 96th AVE NE

Unique Ecology Well ID \_\_\_\_\_  
Tag No: \_\_\_\_\_

City Kirkland County: King

Location SE 1/4 SE 1/4 Sec 30 Twn 43N RSE 3  circle or one WWM

WELL CONSTRUCTION CERTIFICATION. I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (S, L, R) still REQUIRED) Lat Deg \_\_\_\_\_ Lat Min/Sec \_\_\_\_\_  
Long Deg \_\_\_\_\_ Long Min/Sec \_\_\_\_\_

Driller/Engineer/Trainee Name (Print) Andrew Flanagan

Tax Parcel No. \_\_\_\_\_  
Cased or Uncased Diameter 6" Static Level \_\_\_\_\_

Driller/Engineer/Trainee Signature \_\_\_\_\_  
Driller or Trainee License No. 2551

Work/Decommission Start Date 1/26/04  
Work/Decommission Completed Date 1/27/04

If trainee, licensed driller's Signature and License no. \_\_\_\_\_

| Construction/Design | Well Data   | Formation Description                                      |
|---------------------|---|--|
|                     | <p>CONCRETE SURFACE SEAL</p> <p>abandoned in place<br/>w/ bent chips</p> <p>BACKFILL <u>3</u></p> | <p>0 - _____ ft.</p> <p>_____ ft.</p> <p>_____ ft.</p>     |
|                     | <p>DEPTH OF BORING <u>37'</u></p>   | <p><b>RECEIVED</b><br/>FEB 24 2004<br/>DEPT OF ECOLOGY</p> |
|                     | <p>Scale 1" = _____</p>   | <p><b>CLIENTS WELL ID #</b><br/><u>TW-3</u></p>            |

# RESOURCE PROTECTION WELL REPORT CURRENT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Notice of Intent No. A 61238

Construction/Decommission ("x" in circle)

Construction 145883  
 Decommission ORIGINAL INSTALLATION Notice  
 of Intent Number \_\_\_\_\_

Type of Well ("x" in circle)

Resource Protection 26-SE-30R  
 Geotech Soil Boring

Consulting Firm Kare Environmental

Unique Ecology Well ID \_\_\_\_\_

Tag No: \_\_\_\_\_

Property Owner Sunita Shopping Center

Site Address 11849 96th AVE NE

City Kirkland County: King

Location SE 1/4 SE 1/4 Sec 30 Twn 30N RSE WVA circle  
 or one WWM

Lat/Long (s, t, r still REQUIRED) Lat Deg \_\_\_\_\_ Lat Min/Sec \_\_\_\_\_

Long Deg \_\_\_\_\_ Long Min/Sec \_\_\_\_\_

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller  Engineer  Trainee Name (Print) Andrew Flynn

Driller/Engineer/Trainee Signature \_\_\_\_\_

Driller or Trainee License No. 2351

Tax Parcel No. \_\_\_\_\_

Cased or Uncased Diameter 6" Static Level \_\_\_\_\_

Work/Decommission Start Date 1/26/04

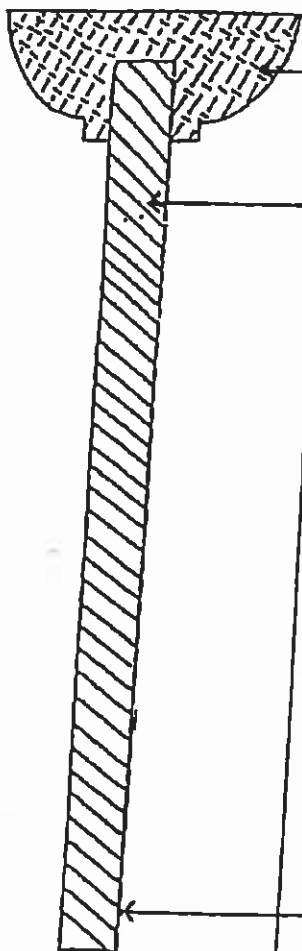
Work/Decommission Completed Date 1/27/04

If trainee, licensed driller's Signature and License no. \_\_\_\_\_

Construction/Design

Well Data 4034

Formation Description



CONCRETE SURFACE SEAL

abandon in place  
 BACKFILL w/ bent chips

DEPTH OF BORING 40' "

0 - ft.

- ft.

- ft.

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DEPT OF ECOLOGY

CLIENTS WELL ID #

TW-4

Scale 1"= \_\_\_\_\_

Page \_\_\_\_\_ of \_\_\_\_\_

ECY 050-12 (Rev 201)

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# RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT  
Notice of Intent No. A 61238

Construction/Decommission ("x" in circle)  
145884

Type of Well ("x" in circle)  
 Resource Protection 26-SE-30R  
 Geotech Soil Boring

Construction  
 Decommission ORIGINAL INSTALLATION Notice  
of Intent Number \_\_\_\_\_

Property Owner Sanita Shopping Center

Consulting Firm Kane Environmental

Site Address 11849 96th AVE NE

Unique Ecology Well ID \_\_\_\_\_

City Kirkland County: King

Tag No: \_\_\_\_\_

Location SE 1/4 SE 1/4 Sec 30 Twn 26N RSE WWM circle of one

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (s, t, r still REQUIRED) Lat Deg \_\_\_\_\_ Lat Min/Sec \_\_\_\_\_ Long Deg \_\_\_\_\_ Long Min/Sec \_\_\_\_\_

Driller  Engineer  Trainee Name (Print) Andrew Flayan

Tax Parcel No. \_\_\_\_\_

Driller/Engineer/Trainee Signature [Signature]

Cased or Uncased Diameter 6" Static Level \_\_\_\_\_

Driller or Trainee License No. 2551

Work/Decommission Start Date 1/26/04

If trainee, licensed driller's Signature and License no. \_\_\_\_\_

Work/Decommission Completed Date 1/27/04

| Construction/Design | Well Data                                  | Formation Description |
|---------------------|--|-----------------------|
|                     | CONCRETE SURFACE SEAL                      | 0 - ft.               |
|                     | abandon in place<br>BACKFILL w/ bent chips | - ft.                 |
|                     | DEPTH OF BORING <u>40'</u>                 | - ft.                 |

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DEPT OF ECOLOGY

CLIENTS WELL ID #

TW-5

# RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT

Notice of Intent No. A 61238

Construction/Decommission ("x" in circle)

145885

Construction

Decommission ORIGINAL INSTALLATION Notice of Intent Number \_\_\_\_\_

Type of Well ("x" in circle)

Resource Protection 26-SE-30R  
 Geotech Soil Boring

Consulting Firm Kare Environmental

Unique Ecology Well ID \_\_\_\_\_

Tag No: \_\_\_\_\_

Property Owner Swanta Shopping Center

Site Address 11849 96th AVE NE

City Kirkland County: King

Location SE 1/4 SE 1/4 Sec 30 Twp 20N 10E  curb or WWM

Lat/Long (s, t, r) Lat Deg \_\_\_\_\_ Lat Min/Sec \_\_\_\_\_  
 still REQUIRED) Long Deg \_\_\_\_\_ Long Min/Sec \_\_\_\_\_

WELL CONSTRUCTION CERTIFICATION. I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller  Engineer  Trainee Name (Print) Andrew Filaga

Driller/Engineer/Trainee Signature [Signature]

Driller or Trainee License No. 2551

Tax Parcel No. \_\_\_\_\_

Cased or Uncased Diameter 6" Static Level \_\_\_\_\_

Work/Decommission Start Date 1/26/04

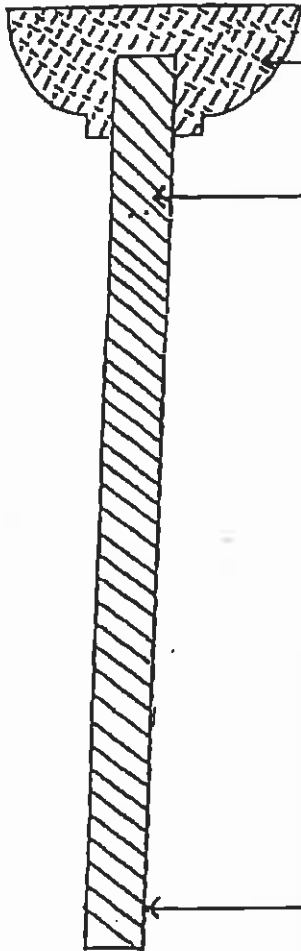
Work/Decommission Completed Date 1/27/04

If trainee, licensed driller's Signature and License no. \_\_\_\_\_

Construction/Design

Well Data 4034

Formation Description



CONCRETE SURFACE SEAL

abandon in place  
 BACKFILL w/ bent chips

DEPTH OF BORING 40'

0 - ft.

- ft.

- ft.

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DEPT OF ECOLOGY

CLIENTS WELL ID #

TW-7

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# RESOURCE PROTECTION WELL REPORT

CURRENT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Notice of Intent No. A 61239

Construction/Decommission ("x" in circle) 145886

Type of Well ("x" in circle)

Construction  
 Decommission ORIGINAL INSTALLATION Notice of Intent Number \_\_\_\_\_

Resource Protection 26-SE-30R  
 Geotech Soil Boring

Consulting Firm Kare Environmental

Property Owner Sanita Shopping Center

Unique Ecology Well ID \_\_\_\_\_  
Tag No: \_\_\_\_\_

Site Address 11849 98th AVE NE

City Kirkland County: King

WELL CONSTRUCTION CERTIFICATION. I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Location SE 1/4 SE 1/4 Sec 30 Twn 26N RSE EW circle of one WWM

Lat/Long (s, t, r) still REQUIRED) Lat Deg \_\_\_\_\_ Lat Min/Sec \_\_\_\_\_  
Long Deg \_\_\_\_\_ Long Min/Sec \_\_\_\_\_

Driller  Engineer  Trainee Name (Print) Andrew Flagan  
Driller/Engineer/Trainee Signature [Signature]  
Driller or Trainee License No. 2551

Tax Parcel No. \_\_\_\_\_

Cased or Uncased Diameter 6" Static Level \_\_\_\_\_

Work/Decommission Start Date 1/26/04

Work/Decommission Completed Date 1/27/04

If trainee, licensed driller's Signature and License no. \_\_\_\_\_

| Construction/Design | Well Data  | Formation Description  |
|---------------------|--|--|
|                     | Well Data <u>4034</u><br>CONCRETE SURFACE SEAL<br>abandon in place<br>BACKFILL w/bent. chips | 0 - _____ ft.<br>_____ ft.<br>_____ ft.  |
|                     | DEPTH OF BORING <u>39'</u>   | <p style="text-align: center;"><b>RECEIVED</b><br/>FEB 24 2004<br/>DEPT OF ECOLOGY</p> <p style="text-align: center;"><b>CLIENTS WELL ID #</b><br/><u>TW-8</u></p> |
|                     | Scale 1"= _____ Page _____ of _____  | ECY 050-12 (Rev 2/01)  |



# RESOURCE PROTECTION WELL REPORT CURRENT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Notice of Intent No. A 61238

Construction/Decommission ("x" in circle)

Construction  
 Decommission ORIGINAL INSTALLATION Notice of Intent Number \_\_\_\_\_

145881

Type of Well ("x" in circle)

Resource Protection 26-SE 30R  
 Geotech Soil Boring

Consulting Firm Kane Environmental

Unique Ecology Well ID \_\_\_\_\_

Tag No: \_\_\_\_\_

Property Owner Suanita Shopping Center

Site Address 11849 96th AVE NE

City Kirkland County: King

Location SE 1/4 SE 1/4 Sec 30 Twp 26N RSE EW  circle or  WWM

Lat/Long (s, t, r still REQUIRED) Lat Deg \_\_\_\_\_ Lat Min/Sec \_\_\_\_\_

Long Deg \_\_\_\_\_ Long Min/Sec \_\_\_\_\_

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller  Engineer  Trainee Name (Print) Andrew Flanagan

Driller/Engineer/Trainee Signature \_\_\_\_\_

Driller or Trainee License No. 2551

Tax Parcel No. \_\_\_\_\_

Cased or Uncased Diameter 6 Static Level \_\_\_\_\_

Work/Decommission Start Date 1/26/04

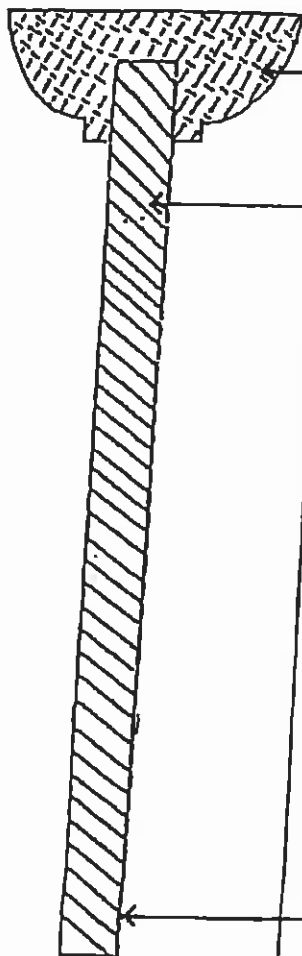
Work/Decommission Completed Date 1/27/04

If trainee, licensed driller's Signature and License no. \_\_\_\_\_

Construction/Design

Well Data 4034

Formation Description



CONCRETE SURFACE SEAL

abandon in place  
 BACKFILL w/ bent-chips

0 - ft.

- ft.

- ft.

DEPTH OF BORING 41 "

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DEPT OF ECOLOGY

CLIENTS WELL ID #

**TW-9**

Scale 1" = \_\_\_\_\_

Page \_\_\_\_\_ of \_\_\_\_\_

ECY 050-12 (Rev 2/01)

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# RESOURCE PROTECTION WELL REPORT CURRENT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Notice of Intent No. A 61238

Construction/Decommission ("x" in circle) 145887

Type of Well ("x" in circle)  
 Resource Protection 26-SE-30R  
 Geotech Soil Boring

Construction   
 Decommission ORIGINAL INSTALLATION Notice of Intent Number \_\_\_\_\_

Property Owner Suanita Shopping Center

Consulting Firm Kane Environmental

Site Address 11849 98th AVE NE

Unique Ecology Well ID \_\_\_\_\_  
 Tag No: \_\_\_\_\_

City Kirkland County: King

Location SE 1/4 SE 1/4 Sec 30 Twn 20N R 5E  WWM circle or one WWM

WELL CONSTRUCTION CERTIFICATION I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief

Lat/Long (S, L, R) Lat Deg \_\_\_\_\_ Lat Min/Sec \_\_\_\_\_  
 still REQUIRED) Long Deg \_\_\_\_\_ Long Min/Sec \_\_\_\_\_

Driller  Engineer  Trainee Name (Print) Andrew Flagan

Tax Parcel No. \_\_\_\_\_

Driller/Engineer/Trainee Signature [Signature]

Cased or Uncased Diameter 6" Static Level \_\_\_\_\_

Driller or Trainee License No. 2551

Work/Decommission Start Date 1/26/04

If trainee, licensed driller's Signature and License no. \_\_\_\_\_

Work/Decommission Completed Date 1/27/04

| Construction/Design        | Well Data   | Formation Description   |
|----------------------------|---|---|
|                            | CONCRETE SURFACE SEAL   | 0 - _____ ft.   |
|                            | <p><i>abandon in place</i></p> BACKFILL <i>w/ bent. chips</i> | _____ ft.   |
|                            | _____   | _____ ft.   |
| DEPTH OF BORING <u>40'</u> |   | RECEIVED<br>FEB 24 2004<br>DEPT OF ECOLOGY<br><br>CLIENTS WELL ID #<br><div style="border: 2px solid black; padding: 5px; display: inline-block;">                     TW-10                 </div> |

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

The Department of Ecology does NOT warrant the Data and/or the Information on this Well Report.

# RESOURCE PROTECTION WELL REPORT CURRENT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Notice of Intent No. A 61238

Construction/Decommission ("x" in circle)

Construction  
 Decommission **ORIGINAL INSTALLATION** Notice of Intent Number 145880

Type of Well ("x" in circle)

Resource Protection 26-SE-30K  
 Geotech Soil Boring

Consulting Firm Kane Environmental

Unique Ecology Well ID

Tag No: \_\_\_\_\_

Property Owner Sunita Shopping Center

Site Address 11849 96th AVE NE

City Kirkland County: King

Location SE 1/4 SE 1/4 Sec 30 Twn 20N R5E <sup>WWM</sup> circle of one

Lat/Long (s, t, r still REQUIRED) Lat Deg \_\_\_\_\_ Lat Min/Sec \_\_\_\_\_ Long Deg \_\_\_\_\_ Long Min/Sec \_\_\_\_\_

**WELL CONSTRUCTION CERTIFICATION** I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller  Engineer  Trainee Name (Print) Andrew Flayen

Driller/Engineer/Trainee Signature [Signature]

Driller or Trainee License No. 2551

Tax Parcel No. \_\_\_\_\_

Cased or Uncased Diameter 6" Static Level \_\_\_\_\_

Work/Decommission Start Date 1/26/04

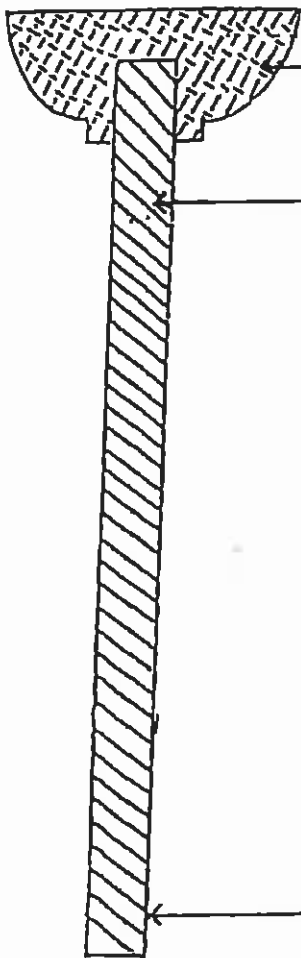
Work/Decommission Completed Date 1/27/04

If trainee, licensed driller's Signature and License no. \_\_\_\_\_

Construction/Design

Well Data 4034

Formation Description



CONCRETE SURFACE SEAL

*abandon in place*  
BACKFILL *w/bent chips*

DEPTH OF BORING 41'

0 - ft.

- ft.

- ft.

**RECEIVED**

FEB 24 2004

DEPT OF ECOLOGY

**CLIENTS WELL ID #**

TW-11

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

# RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT  
Notice of Intent No. A 61238

Construction/Decommission ("x" in circle)  
 Construction 145888  
 Decommission ORIGINAL INSTALLATION Notice  
of Intent Number \_\_\_\_\_

Type of Well ("x" in circle)  
 Resource Protection 26-SE-30R  
 Geotech Soil Boring

Consulting Firm Kare Environmental  
Unique Ecology Well ID \_\_\_\_\_  
Tag No: \_\_\_\_\_

Property Owner Sanita Shopping Center  
Site Address 11849 98th AVE NE  
City Kirkland County: King  
Location SE 1/4 SE 1/4 Sec 30 Twn 20N RSE EWB circle  
or one WWM

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (S, L, R) Lat Deg \_\_\_\_\_ Lat Min/Sec \_\_\_\_\_  
still REQUIRED) Long Deg \_\_\_\_\_ Long Min/Sec \_\_\_\_\_

Driller  Engineer  Trainee Name (Print) Andrew Flanagan  
Driller/Engineer/Trainee Signature [Signature]  
Driller or Trainee License No. 2551

Tax Parcel No. \_\_\_\_\_  
Cased or Uncased Diameter 6" Static Level \_\_\_\_\_  
Work/Decommission Start Date 1/26/04  
Work/Decommission Completed Date 1/27/04

If trainee, licensed driller's Signature and License no. \_\_\_\_\_

| Construction/Design | Well Data                                     | Formation Description |
|---------------------|---|-----------------------|
|                     | CONCRETE SURFACE SEAL                         | 0 - ft.               |
|                     | BACKFILL <u>abandon in place w/bent chips</u> | - ft.                 |
|                     | DEPTH OF BORING <u>41'</u>                    | - ft.                 |

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DEPT OF ECOLOGY

CLIENTS WELL ID #  
TW-13

**Attachment B**  
**TW-12 Photograph April 17, 2008**



Treatment well MW-12 closed with concrete April 17, 2008



October 24, 2008

Ms. Maura O'Brien  
Site Coordinator  
Washington Department of Ecology  
3190 - 160th Avenue SE  
Bellevue, WA 98008

Re: Groundwater Compliance Well Closure Documentation  
Compliance Monitoring Report  
Juanita Village Consent Decree Site  
Consent Decree No. 00-2-16556-1SEA

Dear Ms. O'Brien:

The purpose of this letter is to provide you with a correction regarding closure of former Treatment Well – TW-12. In our letter dated April 17, 2008, Kane Environmental stated that TW-12 was closed and well closure documentation would be obtained. That documentation is included with this letter. However, please note that we also stated that deep groundwater monitoring well MW-4D was closed and provided the well closure documentation for MW-4D. Please note that the documentation for MW-4D was in fact the well closure documentation for TW-12, and that deep groundwater monitoring well MW-4D is still operational.

In response to your letter dated May 21, 2008, Ecology's Contained-In determination dated November 17, 1999 was not needed for our remediation effort at Juanita Village, and it should be closed and/or voided by Ecology.

Please call me at (206) 691-0476 if you have any questions. Thank you.

Sincerely,

**KANE ENVIRONMENTAL, INC.**

A handwritten signature in black ink that reads "John Kane". The signature is written in a cursive style with a long horizontal line extending to the right.

John Kane  
President/Principal

Attachments:

Well Closure Report TW-12

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

# RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT  
Notice of Intent No. A 69887

Construction/Decommission ("x" in circle)  
 Construction 173019  
 Decommission ORIGINAL INSTALLATION Notice  
of Intent Number \_\_\_\_\_

Type of Well ("x" in circle) 265E-30R  
 Resource Protection  
 Geotech Soil Boring

Consulting Firm: Kane Env.  
Unique Ecology Well ID \_\_\_\_\_  
Tag No: \_\_\_\_\_

Property Owner: 11849 98th AVE NE  
Site Address: Swanite Village  
City: Kirkland County: King  
Location: SE 1/4 SE 1/4 Sec 30 Twn 26N R5E E21 circle  
or WWM of ant

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (S, L, R) \_\_\_\_\_ Lat Deg \_\_\_\_\_ Lat Min/Sec \_\_\_\_\_  
still REQUIRED) Long Deg \_\_\_\_\_ Long Min/Sec \_\_\_\_\_

Driller  Engineer  Trainee Name (Print) \_\_\_\_\_  
Driller/Engineer/Trainee Signature: [Signature]  
Driller or Trainee License No. 2682

Tax Parcel No. \_\_\_\_\_  
Cased or Uncased Diameter 6" Static Level ~

If trainee, licensed driller's Brian Gosa 2330  
Signature and License no. [Signature]

Work/Decommission Start Date 5/4/05  
Work/Decommission Completed Date 5/4/05

| Construction/Design | Well Data  | Formation Description                                      |
|---------------------|--|--|
|                     | <p>CONCRETE SURFACE SEAL</p> <p>BACKFILL <u>Bent chips</u></p> <p>DEPTH OF BORING <u>42"</u></p> | <p>0 - <u>42</u> ft.</p> <p>_____ ft.</p> <p>_____ ft.</p> |
|                     | <p>RECEIVED<br/>MAY 26 2005<br/>DEPT OF ECOLOGY</p> <p>CLIENTS WELL ID #</p> <p><u>TW-12</u></p> |  |



