REMEDIAL INVESTIGATION/ FEASIBILITY STUDY REPORT

at the

STOREY GAS STATION FACILITY
1310 East First Street
Cle Elum, Washington

for

EARL STOREY, SUZANNE STOREY, MARILYN STOREY, and JOANNE STOREY MANKUS
Cle Elum, Washington 98922

prepared by

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March 2000

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EXECUTIVE SUMMARY

This report presents the results of Galloway Environmental, Inc.'s (GEI's) Remedial Investigation and Feasibility Study (RI/FS) of the Storey Gas Station Facility located at 1310 East First Street in Cle Elum, Washington. This RI/FS was prepared as part of the Storey Family's (Storey's) response to an Agreed Order issued on the site by the Washington State Department of Ecology (Ecology) in October 1997. Storey intends to completely upgrade the facility and continue the present use of the site as a petroleum service station and retail facility.

A residence belonging to Mr. and Mrs. Earl Storey presently occupies the site, along with an approximately 4,000 square-foot shop building, and one abandoned residence. A new Station office and mini-convenience store will be constructed this spring.

Ten aboveground storage tanks (ASTs), three underground storage tanks (USTs), and four fuel islands and associated piping have been properly decommissioned from the site. These tanks have been replaced with seven new ASTs situated in a new aboveground concrete secondary containment basin. A "Draft" Spill Prevention, Control and Countermeasures (SPCC) Plan has been forwarded to EPA Region X. This Plan will be finalized and forwarded to the EPA when the facility upgrades are completed.

GEI conducted a phased series of site investigations after acceptance of the RI/FS Work Plan by Ecology (November 1997). These investigations included the following scope of work.

1) Two phases of test pit soil sampling and analysis — the soil samples were field-screened for the contaminants of concern and representative samples were submitted for laboratory analysis.
2) Four groundwater-monitoring wells were installed and properly developed — one up-gradient and three down-gradient wells. The wells were sampled at approximately regional high and low water table (three sampling periods). The water samples were submitted for laboratory analysis. Also, hydrogeologic gradient and flow analysis was completed on the wells.
3) Surface water and sediment samples were collected from an on-site drainage ditch. These samples were submitted to a laboratory for chemical analysis.
4) As the areas became accessible during facility decommissioning and upgrading, Storey excavated petroleum-impacted soil from impacted soil source areas identified in the two phases of test pit sampling. GEI collected soil samples from the source removal areas for field screening and follow-up chemical analysis. This sampling was intended to direct the source area removals and to test the soils remaining following the removals.

The following summarizes the results of these investigations.

Soil Samples - Results of the test pit sampling indicated that soils in the vicinity of the ASTs, USTs, and pump islands contained concentrations of petroleum hydrocarbons in excess of the MTCA Method A cleanup levels.

Representative samples of the affected soils were also analyzed for volatiles, semivolatiles and metals. The results of these tests confirmed that the soils are within MTCA-acceptable limits for these contaminants with the exception of one sample, which contained 310 mg/kg for lead — slightly above the MTCA Method A limit of 250 mg/kg in soils.

Water Samples - GEI monitored the installation of four groundwater wells at the site — one upgradient and three downgradient wells. Laboratory analysis of soil samples collected from the monitoring well borings resulted in no-detectable petroleum compounds in the soil.

Water from each of the wells was sampled on January 15 1998, June 4, 1998 and September 16, 1999. Laboratory analysis of these samples confirmed petroleum hydrocarbons were within MTCA Method A Cleanup Standards in all of the wells for all sampling events — with the exception of monitoring well MW-2, which contained gasoline-range petroleum compounds in excess of MTCA Method A in the water sample collected on June 4, 1999. This well is situated in the northeast corner of the property — downgradient of the previous location of the ASTs. This single excedence in this well may be a result of high water table migrating through the affected source area soils. The presence of floating product was not observed in the groundwater monitoring wells.

Younger Creek Water and Sediment Samples – Sediment samples were collected from the drainage ditch located along the southeastern portion of the property (Younger Creek) on January 15 and June 4, 1998. Petroleum hydrocarbon concentrations were slightly above the MTCA-Action limit in the January samples and not detectable in the June samples. Petroleum hydrocarbons were not detectable in the water samples collected from the drainage.

Source Removals (Interim Remedial Action) - An interim remedial action was conducted at the Storey site in September of 1999. This action consisted of the removal of approximately 600 cubic yards of petroleum-impacted soils, following the removal of the pre-existing ASTs, USTs, and fuel pump islands.

Impacted soil was removed from these source areas until: 1) remaining petroleum concentrations in the soil were within Ecology's Method A Cleanup Levels for residential soil; or 2) continued excavation may have jeopardized the structural integrity of the concrete secondary containment housing the ASTs. The excavated soil is currently stockpiled on-site in a

lined, secure stockpile area awaiting remediation. Remaining petroleum hydrocarbon concentrations remaining belowground at the site are summarized as follows:

1) Source area clearance samples have confirmed that petroleum concentrations in soil are less than the MTCA Method A Cleanup Level in the upper eight feet of the ground surface, with one exception — 1,900 mg/kg diesel-range petroleum hydrocarbons at six feet below the ground surface (bgs) beneath the previous location of the Station office

2) Diesel-range petroleum hydrocarbons are confirmed in soil — up to 8,100 mg/kg at depths greater than eight feet bgs (approximately 20 feet west of the previous location of the Station office building);

3) Gasoline-range petroleum hydrocarbons in the soil are less than the MTCA Method A Cleanup Level in all areas tested, with one exception —480 mg/kg at 9.5 feet bgs beneath the previous location of the facilities AST pumps; and

4) Petroleum hydrocarbon concentrations are within MTCA Method A limits in the area of the previous fueling island locations at depths less than 9.5 feet bgs; however, diesel-range petroleum hydrocarbon are present at depths greater than 9.5 feet bgs at concentrations up to 2,800 mg/kg. NOTE: groundwater table at the time of source removals excavation in this area was approximately 8.5 feet bgs.

Corrective Action Regulatory Framework - State of Washington's MTCA Cleanup Levels (MTCA promulgated by Washington Administrative Code 173-340) and federal drinking water standards were reviewed during this RI and considered with respect to the contaminant characteristics (i.e., mobility and degradation).

The site is relatively simple in that the primary contaminants of concern are all petroleum compounds. Those compounds are still present belowground in soil downgradient of the petroleum-impacted source areas. These compounds may also be present in groundwater downgradient from the source areas. These compounds include benzene, toluene, ethyl benzene, and xylene, along with general gasoline, diesel- and oil-range hydrocarbons.

Based on GEI's evaluation, MTCA Method A cleanup levels are appropriate for the site. The Method A cleanup levels for benzene, toluene, ethyl benzene, and xylene in groundwater are 5, 40, 30, and 20 µg/L, respectively. The cleanup level for gasoline and diesel-range hydrocarbons in water are 1000 µg/L.

The MTCA Method A soil cleanup levels are 0.5, 40.0, 20.0, and 20.0 mg/kg for benzene, toluene, ethylbenzene, and xylene. The soil cleanup

levels for gasoline- and diesel-/oil-range petroleum hydrocarbons are 100 mg/kg and 200 mg/kg, respectively.

GEI's research did not detect any drinking water wells likely to be impacted by the off-site migration of petroleum compounds from the site. Therefore, GEI concludes that this site does not currently present an imminent threat to human health and the environment.

As part of the Feasibility Study, several potentially applicable technologies were evaluated to address the contaminated soil stockpiled on the property. These included thermal treatment, bioremediation, aeration, off-site disposal to a landfill, and incorporation into an asphalt mix. Based on the screening of the corrective action alternatives against the remedial action objectives, the bioremediation option has been selected as the remedial option of choice. It is recommended that a Compliance Monitoring Program be implemented to address the potentially contaminated groundwater remaining on-site.

1.0 *INTRODUCTION*

This report presents the results of Galloway Environmental's (GEI) Remedial Investigation (RI) of a property (site) located at 1310 East First Street in Cle Elum, Washington (known as the Storey Service Station). This RI/FS was prepared as part of the Storey Family's (Storey) response to an Agreed Order issued on the site by the Washington State Department of Ecology (Ecology) in October 1997. Storey intends to completely upgrade the facility and to continue the present use of the site as a petroleum service station and retail facility.

1.1 *BACKGROUND*

Mr. Earl Storey has used the Storey site for petroleum fuel storage and retail sales since its acquisition in 1949, at which time the service station and two 12,000-gallon aboveground storage tanks (ASTs) were installed on the site. The service station business was operated concurrently with a logging business through 1968. The shop building was used as a maintenance shed for Storey's logging equipment. Additional ASTs were added in 1953, 1982, and 1989. Three underground storage tanks (USTs) were installed in 1964.

In November 1995, Ecology responded to a reported release of petroleum product into Younger Creek — located at the southeastern portion of the site. Ecology personnel observed petroleum product along the banks of the creek for approximately 1,000 feet downstream of the site. Ecology provided oleophilic booms for the containment of the WDOE-estimated 55-gallon oil spill, however these booms were swept away during a subsequent flood event and were not recovered.

In response to the release, Ecology investigated 24 service station/bulk fuel storage facilities in Cle Elum to determine the source of the spill. The Storey site was included in the investigation. Ecology's in-situ soil vapor sampling results indicated that the subject site was among four sites with potential petroleum contamination in soil. The other three sites are located upgradient of the subject site with respect to groundwater flow direction. Ecology conducted no sampling or testing immediately upgradient of the property to determine if petroleum contaminants may be migrating onto the subject property.

Ecology completed thirteen soil vapor borings, three soil borings and three groundwater-monitoring wells at the subject property. The results of the testing indicated that two monitoring wells exhibited concentrations of gasoline compounds exceeding the Model Toxics Control Act (MTCA) Method A Cleanup level. Ecology concluded that the petroleum contamination in the vicinity of the aboveground tank farm was most likely due to releases during petroleum product offloading and storage tank cleanout operations at the site. Products released from underground piping

may also account for the soil and groundwater contamination detected in the vicinity of the USTs.

Ecology issued an Agreed Order to the owners of the site in October 1997. Ecology determined that Earl Storey, Suzanne Storey, Marilyn Storey, and Joanne Storey Mankus were considered as "owners or operators" of the facility and were thereby notified of their status as "potentially liable persons" (PLPs) under RCW 70.105D.040 after notice and opportunity for comment on March 24, 1997. Attached to the Agreed Order was a Statement of Work for the Remedial Design/Feasibility Study of the station site. The Statement was amended to allow for a phased approach to the remediation of the known site conditions to accommodate the proposed upgrading of the facility by Storey. This document reports the results of the implementation of that Statement of Work.

1.2 *PURPOSE*

The purpose of this RI/FS is to evaluate the nature, extent, and potential migration of contamination by performing data collection and analysis. The RI provides a focused methodology to document the completeness of the source area removals and to define the extent of remaining petroleum contamination at the site. The results of the RI are compared to Washington State Model Toxics Control Act (MTCA) cleanup regulations promulgated in Washington Administrative Code (WAC) 73-340. This information is subsequently used in preparation of an FS to evaluate potential remedial alternatives.

1.3 *OBJECTIVES*

Objectives for this RI/FS include the following:

- Review and summary of existing data for the project area
- Characterize the nature and extent of contamination in soil and groundwater in soil and groundwater on-site
- Determine the groundwater flow direction and gradient
- Develop cleanup levels
- Evaluate the threat that contaminated soil and groundwater poses to human health and the environment, if any, and
- Development of preliminary remedial alternatives for cleanup of contaminants of concern (COCs) in soil and groundwater

2.0 *GENERAL FACILITY INFORMATION*

The information below is provided to comply with WAC 173-340-350(6)(a), "General Facility Information".

2.1 *PROJECT TITLE*

"Remedial Investigation/Feasibility Study - Storey Gas Station Facility"

2.2 *INVOLVED PARTIES*

Property owners and addresses

Earl Storey, Suzanne Storey, Marilyn Storey and Joanne Storey Mankus
1310 east First Street
Cle Elum, Washington 98922

Environmental Consultant

Gary Galloway, RG, REA
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Sammamish, Washington 98029-9540

Ecology Project Manager

Chung Ki Yee, PE
Department of Ecology
Central Regional Office
15 West Yakima Avenue, Suite 200
Yakima, Washington 98902-3401

2.3 *SITE LOCATION*

The Storey Gas Station Facility is located in the City of Cle Elum, Washington, between First Street and State Route 903 *(see Figure 2-1 - Site Location Map)*. The site address is currently identified as 1310 East First Street. The site latitude is 47 11' 28"N and the longitude is 120 54'32"W.

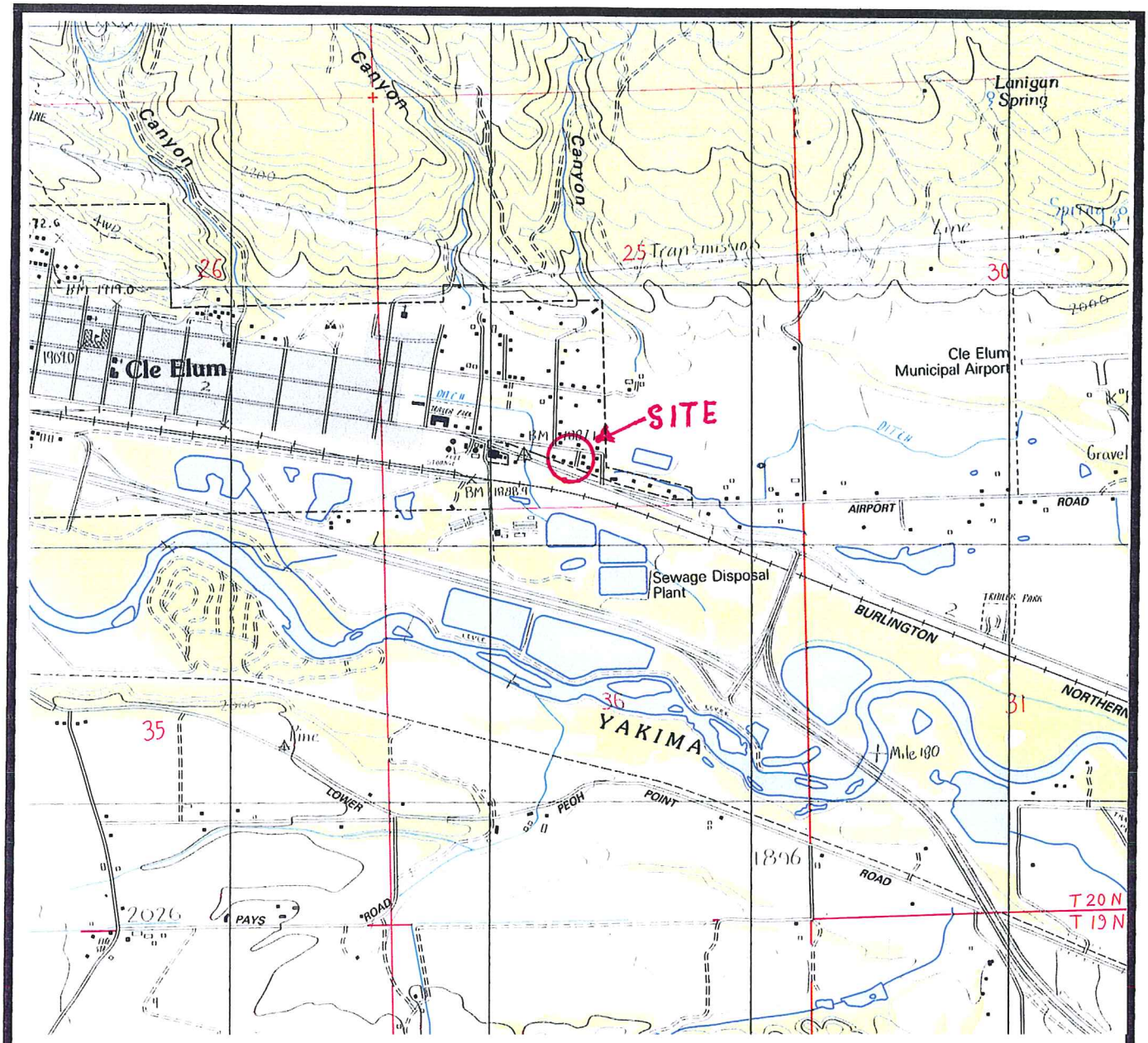

FIGURE 2-1 . — SITE LOCATION MAP

Storey Service Station Site, Cle Elum, Washington

Source: USGS Cle Elum, 7.5' Quadrangle, 1984

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2.4 *SITE LEGAL DESCRIPTION*

The subject property is situated in the SE 1/4 of the SW 1/4 of Section 25, Township 20 North, Range 15 East, Willamette Meridian. The site consists of the following tracts of land:

- Steiner's Garden Tracts #2; East 20 feet of Lot 28, Lot 29 (Parcel #20-15-2552-0029-00) owned by Suzanne G. Storey, Marilyn Storey, and Joanne Storey Mankus.
- Steiner's Garden Tracts #2 — Lot 21 and East 20 feet of Lot 22(Parcel #20-15-2552-0021-00) owned by Suzanne G. Storey, Marilyn Storey, and Joanne Storey Mankus.

2.5 *SITE CONDITIONS*

The layout of the property with respect to property boundaries and other site features prior to the facility upgrades is shown in Figure 2-2 — Pre-Upgrades Site Plan. The property is fairly level. Younger Creek, a drainage ditch fed from the nearby Yakima River, cuts through the southern portion of the property.

Prior to the interim remedial action undertaken in the summer and fall of 1999, the site contained an operating petroleum service station, a large cement block shop/maintenance building, four outbuildings, three underground fuel storage tanks, eleven aboveground fuel storage tanks and three fuel islands. The capacity of the aboveground tanks, used to support the retail sale of petroleum products, totaled approximately 140,000 gallons.

Also prior to the remedial action, various items had been allowed to accumulate on the ground surface of the site, such as scrap metal, automobile hulks, used tires and barrels full of used car batteries. A bulk fuel delivery truck and two fuel transport trailers were also kept on-site. Petroleum-stained soils were observed in the south-central portion of the property. Barrels and buckets of waste petroleum products were stored in the area around the service station building and in various other locations about the property. A variety of horse trailers and railroad ties were stored on the southern portion of the site awaiting retail sale.

During cleanup operations conducted in September 1999, all eleven of the aboveground tanks and the three underground tanks were decommissioned. The service station building was demolished, along with the pump islands, and is temporarily being replaced by one of the outbuildings already present on the property. A new service station and convenience store is planned for the site. Seven ASTs and have been installed in a concrete secondary-containment area to service the new fueling system. New pump islands (with canopies) and asphalt has been installed as shown in Figure 2-3 — Existing Site Plan.

The site vicinity is commercial, as it is located on the eastern end of the main commercial "strip" of downtown Cle Elum. The site is bounded on the north by East First Street and on the south by State Rout 903. Residential homes and various commercial retail establishments border the property on the east and west and across First Street to the north. A Burlington Northern mainline extends from east to west along the south side of State Route 903.

2.6 OPERATIONAL HISTORY

Mr. Earl Storey purchased the property in 1949. At that time, there was a single residence on the site, which has since been moved to the northern portion of the property and is currently unused. A service station building (recently demolished), the residence currently located on-site, and three aboveground tanks were installed in 1949, at which time the service station began operating.

Storey operated the service station concurrently with a logging business from 1949 until 1968, at which time the logging business was discontinued. The cement block shop building was used for repair and maintenance of Storey's logging equipment. The service station building was destroyed by fire in 1959, but was subsequently replaced. Three aboveground tanks were installed during the reconstruction of the service station building. Three underground storage tanks were installed south of the service station building in 1964. Three 10,000-gallon aboveground tanks were installed in 1953 and were replaced by four other aboveground tanks in 1982. Five additional aboveground tanks were installed in approximately 1989.

Since the beginning of this RI/FS, the Storeys have removed and replaced all of the former fuel storage tanks on the property. Currently, there are no underground storage tanks known to be on-site. Seven aboveground tanks provide fuel for the retail fueling business still in operation.

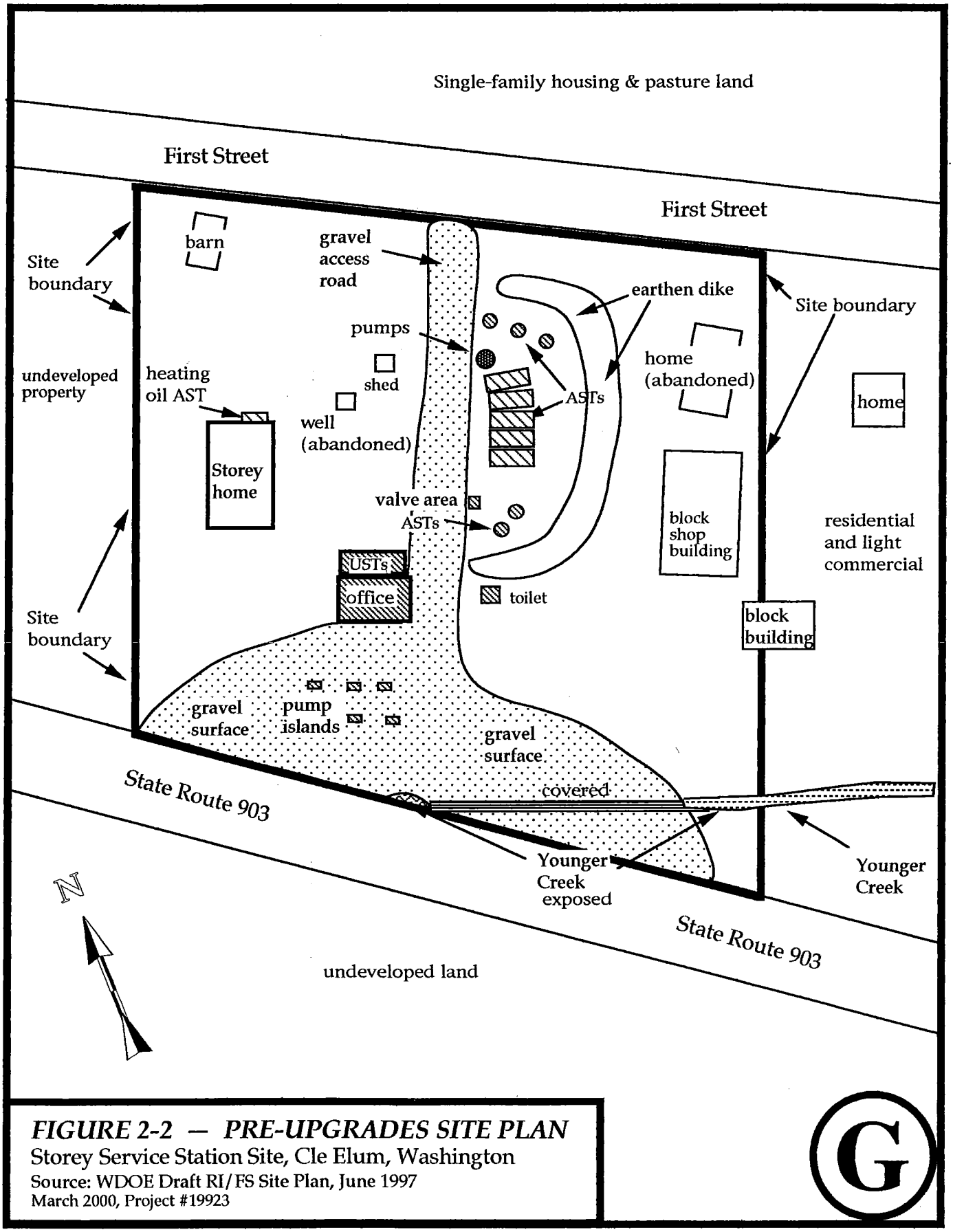

FIGURE 2-2 — PRE-UPGRADES SITE PLAN

Storey Service Station Site, Cle Elum, Washington

Source: WDOE Draft RI/FS Site Plan, June 1997

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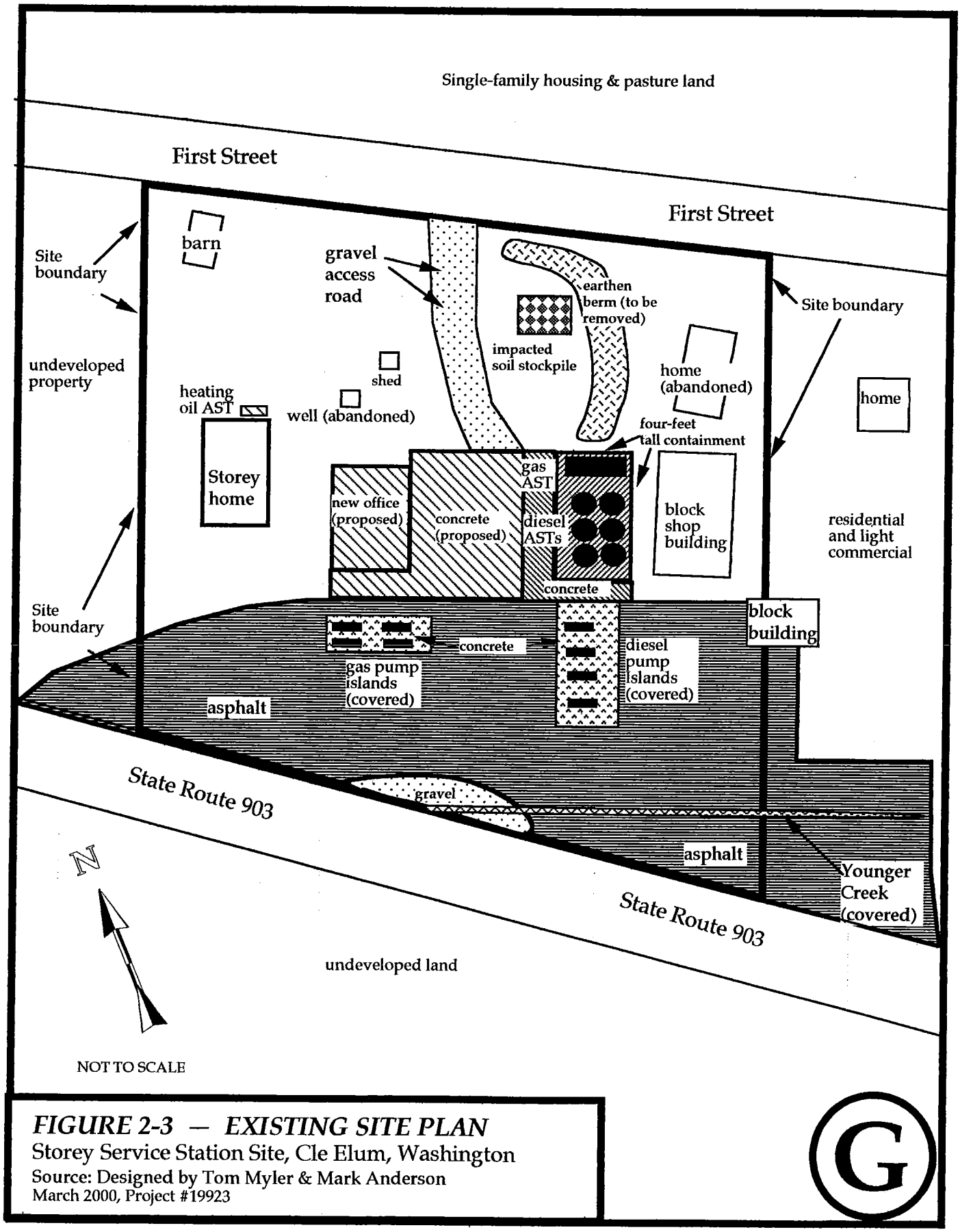

FIGURE 2-3 — EXISTING SITE PLAN
Storey Service Station Site, Cle Elum, Washington
Source: Designed by Tom Myler & Mark Anderson
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2.7 *PREVIOUS SITE STUDIES*

In November 1995, Ecology responded to a reported release of petroleum product into nearby Younger Creek. Ecology personnel observed petroleum product along the banks of Younger Creek for approximately 1,000 feet downstream of the site. Ecology provided oleophilic booms for the containment of the estimated 55-gallon oil spill, however these booms were swept away during a subsequent flood event and were not recovered.

As a follow-up to that release, Ecology investigated 24 service stations and bulk storage facilities located on First Street in Cle Elum. The findings associated with this investigation are documented in "Phase 1 and 2 Environmental Site Assessment, Former and Current Service Stations and Bulk Storage Facilities, Cle Elum, Washington, December, 1996". The Storey site was included in this investigation. In-situ soil vapor samples analyzed using an organic vapor analyzer (OVA) and a flame ionization detector (FID) indicated that the site was among four sites with potentially high petroleum contamination.

All of the sites included in Ecology's investigation are located upgradient of the Storey site with respect to the assumed groundwater flow direction. Of these sites, three were identified by Ecology to have potentially high petroleum contamination. These included:

1) The Knife Works, 316 West First Street
2) Willette's Shell Service, 901 East First Street
3) Former Unocal Bulk Plant 0095/Devere & Sons Distributing, Short and First Street

No drilling or sampling activities were conducted immediately upgradient of the site to determine if petroleum contaminants may be migrating onto the subject property.

2.7.1 *Ecology Soil Investigation-Storey Site*

Ecology conducted a limited soil vapor survey at the Storey site. Based on this vapor survey, Ecology's contractor — Geoboring and Development, Inc., Puyallup, Washington (Geoboring) installed three soil borings, which were ultimately completed as two-inch groundwater monitoring wells, at the site.

The results of the vapor survey and comparison of the analytical results with MTCA Method A Cleanup Levels (WAC 173-340-740) for soil indicated that remedial action was necessary at the site to reduce gasoline and diesel concentrations to acceptable levels. The extent or volume of the impacted soil was not determined by Ecology.

2.7.2 *Groundwater Investigation*

Ecology supervised the installation of groundwater monitoring wells at the soil boring locations installed by Geoboring, Inc. Ecology collected groundwater samples from each of the monitoring wells in June and September of 1996.

Comparison of the analytical results with the MTCA Method A Cleanup Levels for groundwater indicated that remedial action was required to reduce the concentrations of the following petroleum compounds.

- Benzene and xylenes in MW-23; and
- Benzene, toluene, ethylbenzene, xylenes, and gasoline/diesel in MW-24.

Ecology concluded that the petroleum contamination in the vicinity of the tank farm (unpaved area) was most likely due to releases during product offloading and storage tank cleanout operations. Products released from underground fueling system piping may also have accounted for the soil contamination found in the vicinity of the underground storage tanks.

All three of the groundwater monitoring wells installed by Ecology were destroyed during the interim remedial action and facility upgrades undertaken at the site in September 1999.

2.8 *PROPOSED LAND USE*

The Storeys intend to complete any necessary remedial actions on the property and to construct a new service station and convenience store on the site. Therefore, no land use changes are anticipated *(see Appendix D — Photos).*

Records on file with the Kittitas County Planning Department indicate that the site is zoned as "Commercial", although it is currently also used as a residence. The Department has no plans to change the zoning of the property in the future.

3.0 *FIELD INVESTIGATION ACTIVITIES*

The purpose of GEI's field investigation was to characterize contaminants of concern in on-site soil and groundwater, as well as to evaluate the potential for off-site contaminant migration. A phased approach was used, with field investigation activities conducted as part of all phases. The data obtained from each phase of the investigation was used to direct each subsequent phase. The work was conducted in accordance with the Sampling and Analysis Plan (SAP) and the Health and Safety Plan (HASP) prepared by GEI as part of the RI/FS Work Plan (November 1997). The following sections describe field activities performed during the RI.

3.1 *SOIL INVESTIGATION*

3.1.1 *Test Pits*

GEI explored subsurface soil conditions on-site by excavating 22 test pits at the sampling locations shown in Figure 3-1 — Phase I and Phase II Sample Locations *(see Appendices A — Test Pit Logs and D — Photos).*

In December of 1997, twelve test pits were excavated to collect samples for site characterization, as part of the Phase I RI investigation. The test pits were advanced with an owner-supplied backhoe. Samples were collected by GEI from one to seven feet in depth from the test pits and were screened in the field for indications of contamination. Test pit samples with indications of petroleum contamination were submitted to OnSite Environmental Laboratory of Redmond, Washington for analysis. At least one sample from each test pit was analyzed for the contaminants of concern.. The soil samples were analyzed for NWTPH-DX (diesel/oil) and NWTPH-G/BTEX (gasoline). In addition, three of the samples with the highest levels of petroleum contamination were analyzed for RCRA metals, Volatiles (EPA 8260) and Semi-Volatiles (EPA 8270) analysis.

Ten additional test pits were excavated in May of 1998 to collect samples for site characterization, as part of the Phase II RI investigation. Onsite Laboratory analyzed a representative sample from each test pit for the contaminants of concern. The soil samples were analyzed for WTPH-Dx (diesel/oil) and NWTPH-G/BTEX (gasoline). Also, one of the samples was analyzed for RCRA metals.

Logs of the test pits are provided in Appendix A.

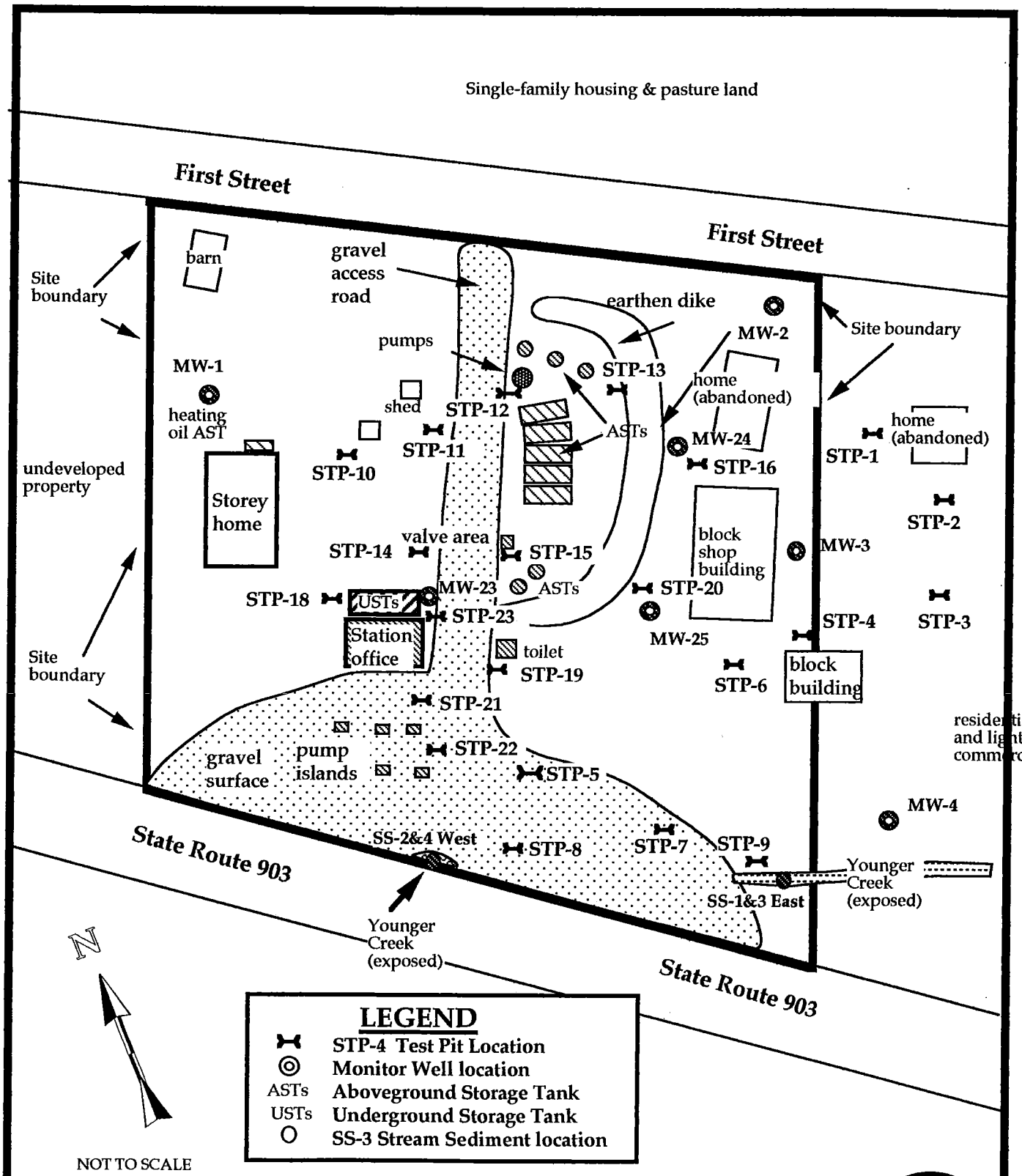

FIGURE 3-1 — PHASE I AND PHASE II SAMPLE LOCATIONS
Storey Service Station Site, Cle Elum, Washington
Source: GEI, March 2000, Project #19923

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3.1.2 *Soil Borings and Sediment Sampling*

Four soil borings were advanced on the property in December 1997, and were ultimately completed as groundwater monitoring wells. The locations of the borings are presented in Figure 3-1 — Phase I and Phase II Sample Locations. Soil samples from the hollow stem auger-drilled borings were field screened to test for indications of petroleum-related soil contamination and selected soil samples were submitted to Onsite Laboratory for chemical analysis.

The vertical borings were drilled to an approximate depth of 15 feet below the ground surface (bgs). Drilling activities were monitored in the field by a GEI geologist who examined and classified the soils encountered, collected soil samples for chemical analysis, field-screened soils for volatile organic compounds, and recorded pertinent information, including stratigraphy and groundwater occurrence *(see Appendix B — Borehole and Monitoring Well Completion Logs).*

Soil samples were collected at five-foot intervals from the soil borings. Soil samples and cuttings were visually examined and classified according to the Unified Soil Classification System (USCS). Completion logs for each borehole are presented in Appendix B. Soil samples were examined for obvious signs of contamination (i.e., discoloration, sheen, and obvious odor), and field screened for VOCs using an organic vapor meter equipped with a photoionization detector (OVM-PID). Soil samples anticipated to be submitted for chemical analysis were immediately packed in laboratory-supplied containers, labeled, and placed into a chilled cooler. Samples not immediately submitted for analyses were kept refrigerated at GEI's offices until they were eventually disposed.

Two sediment samples were collected from Younger Creek, the drainage ditch that extends along the southern boundary of the property in January and again in June 1998. The samples were collected from two locations — one from the eastern end of the ditch, with respect to the property, and one sample from the western end of the ditch *(see Figure 3-1— Phase I and Phase II Sample Locations).* The samples were collected at the active water/sediment interface of the ditch. These discrete samples were placed directly into a pre-washed, decontaminated, stainless steel mixing bowl. The samples were immediately packed in laboratory-supplied containers, labeled, and placed into a chilled cooler.

Soil samples collected from the borings were analyzed for Ecology's Petroleum Hydrocarbon Identification analyses (WTPH HCID — Gas/Diesel/Oil). The sediment samples were analyzed for HCID Gas/Diesel/Oil, followed by an analysis for NWTPH-Dx (Diesel/Oil), and as appropriate.

3.2 *GROUNDWATER INVESTIGATION*

3.2.1 *Monitoring Well Installation*

The four hollow-stem auger soil borings, described above, were converted to four monitoring wells *(see Figure 3-1— Phase I and Phase II Sample Locations)*. All monitoring wells are 2-inch diameter and constructed with 0.020-inch slotted schedule-40 PVC screen with 2-inch diameter solid PVC riser. The wells are completed with traffic-rated flush monuments *(see Appendices B — Borehole and Monitoring Well Completion Logs and D — Photos)*.

The upper portion of the uppermost aquifer at the site is screened with a 10-foot long section of slotted PVC. Well depths were all approximately fifteen feet below the existing grade at the time of completion. Detailed descriptions of each well are provided in Appendix B.

3.2.2 *Well Development and Sampling*

Surging and bailing using a surge block and stainless steel bailer developed monitoring wells. Groundwater samples were collected using a disposable bailer. Three to five well volumes were purged from each well prior to sampling. Temperature, conductivity, and pH were monitored during purging and prior to sampling. The final stabilized measurements were recorded in a field logbook *(see Appendix B— Borehole and Monitoring Well Completion Logs)*.

All monitoring well development and groundwater sampling procedures strictly follow the EPA field guidance document (SW-846) and are detailed in the GEI's Work Plan developed for this site.

3.2.3 *Survey*

On-site monitoring well/soil boring locations were initially established in the field by measuring from structures with a field tape. After completion of the well installations, the elevation of the top-of-casing for all new wells were surveyed relative to the US Coast and Geodetic Survey Benchmark M17 (1931) at 1912.01 feet above mean sea level. The top-of-monument for each previously existing monitoring well was surveyed by Ecology relative to this benchmark in 1996.

A Washington State-Licensed Surveyor surveyed the locations and elevations of the four new wells relative to permanent site survey markers and to the US Coast and Geodetic Survey Benchmark M17 (1931).

3.2.4 *Water Level Monitoring*

Water levels were measured upon completion and prior to sampling events in January 1998, June 1998, and September 1999. Water levels were measured using an electronic sounding device prior to sampling each well. Water level measurements and corresponding elevations are summarized in Appendix B. Groundwater flow direction and gradient is discussed in Section 4.0.

3.2.5 *Chemical Analysis*

Groundwater samples were submitted to Onsite Environmental Laboratory for chemical analysis. The samples were analyzed for HCID, followed by TPH-Gas and EPA 8020 (BTEX) when results of the HCID indicated that further analysis was necessary.

4.0 SITE PHYSICAL CHARACTERISTICS

4.1 CLIMATE

Seasonal precipitation and evaporation trends influence groundwater recharge and flow patterns. This, in turn, can help predict contaminant migration. Cle Elum is located on the East Side of the crest of the Cascade Range, and is shielded in large part by the Cascades from the heavy precipitation found on the West Side of the Range.

The average monthly temperature ranges from a minimum in January of 19°F (degrees Fahrenheit) to a maximum in July of 84 °F. The average mean annual precipitation is 19.22 inches. Most of this precipitation occurs between October and March. Most regional groundwater recharge (by precipitation) occurs during this six-month period when precipitation greatly exceeds evapotranspiration.

4.2 REGIONAL AND SITE GEOLOGY

The City of Cle Elum lies on the northern margin of the Roslyn Basin, an east-west trending valley bounded on the north by Cle Elum Ridge and on the south by South Cle Elum Ridge. The Cle Elum Ridge is composed of rocks consisting of the Roslyn Formation to the north and the Teanaway Basalts and Andesite of Peoh Point to the south. Landslide deposits and Pleistocene moraine remnants are present on the valley margins.

The subject site is positioned upon the floor of the Roslyn Basin, which consists of valley fill composed of an approximately 300-foot thickness of varved clay and sands overlying the Roslyn Formation. Approximately thirty feet of surficial deposits consisting of glacial outwash and conglomerates and flood silts deposited by the Yakima River overlie these clays and sands.

The surficial soil at the site consists of sandy silt flood deposits. These flood silts are likely to extend only a few feet below ground surface and are underlain by a conglomerate deposited by the Yakima River.

According to a report prepared for a property located approximately 1500 feet west of the Storey property, soils in the area consist of river-deposited, subrounded cobbles and boulders ranging up to a foot in diameter, with a matrix of gravelly sand. This stratigraphy was confirmed during excavation of test pits on the property.

The Storey site is flat, with a surficial topography that slopes very gently to the southeast.

4.3 *SITE HYDROGEOLOGY*

4.3.1 *Groundwater Occurrence*

A shallow, surficial aquifer lies approximately eight feet below the ground surface (bgs) at the site. Based on the topography of the Cle Elum Basin, it is likely that this unconfined aquifer flows in a generally easterly direction. Groundwater investigation studies conducted by Ecology (Phase I and II Environmental Site Assessment, Former and Current Service Stations and Bulk Storage Facilities, Cle Elum, Washington, WDOE Central Region Office, December 1996) confirm that this is the general direction of groundwater flow. This is further confirmed by the water table measurements recorded on three occasions during this Remedial Investigation. Figure 4-1 — Hydrogeological Gradient illustrates graphically the results of GEI's RI water level measurements.

Logs of water supply wells provided by the Department of Ecology's Central Regional Office indicate the presence of at least one or more additional aquifers at depth beneath the site. Wells in these deep aquifers are typically screened at depths ranging from 190 to over 400 feet below the local ground surface *(see Appendix C — Water Wells within One Mile of Site).*

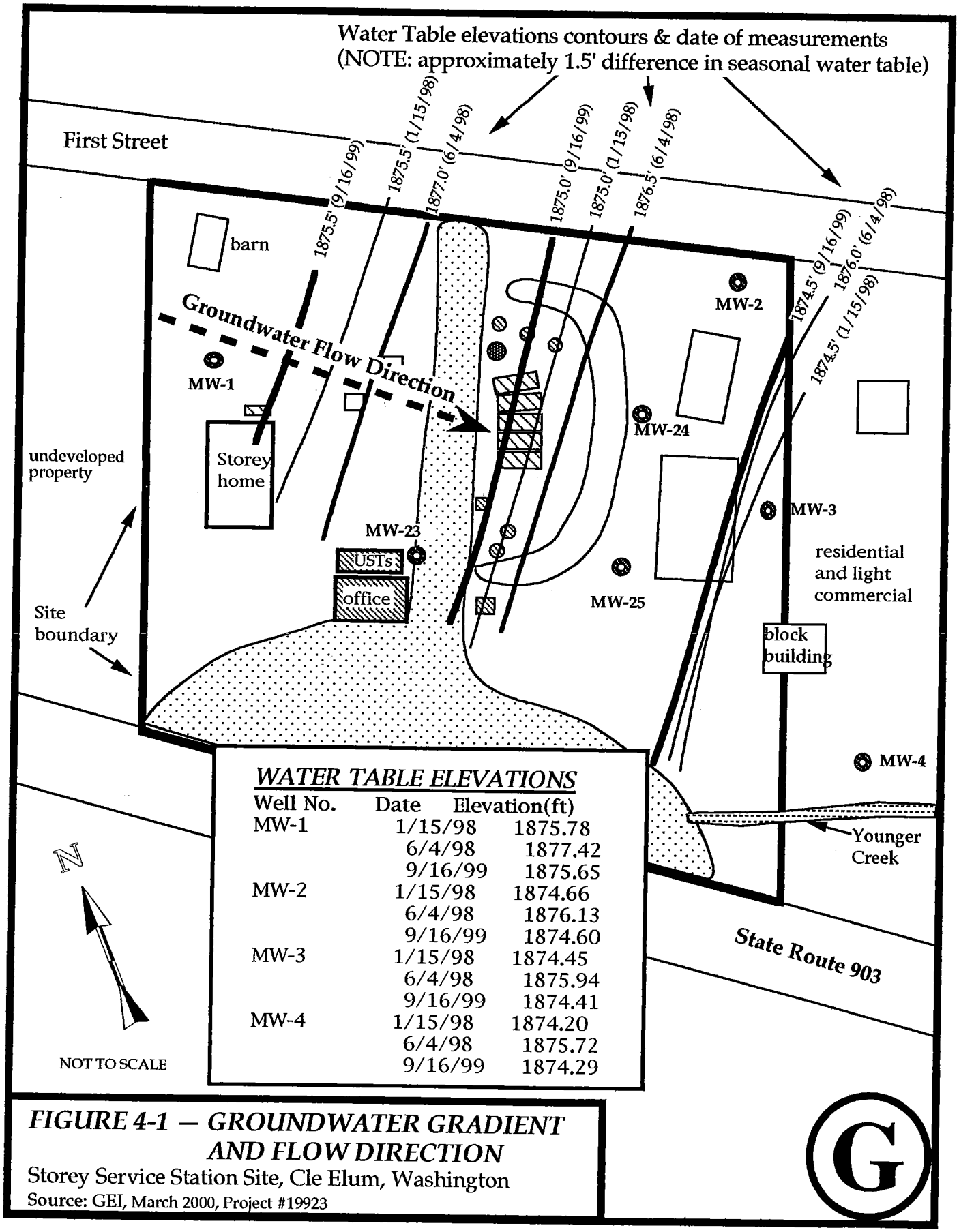
4.3.2 *Current Groundwater Use*

Each of the aquifers underlying the Storey site has been used as a source of water supply. Although examination of appropriate well logs on file at Ecology's Central Regional Office reveals that the deeper pressure aquifers are predominantly drawn on in this area for domestic use. Several of the logs indicate that the shallow aquifer is also drawn on for domestic water consumption. It does not appear that any of these beneficial users of shallow groundwater are located in a downgradient position with respect to the subject property.

During this RI, GEI obtained water supply well logs on file with the Department of Ecology for Sections 25, 26, 35, and 36 of Township 20 N., Range 15 E; and Sections 30 and 31 of Township 20 N., Range 16 E. Copies of the well logs thus obtained are included in Appendix C — Water Wells Within One Mile of Site.

4.4 *SURFACE WATER*

Younger Creek (currently used for irrigation) is an unlined perennial surface water feature that runs through the southern portion of the site. Comparison of the surface water elevation observed in Younger Creek with the elevation of the groundwater surface indicates that Younger Creek may serve as a hydraulic divide. An un-named pond lies approximately one-tenth mile east of the site. The City of Cle Elum Sewage Disposal Plant (which includes four lagoons) lies approximately one-tenth mile south of the site. The Yakima River lies approximately one-quarter mile south of the subject property.



WATER TABLE ELEVATIONS

Well No.	Date	Elevation(ft)
MW-1	1/15/98	1875.78
	6/4/98	1877.42
	9/16/99	1875.65
MW-2	1/15/98	1874.66
	6/4/98	1876.13
	9/16/99	1874.60
MW-3	1/15/98	1874.45
	6/4/98	1875.94
	9/16/99	1874.41
MW-4	1/15/98	1874.20
	6/4/98	1875.72
	9/16/99	1874.29

FIGURE 4-1 — GROUNDWATER GRADIENT AND FLOW DIRECTION

Storey Service Station Site, Cle Elum, Washington

Source: GEI, March 2000, Project #19923

5.0 *CONTAMINANT NATURE AND DISTRIBUTION*

This section presents chemical analytical results for soil, sediments, surface water and groundwater obtained during the RI. Contaminant types, concentrations and distribution are summarized for each environmental media.

Section 6 discusses contaminant characteristics, fate, and transport. In addition, cleanup standards are discussed and compared with contaminant concentrations identified at the site in Section 7.

5.1 *CHEMICAL DATA QUALITY*

The GEI Project Manager reviewed the RI analytical results. In general, the data are complete and of known and acceptable quality. Data completeness and quality are discussed in the Quality Assurance Reports included with laboratory analytical reports in Appendix D.

5.2 *SOIL AND SEDIMENT CHEMICAL RESULTS*

Soil samples were collected from the Phase I/II test pits, the soil borings, and from the bottom and sides of excavations during the source area removal action in September 1999. Contaminant levels remaining on-site (post source removals) are discussed in Section 7.

The results of the chemical analyses performed on soil samples collected from the test pits excavated at the site in the course of the RI are summarized in Table 5 -1 and are compared with OVM-PID readings. Generally, there appears to be a poor correlation of the OVM-PID readings with chemical analytical results. The lack of correlation between the OVM-PID readings and the laboratory analysis is most likely due to the fact that the affected soils contain a wide range of petroleum compounds (i.e., gasoline, diesel, and heavy oil) each with drastic differences in volatility and age of their release to the soil (degree of degradation).

Chemical testing indicates that gasoline-, diesel-, and oil-range petroleum hydrocarbons are the contaminants of concern present at detectable concentrations in on-site soils. Detected concentrations ranged from 40 to 2600 milligrams per kilogram (mg/kg) for diesel- and oil-range hydrocarbons. Detected gasoline-range hydrocarbons ranged from 55 to 2600 mg/kg *(see Tables 5-1 and 5-2— Soil and Sediment Chemical Analytical Summary).*

Soil samples with the highest hydrocarbon concentrations were collected from those test pits excavated closest to the aboveground and underground storage tank locations. Concentrations appear to drop off at a depth of ten to eleven feet (NOTE: Seasonal water table fluctuates from

about seven to ten feet belowground at the site). Comparison of the analytical results with the tank locations indicates that the source of the hydrocarbon contamination is the former storage tanks, pump islands, and possibly the associated underground piping.

Examination of the chemical test data performed on the soil samples collected from the monitoring well soil borings indicates that no detectable concentrations of hydrocarbons were encountered at sample depths of 5, 10, or 15 feet.

Sediment samples collected in January 1998 from the drainage ditch (Younger Creek) near the point where surface water enters and exits the site indicated the presence of diesel-range hydrocarbons. NWTPH-Diesel and Oil were present at concentrations of 190 mg/kg and 280 mg/kg in the eastern sample, and at concentrations of 590 mg/kg and 400 mg/kg in the western sample. However, when the ditch was resampled at the same points in June of 1998, no detectable concentrations of hydrocarbons were found.

5.3 *GROUND AND SURFACE WATER CHEMICAL RESULTS*

Groundwater chemical results are summarized in Table 5-3.

Ecology's Monitor Wells Summary - Of the three wells installed by Ecology during the course of their 1996 study, two of them, MW-23 and MW-24 contained elevated (above MTCA Method A) concentrations of both gasoline and diesel-range hydrocarbons during the January 1998 and June 1998 sampling events. Gasoline-range hydrocarbons ranged from 630 to 58,000 microgram per liter (µg/L) and diesel range hydrocarbons ranged from 1400 to 1700 µg/L. A heavy-oil fraction was also present in these two wells at an average concentration of approximately 530 µg/L. Benzene levels ranged from 71 to 1200 µg/L, toluene from 3 to 3900 µg/L, ethyl benzene from 39 to 980 µg/L, and total xylene isomers from 24 to 6500 µg/L. No detectable levels of petroleum compounds were found in samples collected from monitoring well MW-25 in the course of either sampling event. MW-23 and MW-24 were destroyed in the course of the remedial action undertaken in September 1999.

GEI installed and sampled four additional groundwater-monitoring wells as part of this RI. The upgradient well, MW-1 did not exhibit any detectable hydrocarbons during any of the three sampling events. Two of the three-downgradient wells, MW-3 and MW-4, also did not contain any detectable hydrocarbons during the course of the sampling events. A single sample collected from the remaining well, MW-2, did exhibit gasoline-level hydrocarbons during the June 1998 sampling event, but did not contain detectable hydrocarbons during the January or September samplings.

Two surface water samples were collected from the Younger Creek drainage ditch in June 1998. The samples were collected at points where surface water enters and exits the site. Chemical results of testing performed on these water samples indicate that contaminant levels were non-detect for all compounds tested.

TABLE 5-1- PHASE I - TEST PIT SOIL AND SEDIMENT SAMPLE SUMMARY (mg/kg)

Sample No.	Depth (feet)	PID Reading	HCID Gas	Diesel	Oil	NWTPH-Dx Diesel/Oil		Total RCRA Metals	EPA 8260/8270
STP-1a	0-1	NIR	ND	ND	ND	---	---	---	---
STP-1b	1-3	"	---	---	---	---	---	---	---
STP-1c	3-7	"	---	---	---	---	---	---	---
STP-2a	0-0.5	"	---	---	---	---	---	---	---
STP-2b	0.5-2	"	ND	ND	ND	---	---	---	---
STP-2c	2-7	"	---	---	---	---	---	---	---
STP-3a	0-0.5	"	---	---	---	---	---	---	---
STP-3b	0.5-2.5	"	---	---	---	---	---	---	---
STP-3c	2.5-10	14.6	ND	ND	ND	---	---	---	---
STP-3d	10	10.2	---	---	---	---	---	---	---
STP-4a	0-0.3	NIR	---	---	---	---	---	---	---
STP-4b	0.3-1	"	---	---	---	---	---	---	---
STP-4c	1-5	8.1	ND	ND	ND	---	---	---	---
STP-5a	0-1	22.3	ND	**diesel**	**oil**	140	**440**	<MTCA	<MTCA
STP-5b	1-3	2.6	---	---	---	---	---	---	---
STP-5c	3-6	NIR	---	---	---	---	---	---	---
STP-6a	0-1	22.7	ND	**diesel**	**oil**	**490**	**1300**	<MTCA ()**lead=310**	<MTCA
STP-6b	1-2.5	NIR	---	---	---	---	---	---	---
STP-6c	2.5-4	"	---	---	---	---	---	---	---
STP-7a	0-0.5	"	---	---	---	---	---	---	---
STP-7b	0.5-2	"	ND	ND	**oil**	40	ND	---	---
STP-7c	2-5	"	---	---	---			---	---
STP-8a	0-1.3	"	ND	**diesel**	**oil**	60	180	---	---
STP-8b	1.3-2.5	"	---	---	---	---	---	---	---
STP-8c	2.5-4	"	---	---	---	---	---	---	---
STP-9a	0-0.3	"	---	---	---	---	---	---	---
STP-9b	0.3-1	13.4	---	---	---	---	---	---	---
STP-9c	1-5	18.5	ND	ND	ND	---	---	---	---
STP-15a	0-1	15.6	ND	ND	ND	---	---	---	---
STP-15b	1-6	13.4	ND	ND	ND	---	---	---	---
STP-15c	6-10	9.2	ND	ND	ND	---	---	---	---
STP-19a	0-1	11.6	ND	ND	**oil**	92	**210**	<MTCA	<MTCA
STP-19b	1-3	5.6	ND	ND	ND	---	---	---	---
STP-19c	3-7	18.2	ND	ND	ND	---	---	---	---
STP-20a	0-1.3	NIR	---	---	---	---	---	---	---
STP-20b	1.3-3.3	0.2	---	---	---	---	---	---	---
STP-20c	3.3-7	2.6	ND	ND	ND	---	---	---	---
SS-1 East	0-6"	65.2	ND	**diesel**	**oil**	190	**280**	---	---
SS-2 West	0-6"	2.6	ND	**diesel**	**oil**	**590**	**400**	---	---

NIR = No Instrument Response
ND = Non Detect @ Practical Quantification Limit / --- = Not Analyzed
<MTCA = Less Than WDOE Model Toxics Control Act Cleanup Levels (Method A Residential Soils)

TABLE 5-2- PHASE II - TEST PIT SOIL AND SEDIMENT SAMPLE SUMMARY (mg/kg)									
Sample No.	**Depth (feet)**	**PID Reading**	**HCID Gas**	**Diesel**	**Oil**	**NWTPH-Dx Diesel/Oil**		**NWTPH-G/BTEX**	**Total RCRA Metals**
STP-10a	0-1	53.1	---	---	---	---	---	---	---
STP-10b	1-5	41.9	---	---	---	---	---	---	---
STP-10c	5-6	56.0	ND	ND	ND	---	---	---	---
STP-11a	0-1	37.8	---	---	---	---	---	---	---
STP-11b	1-4.5	131	ND	**diesel**	**oil**	120	170	---	<MTCA
STP-11c	4.5-6	329	ND	ND	ND	---	---	---	---
STP-12a	0-1	1260	**gas**	**diesel**	ND	**310**	**220**	55 0.1/1/ 0.3/2.9	---
STP-12b	1-4	1878	ND	ND	ND	---	---	---	---
STP-12c	4-6	1527	**gas**	**diesel**	ND	**430**	61	**2300** **ND/0.3/ 0.4/24.7**	---
STP-13a	0-1	444	**gas**	ND	ND	---	---	82 ND/0.5/ ND/2.3	---
STP-13b	1-4.5	327	---	---	---	---	---	---	---
STP-13c	4.5-6	375	---	---	---	---	---	---	---
STP-14a	0-1.5	94	---	---	---	---	---	---	---
STP-14b	1.5-6.5	48.9	---	---	---	---	---	---	---
STP-14c	6.5-8.5	145	ND	ND	ND	---	---	---	---
STP-16a	0-1	62.2	---	---	---	---	---	---	---
STP-16b	1-4	20.1	---	---	---	---	---	---	---
STP-16c	4-8	110	ND	ND	ND	---	---	---	---
STP-18a	0-1	57.6	---	---	---	---	---	---	---
STP-18b	1-7	44.3	---	---	---	---	---	---	---
STP-18c	7-8	145	**gas**	**diesel**	ND	**1300**	**110**	**580** **0.7/0.9/ 1.1/8**	---
STP-21a	0-1.5	87.4	---	---	---	---	---	---	---
STP-21b	1.5-4	63.2	---	---	---	---	---	---	---
STP-21c	4-8.5	77.2	---	---	---	---	---	---	---
STP-21d	8.5-9.5	98.6	ND	**diesel**	ND	**1600**	**530**	---	---
STP-22a	0-1.2	51.1	---	---	---	---	---	---	---
STP-22b	1.2-4.5	41.2	---	---	---	---	---	---	---
STP-22c	4.5-9	78.1	---	---	---	---	---	---	---
STP-22d	9-9.5	102	ND	**diesel**	ND	**2600**	110	---	---
STP-23a	0-1.5	682	ND	ND	**oil**	40	140	---	<MTCA
STP-23b	1.5-6	942	---	---	---	---	---	---	---
STP-23c	6-9	1021	---	---	---	---	---	---	---
STP-23d	9-10.5	1820	**gas**	**diesel**	**oil**	**4500**	**360**	**2600** **0.7/0.6 3.9/34.8**	<MTCA
SS-4 West	NA	NIR	ND	ND	ND	---	---	---	---
SS-3 East	NA	NIR	ND	ND	ND	---	---	---	---

NIR = No Instrument Response
ND = Non Detect @ Practical Quantification Limit
--- = Not Analyzed
Bold Print = positive HCID analysis or > WDOE Model Toxics Control Act Cleanup Levels (Method A)

TABLE 5-3- GROUND AND SURFACE WATER SAMPLE SUMMARY (µg/L)										
Sample Number and date sampled	**HCID Gas/ Diesel/ Oil**			**TPH-Gas**	**B/T/E/X**				**TPH-Dx Diesel/Oil**	
MW-1 (Jan. 15, 1998)	ND	ND	ND	---	---	---	---	---	---	---
MW-1 (June 4, 1998)	ND	ND	ND	---	---	---	---	---	---	---
MW-1 (Sept. 16, 1999)	ND	ND	ND	---	---	---	---	---	---	---
MW-2 (Jan. 15, 1998)	ND	ND	ND	---	---	---	---	---	---	---
MW-2 (June 4, 1998)	**gas**	ND	ND	**10000**	**350**	**1400**	**140**	**940**	---	---
MW-2 (Sept. 16, 1999)	ND	ND	ND	---	---	---	---	---	---	---
MW-3 (Jan. 15, 1998)	ND	ND	ND	---	---	---	---	---	---	---
MW-3 (June 4, 1998)	ND	ND	ND	---	---	---	---	---	---	---
MW-3 (Sept. 16, 1999)	ND	ND	ND	---	---	---	---	---	---	---
MW-4 (Jan. 15, 1998)	ND	ND	ND	---	---	---	---	---	---	---
MW-4 (June 4, 1998)	ND	ND	ND	---	---	---	---	---	---	---
MW-4 (Sept. 16, 1999)	ND	ND	ND	---	---	---	---	---	---	---
MW-23 (Jan. 15, 1998)	**gas**	ND	ND	**2600**	**71**	31	**79**	**179**	---	---
MW-23 (June 4, 1998)	**gas**	**diesel**	ND	**58000**	**1200**	**870**	**980**	**6500**	**1700**	540
MW-23 (removed)	---	---	---	---	---	---	---	---	---	---
MW-24 (Jan. 15, 1998)	**gas**	ND	ND	**630**	**480**	3	**39**	**23.6**	---	---
MW-24 (June 4, 1998)	**gas**	**diesel**	ND	**25000**	**1200**	**3900**	**330**	**1870**	**1400**	520
MW-24 (removed)	---	---	---	---	---	---	---	---	---	---
MW-25 (Jan. 15, 1998)	ND	ND	ND	---	---	---	---	---	---	---
MW-25 (June 4, 1998)	ND	ND	ND	---	---	---	---	---	---	---
MW-25 (removed)	---	---	---	---	---	---	---	---	---	---
YC-UP (June 4, 1998)	ND	ND	ND							
YC-DOWN (June 4, 1998)	ND	ND	ND							
MTCA Cleanup Levels	---	---	---	1000	5.0	40.0	30.0	20.0	1000	1000

ND = Non Detect @ Practical Quantification Limit
- - - = Not Analyzed
Bold Print = positive HCID analysis or > WDOE Model Toxics Control Act Cleanup Levels (Method A)

6.0 CONTAMINANT NATURE, FATE, AND TRANSPORT

6.1 NATURE OF CONTAMINANTS

6.1.1 Contaminant Characteristics

The primary contaminants at the site have been confirmed to be gasoline-, diesel- and oil-range petroleum compounds. These compounds are typically a mixture of over 200 petroleum-derived chemicals and several synthetic products added to improve fuel performance. Petroleum hydrocarbon content analysis has been conducted for detecting volatile aromatic compounds including benzene, ethylbenzene, toluene, and total xylene polymers (BTEX). These compounds are reported to pose the most serious known threat to human health of all of the petroleum hydrocarbon constituents. BTEX is present in relatively high concentrations in gasoline and has the greatest potential to migrate through the soil and impact groundwater quality. Basic chemical characteristics for BTEX are listed in Table 6-1.

The chemical components contained in gasoline exhibit a specific gravity less than that of water, and therefore, in the non-aqueous phase, will exist in a positively buoyant state (float) on top of the phreatic surface of the water table. As a result, dispersion of gasoline components occurs primarily as a hydraulically downgradient plume and secondarily as a slight hydraulically upgradient plume along the surface of the water table. Fractionation of the various components also occurs as they move from the source. Individual component partition coefficients, soil permeability, and soil type determine the extent of fractionation. In addition, some of the more soluble gasoline components, such as benzene, dissolve into the water and are transported with groundwater below the water table.

A computer simulation program developed for the EPA evaluated the physical characteristics of gasoline components. The program, called "The Seasonal Soil Component Model" (SESOIL), indicated that lighter hydrocarbons associated with gasoline are more likely to volatilize, while heavier constituents bind tightly to soil particles, especially if the soil contains a high percentage of clay minerals.

6.1.2 Characterization of Hazardous and Toxic Effects

The hazardous and toxic effects of the aromatic volatile organic constituents found in gasoline and motor fuels are described in this section. Table 6-1 summarizes the toxicological effect of each constituent.

<u>Benzene</u> -Benzene is colorless and may create an explosion hazard. Benzene is incompatible with strong oxidizers, chlorine, and bromine with iron, and is irritating to the eyes, nose, and respiratory system. Prolonged exposure may result in giddiness, headache, nausea, staggering gait, fatigue, bone marrow depression, or abdominal pain. Routes of entry

include inhalation, absorption, ingestion, and skin or eye contact. Benzene targets red blood cells, the central nervous system (CNS), skin, bone marrow, eyes, and the respiratory system. Benzene is carcinogenic.

Ethylbenzene - Ethylbenzene is a colorless liquid and may create an explosion hazard. Ethylbenzene is incompatible with strong oxidizers and is irritating to the eyes and mucous membranes. Prolonged exposure may result in headache, dermatitis, narcosis, or coma. Routes of entry include inhalation, ingestion, and skin or eye contact. Ethylbenzene targets the eyes, the upper respiratory system, the CNS, and skin.

Toluene - Toluene is a colorless liquid and may create an explosion hazard. Toluene is incompatible with strong oxidizers, and prolonged exposure may result in fatigue, confusion, euphoria, dizziness, headache, dilation of pupils, lacrimation, insomnia, dermatitis, or photophobia. Routes of entry are inhalation, absorption, ingestion, and skin or eye contact. Toluene can target the CNS, liver, kidneys, and skin.

Xylene Isomers - Xylenes are colorless liquids and may create an explosion hazard. Xylenes are incompatible with strong oxidizers and are irritating to the eyes, nose and throat. Prolonged exposure may result in dizziness, excitement, drowsiness, staggering gait, corneal vacuolization, vomiting, abdominal pain, or dermatitis. Routes of entry are inhalation, absorption, ingestion, and skin or eye contact. Xylenes target the skin, CNS, eyes, the gastrointestinal tract, red blood cells, liver and the kidneys.

TABLE 6 – 1 —BTEX PROPERTIES OF GASOLINE

COMPOUND	*SOLUBILITY (MG/KG)*	*MOBILITY CLASS*	*WEIGHT % IN GASOLINE*	*TOXIC EFFECTS*
Benzene	1,730	high	0.12-3.5	carcinogenic
Toluene	500	moderate	2.73-21.80	neurotoxic
Ethylbenzene	150	low	0.36-2.86	neurotoxic
Xylene (ortho)	170	moderate	0.68-2.86	neurotoxic
Xylene (meta)	146	low	1.77-3.87	neurotoxic
Xylene (para)	156	low	0.77-1.58	neurotoxic

6.2 *FATE AND MIGRATION OF RESIDUAL CONTAMINATION*

Several mechanisms will primarily affect the fate of the residual soil contamination. These include leaching and downward migration due to infiltration of moisture, adsorption/desorption from soil, advection of dissolved constituents and biodegradation. Direct migration of free product has probably been a significant mechanism contributing to the movement of hydrocarbons beneath the site in the past, but is no longer considered of significance, subsequent to the removal of the contaminated

soils and the installation of the product storage and fuel dispensing systems.

Biological degradation of petroleum hydrocarbons in saturated soils at the site is expected to be the single largest mechanism affecting their fate if engineering controls (i.e., capping) are not instituted. This mechanism is recognized as being relatively slow in anaerobic conditions. Therefore, biodegradation would be expected to occur for many years.

6.3 *CURRENT AND POTENTIAL EXPOSURE PATHWAYS*

6.3.1 *Pathways of Concern*

The primary pathways of concern for the contaminants at the Storey site were identified as follows in the RI/FS Work Plan (November 1997). These are:

1) direct contact with surface soil or stream sediments
2) airborne or surface water-based dispersion of surface soil
3) direct contact with impacted subsurface soil during site investigation or remedial activities, and
4) leaching of contaminants from impacted soil to groundwater.

The RI has determined that the stream sediments are not affected by the contaminants of concern. All affected surface soils have been stockpiled on-site in a bermed and secure area, with a liner beneath the stockpile and covered with plastic so dispersion via wind and surface water is no longer a concern.

Potential exposure of the hydrocarbons in the impacted soil remaining belowground is mainly limited to direct contact and inhalation during any future excavation and sampling, or potentially during any significant future site grading during redevelopment.

The surface and subsurface geology was studied in order to evaluate any features, such as paleochannels or man-made structures, which might act as a preferential pathway of hydrocarbon migration. Published geologic data and site-specific information reviewed for this RI/FS has not identified any potential natural or man-made structures that would provide a significant preferential migration pathway. There are no groundwater supply wells located on or adjacent to the property. There is no indication that significant concentrations of contaminants are leaving the property through groundwater migration.

The potential for the stockpiled soils to present a release to the vapor phase exposure pathway during on-site remediation operations is not believed to be significant, given the relatively low concentrations of the contaminants of concern in the stockpiles. However, this potential will be

evaluated (and mitigated if necessary) during the initial phase of the remedial activities by monitoring of the air quality throughout the site.

6.3.2 *Potential Mechanisms for Exposure*

The potential exposure mechanisms include inhalation of volatilized chemicals, inhalation of dust, ingestion of contaminated soil or groundwater, and dermal contact.

Although BTEX constituents are highly volatile, no organic vapors were measured in the breathing zone at the site using portable organic vapor analyzers during the field reconnaissance or remedial operations activities. Volatilization from subsurface soils is limited since most of the contaminated materials have been excavated. Atmospheric dispersion and dilution should further minimize any potential impacts. Therefore, inhalation of volatilized chemicals from soil and groundwater at the site is not considered likely.

Chemical compounds can potentially migrate form the soil in airborne soil particles as a result of wind erosion or traffic. However, the surface soils, which contained significant levels of the contaminants of concern, have been removed and stockpiled on-site. Consequently, exposure to sorbed contaminants through dust inhalation is considered unlikely.

Any potential exposures through ingestion of contaminated soil and groundwater are limited. The contaminated soils are either at depth on-site or are in a covered stockpile area. The shallow groundwater is not used as a source of drinking water. For the same reasons, the potential for dermal exposures to contaminated soil and groundwater is limited.

7.0 *CLEANUP LEVELS*

The Washington Department of Ecology has developed guidance for identifying constituent levels in various media, which are protective of human health and the environment (i.e., cleanup levels). As part of the Model Toxics Control Act (MTCA) Cleanup Regulation, appropriate cleanup levels for constituents of concern are defined as concentrations which comply with all of the following requirements (WAC 173-340, as amended January 1996):

- Concentrations established under Applicable or Relevant and Appropriate Requirements state and federal laws (ARARs)
- Concentrations estimated to result in no adverse effects on aquatic and terrestrial life
- Concentrations which are estimated to result in no acute or chronic toxic effects (non-carcinogenic) on human health, i.e. total hazard index is less than or equal to one
- Concentrations which are estimated to result in a total estimated cancer risk, summing individual risks, of less than or equal to one in one hundred thousand; and
- Concentrations which eliminate or minimize the potential for food chain contamination and other cross media contamination.

With lower limits set by background levels and the quantitation limits of current analytical methods, cleanup levels which meet the above criteria can be selected for constituents of concern at a waste site. To establish exposure conditions for the estimation of human health based cleanup levels (the third and fourth bullets), the Reasonable Maximum Exposures (RME) expected to occur under current and future site use conditions are identified. For application to the Storey Site, the standard method for determining cleanup levels for individual constituents, Method A of the MTCA, was used.

7.0.1 *Stepwise Procedure for Cleanup Level Development*

Based upon this guidance, cleanup standards were devised using the stepwise approach described below.

1) The most stringent quantitative ARAR speciffc to the constituent and the medium, if any, was identified. The ARAR concentration limit was input to the risk equations for the RME scenario defined in the MTCA to determine whether the concentration met target risk levels.
2) If target risk goals were exceeded (or if no ARARs were available), a lower concentration which did meet target risk goals was calculated as the appropriate cleanup level.
3) If necessary, the cleanup level was lowered to prevent violations of cleanup levels in other media.

4) Whether the ARAR or a calculated risk-based value was the identified cleanup level, the concentration was compared to background levels, if available, and to practical quantitation limits of current analytical techniques as the lower limits of reasonable cleanup levels. For media in which multiple hazardous constituents are present, the target risk goals apply to the sum total of non- carcinogenic indices and carcinogenic risks. Similarly, when the same individual is reasonably likely to be exposed to multiple media and pathways, the target risk goals apply to the sum total of non-carcinogenic indices and carcinogenic risks for all exposures.
5) Appropriate cleanup levels for exposure to the entire site are calculated by lowering individual cleanup levels for constituents contributing the largest portion of risk so that the sum total of all exposures, by all media and all pathways, does not exceed an HI of 1.0 and cancer risk of 1 x 10-5.

7.1 *APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS*

Outlined below is an analysis of federal, state, and local regulations and standards that are potentially applicable to the Storey site.

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)

RCRA Subtitle C provides standards for the management of hazardous waste. RCRA requirements would be triggered if materials at the site were hazardous wastes and the remedial activities at the site involved handling, treatment, storage or disposal of those materials.

The RCRA regulations identify solid wastes that are hazardous (through either lists of hazardous wastes or identification of four hazardous waste characteristics), and establish various administrative requirements for three categories of hazardous waste handlers. Those categories include generators, transporters, and owners/operators of treatment storage and disposal facilities (including waste piles). Subtitle C regulations also establish standards for the design and safe operation of those facilities, and impose restrictions on the land disposal of hazardous wastes.

RCRA requirements applicable to the site would be implemented through the EPA-authorized State Hazardous Waste Management Act and Dangerous Waste regulations (see discussion below). A recently promulgated federal requirement, which is applied by EPA until promulgation by the state, revised the toxicity characteristic (one of four characteristics used by EPA to identify hazardous waste). The results to date do not indicate that the soil or water is a hazardous waste.

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT (CERCLA)

CERCLA provides funding and enforcement authority for the remediation of hazardous waste sites created by past practices. Many businesses are also subject to reporting requirements for spills and certain categories of environmental releases. Under CERCLA, the National Contingency Plan (NCP) regulations establish a program for evaluating and placing the sites on the National Priorities List (Superfund). CERCLA requirements are ARARs only at sites that are on the Federal "Superfund" list. As no notification or state referral has occurred for this site, CERCLA and NCP standards are not applicable to this remedial action.

WASHINGTON DEPARTMENT OF ECOLOGY (ECOLOGY) HAZARDOUS WASTE MANAGEMENT ACT AND DANGEROUS WASTE REGULATIONS

The Washington State regulatory program for hazardous waste management, authorized by EPA, generally parallels the federal requirements for hazardous waste handlers and technical standards for treatment, storage, and disposal facilities (including waste piles). As with the federal RCRA requirements, these regulations would be ARARs only if materials handled at this site were classified as "dangerous" or "extremely hazardous waste".

The State standards for determining a hazardous waste (referred to as dangerous or extremely hazardous wastes under state regulations) are more comprehensive than the federal standards. In addition to the hazardous waste lists and hazardous waste characteristics identified in the federal program, the State regulations include "persistent" dangerous wastes identified as wastes containing halogenated hydrocarbons or polynuclear aromatic hydrocarbons (PAHs). The results of this RI confirm that the site would not be considered dangerous or extremely hazardous waste.

Under the remedial approaches to be considered at this site, excavated materials may be temporarily stored on-site to await treatment or disposal off-site. Regulations require that such temporary storage of dangerous waste beyond 90 days would require application and receipt of a permit for a waste pile. Washington Administrative Code (WAC) standards outline specific administrative and technical standards for permitted wasted piles. In general, the technical standards (WAC 173303-660) require the following:

- Liners and leachate collection systems
- Run-on, runoff control systems
- Groundwater monitoring
- Weekly inspections; and
- Removal of all waste, waste residues and contaminated subsurface soils at closure.

The conduct of the remedial action under a consent decree would alleviate the need to apply for a RCRA permit for storage beyond 90 days. However, under the authority of the consent decree, Ecology would still require the waste pile to meet "substantive" technical standards listed above. If the soil and groundwater contamination is lower than thresholds for a dangerous waste, the media would not be required to meet these technical standards. Minimum standards for protection of human health and the environment (i.e., liners and covers over the material) may be required by Ecology upon review of the site work plan.

ECOLOGY'S MODEL TOXICS CONTROL ACT (MTCA)

As the state counterpart to CERCLA, MTCA provides funding and enforcement authority for the remediation of state hazardous waste sites created by past practices. Sites are identified through a reporting program of "hazardous substance" releases because of past practices. Specifically, owner/operators having information that a hazardous substance has been released to the environment and may be a threat to human health or the environment must report such information by June 1,1990 or within 90 days of discovery.

Reports are followed by an initial site investigation and a more detailed site hazard assessment where required. Sites are then prioritized on a list of sites requiring further remedial action based on an Ecology ranking method.

In addition to complying with other relevant ARARs, MTCA also establishes general criteria for selecting cleanup actions and specific methodologies for designing cleanup levels. In general, Method A applies to routine actions with relatively few hazardous substances. Method A provides specific concentration levels for the most prevalent hazardous substances. Method B uses a risk assessment approach (using risk equations and standard exposure assumptions) to achieve an overall excess cancer risk of 1x10-6, or 10-5 for multiple hazardous substances. Method C allows a 10-5 risk level but places strict restrictions on future land use, requiring institutional controls.

Finally, MTCA provides several administrative options for conducting remedial actions. The "potentially liable person" (PLP) may undertake an independent remedial action without oversight or approval from Ecology.

The PLP may undertake the action under the auspices of an approved consent decree enforceable by judicial action, or the remediation may take place under an agreed order. Cleanup levels, standards for conduct of the investigation and cleanup, and administrative options for conduct of the action at the site are discussed below.

Ecology's Site-specific Air Quality Requirements for On-Site Treatment

GEI has discussed the possibility of on-site bioremediation of the petroleum-impacted (stockpiled) soils with Ecology's Central Regional Office. On-site bioremediation of the affected, stockpiled soils will be allowed by Ecology, provided that the following conditions are complied with *(e-mail Letter from WDOE Central Regional Office, R. D. Swackhamer, November 23, 1999).*

1. *The proposed soil treatment project shall be limited to bioremediation of 600 cubic yards or less of petroleum contaminated soil generated on-site. No soil, groundwater, or surface water from other contaminated sites shall be transported to the Storey site or treated at the Storey site.*

2. *Soil handling shall he conducted using techniques which minimize the uncontrolled volatilization of the petroleum, which is not a part of the bioremediation. Tillage shall he conducted only if necessary and not as a means of accelerated aeration. During weather conditions that enhance uncontrolled petroleum volatilization, soil handling shall be minimized. Aeration of petroleum contaminated soil is not authorized herein.*

3. *There shall be no visible emissions, particulate matter, or odor from the project detectable beyond the facility boundary. At no time shall the opacity of any emission at the facility exceed 10%.*

4. *Soil bioremediation shall be conducted only on pads, which include, but are not limited to 18 inches or more of compacted sandy clay and a 30-mil geomembrane liner placed over a smooth bed. Water runoff from the bioremediation piles shall be prevented from entering surface or groundwater. The piles of petroleum contaminated soil shall be covered with plastic at all times when fertilizer mixing is not occurring.*

5. *Fertilizer or other nutrients may be mixed with the petroleum contaminated soil to enhance bioremediation, with a target addition of approximately ten percent of the total hydrocarbon loading, a target phosphorous addition of approximately one percent of the total petroleum hydrocarbon loading and a target potassium addition of approximately 0.1 percent of the total petroleum hydrocarbon loading. If the hydrocarbon loading exceeds 1,000 parts per million, the nutrients may have to be added in steps over time so that the bacteria will not be destroyed. Alternative methods and quantities of nutrient addition may be approved by the Department of Ecology.*

The WAC standards require that the cleanup level selected by the method described above must be attained at the point of compliance. Point of compliance for soils is generally defined as throughout the site from the ground surface to fifteen feet below the surface. Point of compliance for groundwater is generally considered to be at the site boundary.

Administrative Options for Conduct of the Remedial Action

As outlined above, WAC standards outline three options for conducting the remedial action: independent action, action under the auspices of a consent results indicate that the contaminated soil is a hazardous or dangerous waste.

A city or county permit may be required for the remedial action

SUMMARY OF REGULATORY IMPLICATIONS

This RI has concluded that the soil is not a RCRA waste or a Washington-defined EHW. Because the waste is not hazardous, it may be stored on site for over 90 days.

DOT regulations (49 CFR 172) define the constituents contained in the contaminated soil at the site not to be considered hazardous substances under RCRA. As such, shipment of the contaminated soil is not subject to DOT shipping standards, requiring that the generator complete DOT shipping papers, which accompany the transport of the contaminated material to the disposal facility. Additional requirements for placarding and record keeping are placed on the transporter of the material.

7.2 *SELECTION OF CLEANUP LEVELS*

Either MTCA Method A or Method B could be acceptable for the site. Given the relative routine nature of the contamination found at the Storey site, and the limited number of hazardous substances, the Method A cleanup level may be most appropriate for this site.

The Washington State Department of Ecology has developed a guidance document for cleanup levels in soils for TPH and BTEX. The appropriate levels at the Storey site were determined utilizing the information available and considering the current land use in the vicinity of the site. These cleanup levels were established for the protection of public health and the environment in accordance with WAC 173-340. Therefore, the MTCA Method A (Residential) Cleanup Levels for soil have been selected as the appropriate levels for the Storey property.

The site is relatively simple in that the primary contaminants of concern are all petroleum compounds. Those compounds are still present belowground in soil downgradient of the petroleum-impacted source areas. These compounds may also be present in groundwater downgradient from the source areas. These compounds include benzene, toluene, ethyl benzene, and xylene, along with general gasoline-, diesel- and oil-range hydrocarbons.

7.2.1 *MTCA Method A (Residential) Cleanup Levels*

The Method A cleanup levels for benzene, toluene, ethyl benzene, and xylene in groundwater are 5, 40, 30, and 20 µg/L, respectively. The cleanup level for gasoline and diesel-range hydrocarbons in water are 1000 µg/L.

The MTCA Method A soil cleanup levels are 0.5, 40.0, 20.0, and 20.0 mg/kg for benzene, toluene, ethylbenzene, and xylene. The soil cleanup levels for gasoline-range hydrocarbons are 100 mg/kg, and diesel- and oil-range petroleum hydrocarbons and 200 mg/kg.

7.3 *CONTAMINANT CONCENTRATIONS (REMAINING) IN SOIL*

Following the removals of tanks and other on-site structures, petroleum-impacted soil was removed from source areas identified during the RI/FS Phase I, Phase II and Source Area Removals environmental studies at the site. During the Source Area Removals phase, impacted soil was removed from these source areas until either 1) remaining petroleum concentrations in the soil were within Ecology's Method A Cleanup Levels for residential soil; or 2) excavation of impacted soils downgradient of the source areas would have required the removal of an excessive amount of non-impacted soil from the surface *(see Appendix E — Photos).*

The majority of the soil exhibiting excedence of the cleanup levels was excavated on September 7, 15, and 16, of 1999. Approximately 600 cubic yards (cys) of impacted soils were excavated and placed in a secure, lined revetment situated in the north-central portion of the site, where it awaits treatment or transport to a permitted facility.

Specifically, petroleum-impacted soil was removed from the following source areas *(see Figure 7-1 — Source Area Removal Areas and Clearance Sample Locations and Table 7-1 Contaminant Concentrations Remaining in Soil).*

1) Source Area 1 — AST pump area *(see Figure 7-2)*
2) Source Area 2 — USTs area *(see Figure 7-3)*
3) Source Area 3 — Fuel dispensing islands *(see Figure 7-4)*; and
4) The upper one-foot of impacted soil was dozed from the surface of the southeastern potion of the site *(see Section 3.1 — Soil Investigation).*

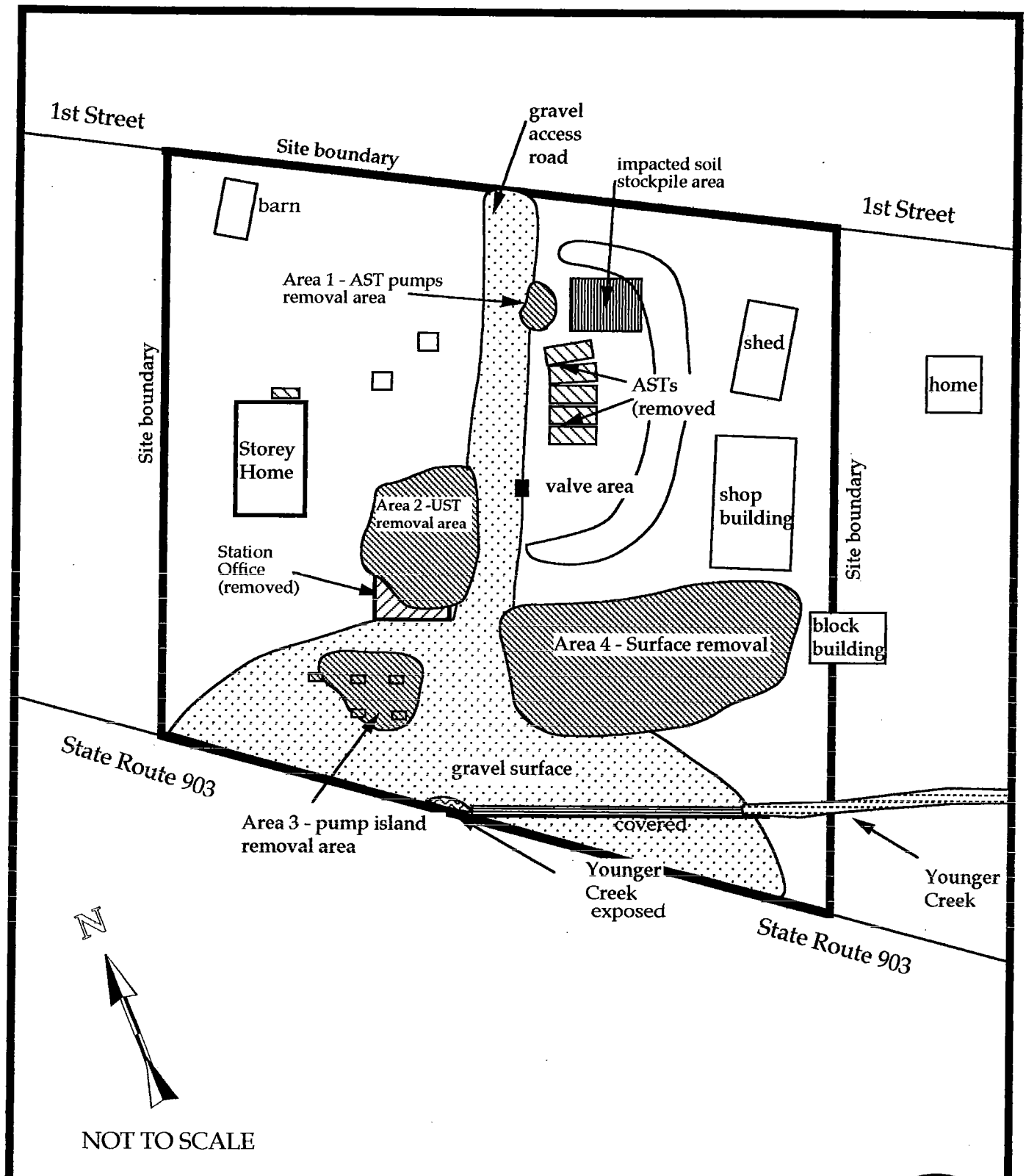


FIGURE 7-1 — SOURCE REMOVAL AREAS
Storey Service Station Site, Cle Elum, Washington
Source: GEI September 1999, Project #19923

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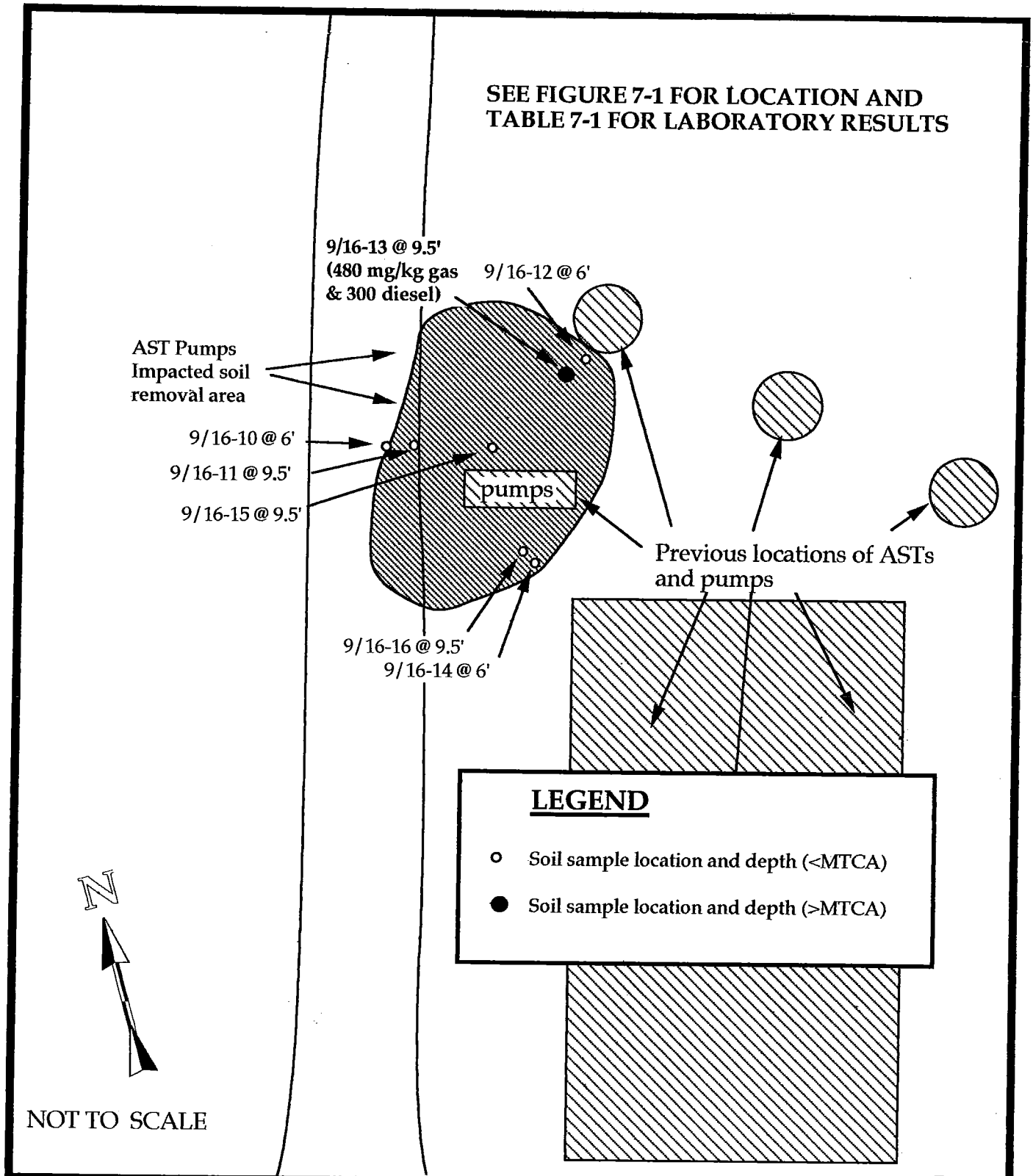

FIGURE 7-2 — SOURCE AREA 1 REMOVALS AND CLEARANCE SAMPLES

Storey Service Station Site, Cle Elum, Washington

Source: GEI September 1999, Project #19923

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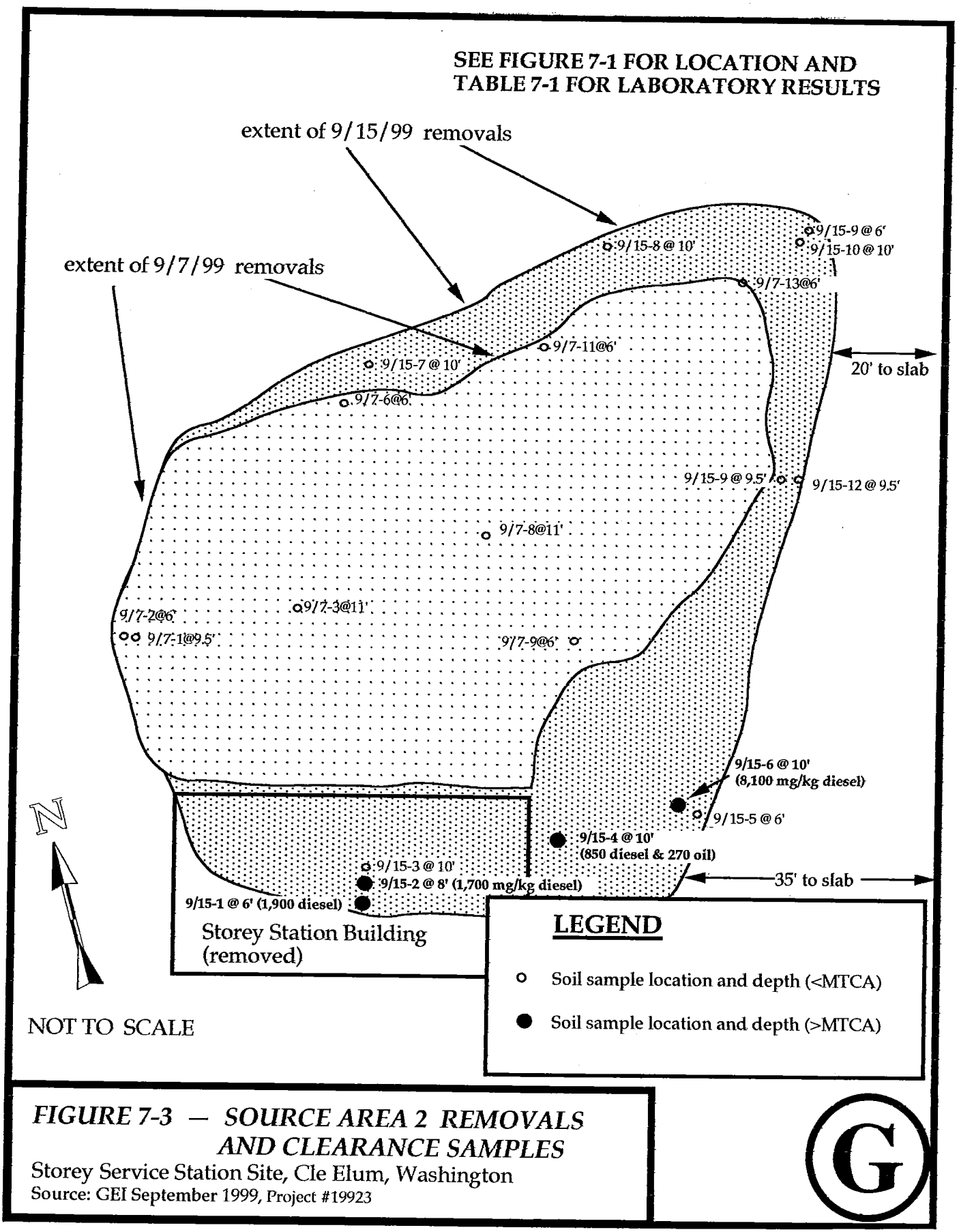
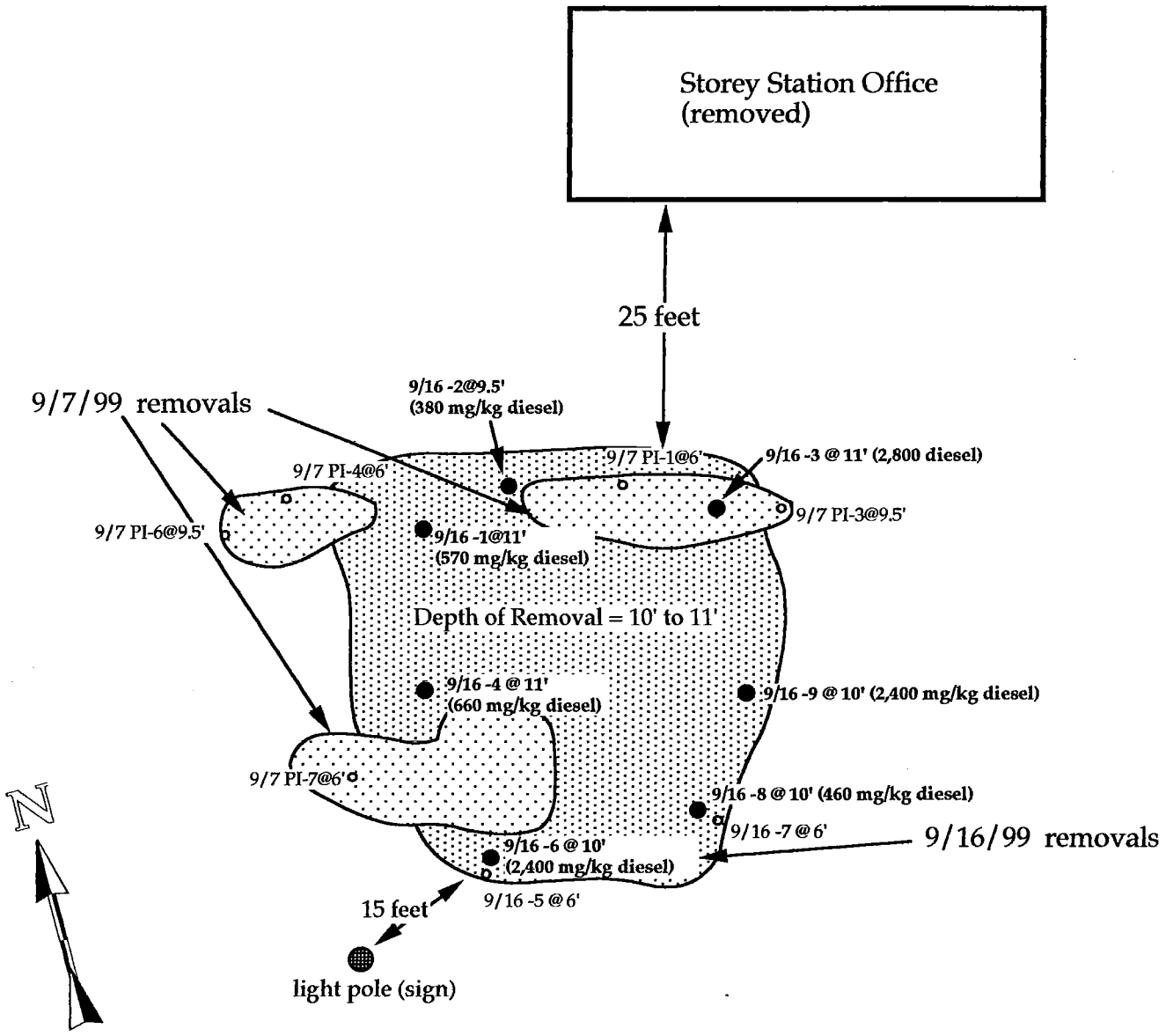


FIGURE 7-3 — SOURCE AREA 2 REMOVALS AND CLEARANCE SAMPLES

Storey Service Station Site, Cle Elum, Washington

Source: GEI September 1999, Project #19923

SEE FIGURE 7-1 FOR LOCATION AND TABLE 7-1 FOR LABORATORY RESULTS



NOT TO SCALE

FIGURE 7-4 — SOURCE AREA 3 PUMP ISLAND REMOVALS AND CLEARANCE SAMPLES

Storey Service Station Site, Cle Elum, Washington

Source: GEI September 1999, Project #19923

TABLE 7-1- CONTAMINANT CONCENTRATIONS REMAINING ON-SITE (mg/kg)]											
Sample No.	Depth (feet)	HCID Gas/ Diesel/ Oil			TPH-Gas	B/T/E/X				TPH-Dx Diesel/Oil	
9/7 PI-1@6'	6	ND	ND	ND	---	---	---	---	---	---	---
9/7 PI-3@9.5'	9.5	ND	ND	ND	---	---	---	---	---	---	---
9/7 PI-4@6'	6	ND	ND	ND	---	---	---	---	---	---	---
9/7 PI-6@9.5'	9.5	ND	ND	ND	---	---	---	---	---	---	---
9/7 PI-7@6'	6	ND	**diesel**	ND	---	---	---	---	---	53	ND
9/7 PI-11@9.5'	9.5	ND	**diesel**	ND	---	---	---	---	---	**5800**	ND
9/7-1@9.5'	9.5	ND	**diesel**	ND	---	---	---	---	---	130	70
9/7-2@6'	6	ND	ND	ND	---	---	---	---	---	---	---
9/7-3@11'	11	ND	ND	ND	---	---	---	---	---	---	---
9/7-6@6'	6	ND	ND	ND	---	---	---	---	---	---	---
9/7-8@11'	11	**gas**	**diesel**	ND	ND	ND	ND	ND	0.76	92	ND
9/7-9@6'	6	ND	ND	ND	---	---	---	---	---	---	---
9/7-11@6'	6	ND	**diesel**	**oil**	---	---	---	---	---	64	170
9/7-13@6'	6	ND	ND	ND	---	---	---	---	---	---	---
9/15-1@6'	6	ND	**diesel**	ND	---	---	---	---	---	**1900**	ND
9/15-2@8'	8	ND	**diesel**	ND	---	---	---	---	---	**1700**	ND
9/15-3@10'	10	ND	**diesel**	ND	---	---	---	---	---	51	ND
9/15-4@10'	10	ND	**diesel**	**oil**	---	---	---	---	---	**850**	**270**
9/15-5@6'	6	ND	ND	ND	---	---	---	---	---	---	---
9/15-6@10'	10	ND	**diesel**	ND	---	---	---	---	---	**8100**	ND
9/15-7@10'	10	ND	ND	ND	---	---	---	---	---	---	---
9/15-8@10'	10	ND	ND	ND	---	---	---	---	---	---	---
9/15-9@6'	9	ND	ND	ND	---	---	---	---	---	---	---
9/15-10@10'	10	**gas**	**diesel**	ND	87	ND	0.33	ND	1.89	62	ND
9/15-11@6'	6	ND	ND	ND	---	---	---	---	---	---	---
9/15-12@9.5'	9.5	ND	ND	ND	---	---	---	---	---	---	---
9/16-1@11'	11	ND	**diesel**	ND	---	---	---	---	---	**570**	ND
9/16-2@9.5'	9.5	ND	**diesel**	ND	---	---	---	---	---	**380**	ND
9/16-3@11'	11	ND	**diesel**	ND	---	---	---	---	---	**2800**	ND
9/16-4@11'	11	ND	**diesel**	ND	---	---	---	---	---	**660**	ND

ND = Non Detect @ Practical Quantification Limit

--- = Not Analyzed

Samples designated SP- # are stockpile samples

Bold Print = positive HCID analysis or > WDOE Model Toxics Control Act Cleanup Levels (Method A)

TABLE 7-1 (Continued — all results in mg/kg)											
Sample No.	Depth (feet)	HCID Gas/ Diesel/ Oil			TPH-Gas	B/T/E/X				TPH-Dx Diesel/Oil	
9/16-5@6′	6	ND	ND	ND	---	---	---	---	---	---	---
9/16-6@10′	10	ND	**diesel**	ND	---	---	---	---	---	**2400**	ND
9/16-7@6′	6	ND	ND	ND	---	---	---	---	---	---	---
9/16-8@10′	10	ND	**diesel**	ND	---	---	---	---	---	**460**	ND
9/16-9@10′	10	ND	**diesel**	ND	---	---	---	---	---	**2400**	ND
9/16-10@6′	6	ND	ND	ND	---	---	---	---	---	---	---
9/16-11@9.5′	9.5	ND	ND	ND	---	---	---	---	---	---	---
9/16-12@6′	6	ND	**diesel**	**oil**	---	---	---	---	---	68	170
9/16-13@9.5′	9.5	**gas**	**diesel**	ND	**480**	ND	0.8	0.33	14.7	**300**	200
9/16-14@6′	6	ND	ND	ND	---	---	---	---	---	---	---
9/16-15@9.5′	9.5	ND	ND	ND	---	---	---	---	---	---	---
9/16-16@9.5′	9.5	ND	ND	ND	---	---	---	---	---	---	---
9/7 SP-1′	---	**gas**	**diesel**	**oil**	54	0.49	2.3	0.42	3.9	57	87
9/7 SP-2	---	**gas**	**diesel**	**oil**	**740**	**0.91**	6.2	2.3	**20.8**	**1000**	**470**
9/7 SP-3	---	**gas**	**diesel**	**oil**	34	ND	0.35	0.073	1.41	110	**290**
9/16 SP-1′	---	ND	**diesel**	**oil**	---	---	---	---	---	**380**	**560**
9/16 SP-2	---	ND	**diesel**	**oil**	---	---	---	---	---	**1100**	**520**
9/16 SP-3	---	ND	ND	ND	---	---	---	---	---	---	---
9/16 SP-4	---	ND	ND	ND	---	---	---	---	---	---	---
MTCA Cleanup Levels					100	0.5	40.0	20.0	20.0	200	200

ND = Non Detect @ Practical Quantification Limit
--- = Not Analyzed
Samples designated SP- # are stockpile samples
Bold Print = Greater than MTCA Cleanup Levels

7.4 *CONTAMINANT CONCENTRATIONS IN GROUNDWATER*

One of the four wells installed and sampled by GEI in the course of the RI exhibited one exceedance of the Method A cleanup level, during the June 1998 sampling event. This exceedance was not observed during the January 1998 sampling event, nor was it repeated during the September 1999 sampling. Exceedences of the Method A levels were not observed in samples collected from the other three wells.

7.5 *POINT OF COMPLIANCE*

Identification of the points of compliance for the impacted soil and/or groundwater medium is considered to be the Site boundary. The point of compliance for surface water is also the Site boundary.

8.0 *EVALUATION OF APPLICABLE REMEDIAL TECHNOLOGIES*

The remedial investigation (RI) has served to identify the need for remedial action at the Storey site. Based on this information, we have developed this feasibility study to identify and screen potentially applicable remedial technologies from a broad base of general remedial technology categories. We also recognize the need to incorporate the potential for the off-site migration of impacted groundwater from the site into the final design of the remedial action.

The remedial technologies must be evaluated for effectiveness, impacts on future development and use, implementability, and cost. This screening step identifies those alternatives with sufficient merit to undergo additional evaluation.

Following this screening, using a three-step process, remedial alternatives that may reach the Remedial Action Objectives are developed. The first step develops response criteria to evaluate the anticipated applicability of each alternative with respect to the protection of environmental and human health. Second, the Applicable or Relevant and Appropriate Requirements (ARARs) and performance requirements are identified and used to evaluate potential risks for each remedial action. Third, the costs and impacts on future use and development for these technically feasible technologies are compared.

Using MTCA (WAC 173-340-360, Selection of Cleanup Actions) as a model, we have targeted our discussion of appropriate remedial technologies to protect human health and the environment; comply with the applicable cleanup standards; comply with relevant environmental regulations; and provide compliance monitoring. We understand that an important goal of the remediation will be to provide permanent solutions for the cleanup and to minimize the amount of hazardous substances remaining at the site, to the extent practicable. With these goals in mind, we will present the remedial alternatives in Ecology's descending order of preference:

- Reuse or recycling
- Destruction or detoxification
- Separation or volume reduction followed by reuse, recycling, destruction, or detoxification of the residual hazardous substances
- Immobilization of hazardous substances
- On-site or off-site disposal at an engineered facility designed to minimize the future releases of hazardous substances and in accordance with applicable state and federal laws
- Isolation or containment with attendant engineering controls; and
- Institutional controls and monitoring.

8.3 *REMEDIAL ACTION ALTERNATIVES*

The RI has served to identify the need for remedial action at this site. Based on this information, this feasibility study has been developed to identify and screen potentially applicable remedial technologies from a broad base of general remedial technology categories.

Appropriate technologies, which are potentially applicable at the site, include the following:

WATER

- Institutional Controls
- Groundwater monitoring
- Deed restrictions
- Access restrictions
- Hydraulic barriers
- Plume containment

SOIL

- Soil excavation
- Soil treatment
- Incineration
- Stabilization
- Bioremediation
- Chemical Treatment
- Aeration
- On-site Containment
- Capping
- Off-site Disposal
- Disposal at a solid waste landfill (after treatment)
- Disposal at a special waste landfill (with no treatment)
- Incorporation into asphalt

Each of these alternatives are discussed below.

8.3.1 *Institutional Controls*

8.3.1.1 *Groundwater Monitoring*

Monitoring of groundwater is a potentially applicable alternative to the remediation of groundwater at the Storey site, when performed in conjunction with the excavation and source removal alternative. Since the majority of the affected soil at the site has already been excavated, and the source areas (i.e., petroleum storage and fueling equipment and affected soils) have been removed, groundwater remediation may not be required. A long-term groundwater-monitoring program is an applicable

8.3.4 *Soil Excavation*

In this technology, soil containing the chemical constituents is excavated using conventional construction machinery and is then treated either off-site or on-site or hauled to a landfill for disposal. This is a relatively inexpensive option and usually results in immediate source removal. This option has already been implemented at the Storey site as part of the September 1999 interim remedial action *(see Section 7.3 — Contaminant Concentrations Remaining in Soil).*

8.3.5 *Soil Treatment*

Soil treatment types evaluated here include incineration, stabilization, bioremediation, chemical treatment, and aeration.

8.3.5.1 *Incineration*

Soil incineration involves the application of sufficient heat to thermally destroy chemicals of concern that are present. The operation typically tales place in a kiln or similar furnace. Incineration is a technology that is effective for destruction of organic compounds. Soils containing high amounts of organic materials are best suited for incineration because combustion of the organic compounds release heat to assist the external heat supply. Incineration may pose air pollution problems — if not properly controlled and permitting may be a significant issue.

Soils could be incinerated on-site and subsequently disposed of on-site or off-site. Incineration is potentially applicable to remediation of petroleum-contaminated soils. However, the economics of using this technique on-site are scale-sensitive in that several thousand yards of material is required to justify the mobilization fees for the portable incineration equipment. The economics of off-site incineration are dependent on trucking costs. The closest thermal treatment centers to the Storey site are located in Seattle and/or Spokane. Due to the estimated hauling and mobilization costs, this alternative will not be considered further.

8.3.5.2 *Stabilization*

Stabilization of contaminated soils involves chemical and/or physical treatment to render the contaminants less mobile. This treatment can be effective in treating soils containing multiple contaminants. Stabilization of the soil can make the soil suitable for reuse on-site or land disposal by decreasing contaminant mobility. Stabilization may be effectively implemented only if it results in constituent waste extract concentrations that are below regulatory levels. Stabilization is usually applied to soils containing significant levels of metallic contaminants. It therefore will not be considered further for the Storey property.

considered further *(see Section 7.1 — ARARs, Air Quality Requirements for on-site Bioremediation).*

8.3.6 On-site Containment

8.3.6.1 Capping

Capping soils that are contaminated with petroleum compounds is an acceptable remedial alternative. Capping with a suitable impervious material will substantially reduce the leaching potential of the chemicals of concern remaining in the contaminated soil, which was not accessible during the interim action and will protect the groundwater resource.

Facility upgrades at the Site have included asphalt paving of the southern portion of the site — covering the fuel islands impacted soil source areas. Also, a new service station office will be constructed on a concrete slab in the area of the previous sales office — this pad and building will cover most of the UST impacted soil source area. All soil sample locations with petroleum concentrations exceeding MTCA Method A (Residential) action levels are covered with a minimum of six feet of "clean" soil and asphalt or concrete — with the exception of one soil sample collected at the northeastern corner of Source Removal Area 1 at 9.5 feet bgs *(see Figure 8-1 Source Area Cap Zones).*

Additional capping is an alternative, which may need to be further evaluated if the proposed groundwater monitoring discloses that the remaining petroleum-contaminated soils are having a negative effect on groundwater quality.

8.3.7 Off-site Disposal

8.3.7.1 Disposal at a Solid Waste Landfill

This option may be applicable to soils, which meet TCLP testing criteria and contain petroleum at concentrations below MTCA Method A cleanup criteria. The majority of the soil excavated from the site exhibits levels of petroleum in excess of the Method A levels.

This option would be available only after the MTCA Method A cleanup levels are achieved through treatment of the affected soils. Transportation costs of the affected soil may substantially increase the overall costs of this approach. Therefore, this alternative will not be considered any further unless on-site remedial options are excluded.

8.3.7.2 Disposal at a Special Waste Landfill

This option is applicable to soil with a petroleum concentration in excess of 200 mg/kg. The landowner that utilizes this option may become liable for a portion of the remedial response costs should the selected landfill

ever face a cleanup action. However, the long-term liability issue remains, as do the trucking costs and tipping fees, which are generally more expensive than at solid waste landfills.

This option is not considered cost-effective for large quantities of soil, unless the time involved in achieving the cleanup goal is the paramount issue involved.

8.3.7.3 *Incorporation into Asphalt*

This option is considered applicable to sites with petroleum-contaminated soils. Asphalt plants are very specific as to the types of soils they can accept. Based upon the samples collected from borings and test pits at the site, the majority of the soil appears to have a high coarse gravel fraction and would have to be screened before its acceptance by an asphalt plant. The screened fraction would then have to be treated by some other technology. Therefore, this technology will not be considered further.

8.4 *APPLICABLE TECHNOLOGIES*

The technologies that are applicable to the remediation at this Site are based upon the discussion in Section 8.3. A list of the technologies includes:

- Soil excavation
- Off-site disposal
- On-site bioremediation
- Long-term groundwater monitoring
- Capping

8.5 *REMEDIAL ALTERNATIVES*

These applicable technologies have been grouped together to form complete remedial alternatives which will meet the remedial action objectives. The alternatives developed are as follows:

Alternative 1 - No action
Alternative 2 - Soil excavation with off-site disposal; groundwater monitoring
Alternative 3 - Soil excavation with on-site biotreatment of the excavated soil; groundwater monitoring
Alternative 4 - Capping of the site with groundwater monitoring

The "No Action" alternative is considered for comparison purposes only.

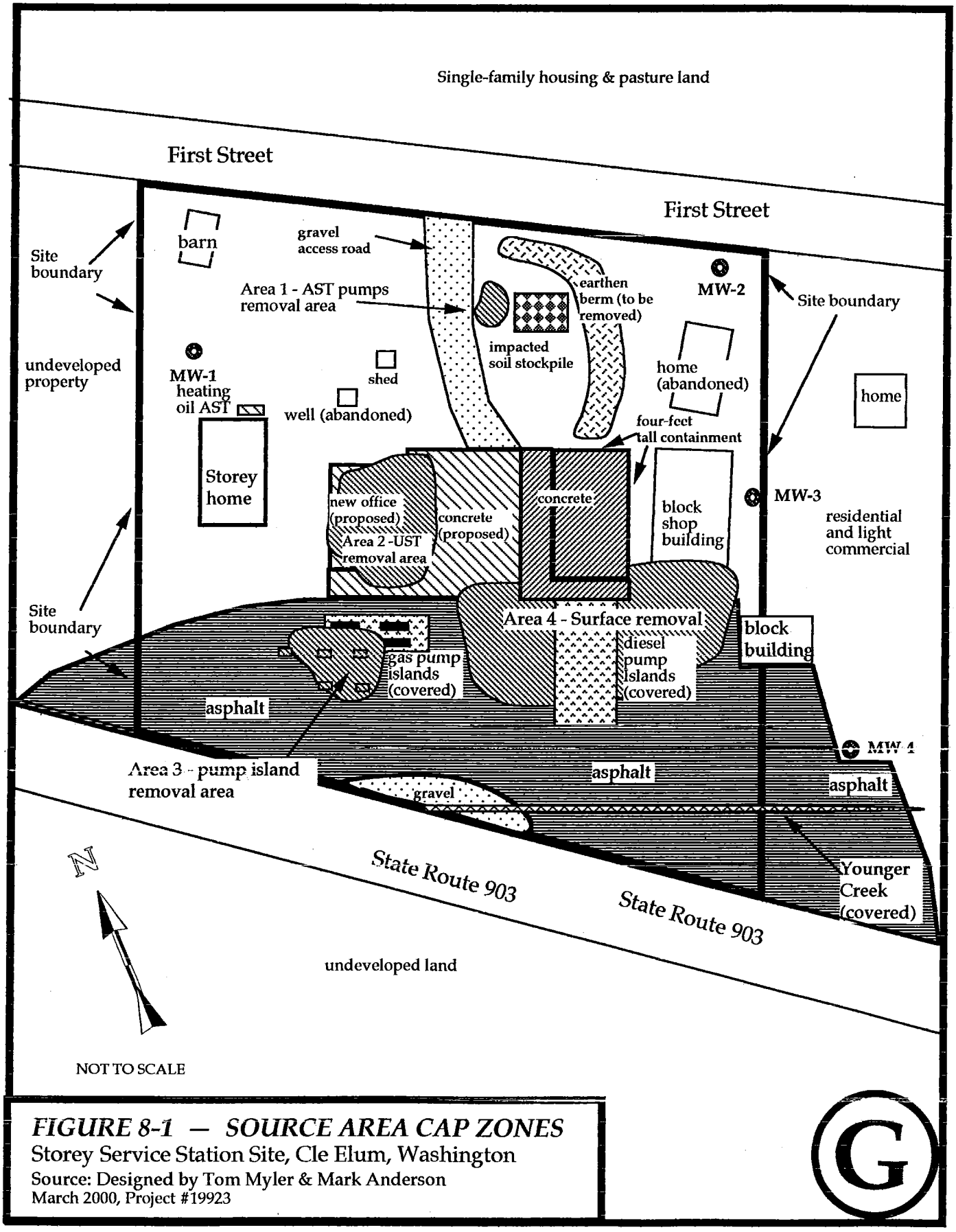


FIGURE 8-1 — SOURCE AREA CAP ZONES
Storey Service Station Site, Cle Elum, Washington
Source: Designed by Tom Myler & Mark Anderson
March 2000, Project #19923

8.6 *EVALUATION CRITERIA*

As required by MTCA, this evaluation of cleanup alternatives is targeted to protect human health and the environment by "eliminating, reducing, or otherwise controlling risks posed through each exposure pathway and migration pathway". Each of the four alternatives developed for the site are described below and are evaluated based on the following criteria:

- Technical feasibility
- Protection of human health and the environment
- Long-term effectiveness
- Permanent toxicity and mobility reduction
- Compliance with regulatory requirements; and
- Cost.

8.7 *ALTERNATIVE 1 - NO ACTION ALTERNATIVE*

Under the no-action alternative, no further remediation costs would be incurred developing the site. The no-action alternative is not likely to be acceptable to the regulatory agencies because the stockpiled soil at the site contains chemical constituents exceeding MTCA cleanup levels and potential exposure routes to contaminants (groundwater) would not be eliminated.

8.8 *ALTERNATIVE 2 - SOIL EXCAVATION WITH OFF-SITE DISPOSAL*

Under this alternative, the soil containing concentrations of petroleum exceeding MTCA Method A levels would be excavated (or the stockpiled soils) and hauled to a landfill. It is estimated that approximately 600 cubic yards of soil at the site exceeding MTCA cleanup levels requires disposal. If additional petroleum-impacted soils require excavation, then after excavation and disposal, clean backfill would be placed in the excavated areas to the existing grade.

8.8.1 *Technical Feasibility*

This alternative is technically feasible and will effectively remove all accessible soils with concentrations exceeding MTCA Method A levels. The excavation and backfilling portion of this task has already been completed, and compliance sampling has indicated that all accessible soils containing chemicals of potential concern have been removed. If the soils are disposed of at a landfill, permits will have to be obtained from the governing agencies.

8.8.2 *Health and the Environment*

Excavation of and relocation of contaminated soil eliminates the exposure pathway to soil and prevents any additional leaching of contaminants into groundwater.

8.8.3 *Long-term Effectiveness*

Excavation of the contaminated soil would permanently clean up the soil at the site, now that the source areas (petroleum storage and fueling systems) have been removed.

8.8.4 *Permanent Toxicity*

Excavation and removal of the soil from the site would eliminate the toxicity at the site. The toxicity of the material would persist in the disposal site.

8.8.5 *Compliance with Regulatory Requirements*

The off-site disposal facility will have acceptance criteria, which must be met. The permitting process for this alternative is expected to be relatively short. A deed restriction may be required to address the impacted soil remaining downgradient of the source areas on-site.

8.8.6 *Cost*

The off-site disposal of the stockpiled soil is estimated at approximately $50,000, including any required analytical testing, permitting, haulage and the tipping fee. The groundwater-monitoring phase is expected to last three years and total approximately $30,000.

8.9 *ALTERNATIVE 3 - SOIL EXCAVATION WITH ON-SITE BIOTREATMENT*

On-site biotreatment would require the treatment of contaminated soils on an engineered biotreatment pad constructed on-site. Treated soil could be reused, following the successful treatment.

8.9.1 *Technical Feasibility*

The implementation of this alternative would be enhanced by the readily available space for pad construction at the property. The equipment and materials necessary to perform the treatment at the site are readily available.

8.9.2 *Health and the Environment*

Soil treatment would remediate the contamination at the site and would significantly reduce exposure pathways to the contaminated soil at the site. However, exposure pathways may develop during on-site treatment of the stockpiled soils.

Ecology's site-specific restrictions to on-site treatment of the impacted soils are discussed in Section 7.1 — ARARs, Air Quality.

8.9.3 *Long-Term Effectiveness*

If the treatment technologies are successful, excavation and treatment of the contaminated soil and sediment would permanently clean up soil at the site.

8.9.4 *Permanent Toxicity*

Treatment of the soil at the site would permanently reduce concentrations of gasoline- and diesel-range petroleum at the site.

8.9.5 *Compliance with Regulatory Requirements*

The permitting of the biotreatment process may require an Ecology Central Regional Office Air Quality Section permit for release of hydrocarbons to the atmosphere. Since an Agreed Order has been issued, this cleanup may qualify for an exemption from procedural requirements; however, Ecology will ensure that the remediation project complies with substantive requirements. The permitting process for this alternative is expected to be relatively short. A deed restriction may be required to address the soil remaining on-site *(see Section 7.1 — ARARs, Air Quality).*

8.9.6 *Costs*

Biological treatment of petroleum in soil often requires six months to a year to complete. Given the small volume of material requiring treatment, it is anticipated that only one phase of soil treatment will be required. The uncertainty of the required time may affect the total cost of this alternative.

The total estimated cost for soil bioremediation is difficult to gauge, as the excavation work, which was accomplished with the larger systems removal and demolition project in September 1999, is already finished. The bioremediation process is estimated to be approximately $30,000. Optimum weather conditions would greatly secure the final costs to the lower of the two amounts.

The groundwater-monitoring phase is expected to last three years and total approximately $30,000.

8.10 *ALTERNATIVE 4 - CAPPING OF THE SITE*

The capping alternative is presented because it may be evaluated in the future if groundwater monitoring indicates that levels of contaminants in the groundwater beneath the site have not responded to the removal of the contaminant sources.

Facility upgrades at the Site have included asphalt paving of the southern portion of the site — covering the fuel islands impacted soil source areas. Also, a new service station office will be constructed on a concrete slab in the area of the previous sales office — this pad and building will cover most of the UST impacted soil source area. All soil sample locations with petroleum concentrations exceeding MTCA Method A (Residential) action levels are covered with a minimum of six feet of "clean" soil and asphalt or concrete — with the exception of one soil sample collected at the northeastern corner of Source Removal Area 1 at 9.5 feet bgs *(see Figure 8-1 Source Area Cap Zones).*

The currently stockpiled impacted soils would also require remediation.

8.10.1 *Technical Feasibility*

If necessary, the equipment and expertise needed to construct the cap are readily available in this area. It is suggested that the cap be designed and constructed in coordination with the redevelopment of the site, assuming that such development occurs in the next few years. If required, the cap could significantly reduce the leaching potential of the chemicals of potential concern. Cap maintenance and groundwater monitoring would be required.

8.10.2 *Health and the Environment*

Construction and maintenance of an asphalt cap would eliminate direct contact with soil and prevent the infiltration of surface water through contaminated soil at the site.

8.10.3 *Long-Term Effectiveness*

Capping of the areas of the site believed to contain residual soil contamination would effectively reduce the infiltration of surface water into the contaminated subsurface soil, which would reduce the migration of contaminants from the site and reduce exposure to surficial contamination. However, the cap would require periodic inspection and maintenance to remain effective.

9.0 *SUMMARY OF ALTERNATIVES*

Section 8.0 presented remedial alternatives for each area of potential concern. This analysis will provide the basis for developing a remedial action program for the Storey site.

The analysis of alternatives has been objective in nature. Costs for each alternative were provided in Section 8.0. A summary of the costs, advantages and disadvantages for each alternative is presented in Table 9-1. These costs are based on certain assumptions and are specific to the site and the remedial alternative.

TABLE 9-1 SUMMARY OF REMEDIAL ALTERNATIVES

Remedial Alternative	Estimated Total Costs	Advantages	Disadvantages
No Action (Capping only)	Not applicable	-Low costs -No cleanup time required	-Long-term liability -Does not meet regulatory requirements
Off-site disposal of stockpiled soils, including long-term groundwater monitoring	$80,000	-Meets regulatory requirements -Short cleanup time	-Not least-cost alternative -Long-term liability at an additional site
On-site bioremediation of stockpiled soils, including long-term groundwater monitoring	$60,000	-Meets regulatory requirements -Permanent reduction in toxicity -Reduced long-term liability -Relatively lower costs	-Cleanup time and space requirements
Capping of impacted soils downgradient of source areas, including long-term groundwater monitoring (see Figure 8-1 Source Area Cap Zones)	$66,000	-Has been integrated with planned facility upgrades	-Additional costs -Not a permanent solution -Cap maintenance is required -Deed restrictions may be necessary

APPENDIX A

TEST PIT LOGS

Project Number: 19923
Date of excavation: 12/10/97
Logged by: Gary Galloway

TEST PIT LOGS

TEST PIT NO.	DEPTH (FT)	USCS	DESCRIPTION
STP-1	0.0 – 1.0	SM	TOPSOIL: Silty, fine-grained sand, dark brown, dry to damp, loose to medium dense (Sample #STP-1a)
	1.0 – 3.0	SM	TOPSOIL: Silty, fine-grained sand, brown, damp, medium dense (Sample #STP-1b)
	3.0 – 7.0	SW	Qal: Cobbly course-grained sand, gray, damp, dense (Sample #STP-1c)
STP-2	0.0 – 0.5	SM	TOPSOIL: Silty, fine-grained sand, dark brown, dry to damp, loose to medium dense (Sample #STP-2a)
	0.5 – 1.0	SM	TOPSOIL: Silty, fine-grained sand, brown, damp, medium dense (Sample #STP-2b)
	1.0 – 5.0	SW	Qal: Silty, cobbly course-grained sand, gray, damp, dense (Sample #STP-2c)
STP-3	0.0 – 0.3	SM	TOPSOIL: Silty, fine-grained sand, dark brown, dry to damp, loose to medium dense (Sample #STP-3a)
	0.3 – 1.0	SM	TOPSOIL: Silty, fine-grained sand, brown, damp, medium dense (Sample #STP-3b)
	1.0 – 10.0	SW	Qal: Silty, cobbly course-grained sand, gray, wet (water @ 9'), dense (Sample #STP-3c)
STP-4	0.0 – 0.2	SM	TOPSOIL: Silty, fine-grained sand, dark brown, dry to damp, loose to medium dense (Sample #STP-4a)
	0.2 – 1.0	SM	TOPSOIL: Silty, fine-grained sand, brown, damp, medium dense (Sample #STP-4b)
	3.0 – 7.0	SW	Qal: Silty, cobbly course-grained sand, gray, damp, dense (Sample #STP-4c)

Project Number: 19923
Date of excavation: 12/10/97
Logged by: Gary Galloway

TEST PIT LOGS (Continued)

TEST PIT NO.	DEPTH (FT)	USCS	DESCRIPTION
STP-5	0.0 – 1.0	SM	TOPSOIL: Silty, fine-grained sand, dark brown, dry to damp, loose to medium dense (Sample #STP-5a)
	1.0 – 3.0	SM	TOPSOIL: Silty, fine-grained sand, brown, damp, medium dense (Sample #STP-5b)
	3.0 – 5.0	SW	Qal: Silty, cobbly course-grained sand, gray, damp, dense (Sample #STP-5c)
STP-6	0.0 – 0.6	SM	TOPSOIL: Silty, fine-grained sand with bricks & other debris, dark brown, dry to damp, loose to medium dense, heavy dark-staining (Sample #STP-6a)
	1.0 – 3.0	SM	TOPSOIL: Silty, fine-grained sand, brown, damp, medium dense (Sample #STP-6b)
	3.0 – 5.0	SW	Qal: Silty, cobbly course-grained sand, gray, damp, dense (Sample #STP-6c)
STP-7	0.0 – 0.5	SM	Qaf: Silty, fine-grained sand with bricks & other debris, dark brown, dry to damp, loose to medium dense, moderate staining (Sample #STP-7a)
	0.5 – 2.5	SM	TOPSOIL: Silty, fine-grained sand, brown, damp, medium dense (Sample #STP-7b)
	2.5 – 5.0	SW	Qal: Silty, cobbly course-grained sand, gray, damp, dense (Sample #STP-7c)
STP-8	0.0 – 1.3	SM	Qaf: Silty, fine-grained sand with bricks & other debris, dark brown, dry to damp, loose to medium dense, moderate staining (Sample #STP-8a)
	1.3 – 2.5	SM	TOPSOIL: Silty, fine-grained sand, brown, damp, medium dense (Sample #STP-8b)

Project Number: 19923
Date of excavation: 12/10/97
Logged by: Gary Galloway

	2.5 – 4.0	SW	Qal: Silty, cobbly course-grained sand, gray, damp, dense (Sample #STP-8c)
STP-9	0.0 – 1.0	SM	TOPSOIL: Silty, fine-grained sand, dark brown, dry to damp, loose to medium dense (Sample #STP-9a)
	1.0 – 2.0	SM	TOPSOIL: Silty, fine-grained sand, brown, damp, medium dense (Sample #STP-9b)
	2.0 – 5.0	SW	Qal: Silty, cobbly course-grained sand, gray, damp, dense (Sample #STP-9c)

Project Number: 19923
Date of excavation: 12/17/98
Logged by: Gary Galloway

TEST PIT LOGS (Continued)

TEST PIT NO.	DEPTH (FT)	USCS	DESCRIPTION
STP-14	0.0 – 1.2	SM	Qaf: Silty, fine-grained sand with bricks & debris, dark brown, dry to damp, loose to medium dense (Sample #STP-14a)
	1.2 – 3.0	SM	TOPSOIL: Silty, fine-grained sand, brown, damp, medium dense (Sample #STP-14b)
	3.0 – 7.0	SW	Qal: Silty, cobbly course-grained sand, gray, damp, dense (Sample #STP-14c)
STP-15	0.0 – 0.6	SM	TOPSOIL: Silty, fine-grained sand, brown, dry to damp, loose to medium dense (Sample #STP-15a)
	0.6 – 6.0	SM	TOPSOIL: Silty, fine-grained sand, light brown, damp to moist, medium dense (Sample #STP-15b)
	6.0 – 7.0	SW	Qal: Fine-grained sand, tan, moist, (Sample #STP-15c)
	7.0 – 9.0	SW	Qal: Silty, cobbly course-grained sand, gray, wet (water @ 8'), dense (Sample #STP-15d)
STP-19	0.0 – 1.3	SM	Qaf: Silty, fine-grained sand with coal slag & wood debris, brown, dry to damp, medium dense (Sample #STP-19a)
	1.3 – 2.5	SM	TOPSOIL: Silty, fine-grained sand, brown, damp, medium dense (Sample #STP-19b)
	2.5 – 4.0	SW	Qal: Silty, cobbly course-grained sand, brown, damp, dense (Sample #STP-19c)
STP-20	0.0 – 0.7	SM	Qaf: Silty, fine-grained sand with bricks & debris, brown, dry to damp, loose to medium dense (Sample #STP-20a)
	0.7 – 2.5	SM	TOPSOIL: Silty, fine-grained sand, brown, damp, medium dense (Sample #STP-20b)
	2.5 – 5.0	SW	Qal: Silty, cobbly course-grained sand, brown, damp, dense (Sample #STP-1c)

Project Number: 19923
Date of excavation: 6/10/98
Logged by: Gary Galloway

TEST PIT LOGS (Continued)

TEST PIT NO.	DEPTH (FT)	USCS	DESCRIPTION
STP-10	0.0 – 1.0	SM	TOPSOIL: Silty, fine-grained sand, dark brown, dry to damp, loose to medium dense (Sample #STP-10a)
	1.0 – 5.0	SM	TOPSOIL: Silty, fine-grained sand, brown, damp, medium dense (Sample #STP-10b)
	5.0 – 6.0	SW	Qal: Silty, cobbly course-grained sand, gray, damp, dense (Sample #STP-10c)
STP-11	0.0 – 1.0	SM	TOPSOIL: Silty, fine-grained sand, brown, dry to damp, loose to medium dense (Sample #STP-11a)
	1.0 – 4.5	SM	TOPSOIL: Silty, fine-grained sand, light brown, damp, medium dense (Sample #STP-1b)
	4.5 – 6.0	SW	Qal: Silty, cobbly course-grained sand, brown, damp to moist, dense (Sample #STP-11c)
STP-12	0.0 – 1.0	SM	TOPSOIL: Silty, fine-grained sand, dark brown, dry to damp, loose to medium dense (Sample #STP-12a)
	1.0 – 4.0	SM	TOPSOIL: Silty, fine-grained sand, gray to black, damp, medium dense (Sample #STP-12b, strong hydrocarbon odor & staining)
	4.0 – 6.0	SW	Qal: Silty, cobbly course-grained sand, gray, wet, dense (Sample #STP-12c, slight hydrocarbon odor)
STP-13	0.0 – 1.0	SM	TOPSOIL: Silty, fine-grained sand, dark brown, dry, loose to medium dense (Sample #STP-13a)
	1.0 – 4.5	SM	TOPSOIL: Silty, fine-grained sand, light brown, damp, medium dense (Sample #STP-13b)

Project Number: 19923
Date of excavation: 6/10/98
Logged by: Gary Galloway

TEST PIT LOGS (Continued)

TEST PIT NO.	DEPTH (FT)	USCS	DESCRIPTION
	4.5 – 6.0	SW	Qal: Silty, cobbly course-grained sand, brown, wet, dense (Sample #STP-13c, water @ 6')
STP-16	0.0 – 1.0	SM	TOPSOIL: Silty, fine-grained sand, dark brown, dry, loose to medium dense (Sample #STP-16a)
	1.0 – 4.0	SM	TOPSOIL: Silty, fine-grained sand, light brown, damp, medium dense (Sample #STP-16b)
	4.0 – 8.0	SW	Qal: Silty, cobbly course-grained sand, brown, wet, dense (Sample #STP-16c, water @ 8')
STP-17			No access to area (No STP-17)
STP-18	0.0 – 1.0	SM	TOPSOIL: Silty, fine-grained sand, dark brown, dry to damp, loose to medium dense (Sample #STP-18a)
	1.0 – 7.0	SM	TOPSOIL: Silty, fine-grained sand, brown, damp, medium dense (Sample #STP-18b)
	7.0 – 8.0	SM	Qal: Silty, fine-grained sand, dark gray, damp, dense (Sample #STP-18c, strong hydrocarbon odor)
STP-21	0.0 – 1.5	SM	TOPSOIL: Gravelly, fine-grained sand with asphalt chips, dark gray to black, dry to damp, loose to medium dense (Sample #STP-21a)
	1.5 – 4.0	SM	TOPSOIL: Silty, fine-grained sand, light brown, damp, medium dense (Sample #STP-21b, no hydrocarbon odor or stains)
	4.0 – 8.5	SW	Qal: Cobbly course-grained sand, gray, moist to wet @ 8.5', dense (Sample #STP-21c)

Project Number: 19923
Date of excavation: 6/10/98
Logged by: Gary Galloway

TEST PIT LOGS (Continued)

TEST PIT NO.	DEPTH (FT)	USCS	DESCRIPTION
	8.5 – 9.0	SW	Same except moderate hydrocarbon odor
STP-22	0.0 – 1.2	SM	Qaf: Silty, fine-grained sand with coal slag, bricks & debris, black with orange/red slag & bricks, dry to damp, loose to medium dense (Sample #STP-22a, no odors, etc.)
	1.2 – 4.5	SM	TOPSOIL: Silty, fine-grained sand, brown, damp, medium dense (Sample #STP-22b)
	4.5 – 9.0	SW	Qal: Cobbly course-grained sand, brown, damp, dense (Sample #STP-22c)
	9.0 – 9.5	SW	Qal: Cobbly course-grained sand, brown, damp, dense (Sample #STP-22d, slight hydrocarbon odor, water @ 9')
STP-23	0.0 – 1.5	SW	Qaf: Gravelly & cobbly, medium-Grained sand, rown, dry, loose to medium dense (Sample #STP-23a)
	1.5 – 6.0	SW	Qaf: Gravelly, medium-grained sand, brown, dry, medium dense (Sample #STP-23b)
	6.0 – 9.0	SW	Qaf: Silty, fine-grained sand, dark brown, damp, dense (Sample #STP-1c, moderately strong hydrocarbon odor, water @ 8.5')

APPENDIX B

BOREHOLE
AND
MONITORING WELL COMPLETION LOGS

PROJECT NO. GEI #19823

BORING LOG

SHEET 1 OF 4

PROJECT NAME: Storey
LOCATION: Cle Elum, WA
CLIENT NAME: Storey
SITE MANAGER: Gary Galloway
LOGGED BY: Gary Galloway

BORING NUMBER: B-1
BORING LOCATION: West Side
DRILLING CONTRACTOR: Holt Drilling
DRILLING METHOD: HSA
BIT SZ/HAMMER/WT/DROP: 6"/140#/30"
SAMPLE RETRIEVAL SYS: Split Spoon

DATE/TIME STARTED: 12/16/97
DATE/TIME COMPLETED: 10:35 Hrs
TOTAL DEPTH: 16'
SURFACE ELEVATION:
WATER DEPTH: 9'
CLOSURE METHOD: GW Well

DEPTH (Feet)	GRAPHIC LOG	Sample #	Blows / 6"	OVA (ppm)	CGI (% LEL)	Odor	Color	Moisture	Porosity (%)	USCS Symbols	DESCRIPTION
										SM	Lawn-covered surface
										SW	0'-2' Soil: brown, silty fine-grained sand, damp to moist, med dense, (SM)
5	1	1	30 46 32	1.4							2'-5' Qal: gray/brn, cobbly course-grained sand, dense, moist (SW)
											5'-16' Same lithology
10	2	2	23 39 27	2.2							
15	3	3	34 50 6"	8.3							Sample Log @5' Soil sample, no odor/no staining, moist, poor recovery (40%) @10' Soil sample, no odor/no staining, wet, poor recovery (60%) @15' Soil sample, no odor/no staining, wet, poor recovery (20%)

Boulders Cobbles Pebbles Gravel Crs. Sand Med. Sand Fine Sand Silt Clay

Legend - see back

FIELD BORING LOG

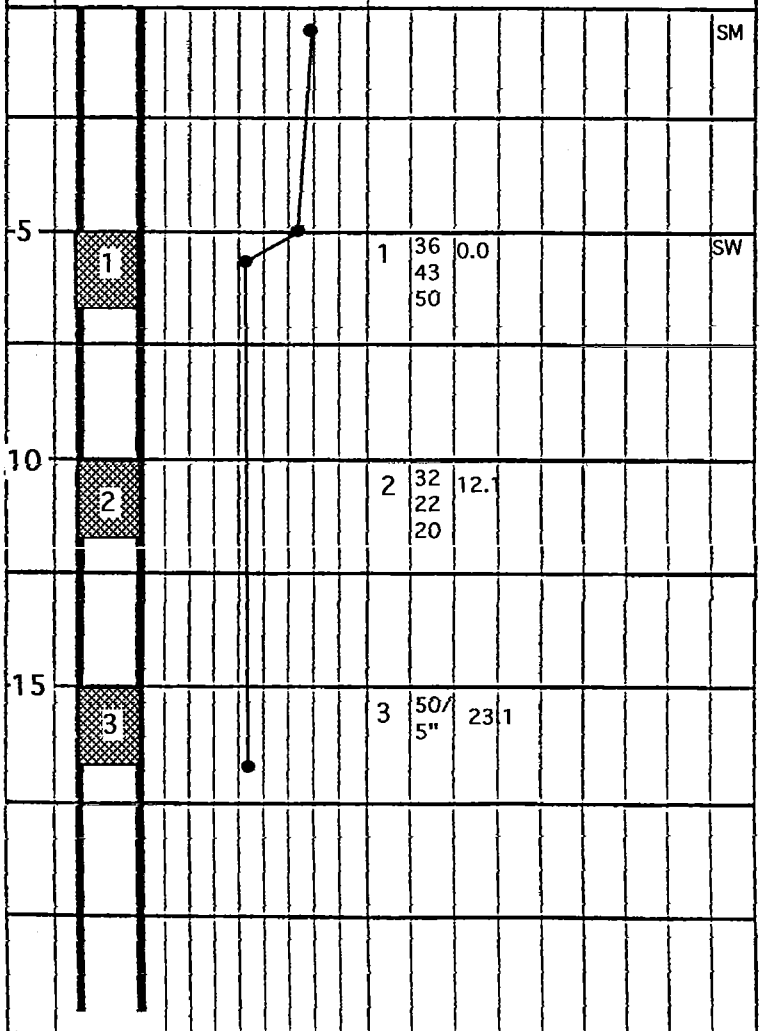
Signature Gary Galloway Date 12/16/97

PROJECT NO. GEI #19823	**BORING LOG**	SHEET 2 OF 4

PROJECT NAME: Storey
LOCATION: Cle Elum, WA
CLIENT NAME: Storey
SITE MANAGER: Gary Galloway
LOGGED BY: Gary Galloway

BORING NUMBER: B-2
BORING LOCATION: NE Side
DRILLING CONTRACTOR: Holt Drilling
DRILLING METHOD: HSA
BIT SZ/HAMMER/WT/DROP: 6"/140#/30"
SAMPLE RETRIEVAL SYS: Split Spoon

DATE/TIME STARTED: 12/16/97
DATE/TIME COMPLETED: 12:45 Hrs
TOTAL DEPTH: 16'
SURFACE ELEVATION:
WATER DEPTH: 9'
CLOSURE METHOD: GW Well



DESCRIPTION

0'-6" Soil: brown, organic-rich, silty sand, damp, med dense, (SM)

6"-5' Qal: lt. brn, silty fine-grained sand, med. dense, dry to damp (SM)

5'-16' Qal: brn., cobbly course-grained sand, med. dense to dense, wet (water @ 9')

Sample Log

@5' Soil sample, no odor/no staining, moist, poor recovery (70%)

@10' Soil sample, no odor/no staining, wet, poor recovery (30%)

@15' Soil sample, no odor/no staining, wet, poor recovery (40%)

Legend - see back

FIELD BORING LOG

Signature _____ Date 12/16/97

PROJECT NO. GEI #19823

BORING LOG

SHEET 3 OF 4

PROJECT NAME: Storey
LOCATION: Cle Elum, WA
CLIENT NAME: Storey
SITE MANAGER: Gary Galloway
LOGGED BY: Gary Galloway

BORING NUMBER: B-3
BORING LOCATION: Center East Side
DRILLING CONTRACTOR: Holt Drilling
DRILLING METHOD: HSA
BIT SZ/HAMMER/WT/DROP: 6"/140#/30"
SAMPLE RETRIEVAL SYS: Split Spoon

DATE/TIME STARTED: 12/16/97
DATE/TIME COMPLETED: 15:05 Hrs
TOTAL DEPTH: 16'
SURFACE ELEVATION:
WATER DEPTH: 9'
CLOSURE METHOD: GW Well

DEPTH (Feet)	GRAPHIC LOG	Sample #	Blows / 6"	OVA (ppm)	CGI (% LEL)	Odor	Color	Moisture	Porosity (%)	USCS Symbols	DESCRIPTION
										SM	0'-6" Soil: brown, organic-rich, silty sand, med dense, damp (SM)
5	1	1	39 26 38	6.1						SW	6"-16' Qal: gray/brn., cobbly course-grained sand, dense, moist (SW)
10	2	2	50 /3"	23.4							
15	3	3	36 50/ 4"	22	3						

Boulders, Cobbles, Pebbles, Gravel, Crs. Sand, Med. Sand, Fine Sand, Silt, Clay

Sample Log

@5' Soil sample, no odor/no staining, moist, poor recovery (70%)

@10' Soil sample, no odor/no staining, wet, poor recovery (30%)

@15' Soil sample, no odor/no staining, wet, poor recovery (40%)

Legend - see back

FIELD BORING LOG

Signature _____ Date 12/16/97

PROJECT NO. GEI #19823

BORING LOG

SHEET 4 OF 4

PROJECT NAME: Storey
LOCATION: Cle Elum, WA
CLIENT NAME: Storey
SITE MANAGER: Gary Galloway
LOGGED BY: Gary Galloway

BORING NUMBER: B-4
BORING LOCATION: South East Side
DRILLING CONTRACTOR: Holt Drilling
DRILLING METHOD: HSA
BIT SZ/HAMMER/WT/DROP: 6"/140#/30"
SAMPLE RETRIEVAL SYS: Split Spoon

DATE/TIME STARTED: 12/17/97
DATE/TIME COMPLETED: 08:00 Hrs
TOTAL DEPTH: 14'
SURFACE ELEVATION:
WATER DEPTH: 9.5'
CLOSURE METHOD: GW Well

DEPTH (Feet)	GRAPHIC LOG	Sample #	Blows / 6"	OVA (ppm)	CGI (% LEL)	Odor	Color	Moisture	Porosity (%)	USCS Symbols
										SM
5	1	1	44 50 /3 "	20.2						SW
10	2	2	50 /5"	21.4						
15	3	3	50/ 5"	20.8						

Boulders / Cobbles / Pebbles / Gravel / Crs. Sand / Med. Sand / Fine Sand / Silt / Clay

DESCRIPTION

0'-8" Soil: brown, silty sand, loose to med dense, damp (SM)

8"-16"Soil, lt. brn., silty sand, loose to med. dense, wet (SM)

16"-14' Qal: lt. brn./brn., cobbly medium-grained sand, dense, moist (SW)

HSA ring broke @ 14' Stop

Sample Log

@5' Soil sample, no odor/no staining, moist, poor recovery (5%)

@10' Soil sample, no odor/no staining, wet, poor recovery (60%)

@15' Soil sample, no odor/no staining, wet, poor recovery (40%)

Legend - see back

FIELD BORING LOG

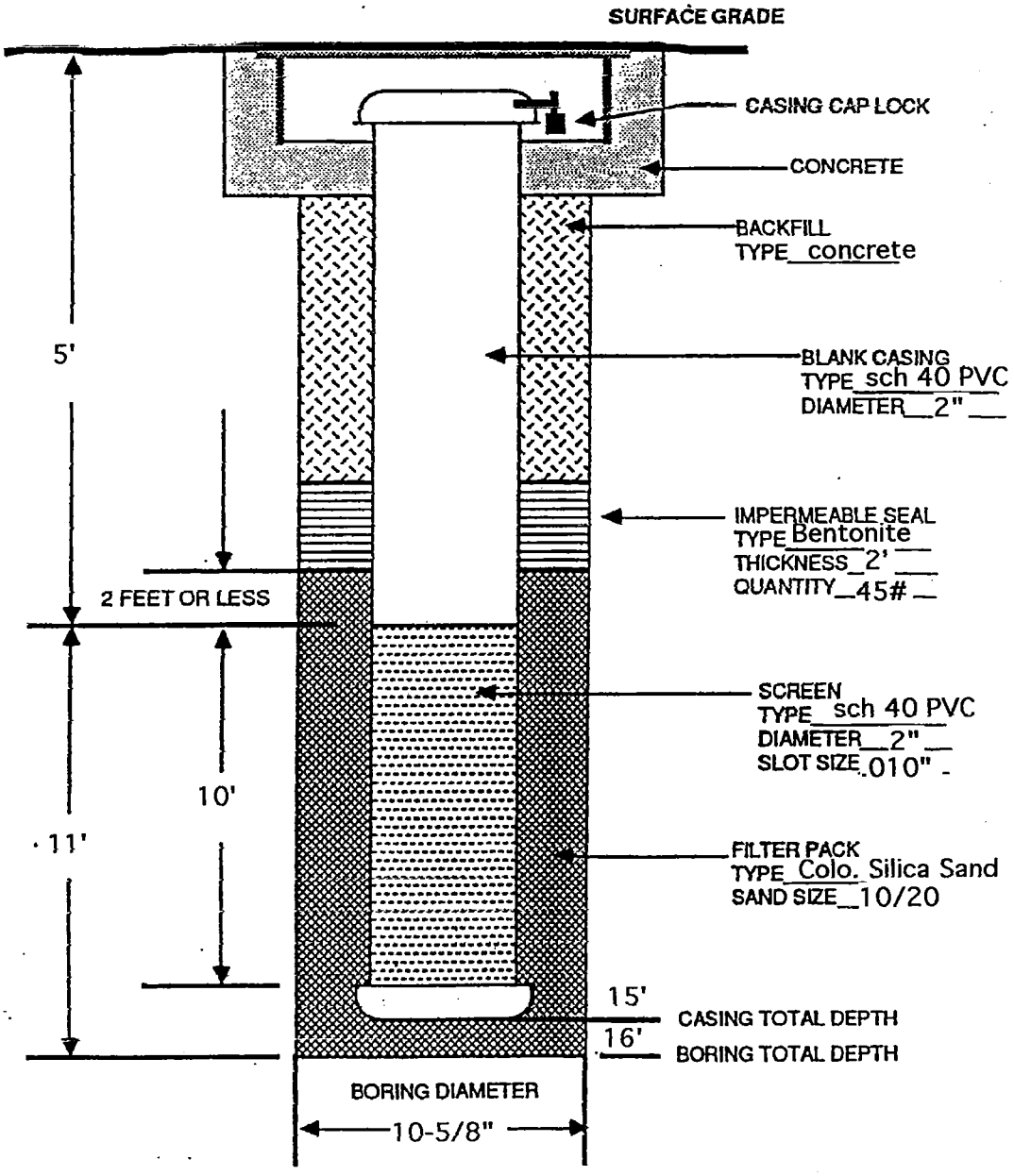
Signature _____ Date 12/17/97

MONITORING WELL INSTALLATION REPORT

WELL NUMBER: MW-1
PROJECT NAME: Storey
ADDRESS: Cle Elum, WA

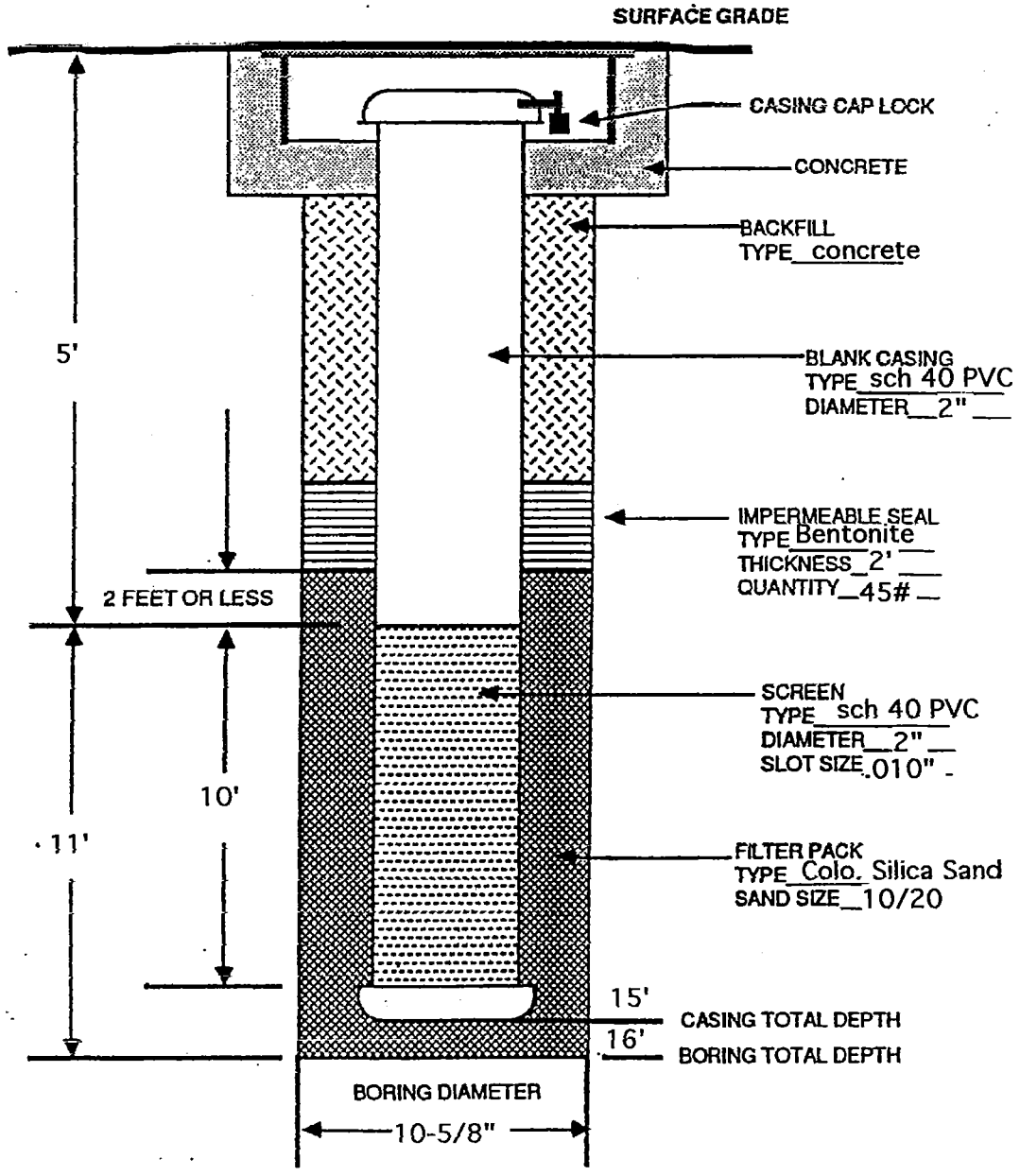
TYPE OF WELL: 2" GW Monitor Well
INSTALLATION CONTRACTOR: Holt Drilling

INSTALLATION DATE: 12/16/97
SURFACE ELEV: (FT ABOVE MSL)
TOP OF CASING: (FT ABOVE MSL)
SURVEYED WELL LOCATION: West side of property
SITE MANAGER: Gary Galloway



MONITORING WELL INSTALLATION REPORT

WELL NUMBER:	MW-3	INSTALLATION DATE:	12/16/97
PROJECT NAME:	Storey	SURFACE ELEV: (FT ABOVE MSL)	
ADDRESS:	Cle Elum, WA	TOP OF CASING: (FT ABOVE MSL)	
TYPE OF WELL:	2" GW Monitor Well	SURVEYED WELL LOCATION:	East/center of property
INSTALLATION CONTRACTOR:	Holt Drilling	SITE MANAGER:	Gary Galloway



WELL DEVELOPMENT LOG
(SAMPLING)

Project Name: Storey
Project Number: 19823
Date: 1/15/98
Site Engineer: Gary Galloway

Well Number: MW-2
Equipment: peristaltic pump pH & Orion Cond. meters/ disposable teflon bailer
Contractor: Gary Galloway

	BEFORE	AFTER
Depth to Sediment (Ft)	13.8'	14.2'
Depth to Water (Ft)	8.16'	8.09'
Water Column Height (Ft)	5.64	6.11

Well Volume/(Ft) (gallons) 0.16 gal/ft

	INITIAL	RECOVERED
Well Volume (gallons)	0.902 gallons	0.978 gallons

Time	Ph.	Temp. °C	Conductivity	Pump Rate	Comments
13:05 Hrs	6.56	7.3	347 uS/cm		2 gallons pumped
13:15 Hrs	5.59	7.4	355 uS/cm		0.5 gallons pumped

Sampling Procedure: Disposable teflon bailer, 2 - 40 ml VOA vials plus 1 - 500 ml amber glass bottle (HCl-preserved), stored in iced cooler.

WELL DEVELOPMENT LOG
(SAMPLING)

Project Name: Storey
Project Number: 19823
Date: 1/15/98
Site Engineer: Gary Galloway

Well Number: MW-3
Equipment: peristaltic pump
pH & Orion Cond. meters/
disposable teflon bailer
Contractor:
Gary Galloway

	BEFORE	AFTER
Depth to Sediment (Ft)	14.28'	14.46
Depth to Water (Ft)	8.33	8.28
Water Column Height (Ft)	5.95	6.18

Well Volume/(Ft) (gallons) 0.16 gal/ft

	INITIAL	RECOVERED
Well Volume (gallons)	0.952 gallons	0.989 gallons

Time	Ph	Temp. °C	Conductivity	Pump Rate	Comments
14:30 Hrs	6.90	7.2	329 uS/cm		3 gallons pumped
14:45 Hrs	6.83	6.8	335 uS/cm		0.5 gallons pumped
14:50 Hrs	6.86	6.8	326 uS/cm		0.5 gallons pumped

Sampling Procedure: Disposable teflon bailer, 2 - 40 ml VOA vials plus 1 - 500 ml amber glass bottle (HCl-preserved), stored in iced cooler.

WELL DEVELOPMENT LOG
(SAMPLING)

Project Name: Storey
Project Number: 19823
Date: 1/15/98
Site Engineer: Gary Galloway

Well Number: MW-4
Equipment: peristaltic pump
pH & Orion Cond. meters/
disposable teflon bailer
Contractor:
Gary Galloway

	BEFORE	AFTER
Depth to Sediment (Ft)	12.82	12.89
Depth to Water (Ft)	9.90	9.86
Water Column Height (Ft)	2.92	3.03

		INITIAL	RECOVERED
Well Volume/(Ft) (gallons)	0.16 gal/ft		
Well Volume (gallons)		0.467 gallons	0.485 gallons

Time	Ph.	Temp. °C	Conductivity	Pump Rate	Comments
15:10 Hrs	6.53	7.6	329 uS/cm		3 gallons pumped
15:20 Hrs	6.58	7.5	326 uS/cm		0.5 gallons pumped

Sampling Procedure: Disposable teflon bailer, 2 - 40 ml VOA vials plus 1 - 500 ml amber glass bottle (HCl-preserved), stored in iced cooler.

WELL DEVELOPMENT LOG
(SAMPLING)

Project Name: Storey
Project Number: 19823
Date: 1/15/98
Site Engineer: Gary Galloway

Well Number: MW-23
Equipment: peristaltic pump
pH & Orion Cond. meters/
disposable teflon bailer
Contractor:
Gary Galloway

	BEFORE	AFTER
Depth to Sediment (Ft)	11.6	11.82
Depth to Water (Ft)	9.48	9.40
Water Column Height (Ft)	2.12	2.42

Well Volume/(Ft) (gallons) 0.16 gal/ft

	INITIAL	RECOVERED
Well Volume (gallons)	0.339 gallons	0.387 gallons

Time	Ph.	Temp. °C	Conductivity	Pump Rate	Comments
15:38 Hrs	6.31	6.6	182 uS/cm		2 gallons pumped
15:45 Hrs	6.40	6.5	176 uS/cm		0.5 gallons pumped

Sampling Procedure: Disposable teflon bailer, 2 - 40 ml VOA vials plus 1 - 500 ml amber glass bottle (HCl-preserved), stored in iced cooler.

WELL DEVELOPMENT LOG
(SAMPLING)

Project Name: Storey
Project Number: 19823
Date: 1/15/98
Site Engineer: Gary Galloway

Well Number: MW-24
Equipment: peristaltic pump
pH & Orion Cond. meters/
disposable teflon bailer
Contractor:
Gary Galloway

	BEFORE	AFTER
Depth to Sediment (Ft)	15.4	15.5
Depth to Water (Ft)	9.85	9.55
Water Column Height (Ft)	5.55	5.95

Well Volume/(Ft) (gallons) 0.16 gal/ft

	INITIAL	RECOVERED
Well Volume (gallons)	0.888 gallons	0.952 gallons

Time	Ph.	Temp. °C	Conductivity	Pump Rate	Comments
16:10 Hrs	6.71	6.7	338 uS/cm		2 gallons pumped
16:20 Hrs	6.80	6.9	336 uS/cm		1 gallons pumped

Sampling Procedure: Disposable teflon bailer, 2 - 40 ml VOA vials plus 1 - 500 ml amber glass bottle (HCl-preserved), stored in iced cooler.

WELL DEVELOPMENT LOG
(SAMPLING)

Project Name: Storey
Project Number: 19823
Date: 1/15/98
Site Engineer: Gary Galloway

Well Number: MW-25
Equipment: peristaltic pump
pH & Orion Cond. meters/
disposable teflon bailer
Contractor: Gary Galloway

	BEFORE	AFTER
Depth to Sediment (Ft)	15.9	16.2
Depth to Water (Ft)	9.98	9.92
Water Column Height (Ft)	5.92	6.28

Well Volume/(Ft) (gallons) 0.16 gal/ft

	INITIAL	RECOVERED
Well Volume (gallons)	0.947 gallons	1.002 gallons

Time	Ph.	Temp. °C	Conductivity	Pump Rate	Comments
16:40 Hrs	6.6	4.6	162.3 uS/cm		2 gallons pumped
16:50 Hrs	6.59	5.7	182.7 uS/cm		1 gallons pumped

Sampling Procedure: Disposable teflon bailer, 2 - 40 ml VOA vials plus 1 - 500 ml amber glass bottle (HCl-preserved), stored in iced cooler.

WELL DEVELOPMENT LOG
(SAMPLING)

Project Name: Storey
Project Number: 19823
Date: 6/4/98
Site Engineer: Gary Galloway

Well Number: MW-1
Equipment: peristaltic pump
pH & Orion Cond. meters/
disposable teflon bailer
Contractor:
Gary Galloway

	BEFORE	AFTER
Depth to Sediment (Ft)		
Depth to Water (Ft)	7.13'	7.21'
Water Column Height (Ft)		

Well Volume/(Ft) (gallons) 0.16 gal/ft

	INITIAL	RECOVERED
Well Volume (gallons)		

Time	Ph.	Temp. °C	Conductivity	Pump Rate	Comments
11:34 Hrs	6,51	11.9	445 uS/cm		2 gallons pumped
11:44 Hrs	6.83	11.7	383 uS/cm		0.5 gallons pumped
11: 57 Hrs	6.87	12.1	360 uS/cm		0.5 gallons pumped

Sampling Procedure: Disposable teflon bailer, 2 - 40 ml VOA vials plus 1 - 500 ml amber glass bottle (HCl-preserved), stored in iced cooler.

WELL DEVELOPMENT LOG
(SAMPLING)

Project Name: Storey
Project Number: 19823
Date: 6/4/98
Site Engineer: Gary Galloway

Well Number: MW-2
Equipment: peristaltic pump
pH & Orion Cond. meters/
disposable teflon bailer
Contractor:
Gary Galloway

	BEFORE	AFTER
Depth to Sediment (Ft)		
Depth to Water (Ft)	6.69'	6.69'
Water Column Height (Ft)		

		INITIAL	RECOVERED
Well Volume/(Ft) (gallons)	0.16 gal/ft		
Well Volume (gallons)			

Time	Ph.	Temp. °C	Conductivity	Pump Rate	Comments
12:29 Hrs	7.17	11.0	324 uS/cm		2 gallons pumped
12:37 Hrs	7.18	10.0	345 uS/cm		0.5 gallons pumped

Sampling Procedure: Disposable teflon bailer, 2 - 40 ml VOA vials plus 1 - 500 ml amber glass bottle (HCl-preserved), stored in iced cooler.

WELL DEVELOPMENT LOG
(SAMPLING)

Project Name: Storey
Project Number: 19823
Date: 6/4/98
Site Engineer: Gary Galloway

Well Number: MW-3
Equipment: peristaltic pump
pH & Orion Cond. meters/
disposable teflon bailer
Contractor:
Gary Galloway

	BEFORE	AFTER
Depth to Sediment (Ft)		
Depth to Water (Ft)	6.84'	6.92'
Water Column Height (Ft)		

Well Volume/(Ft) (gallons) 0.16 gal/ft

	INITIAL	RECOVERED
Well Volume (gallons)		

Time	Ph.	Temp. °C	Conductivity	Pump Rate	Comments
17:00 Hrs	7.08	12.9	354 uS/cm		2 gallons pumped
17:10 Hrs	7.17	13.6	345 uS/cm		0.5 gallons pumped

Sampling Procedure: Disposable teflon bailer, 2 - 40 ml VOA vials plus 1 - 500 ml amber glass bottle (HCl-preserved), stored in iced cooler.

WELL DEVELOPMENT LOG
(SAMPLING)

Project Name: Storey
Project Number: 19823
Date: 6/4/98
Site Engineer: Gary Galloway

Well Number: MW-4
Equipment: peristaltic pump
pH & Orion Cond. meters/
disposable teflon bailer
Contractor:
Gary Galloway

	BEFORE	AFTER
Depth to Sediment (Ft)		
Depth to Water (Ft)	8.38	8.72
Water Column Height (Ft)		

Well Volume/(Ft) (gallons) 0.16 gal/ft

	INITIAL	RECOVERED
Well Volume (gallons)		

Time	Ph.	Temp. °C	Conductivity	Pump Rate	Comments
13:45 Hrs	7.47	13.6	117 uS/cm		2 gallons pumped
13:55 Hrs	7.13	15.1	135 uS/cm		0.5 gallons pumped

Sampling Procedure: Disposable teflon bailer, 2 - 40 ml VOA vials plus 1 - 500 ml amber glass bottle (HCl-preserved), stored in iced cooler.

WELL DEVELOPMENT LOG
(SAMPLING)

Project Name: Storey
Project Number: 19823
Date: 6/4/98
Site Engineer: Gary Galloway

Well Number: MW-23
Equipment: peristaltic pump
pH & Orion Cond. meters/
disposable teflon bailer
Contractor:
Gary Galloway

	BEFORE	AFTER
Depth to Sediment (Ft)		
Depth to Water (Ft)	7.91	7.93
Water Column Height (Ft)		

Well Volume/(Ft) (gallons) 0.16 gal/ft

	INITIAL	RECOVERED
Well Volume (gallons)		

Time	Ph.	Temp. °C	Conductivity	Pump Rate	Comments
14:30 Hrs	6.89	15.4	115 uS/cm		2 gallons pumped
14:40 Hrs	6.93	15.4	110 uS/cm		0.5 gallons pumped

Sampling Procedure: Disposable teflon bailer, 2 - 40 ml VOA vials plus 1 - 500 ml amber glass bottle (HCl-preserved), stored in iced cooler.

WELL DEVELOPMENT LOG
(SAMPLING)

Project Name: Storey
Project Number: 19823
Date: 6/4/98
Site Engineer: Gary Galloway

Well Number: MW-24
Equipment: peristaltic pump
pH & Orion Cond. meters/
disposable teflon bailer
Contractor:
Gary Galloway

	BEFORE	AFTER
Depth to Sediment (Ft)		
Depth to Water (Ft)	8.08	8.19
Water Column Height (Ft)		

Well Volume/(Ft) (gallons) 0.16 gal/ft

	INITIAL	RECOVERED
Well Volume (gallons)		

Time	Ph.	Temp. °C	Conductivity	Pump Rate	Comments
13:15 Hrs	6.98	12.1	373 uS/cm		2 gallons pumped
13.25 Hrs	7.04	13.8	367 uS/cm		0.5 gallons pumped

Sampling Procedure: Disposable teflon bailer, 2 - 40 ml VOA vials plus 1 - 500 ml amber glass bottle (HCl-preserved), stored in iced cooler.

WELL DEVELOPMENT LOG
(SAMPLING)

Project Name: Storey
Project Number: 19823
Date: 6/4/98
Site Engineer: Gary Galloway

Well Number: MW-25
Equipment: peristaltic pump
pH & Orion Cond. meters/
disposable teflon bailer
Contractor:
Gary Galloway

	BEFORE	AFTER
Depth to Sediment (Ft)		
Depth to Water (Ft)	7.68	7.69
Water Column Height (Ft)		

Well Volume/(Ft) (gallons) 0.16 gal/ft

Well Volume (gallons)	INITIAL	RECOVERED

Time	Ph.	Temp. °C	Conductivity	Pump Rate	Comments
13:56 Hrs	6.81	13.4	326 uS/cm		2 gallons pumped
14:06 Hrs	6.91	14.1	341 uS/cm		0.5 gallons pumped

Sampling Procedure: Disposable teflon bailer, 2 - 40 ml VOA vials plus 1 - 500 ml amber glass bottle (HCl-preserved), stored in iced cooler.

WELL DEVELOPMENT LOG
(SAMPLING)

Project Name: Storey
Project Number: 19823
Date: 9/16/99
Site Engineer: Gary Galloway

Well Number: MW-1
Equipment: peristaltic pump
pH & Orion Cond. meters/
disposable teflon bailer
Contractor:
Gary Galloway

	BEFORE	AFTER
Depth to Sediment (Ft)		
Depth to Water (Ft)	8.90	8.99
Water Column Height (Ft)		

Well Volume/(Ft) (gallons) 0.16 gal/ft

	INITIAL	RECOVERED
Well Volume (gallons)		

Time	Ph.	Temp. °C	Conductivity	Pump Rate	Comments
15:11 Hrs	6.45	14.6	343 uS/cm		2 gallons pumped
15:30 Hrs	6.25	13.9	352 uS/cm		0.5 gallons pumped
16:30 Hrs	5.91	13.1	401 uS/cm		0.5 gallons pumped

Sampling Procedure: Disposable teflon bailer, 2 - 40 ml VOA vials plus 1 - 500 ml amber glass bottle (HCl-preserved), stored in iced cooler.

WELL DEVELOPMENT LOG
(SAMPLING)

Project Name: Storey
Project Number: 19823
Date: 9/16/99
Site Engineer: Gary Galloway

Well Number: MW-2
Equipment: peristaltic pump
pH & Orion Cond. meters/
disposable teflon bailer
Contractor:
Gary Galloway

	BEFORE	AFTER
Depth to Sediment (Ft)		
Depth to Water (Ft)	8.22	8.25
Water Column Height (Ft)		

Well Volume/(Ft) (gallons)	0.16 gal/ft	INITIAL	RECOVERED
Well Volume (gallons)			

Time	Ph.	Temp. °C	Conductivity	Pump Rate	Comments
18:30 Hrs	6.33	16.2	350 uS/cm		2 gallons pumped
18:40 Hrs	6.07	14.4	366 uS/cm		0.5 gallons pumped

Sampling Procedure: Disposable teflon bailer, 2 - 40 ml VOA vials plus 1 - 500 ml amber glass bottle (HCl-preserved), stored in iced cooler.

WELL DEVELOPMENT LOG
(SAMPLING)

Project Name: Storey
Project Number: 19823
Date: 9/16/99
Site Engineer: Gary Galloway

Well Number: MW-3
Equipment: peristaltic pump
pH & Orion Cond. meters/
disposable teflon bailer
Contractor:
Gary Galloway

	BEFORE	AFTER
Depth to Sediment (Ft)		
Depth to Water (Ft)	8.37	8.38
Water Column Height (Ft)		

Well Volume/(Ft) (gallons) 0.16 gal/ft

	INITIAL	RECOVERED
Well Volume (gallons)		

Time	Ph.	Temp. °C	Conductivity	Pump Rate	Comments
17:20 Hrs	6.17	13.9	406 uS/cm		2 gallons pumped
17:30 Hrs	5.92	13.0	412 uS/cm		0.5 gallons pumped

Sampling Procedure: Disposable teflon bailer, 2 - 40 ml VOA vials plus 1 - 500 ml amber glass bottle (HCl-preserved), stored in iced cooler.

WELL DEVELOPMENT LOG
(SAMPLING)

Project Name: Storey
Project Number: 19823
Date: 9/16/99
Site Engineer: Gary Galloway

Well Number: MW-4
Equipment: peristaltic pump
pH & Orion Cond. meters/
disposable teflon bailer
Contractor:
Gary Galloway

	BEFORE	AFTER
Depth to Sediment (Ft)		
Depth to Water (Ft)	9.81	9.82
Water Column Height (Ft)		

Well Volume/(Ft) (gallons) 0.16 gal/ft

	INITIAL	RECOVERED
Well Volume (gallons)		

Time	Ph.	Temp. °C	Conductivity	Pump Rate	Comments
16:50 Hrs	6.57	15.6	323 uS/cm		2 gallons pumped
17:00 Hrs	6.19	15.2	351 uS/cm		0.5 gallons pumped

Sampling Procedure: Disposable teflon bailer, 2 - 40 ml VOA vials plus 1 - 500 ml amber glass bottle (HCl-preserved), stored in iced cooler.

APPENDIX C

WATER WELL REPORTS WITHIN ONE MILE OF SITE

4486

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 079328

Water Right Permit No. _____

(1) OWNER: Name Floyd Rogolski Address 1313 E. Third St. Cle Elum, Wa.

(2) LOCATION OF WELL: County Kittitas NW ¼ SE ¼ Sec 25 T. 20 N., R. 15 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) 1313 E. 3rd St., CleElum, Wa.

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____

Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 30 feet. Depth of completed well 30 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +1 ft. to 30 ft.
Welded ☒ _____ " Diam. from _____ ft. to _____ ft.
Liner installed ☐ _____ " Diam. from _____ ft. to _____ ft.
Threaded ☐

Perforations: Yes ☐ No ☒
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 6 ft. below top of well Date 2/4/91
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
r test _____ gal./min. with _____ ft. drawdown after _____ hrs.
10 gal./min. with stem set at 30 ft. for 2 hrs.
flow _____ g.p.m. Date _____
ɔre of water _____ Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Soil	0	14
Br. clay, gravel, And rock	14	16
Sand gravel, silt, and water	16	30
Blue gray clay	30	

RECEIVED
MAR - 6 1991
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work started 2/4/91, 19. Completed 2/4/91, 19

WELL CONSTRUCTOR 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.

NAME Water Wells Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 5503 Ahtanum Rd., Yakima, Wa.

(Signed) Vernon L. Rank (WELL DRILLER) License No. 0854

Contractor's Registration No. WATERWD112QB Date 2/26/91, 19

(USE ADDITIONAL SHEETS IF NECESSARY)

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

M.SS Start Card No. 83026

Water Right Permit No. L

(1) OWNER: Name Ted Johnson Address Cle Elum

(2) LOCATION OF WELL: County Kittitas NE¼ SW¼ Sec 25 T. 20 N., R. 15E W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) 3rd St

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) ____

Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 40 feet. Depth of completed well 22 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 0 ft. to 22 ft.
Welded ☒ Liner installed ☐ Threaded ☐
" Diam. from ft. to ft.
" Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used ____
SIZE of perforations ____ in. by ____ in.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name ____
Type ____ Model No. ____
Diam. ____ Slot size ____ from ____ ft. to ____ ft.
Diam. ____ Slot size ____ from ____ ft. to ____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel ____
Gravel placed from ____ ft. to ____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal Bentonite + Water
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ____ Depth of strata ____
Method of sealing strata off ____

(7) PUMP: Manufacturer's Name ____
Type: ____ H.P. ____

(8) WATER LEVELS: Land-surface elevation above mean sea level 2,000 ft.
Static level 11 ft. below top of well Date ____
Artesian pressure ____ lbs. per square inch Date ____
Artesian water is controlled by ____ (Cap, valve, etc.))

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? ____
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ____
Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.
Airtest 16 gal./min. with stem set at 20 ft. for 2 hrs.
Artesian flow ____ g.p.m. Date ____
Temperature of water ____ Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Boulders + gravel	0'	6'
Gravel small	6'	23'
Gravel small sand course	23'	26'
Clay blue	26'	40
Pulled back to 22'		

DEC 4 1992

Work started 9/10, 19. Completed 9/16, 19

WELL CONSTRUCTOR 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.

NAME American Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address PO Box 89 Cle Elum WA 98922

(Signed) Mark Blood (WELL DRILLER) License No. 1887

Contractor's Registration No. AMERIDPU832LS Date 10/9, 1992

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329- 3

6709

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 086678

Water Right Permit No. A

(1) **OWNER:** Name Ray Rogalski Address P.O. Box 160 Cle Elum, WA 98922

(2) **LOCATION OF WELL:** County Kittitas N1/2 NE ¼ NE ¼ Sec. 35 T. 20 N., R. 15 W.M.

(2a) **STREET ADDDRESS OF WELL** (or nearest address)

(3) **PROPOSED USE:** [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) **TYPE OF WORK:** Owner's number of well (if more than one) W-2

Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [ ] Rotary [X] Jetted [ ]

(5) **DIMENSIONS:** Diameter of well 10" 6" inches. Drilled 20 feet. Depth of completed well 20 ft.

(6) **CONSTRUCTION DETAILS:**

Casing Installed: 6" * Diam. from +1 ft. to 19 ft.
Welded [X] Liner installed [ ] Threaded [ ]
_____ * Diam. from ____ ft. to ____ ft.
_____ * Diam. from ____ ft. to ____ ft.

Perforations: Yes [ ] No [X]
Type of perforator used
SIZE of perforations ____ in. by ____ in.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.

Screens: Yes [ ] No [X]
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes [ ] No [X] Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes [X] No [ ] To what depth? 18 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? Depth of strata
Method of sealing strata off

(7) **PUMP:** Manufacturer's Name
Type: H.P.

(8) **WATER LEVELS:** Land-surface elevation above mean sea level ft.
Static level 8 ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom?
Yield: 75 gal./min. with ft. drawdown after hrs.
" Estimated air lift 75 GPM "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

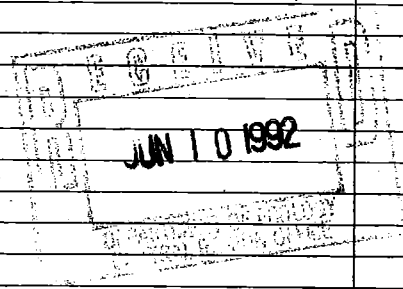
Date of test

Bailer test gal./min. with ft. drawdown after hrs.
Airtest gal./min. with stem set at ft. for hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes [ ] No [ ]

(10) **WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION**

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Top soil brown medium	0	2
Sand gravel cobbles boulders very hard	2	14
Sand silt gravel cobbles hard	14	16
Sand gravel cobbles hard	16	20water
Clay blue gray medium	20	
6" Drive shoe utilized		



Work started 5-21-92, 19. Completed 5-21, 19 92

WELL CONSTRUCTOR 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.

NAME Ponderosa Drilling & Development, Inc.
(PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address E. 6010 Braodway Spokane, WA 99212

(Signed) (WELL DRILLER) License No. 1335

Contractor's Registration No. PO-ND-EI*248JE Date 6-1, 19 92

(Steve Mills)

(USE ADDITIONAL SHEETS IF NECESSARY)

6708

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 086678

Water Right Permit No. A

(1) OWNER: Name Ray Rogalski Address P.O. Box 160 Cle Elum, WA 98922

(2) LOCATION OF WELL: County Kittitas N1/2 NE ¼ NE ¼ Sec 35 T. 20 N., R. 15 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address)

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) W-1

Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 10" 6" inches. Drilled 37 feet. Depth of completed well 37 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from +1 ft. to 37 ft.
Welded ☒
Liner installed ☐
Threaded ☐
" Diam. from ft. to ft.
" Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18' ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 5' ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: 3-4 gal./min. with ft. drawdown after hrs.
" Estimated air lift 3 -4 GPM "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test

Bailer test gal./min. with ft. drawdown after hrs.
Airtest gal./min. with stem set at ft. for hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Sand gravel cobbles boulders very hard	0	9
Silt sand gravel boulders hard	9	15water
Clay silt sand gravel cobble hard	15	17
Clay & clay shale blue/gray med.	17	23
Sandstone w/clay & sand med/soft	23	32
Sand & clay blue gray	32	37
6" Drive shoe utilized		

RECEIVED JUN 10 1992 DEPARTMENT OF ECOLOGY

Work started 5-19-92, 19. Completed 5-20, 19 92

WELL CONSTRUCTOR 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.

NAME Ponderosa Drilling & Development, Inc. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address E. 6010 Broadway Spokane, WA 99212

(Signed) Steve Mills (WELL DRILLER) License No. 1335

Contractor's Registration No. PO-ND-EI*248JE (Steve Mills) Date 6-1, 19 92

(USE ADDITIONAL SHEETS IF NECESSARY)

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 086992

Water Right Permit No. _____

(1) OWNER: Name John Uribe Address 403 Columbia Ave., Cle Elum, WA 9892

(2) LOCATION OF WELL: County Kittitas NW ¼ NE ¼ Sec. 31 T. 20 N., R. 16 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) Parcel # 20 16 31 520004

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____

Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 12" 8" inches. Drilled 26 feet. Depth of completed well 26 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 8" Diam. from +1 ft. to 24 ft.
Welded ☒
Liner installed ☐
Threaded ☐
_____" Diam. from _____ ft. to _____ ft.
_____" Diam. from _____ ft. to _____ ft.

Perforations: Yes ☐ No ☒
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 18' ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 8 ft. below top of well Date _____
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.))

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? _____
Yield: 45-50 gal./min. with _____ ft. drawdown after _____ hrs.
" Estimated air lift 45-50 GPM "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Sandy clay and gravel brown medium	0	2
Sand gravel hard	2	10
Gravel cobbles boulders very hard	10	16
Sand gravel cobbles medium	16	26we
Clay gray soft	26	

RECEIVED
FEB 16 [illegible]
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

8" Drive shoe utilized

Work started 2/1/93, 19. Completed 2/1, 19 93

WELL CONSTRUCTOR 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.

NAME Ponderosa Drilling & Development, Inc.
(PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address E. 6010 Broadway Spokane, WA 99212

(Signed) Steve Mills (WELL DRILLER) License No. 1335

Contractor's Registration No. PO-ND-EI*248JE Steve Mills Date 2/4, 19 93

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329-

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 83022

Water Right Permit No. B

(1) OWNER: Name John Uribe Address Hwy 99 1 mile south of Cle E

(2) LOCATION OF WELL: County Kittitas NW¼ NE¼ Sec 31 T. 20 N., R 16E W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) Hwy 97

(3) PROPOSED USE: [X] Domestic [ ] Irrigation [ ] DeWater [ ] Industrial [ ] Test Well [ ] Municipal [ ] Other

(4) TYPE OF WORK: Owner's number of well (if more than one)
Abandoned [ ] New well [X] Deepened [ ] Reconditioned [ ] Method: Dug [ ] Cable [ ] Rotary [X] Bored [ ] Driven [ ] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 80 feet. Depth of completed well 34 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from 0 ft. to 80 ft.
Welded [X] Liner installed [ ] Threaded [ ]
" Diam. from ft. to ft.
" Diam. from ft. to ft.

Perforations: Yes [ ] No [X]
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes [ ] No [X]
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes [ ] No [X] Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes [X] No [ ] To what depth? 18 ft.
Material used in seal Bentonite + water
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level 2,000 ft.
Static level 8 ft. below top of well Date 9/28/92
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test

Baller test gal./min. with ft. drawdown after hrs.
Airtest 60 gal./min. with stem set at 32 ft. for 2 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Over burden	0'	2'
Gravel small sand course	2'	16'
Gravel large sand course	16'	19'
Clay gray soft	19'	32'
Gravel small water bearing	32'	34'
Clay Gray soft	34'	80'
Pulled casing back to 34'		

Work started 9/20, 19 92 Completed 9/28, 19 92

WELL CONSTRUCTOR 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.

NAME American Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address PO Box 89 Cle Elum WA 98922

(Signed) Mark Black (WELL DRILLER) License No. 1687

Contractor's Registration No. AMERIDP483L5 Date 10/9, 19 92

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329- 3

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W079094

UNIQUE WELL I.D. # ACW-606

Water Right Permit No. _____

OWNER: Name Ray Owens Address 109W 4TH St. CleElum WA 98922

(2) LOCATION OF WELL: County Kittitas 1/4 NW 1/4 Sec 25 T. 20 N., R 15 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) Main St. to Columbia CDEF

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) 1

Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6" inches. Drilled 300 feet. Depth of completed well 300 ft.

(6) CONSTRUCTION DETAILS:

Casing Installed: 6" Diam. from +2 ft. to -55 ft.
Welded ☒ 4" Diam. from -40 ft. to -300 ft.
Liner Installed ☐
Threaded ☐ _____" Diam. from _____ ft. to _____ ft.

Perforations: Yes ☒ No ☐
Type of perforator used Skillsaw
SIZE of perforations 1/8 in. by 6 in.
48 perforations from -280 ft. to -300 ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 120 ft. below top of well Date 8/8/97
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 50 gal./min. with stem set at 298 ft. for 1 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Clay Brown	0	25
Clay Gray Small Gravels	25	55
Shale Green	55	160
Shale Gray	160	200
Shale Gray Soft Fractured	200	240
Shale Gray Medium	240	260
Shale Gray With Water	260	300

RECEIVED
SEP - 5 1997
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

RECEIVED
AUG 20 1997
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Work Started 8/7/97 19. Completed 8/8/97 19

WELL CONSTRUCTOR 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.

NAME H2O WELL SVC INC. 1-800-772-4901
(PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 582 W Hayden AVe Hayden Lake ID 8383

(Signed) Jim McLeslie (WELL DRILLER) License No. 2257

(Jim Mcleslie)

Contractor's Registration No. H2OWESI101DW Date 8/8/97 19

(USE ADDITIONAL SHEETS IF NECESSARY)

ECL 050-1-20 (2/93)

ile Original and First Copy with
epartment of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. .....

(1) OWNER: Name Frank J. Magliotti Address RT #1 Box 7C Cle Elum

(2) LOCATION OF WELL: County Kittitas NE ¼ SE ¼ Sec 25 T 20 N., R 15 W.M.

g and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 8 inches.
Drilled 305 ft. Depth of completed well 305 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 8 " Diam. from +2 ft. to 80 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☒ No ☐
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 2 ft. below top of well Date 9/10/80
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 20 gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Topsoil	0	15
Coarse gravel	15	30
Coarse gravel & blue clay	30	38
Blue clay	38	70
Sand & Gravel	70	75
Grey rock	75	80
Hard Grey clay	80	95
Grey rock	95	100
Sand stone	100	185
Hard clay	185	200
Sandstone	200	230
Hard Clay	230	240
Oil shale	240	250
Sandstone	250	290
Coal	290	292
Sandstone	292	305

JAN 30 1981

Work started 9/3/80, 19 Completed 9/10/80, 19

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Vernon Rank
(Person, firm, or corporation) (Type or print)

Address P.O. Box 9871 Yakima, Wn.

[Signed] Vernon L. Rank
(Well Driller)

License No. 0854 Date 8/10, 19 80

(USE ADDITIONAL SHEETS IF NECESSARY) DK 3.18.81

ECY 050-1-20

3

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. 1

(1) OWNER: Name WAYNE HILL Address BOX 378, CLE ELUM, WA 98922

LOCATION OF WELL: County Kittitas — ¼ ¼ Sec (25) T. 20 N., R. 15 W.M.
ng and distance from section or subdivision corner 300' ft. S. of House Lot 6-7-8 of BAKER ADDITION-CLE ELU

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☐
Irrigation ☒ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☐ Method: Dug ☐ Bored ☐
Deepened ☒ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 8 inches.
Drilled 133 ft. Depth of completed well 300 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 7 " Diam. from ~~137~~ 20 ft. to 300 ft.
Threaded ☐ ..... " Diam. from ..... ft. to ..... ft.
Welded ☒ ..... " Diam. from ..... ft. to ..... ft.

Perforations: Yes ☒ No ☐
Type of perforator used TORCH
SIZE of perforations ¼ in. by 24 in.
50 ~~53~~ perforations from 140 ft. to 300 ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☐ No ☐ ALREADY IN To what depth? ..... ft.
Material used in seal .....
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 7 ½ ft. below top of well Date 6/10/80
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☒ with AIR No ☐ If yes, by whom? DRILLER
Yield: 75 gal./min. with ..... ft. drawdown after ..... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test ..... gal./min. with ..... ft. drawdown after ..... hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:
Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
FRACTURED, BRN TO GRAY SILTSTONE T SAND STONE	187	290
GREY HARD ROCK	290	320

Work started 6-3 , 19 80 Completed 6-10 , 19 80

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME OELKE DRILLING Co.
(Person, firm, or corporation) (Type or print)

Address 701-41st AVE. N.E., Puyallup, 98371

[Signed] Roger Oelke
(Well Driller)

License No. 0379 Date 7/15 , 19 80

(USE ADDITIONAL SHEETS IF NECESSARY)

✓ DK 1.1481

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. A21160
Unique Well I.D. #
Water Right Permit No.

(1) OWNER: Name GRANGER, DIGBY Address P.O. BOX 87 CLE ELUM, WA 98922-

(2) LOCATION OF WELL: County KITTITAS - SE 1/4 SW 1/4 Sec 26 T 20 N., R 15E WM

(2a) STREET ADDRESS OF WELL (or nearest address) ,

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one) 1
DECOMMISSIONED Method: ROTARY

(5) DIMENSIONS: Diameter of well inches
Drilled ft. Depth of completed well ft.

(6) CONSTRUCTION DETAILS:
Casing installed: " Dia. from ft. to ft.
" Dia. from ft. to ft.
" Dia. from ft. to ft.

Perforations: NO
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: NO
Manufacturer's Name
Type Model No.
Diam. slot size from ft. to ft.
Diam. slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: NO To what depth? ft.
Material used in seal
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level ft. below top of well Date
Artesian Pressure lbs. per square inch Date
Artesian water controlled by

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? NO If yes, by whom?
Yield: gal./min with ft. drawdown after hrs.

Recovery data
Time Water Level Time Water Level Time Water Level

Date of test / /
Bailer test gal/min. ft. drawdown after hrs.
Air test gal/min. w/ stem set at ft. for hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
	0	
PULLED CASING. FILLED WITH BENTONITE FROM 15' TO SURFACE. DECOMMISSIONED WELL.		

RECEIVED
APR 27 1995
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work started 2-1-95 Completed 2-1-95

WELL CONSTRUCTOR 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.

NAME PONDEROSA DRILLING
(Person, firm, or corporation) (Type or print)

ADDRESS E 6010 BROADWAY

[SIGNED] License No. 2060

Contractor's
Registration No. PO-ND-EI*248JE Date 02/15/95

4583

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 34120

Water Right Permit No. R

OWNER: Name Orville Montgomery Address

(2) LOCATION OF WELL: County Kittitas SE ¼ SE ¼ Sec. 35 T. 20 N., R. 15 E W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) HC 60 Bx 10890

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one)

Abandoned ☐ New well ☐ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 118 feet. Depth of completed well 118 ft.

(6) CONSTRUCTION DETAILS:

Casing Installed: 6 " Diam. from 0 ft. to 116 ft. Welded ☒ Liner installed ☐ Threaded ☐

" Diam. from ft. to ft.

" Diam. from ft. to ft.

Perforations: Yes ☒ No ☐

Type of perforator used torch

SIZE of perforations ¼ in. by 12 in.

12 perforations from ft. to ft.

perforations from 106 ft. to 116 ft.

perforations from ft. to ft.

Screens: Yes ☐ No ☒

Manufacturer's Name

Type Model No.

Diam. Slot size from ft. to ft.

Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel

Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.

Material used in seal granular bentonite+water

Did any strata contain unusable water? Yes ☐ No ☒

Type of water? Depth of strata

Method of sealing strata off

(7) PUMP: Manufacturer's Name

Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level 1,900 ft.

Static level 90 ft. below top of well Date 2/17/91

Artesian pressure lbs. per square inch Date

Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? Yes ☐ No ☒ If yes, by whom?

Yield: gal./min. with ft. drawdown after hrs.

" " " "

" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test 2/11/91

Bailer test gal./min. with ft. drawdown after hrs.

Airtest 30 gal./min. with stem set at 115 ft. for 2 hrs.

Artesian flow g.p.m. Date

Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Over burden	0'	3'
Boulders small	3'	24'
Gravel large	24'	68'
Gravel small w/ some sand	68'	98'
Gravel small little sand water bearing	98'	118'

RECEIVED
MAR 12 1991
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work started 2/9, 19. Completed 2/11, 1991

WELL CONSTRUCTOR 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.

NAME American Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address PO Bx 89 Cle Elum WA 98922

(Signed) Mark Blair (WELL DRILLER) License No. 1887

Contractor's Registration No. AMERIDA*121OW Date Feb 25, 1991

(USE ADDITIONAL SHEETS IF NECESSARY)

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. .....

(1) OWNER: Name HARTING VATHERRER Address 403 E 2nd CLE ELUM, WA. 98922

(2) LOCATION OF WELL: County Kittitas — NW ¼ NE ¼ Sec. 35 T. 20 N., R. 15 W.M.

Bearing and distance from section or subdivision corner B

(3) PROPOSED USE: Domestic [X] Industrial [ ] Municipal [ ]
Irrigation [ ] Test Well [ ] Other [ ]

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well [X] Method: Dug [ ] Bored [ ]
Deepened [ ] Cable [X] Driven [ ]
Reconditioned [ ] Rotary [ ] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 115 ft. Depth of completed well 115 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 0 ft. to 115 ft.
Threaded [ ] " Diam. from ft. to ft.
Welded [X] " Diam. from ft. to ft.

Perforations: Yes [ ] No [X]
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes [ ] No [X]
Manufacturer's Name
Type Model No
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes [ ] No [X] Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes [X] No [ ] To what depth? ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 35 ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [ ] If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 20 gal./min. with 10 ft. drawdown after 4 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes [ ] No [ ]

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
BROWN CLAY & ROCKS	0	36
BROWN CLAY & SILT	36	39
BROWN CLAY & LOOSE GRAVEL	39	60
COMPACT GRAY CLAY & ROCKS	60	80
CLAY & GRAVEL SOME WATER	80	100
CLAY & layer of Gravel with water	100	115
WATER BEARING		

RECEIVED AUG 12 19[illegible] DEPARTMENT OF ECOLOGY CENTRAL REGION OFFICE

Work started 7/15, 1985 Completed 7/25, 1985

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME MOUNTAIN WELL DRILLING
(Person, firm, or corporation) (Type or print)

Address P.O. BOX 144 CLE ELUM, WA. 98922

[Signed] Steven E. Berg
(Well Driller)

License No. 1355 Date, 19

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

3

Original and First Copy with Department of Ecology
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WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. WO50375

UNIQUE WELL I.D. # ACL-140

Water Right Permit No. _____

WNER: Name Leslie Williamson Address 1510 Upper Peach Point Rd Elum.

LOCATION OF WELL: County Kittitas NW 1/4 NW 1/4 Sec 35 T. 20 N., R 15 W.M.

) STREET ADDRESS OF WELL (or nearest address) _____

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____

Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 10" 6" inches. Drilled 136 feet. Depth of completed well 136 ft.

) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from +2 ft. to 136 ft. Welded ☒

Liner installed ☐ " Diam. from _____ ft. to _____ ft.

Threaded ☐ " Diam. from _____ ft. to _____ ft.

Perforations: Yes ☐ No ☒

Type of perforator used _____

SIZE of perforations _____ in. by _____ in.

_____ perforations from _____ ft. to _____ ft.

_____ perforations from _____ ft. to _____ ft.

_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☒

Manufacturer's Name _____

/pe _____ Model No. _____

Diam. ____ Slot size _____ from _____ ft. to _____ ft.

Diam. ____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel _____

Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 18' ft.

Material used in seal Bentonite

Did any strata contain unusable water? Yes ☐ No ☒

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

) PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 98' ft. below top of well Date _____

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (Cap, valve, etc.)

) WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? Yes ☐ No ☐ If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

" " " "

" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
	Aprox '10 to 12 gpm				
	Air Lift				

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Sandy top soil Gravel malty colored m	0	2
Sand Gravel malty Color Br. mH	2	6
sand Gravel malty color br. mH	6	36
sand gravel Cobbels malty Color H	36	72
Sand Gravel malty Color mH	72	89
Sand Gravel Cobbels malty color mH	89	100
Sand Gravel Cobbels malty col mH	100	116
Silty sand gravel Cobbels malty Color mH	116	125
Silty Gravel Cobbels malty color mH	125	134
Silty sand Gravel gravel Cobbels malty Color mH	134	136

RECEIVED
JUN 10 1997
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work Started 5/15/97 19. Completed 5/19/97 19

WELL CONSTRUCTOR 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.

NAME Water Man Well Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 106 Berriman In Selah Wa 98942

(Signed) Steve Mills (WELL DRILLER) License No. 1335

Contractor's Registration No. Watermnwo164J2 Date 5/19/97 19

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/92) * * *

well #1 No water Abandoned

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W050375

UNIQUE WELL I.D. # ____

Water Right Permit No. ____

(1) OWNER: Name Leslie Williamson Address 1560 Upper Peoh Point Cle Elum

(2) LOCATION OF WELL: County Kittitas NW 1/4 NW 1/4 Sec 35 T. 20 N., R. 15 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) ____

(3) PROPOSED USE: [X] Domestic [ ] Irrigation [ ] DeWater Industrial [ ] Test Well [ ] Municipal [ ] Other [ ]

(4) TYPE OF WORK: Owner's number of well (If more than one) ____
Abandoned [X] New well [X] Deepened [ ] Reconditioned [ ]
Method: Dug [ ] Cable [ ] Rotary [X] Bored [ ] Driven [ ] Jetted [ ]

(5) DIMENSIONS: Diameter of well 10" 6" inches.
Drilled 560 feet. Depth of completed well 560 ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: 6" Diam. from +2 ft. to 300 ft.
Welded [X] ____" Diam. from ____ ft. to ____ ft.
Liner installed [ ] ____" Diam. from ____ ft. to ____ ft.
Threaded [ ]

Perforations: Yes [ ] No [X]
Type of perforator used ____
SIZE of perforations ____ in. by ____ in.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.

Screens: Yes [ ] No [X]
Manufacturer's Name ____
Type ____ Model No. ____
Diam. ____ Slot size ____ from ____ ft. to ____ ft.
Diam. ____ Slot size ____ from ____ ft. to ____ ft.

Gravel packed: Yes [ ] No [X] Size of gravel ____
Gravel placed from ____ ft. to ____ ft.

Surface seal: Yes [X] No [ ] To what depth? 18' 560' ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? ____ Depth of strata ____
Method of sealing strata off ____

(7) PUMP: Manufacturer's Name ____
Type: ____ H.P. ____

(8) WATER LEVELS: Land-surface elevation above mean sea level ____ ft.
Static level NONE ft. below top of well Date ____
Artesian pressure ____ lbs. per square inch Date ____
Artesian water is controlled by ____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [ ] If yes, by whom? ____
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
" " "
" " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
	NO water.				

Date of test ____
Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.
Airtest ____ gal./min. with stem set at ____ ft. for ____ hrs.
Artesian flow ____ g.p.m. Date ____
Temperature of water ____ Was a chemical analysis made? Yes [ ] No [ ]

RECEIVED JUN 13 1997 DEPARTMENT OF ECOLOGY CENTRAL REGION OFFICE

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Sandy Clay Brown M	0	4
Clay + Gravel Brown H	4	12
Clay + Gravel Dark Brown M	12	16
Cemented Gravel Cobbels Multy Colored H	16	51
Sand + Gravel Multy colored H	51	54
Gravel Multy colored H	54	64
Silty Sand Gravel Brown H	64	130
Clay + Gravel Brown H	130	133
Clay with Coal seam's Gray M	133	151
Clay Gray MS	151	180
Clay + Gravel Gray MS	180	215
Clay Gray MS	215	234
Clay + Gravel Gray M	234	239
Clay Gray M	239	248
Clay + Gravel Gray MS	248	273
Sandy Clay Gravel White Black M	273	328
Sandy Sandstone White M	328	335
Sandy Sandstone + Clay White M	335	344
Clay Gray M	344	352
Sandstone Gray M	352	373
Sandstone with Clay Lens M	373	390
Sandstone Gray M	390	460
Sandstone with Clay Lens M	460	560
Used 9 Bag's cement		
Used 28 Bag's Bentonite		
to Abandoned this well		

Work Started 5/6/97, 19__. Completed 5/13/97, 19__

WELL CONSTRUCTOR 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.

NAME Water Man well Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 106 Berriman Ln Selah wash 98942

(Signed) [signature] (WELL DRILLER) License No. 1335

Contractor's Registration No. watermwd64J2 Date 6/10/97, 19__

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (2/92) 1-1-1

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Second Copy—Owner's Copy
ird Copy—Driller's Copy

MARILYN

WATER WELL REPORT

STATE OF WASHINGTON

3/03 Start Card No. 28701

Water Right Permit No. E

OWNER: Name MARILYN WOODS Address HC 60 BOX 11019

(2) LOCATION OF WELL: County KITTITAS SW ¼ NW ¼ Sec 35 T. 20 N., R. 15 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address)

(3) PROPOSED USE: [X] Domestic [ ] Irrigation [ ] DeWater [ ] Industrial [ ] Test Well [ ] Municipal [ ] Other

(4) TYPE OF WORK: Owner's number of well (if more than one)

Abandoned [ ] New well [X] Deepened [ ] Reconditioned [ ] Method: Dug [ ] Cable [ ] Rotary [ ] Bored [ ] Driven [ ] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 135 feet. Depth of completed well 135 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 0 ft. to 135 ft.
Welded [X] Liner installed [ ] Threaded [ ] " Diam. from ft. to ft.
" Diam. from ft. to ft.

Perforations: Yes [ ] No [ ]
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes [ ] No [ ]
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes [ ] No [ ] Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes [X] No [ ] To what depth? 20 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? Yes [ ] No [ ]
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 19 ft. below top of well Date 5-24-90
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [ ] If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 4 gal./min. with ft. drawdown after 4 hrs.
Airtest 4 gal./min. with stem set at 130 ft. for 4 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes [ ] No [ ]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
DIRT	0	4
GRAVEL + CLAY	4	20
SAND + GRAVEL CEMENTED	20	120
LOOSE SAND + GRAVEL	120	135

ENTERED

RECEIVED
JUN 4
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work started 5-21, 19 90 Completed 5-24, 19 90

WELL CONSTRUCTOR 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.

NAME Bach Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address Rt 5 Box 1010 Ellensburg WA
(Signed) Mike Bach (WELL DRILLER) License No. 22
Contractor's Registration No. MIKEBDC133U4 Date 6-1, 19 90

(USE ADDITIONAL SHEETS IF NECESSARY)

Start Card No. W0873[illegible]9

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

UNIQUE WELL I.D. # _____

Water Right Permit No. _____

OWNER: Name SAM FLEMING Address _____

LOCATION OF WELL: County _____ SE 1/4 NW 1/4 Sec 35 T. 20 N., R. 15 W.M.

STREET ADDRESS OF WELL (or nearest address) _____ F

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____

Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 220 feet. Depth of completed well 220 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 0 ft. to 220 ft.
Welded ☒ " Diam. from _____ ft. to _____ ft.
Liner installed ☐ " Diam. from _____ ft. to _____ ft.
Threaded ☐

Perforations: Yes ☒ No ☐
Type of perforator used Mills Knife
SIZE of perforations _____ in. by _____ in.
20 perforations from 80 ft. to 95 ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☐
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☐ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 71 ft. below top of well Date AUG 5 96
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 3 gal./min. with stem set at 180 ft. for 1 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Soil	0	6
Cemented Gravel	6	60
Cemented Gravel Lt/c water	60	90
Grey Silt+Sand	90	177
Grey Silt+Cemented Gravel	177	190
Grey Silt+Sand	190	210
Grey Silt+Clay	210	220

RECEIVED SEP 13 DEPARTMENT OF ECOLOGY CENTRAL REGION OFFICE

Work Started AUG 1 19. Completed AUG 5 1996

WELL CONSTRUCTOR 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.

NAME BACH DRILLING CO (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 3340 WILSON CREEK

(Signed) Bill Bach (WELL DRILLER) License No. 0997

Contractor's Registration No. MIKEBDC133W4 Date 8/6 1996

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (2/90) ***

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT 5

STATE OF WASHINGTON

Start Card No. 4961 10479

Water Right Permit No. _____

(1) OWNER: Name NO. 3 Cornick Div. II Address _____

(2) LOCATION OF WELL: County _____ NE ¼ SE ¼ Sec 35 T. 20 N., R. 15 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) _____

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____

Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well _____ inches.

Drilled _____ feet. Depth of completed well _____ ft.

(6) CONSTRUCTION DETAILS:

Casing installed: _____ " Diam. from _____ ft. to _____ ft.

Welded [X] Liner installed [ ] Threaded [ ] _____ " Diam. from _____ ft. to _____ ft.

_____ " Diam. from _____ ft. to _____ ft.

Perforations: Yes [ ] No [X]

Type of perforator used _____

SIZE of perforations _____ in. by _____ in.

_____ perforations from _____ ft. to _____ ft.

_____ perforations from _____ ft. to _____ ft.

_____ perforations from _____ ft. to _____ ft.

Screens: Yes [ ] No [X]

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes [ ] No [X] Size of gravel _____

Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes [X] No [ ] To what depth? 20 ft.

Material used in seal #8 Bentonite

Did any strata contain unusable water? Yes [ ] No [ ]

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 100 ft. below top of well Date 5-29-91

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? Yes [ ] No [ ] If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

" " " "

" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 12-15 gal./min. with stem set at 110 ft. for 2 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? Yes [ ] No [ ]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Black Dirt	0	4
Cemented Cobbles	4	20
Cemented Sand & Gravel	20	100
Sand & Gravel	100	120

MAY 31

Work started 5-28, 19 91 Completed 5-29, 19 91

WELL CONSTRUCTOR 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.

NAME Bach Drilling Co. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address Rt. 5 - Box 100 E - Burg

(Signed) _____ License No. 0836
(WELL DRILLER)

Contractor's Registration No. BACH133NC Date 5-29, 19 91

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) 1329 3

4962

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 10478

Water Right Permit No. _____

(1) OWNER: Name No 2 Cornick Div. I Address _____

(2) LOCATION OF WELL: County _____ NE ¼ SE ¼ Sec 35 T. 20 N., R. 15 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) _____

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____
Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ]
Deepened [ ] Cable [ ] Driven [ ]
Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 120 feet. Depth of completed well 120 ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: 6 " Diam. from 0 ft. to 120 ft.
Welded [ ] _____ " Diam. from _____ ft. to _____ ft.
Liner installed [ ]
Threaded [ ] _____ " Diam. from _____ ft. to _____ ft.

Perforations: Yes [ ] No [X]
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes [ ] No [X]
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes [ ] No [X] Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes [X] No [ ] To what depth? 20 ft.
Material used in seal _____
Did any strata contain unusable water? Yes [ ] No [ ]
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 100 ft. below top of well Date 5-28-91
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [ ] If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Baller test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 15 gal./min. with stem set at 110 ft. for 2 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes [ ] No [ ]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
DIRT - BLACK	0	4
COBBLES + GRAVEL	4	20
CEMENTED SAND + GRAVEL	20	112
SAND + LARGE GRAVEL WATER	112	120

MAY 31

Work started 5-24, 19 91 Completed 5-28, 19 91

WELL CONSTRUCTOR 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.

NAME Bach Drilling Co. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address Rt 5 Box 1010 E-Burg

(Signed) [signature] License No. 0836
(WELL DRILLER)

Contractor's Registration No. MIKE BRC. 133N4 Date 5-28, 19 91

(USE ADDITIONAL SHEETS IF NECESSARY)

Start Card No. W092888

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tment of Ecology
Copy — Owner's Copy
opy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

UNIQUE WELL I.D. # _____

Water Right Permit No. _____

K

WNER: Name DENNIS SCHWAB Address _____

(2) LOCATION OF WELL: County KITTITAS NW 1/4 SE 1/4 Sec 35 T. 20 N., R 15 W.M.

STREET ADDRESS OF WELL (or nearest address) _____

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

TYPE OF WORK: Owner's number of well (if more than one) _____

Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☐ Jetted ☐

) DIMENSIONS: Diameter of well 6 inches. Drilled _____ feet. Depth of completed well 140 ft.

i) CONSTRUCTION DETAILS:

Casing Installed: 6 " Diam. from 0 ft. to 140 ft.
Welded ☐ _____ " Diam. from _____ ft. to _____ ft.
Liner installed ☐ _____ " Diam. from _____ ft. to _____ ft.
Threaded ☐

Perforations: Yes ☐ No ☒
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name _____ Model No. _____
Type _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____ H.P. _____
Type: _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 120 ft. below top of well Date _____
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 15 gal./min. with stem set at 130 ft. for 2 hrs.
Artesian flow _____ g.p.m. Date _____
Chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
SOIL	0	10
CEMENTED GRAVEL	10	140

RECEIVED
JAN 8 1998
CENTRAL REGION

Work Started _____, 19. Completed _____, 19 ____

WELL CONSTRUCTOR 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.

NAME BACH DRILLING Co (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 3340 WILSON CREEK

(Signed) MIKE MOREFIELD (WELL DRILLER) License No. 2361

Contractor's Registration No. MIKEBAC133N4 Date 12/17, 19 97

(USE ADDITIONAL SHEETS IF NECESSARY)

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W087429

UNIQUE WELL I.D. # _____

Water Right Permit No. _____

OWNER: Name JOHN Schutz Sr. Address 91 Upper Rock Point Rd Cle Elum

(2) LOCATION OF WELL: County Kittitas Co. NW 1/4 SE 1/4 Sec 35 T. 20 N., R 15 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 91 Upper Rock Point Cle Elum, Wa 98922

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____

Abandoned ☐ New well ☐ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 140 feet. Depth of completed well 140 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from _____ ft. to 140 ft.
Welded ☒ _____ " Diam. from _____ ft. to _____ ft.
Liner installed ☐ _____ " Diam. from _____ ft. to _____ ft.
Threaded ☐

Perforations: Yes ☐ No ☒
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 120 ft. below top of well Date _____
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with 140 ft. drawdown after 1 hrs.
Airtest 15 gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
0-10 Drit	0	10
10-140 Cement gravel	10	140

RECEIVED
NOV 17 1997
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work Started _____, 19. Completed _____, 19 ____

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for 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.

NAME Bach Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 3340 Wilson Cr. Rd. Ellensburg

(Signed) Mike Mayfield (WELL DRILLER) License No. 2361

Contractor's Registration No. MikeBDC193N4 Date _____, 1997

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93) * * f

File Original with Department of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Notice of Intent W 107381
UNIQUE WELL I.D. # AFE 320
Water Right Permit No. _____

(1) OWNER: Name James Montgomery Address PO Shop Cle Elum WA - 98922

(2) LOCATION OF WELL: County Kittitas 1/4 SW 1/4 Sec 35 T 20 N.R. 15 (EWM)

(2a) STREET ADDRESS OF WELL: (or nearest address) _____

TAX PARCEL NO.: _____ L, M, N, P

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) 1
☒ New Well ☐ Deepened ☐ Reconditioned ☐ Decommission
Method: ☐ Dug ☐ Bored ☐ Cable ☐ Driven ☒ Rotary ☐ Jetted

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 120 feet. Depth of completed well 116 / 120 ft.

(6) CONSTRUCTION DETAILS
Casing Installed:
☒ Welded 6 " Diam. from +4 ft. to 116 ft.
☐ Liner installed _____ " Diam. from _____ ft. to _____ ft.
☐ Threaded _____ " Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot Size _____ from _____ ft. to _____ ft.
Diam. _____ Slot Size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____
Material placed from _____ ft. to _____ ft.

Surface seal: ☒ Yes ☐ No To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? _____ Depth of strata _____
Method of sealing strata off Cased

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 76 ft. below top of well Date 9/8/95
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☐ No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 26 gal./min. with _____ ft. drawdown after 2 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION
Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered.

MATERIAL	FROM	TO
Top Soil	0	4
Clay Silt Sand & Gravel	4	95
Sandy Clay Gravel w/ B	95	120
grey clay No W	120	121
Water 26½ GPM.		

RECEIVED
SEP 27 1995
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work Started 9/7/95 Completed 9/8/95

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

Type or Print Name John Pierce License No. 0422
(Licensed Driller/Engineer)

Trainee Name _____ License No. _____
Drilling Company Pierce Well Drilling Inc
(Signed) _____ License No. 0422
(Licensed Driller/Engineer)
Address p.o. Box 10866 Yakima, WA 98909
Contractor's Registration No. PWD132K1 Date 9/10/95

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (360) 407-6600. The TDD number is (360) 407-6006.

ECY 050-1-20 (11/98)

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. WO 87425

UNIQUE WELL I.D. # _____

Water Right Permit No. _____

OWNER: Name Ernest Craft. Address 350 Pease Rd, Cle Elum, Wa 9852

(2) LOCATION OF WELL: County Kittitas Co. NE 1/4 SW 1/4 Sec 35 T. 20 N., R. 15 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 411 Upper Peoh Point Rd.

(3) PROPOSED USE: ☑ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____

Abandoned ☐ New well ☐ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☑ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 140 feet. Depth of completed well 140 ft.

(6) CONSTRUCTION DETAILS:

Casing Installed: 6 " Diam. from 140 ft. to 140 ft.
Welded ☑ Liner installed ☐ Threaded ☐ _____ " Diam. from _____ ft. to _____ ft.
_____ " Diam. from _____ ft. to _____ ft.

Perforations: Yes ☐ No ☑
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☑
Manufacturer's Name _____
Type _____ Model No. _____
Diam. ____ Slot size _____ from _____ ft. to _____ ft.
Diam. ____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☑ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☑ No ☐ To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 120 ft. below top of well Date _____
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 15 gal./min. with stem set at 140 ft. for 1 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
0-Dirt	0	10
cement grout	10	140

RECEIVED
NOV 17 1997
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work Started 9-2 19. Completed 9-5 1997

WELL CONSTRUCTOR 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.

NAME Bach Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 3340 Wilson Cr. Rd. Ellensburg

(Signed) Mike Mayhall (WELL DRILLER) License No. 2361

Contractor's Registration No. MIKEBDC133NA Date _____ 1997

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93) * * *

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 34122

M

Water Right Permit No. _____

OWNER: Name Kenny Shomberg Address Pease Road Cle Elum

(2) LOCATION OF WELL: County Kittitas NW ¼ SW ¼ Sec 35 T 20 N., R 15E W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) _____

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____

Abandoned ☐ New well ☐ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 140 feet. Depth of completed well 140 ft.

(6) CONSTRUCTION DETAILS:

Casing Installed: 6 " Diam. from 0 ft. to 140 ft.

Welded ☒ Liner installed ☐ Threaded ☐ _____ " Diam. from _____ ft. to _____ ft.

Perforations: Yes ☐ No ☒

Type of perforator used _____

SIZE of perforations _____ in. by _____ in.

_____ perforations from _____ ft. to _____ ft.

_____ perforations from _____ ft. to _____ ft.

_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☒

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel _____

Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.

Material used in seal _____

Did any strata contain unusable water? Yes ☐ No ☒

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level 2,100 ft.

Static level 120 ft. below top of well Date 3/16/91

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (Cap, valve, etc.))

(9) WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? Yes ☐ No ☒ If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

" " " "

" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Baller test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 4 gal./min. with stem set at 138 ft. for 2½ hrs.

Artesian flow _____ g.p.m. Date 3/15/91

Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Over burden	0'	4'
Gravel Large	4'	28'
Gravel Sandy	28'	130'
Gravel Small water bearing	130'	140'

RECEIVED APR – 1 DEPARTMENT OF ECOLOGY CENTRAL REGION OFFICE

Work started March 12, 19 91 Completed 3/16, 19 91

WELL CONSTRUCTOR 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.

NAME American Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address PO BX 89 Cle Elum WA 98922

(Signed) Mark Block (WELL DRILLER) License No. 1887

Contractor's Registration No. AMERID*210W Date March 18, 19 91

(USE ADDITIONAL SHEETS IF NECESSARY)

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. ✓
Permit No. ....

(1) OWNER: Name Tom Wait Address RH #4 Box 105B, Cle Elum, Wa.

(2) LOCATION OF WELL: County Kittitas SW¼ SW¼ Sec. 36 T. 20 N., R. 15 E. W.M.
Bearing and distance from section or subdivision corner 100 E. of House

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 60 ft. Depth of completed well 60 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from 0 ft. to 60 ft.
Threaded ☐ ..." Diam. from .... ft. to .... ft.
Welded ☒ ..." Diam. from .... ft. to .... ft.

Perforations: Yes ☐ No ☒
Type of perforator used....
SIZE of perforations .... in. by .... in.
.... perforations from .... ft. to .... ft.
.... perforations from .... ft. to .... ft.
.... perforations from .... ft. to .... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name....
Type.... Model No....
Diam. .... Slot size .... from .... ft. to .... ft.
Diam. .... Slot size .... from .... ft. to .... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: ....
Gravel placed from .... ft. to .... ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal Cuttings & Dirt
Did any strata contain unusable water? Yes ☐ No ☒
Type of water?.... Depth of strata....
Method of sealing strata off....

(7) PUMP: Manufacturer's Name....
Type: .... H.P....

(8) WATER LEVELS: Land-surface elevation above mean sea level.... ft.
Static level 35 ft. below top of well Date 10/10/79
Artesian pressure .... lbs. per square inch Date....
Artesian water is controlled by .... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☒ No ☐ If yes, by whom? DRILLER
Yield: 150 gal./min. with .... ft. drawdown after .... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ....
Bailer test.... gal./min. with .... ft. drawdown after .... hrs.
Artesian flow.... g.p.m. Date....
Temperature of water 48 Was a chemical analysis made? Yes ☒ No ☐
IRON 3.5

(10) WELL LOG:
Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Silty Brn. Top Soil	0	4
Brn Silt w/ Gravel	4	12
Brn Silty Sand + Gravel	12	45
Brn Sand + Gravel	45	57
Coarse Clean Gravel	57	60

RECEIVED
DEC 13 1979
DEPARTMENT OF ECOLOGY
SOUTHWEST REGIONAL OFFICE

Work started 10/9, 19 79 Completed 10/10, 19 79

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Clyde Drilling Co.
(Person, firm, or corporation) (Type or print)
Address 704-43rd Ave. N.E. Puyallup, Wa.
[Signed] .... (Well Driller)
License No. 0379 Date 11/13, 19 79

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

✓ mc 12-79

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) OWNER: Name Ed Mc'KEAN Address 327 Lincoln Clelum

LOCATION OF WELL: County Kittitas — SW¼ SW¼ Sec. 35 T. 20 N., R. 15 W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☑ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☑ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 145 ft. Depth of completed well 140 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 0 ft. to 130 ft.
Threaded ☐ ..... " Diam. from ..... ft. to ..... ft.
Welded ☑ ..... " Diam. from ..... ft. to ..... ft.

Perforations: Yes ☐ No ☑
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☑
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☑ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☑ No ☐ To what depth? 25 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 120 ft. below top of well Date .....
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? .....
Yield: ..... gal./min. with ..... ft. drawdown after ..... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test 5 gal./min. with ..... ft. drawdown after ..... hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
clay - gravel cemented	0	130
gravel (water bearing)	130	132
blue clay	132	145

RECEIVED
MAY 21 1987
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work started 5-3, 19 87 Completed 5-5, 19 87

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Bach Drilling Co.
(Person, firm, or corporation) (Type or print)

Address Rt. 5, Box 1010, Ellensburg

[Signed] Mike Bach
(Well Driller)

License No. 22 Date 5-5, 19 87

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

5477 Start Card No. 28708

Water Right Permit No. N

(1) OWNER: Name Candido Freitas Address Pease Road

(2) LOCATION OF WELL: County Kittitas ¼ SW ¼ Sec 35 T. 20 N., R. 15 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address)

(3) PROPOSED USE: ☑ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one)
Abandoned ☐ New well ☑ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☑ Jetted ☐

(5) DIMENSIONS: Diameter of well inches. Drilled feet. Depth of completed well ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: 6 " Diam. from 0 ft. to 140 ft.
Welded ☐ Liner installed ☐ Threaded ☐ " Diam. from ft. to ft.
" Diam. from ft. to ft.

Perforations: Yes ☐ No ☑
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☑
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☑ Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes ☑ No ☐ To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 115 ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Baller test gal./min. with ft. drawdown after hrs.
Airtest 10 gal./min. with stem set at 135 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
SAND - GRAVEL	0	135
GRAVEL with WATER	135	140

RECEIVED
JUL 31 1990
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

ENTERED

Work started 6-14, 19. Completed 6-15, 1990

WELL CONSTRUCTOR 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.

NAME Bach Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address R+5 Box 1010 Ellensburg

(Signed) Mike Bach (WELL DRILLER) License No. 22

Contractor's Registration No. MIKEBDC133NY Date 6-21, 1990

(USE ADDITIONAL SHEETS IF NECESSARY)

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 28706

Water Right Permit No. X

(1) OWNER: Name MIKE Cordner Address PEASE

(2) LOCATION OF WELL: County KITTITAS 5 ¼ SW ¼ Sec 35 T. 20 N., R. 15 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address)

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one)
Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well inches.
Drilled feet. Depth of completed well ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: 6 " Diam. from 0 ft. to 135 ft.
Welded [X] Liner Installed [ ] Threaded [ ] " Diam. from ft. to ft.
" Diam. from ft. to ft.

Perforations: Yes [ ] No [ ]
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes [ ] No [ ]
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes [ ] No [ ] Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes [X] No [ ] To what depth? 20 ft.
Material used in seal
Did any strata contain unusable water? Yes [ ] No [ ]
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 119 ft. below top of well Date 5-31-90
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [ ] If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test

Bailer test 4 gal./min. with ft. drawdown after hrs.
Airtest 4 gal./min. with stem set at 130 ft. for 2 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes [ ] No [ ]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
DIRT	0	8
GRAVEL & CLAY	8	60
Cemented SAND & GRAVEL	60	120
Loose SAND & GRAVEL	120	137

ENTERED

RECEIVED
JUN 4 1990
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work started 5-28, 1990 Completed 5-31, 1990

WELL CONSTRUCTOR 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.

NAME Bach Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address Rt 5 Box 1010 Ellensburg, WA.

(Signed) Mike Bach (WELL DRILLER) License No. 22

Contractor's Registration No. MIKE BDC133N4 Date 6-1-, 1990

(USE ADDITIONAL SHEETS IF NECESSARY)

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. ....

Permit No. .....

(1) OWNER: Name Charles Forenpohar Address Rt #4 - Cle Elum Wa. 98922

(2) LOCATION OF WELL: County Kittitas SW ¼ SW ¼ Sec. 35 T. 20 N., R. 15 E W.M.

Bearing and distance from section or subdivision corner 20 N. of House

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....

New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 201 ft. Depth of completed well 201 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 0 ft. to 194 ft.
Threaded ☐ ...." Diam. from .... ft. to .... ft.
Welded ☒ ...." Diam. from .... ft. to .... ft.

Perforations: Yes ☐ No ☒
Type of perforator used ....
SIZE of perforations .... in. by .... in.
.... perforations from .... ft. to .... ft.
.... perforations from .... ft. to .... ft.
.... perforations from .... ft. to .... ft.

Screens: Yes ☒ No ☐
Manufacturer's Name ....
Type Stainless Steel Model No. ....
Diam. 6 Slot size .010 from 196 ft. to 201 ft.
Diam. .... Slot size .... from .... ft. to .... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: ....
Gravel placed from .... ft. to .... ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal Puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? .... Depth of strata ....
Method of sealing strata off ....

(7) PUMP: Manufacturer's Name ....
Type: .... H.P. ....

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 112 ft. below top of well Date 10/9/79
Artesian pressure .... lbs. per square inch Date ....
Artesian water is controlled by .... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☒ No ☒ If yes, by whom? ~~Drill~~
Yield: ~~??~~ gal./min. with .... ft. drawdown after .... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ....
Bailer test 17+ gal./min. with .... ft. drawdown after .... hrs.
Artesian flow .... g.p.m. Date ....
Temperature of water 53 Was a chemical analysis made? Yes ☒ No ☐

NOV - 1 5

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Brown Silt	0	2
Brn. Silty, Sandy Gravel and	2	87
cobbles	~~87~~	~~133~~
Clean Loose Sand & Gravel	87	133
Blue silty clay	133	196
FINE SAND - w/water	196	201

RECEIVED
DEC 13 1979
DEPARTMENT OF ECOLOGY
SOUTHWEST REGIONAL OFFICE

Work started 10/4, 1979. Completed 10/9, 1979.

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME OELKE DRILLING Co (Person, firm, or corporation) (Type or print)

Address 701 - 41st Ave. N.E., Puyallup 983..

[Signed] [signature] (Well Driller)

License No. 0379 Date 10/29, 1979

(USE ADDITIONAL SHEETS IF NECESSARY)

✓ vmc 12/79

ECY 050-1-20

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W109573
UNIQUE WELL I.D. # AEM683
Water Right Permit No. _____

(1) OWNER: Name Clifford Winfrey Address 6025 maltby rd Woodinville wa 98

(2) LOCATION OF WELL: County Kittitas SE 1/4 SW 1/4 Sec 36 T 20 N, R 15 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) _____

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____
Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 10 X 6 inches. Drilled 395 feet. Depth of completed well 395 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from 3 ft. to 394 ft.
Welded ☒ _____ " Diam. from _____ ft. to _____ ft.
Liner installed ☐ _____ " Diam. from _____ ft. to _____ ft.
Threaded ☐

Perforations: Yes ☐ No ☒
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name _____
Type _____ Model No. _____
_____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level ~44 ft. below top of well Date 7-13-99
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? _____
Yield: 20 gal./min. with _____ ft. drawdown after _____ hrs.
" air lift " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Baller test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL				FROM	TO
Top soil	BR	m		0	2
Clay gravel	BR	m	H	2	11
sand gravel clay & cobbles	BR	m	H	11	31
Clay gravel	BR	m	H	31	36
Clay	gray	m		36	336
Clay gravel	gray	m	H	336	355
sink sand & gravel	gray	m		355	395

RECEIVED
JUL 23 1999
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work Started 7-6-99 19. Completed 7-13- 19 99

WELL CONSTRUCTOR 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.

NAME Waterman Well Drilling Inc (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 106 Berriman ln Selah Wa 98
(Signed) Chris Hayes (WELL DRILLER) (CHRIS HAYES) License No. 1908
Contractor's Registration No. WATERWD022DB Date 7/19/99 19

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93) ** f

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W37094
Unique Well I.D. # ABL089
Water Right Permit No.

(1) OWNER: Name FABIAN, GEORGE Address 27820 NE 141ST PLACE DUVALL, WA 98019-

(2) LOCATION OF WELL: County KITTITAS - N 1/4 NE 1/4 Sec 30 T 20 N., R 16 WM

(2a) STREET ADDRESS OF WELL (or nearest address) ,

A

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one) 1
NEW WELL Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 80 ft. Depth of completed well 80 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from 42 ft. to 23 ft.
WELDED 4 " Dia. from -5 ft. to 80 ft.
" Dia. from ft. to ft.

Perforations: YES
Type of perforator used SKILL SAW
SIZE of perforations 1/8 in. by 6 in.
100 perforations from 62 ft. to 80 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: NO
Manufacturer's Name
Type Model No.
Dia. slot size from ft. to ft.
Dia. slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: YES To what depth? 20 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off OVERBORE

(7) PUMP: Manufacturer's Name
Type H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 45 ft. below top of well Date 05/25/94
Artesian Pressure lbs. per square inch Date
Artesian water controlled by

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? NO If yes, by whom?
Yield: gal./min with ft. drawdown after hrs.

Recovery data
Time Water Level Time Water Level Time Water Level

Date of test / /
Bailer test gal/min. ft. drawdown after hrs.
Air test 15 gal/min. w/ stem set at 79 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
CLAY BROWN	0	10
CLAY GRAY SANDY	10	18
CLAY SANDY	18	58
SANDSTONE GRAY WITH WATER	58	80
	80	

RECEIVED
JUN - 2 1994
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work started 05/24/94 Completed 05/25/94

WELL CONSTRUCTOR 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.

NAME PONDEROSA DRILLING
(Person, firm, or corporation) (Type or print)

ADDRESS E 6010 BROADWAY

SIGNED: Roger Kelly License No. 2004

Contractor's Registration No. PO-NO-EI*248JE Date 05/27/94

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W37252
Unique Well I.D. # ABL090
Water Right Permit No.

(1) OWNER: Name FRAKER, TERRY N. Address 320 1ST AVENUE NE ISSAQUAH, WA 98027-

(2) LOCATION OF WELL: County KITTITAS - 1/4 NE 1/4 Sec 30 T 20 N., R 16 WM

(2a) STREET ADDRESS OF WELL (or nearest address) ,

A

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one) 1
NEW WELL Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 140 ft. Depth of completed well 140 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from +2 ft. to 56 ft.
WELDED 4 " Dia. from -7 ft. to 140 ft.
" Dia. from ft. to ft.

Perforations: YES
Type of perforator used SKILL SAW
SIZE of perforations 1/8 in. by 6 in.
106 perforations from 122 ft. to 140 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: NO
Manufacturer's Name
Type Model No.
Dia. slot size from ft. to ft.
Dia. slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: YES To what depth? 20 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off OVERBORE

(7) PUMP: Manufacturer's Name
Type H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 90 ft. below top of well Date 05/25/94
Artesian Pressure lbs. per square inch Date
Artesian water controlled by

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
TOPSOIL	0	10
CLAY BROWN	10	35
CLAY DARK GRAY	35	45
SANDSTONE CLAY	45	100
SANDSTONE WITH WATER	100	130
BLUE CLAY	130	140
	140	

RECEIVED
JUN - 2 1994
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work started 05/25/94 Completed 05/25/94

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? NO If yes, by whom?
Yield: gal./min with ft. drawdown after hrs.

Recovery data
Time Water Level Time Water Level Time Water Level

Date of test / /
Bailer test gal/min. ft. drawdown after hrs.
Air test 7 gal/min. w/ stem set at 139 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

WELL CONSTRUCTOR 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.

NAME PONDEROSA DRILLING
(Person, firm, or corporation) (Type or print)

ADDRESS E 6010 BROADWAY

[SIGNED] Roger Kelly License No. 2004

Contractor's Registration No. PO-ND-EI*248JE Date 05/27/94

1271

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. _____

Water Right Permit No. _____

(1) **OWNER:** Name Bob Daniels Address 10921 Rd 6 SE Moses Lake

(2) **LOCATION OF WELL:** County Kittitas north ¼ ¼ Sec 30 T. 20 N., R. 16 W.M.

(2a) **STREET ADDDRESS OF WELL** (or nearest address) _____

(3) **PROPOSED USE:** ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) **TYPE OF WORK:** Owner's number of well (if more than one) _____

Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) **DIMENSIONS:** Diameter of well 6 inches. Drilled 110 feet. Depth of completed well 110 ft.

(6) **CONSTRUCTION DETAILS:**

Casing Installed: 6 " Diam. from 0 ft. to 93 ft.
Welded ☑ _____ " Diam. from _____ ft. to _____ ft.
Liner installed ☐
Threaded ☐ _____ " Diam. from _____ ft. to _____ ft.

Perforations: Yes ☐ No ☒
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☑ No ☐ To what depth? 93 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) **PUMP:** Manufacturer's Name _____
Type: _____ H.P. _____

(8) **WATER LEVELS:** Land-surface elevation above mean sea level _____ ft.
Static level 93 ft. below top of well Date _____
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) **WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION**

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Sandy Clay	0	60
Tan Clay	60	80
Blue Clay	80	110
Black Shale	110	

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SEP - 4 1990
DEPARTMENT OF ECOLOGY

Work started _____, 19. Completed _____, 19

WELL CONSTRUCTOR 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.

NAME D & T Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 205 Beale Moses Lake

(Signed) _____ (WELL DRILLER) License No. 0116

Contractor's Registration No. DFDRI118DL Date _____, 19

(USE ADDITIONAL SHEETS IF NECESSARY)

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 22610

UNIQUE WELL I.D. #

Water Right Permit No.

(1) OWNER: Name Fred Rourke Address 3329 S. 248th Place, Kent, WA 98032

LOCATION OF WELL: County Kittitas NE ¼ NE ¼ Sec 30 T. 20 N., R 16E W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address)

(3) PROPOSED USE: ☒ Domestic ☐ Irrigation ☐ DeWater ☐ Industrial ☐ Test Well ☐ Municipal ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
Abandoned ☐ New well ☒ Deepened ☐ Reconditioned ☐ Method: Dug ☐ Cable ☐ Rotary ☒ Bored ☐ Driven ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 260 feet. Depth of completed well 260 ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: 6 " Diam. from +2 ft. to 132 ft.
Welded ☒ PVC 4 " Diam. from -9 ft. to 260 ft.
Liner installed ☒
Threaded ☐ " Diam. from ft. to ft.

Perforations: Yes ☒ No ☐ PVC Liner
Type of perforator used Skill Saw
SIZE of perforations 1/8 in. by 6 in.
102 perforations from 240 ft. to 260 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 90 ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.))

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: 8+ gal./min. with ft. drawdown after hrs.
" ESTIMATED AIRLIFT " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test

Bailer test gal./min. with ft. drawdown after hrs.
Airtest gal./min. with stem set at ft. for hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Sandy Clay	0	34
Clay, Dk Brown, Soft	34	37
Sandstone, Clay Lt. Gray	37	53
Sandstone, Clay, Brown	53	90
Sandstone, Lt. Gray	90	95
Sandstone, Brown, Medium	95	110
Clay, DK Brown, Soft	110	116
Shale, Green, Medium	116	119
Shale, Gray, Clay	119	131
Sandstone, Gray, Hard	131	198
Coal, Black	198	204
Sandstone, Lt. Gray, Medium Hard	204	260
6" Drive Shoe Utilized		

OCT 18 93
GP

Work started 9-29-93, 19. Completed 9-30-93, 19

WELL CONSTRUCTOR 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.

NAME Ponderosa Drilling & Development, Inc.
(PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address E. 6010 Broadway, Spokane, WA 99212

(Signed) (WELL DRILLER) License No. 2060

Contractor's Registration No. PO-ND-EI*248JE (DaveRicard)

Date September 30, 1993

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329-

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W087259
UNIQUE WELL I.D. # ACX 586
Water Right Permit No. _____

(1) OWNER: Name DOYLE, DAN Address 10633 34TH AVE S.W, SEATTLE WA. 98146

(2) LOCATION OF WELL: County KITTITAS NW 1/4 NE 1/4 Sec 30 T. 20 N., R 16E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 191 BUENA VIEW RD. CLE ELUM, WA B

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____
Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 219 feet. Depth of completed well 219 ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: 6" Diam. from +1½ ft. to 62½ ft.
Welded [X] 4½" Diam. from -60 ft. to 219 ft.
Liner installed [ ] _____" Diam. from _____ ft. to _____ ft.
Threaded [ ]

Perforations: Yes [X] No [ ]
Type of perforator used SKIL SAW
SIZE of perforations 1/8 in. by 7 in.
42 perforations from 79 ft. to 99 ft.
42 perforations from 159 ft. to 179 ft.
42 perforations from 199 ft. to 219 ft.

Screens: Yes [ ] No [X]
Manufacturer's Name _____
Type _____ Model No. _____
Diam. ____ Slot size _____ from _____ ft. to _____ ft.
Diam. ____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes [ ] No [X] Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes [X] No [ ] To what depth? 20 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____
Static level 46½ ft. below top of well Date 5-21-98
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test 5 gal./min. with _____ ft. drawdown after 2½ hrs.
Airtest _____ gal./min. with stem set at 218 ft. for 2½ hrs.
Artesian flow _____ g.p.m. Date 5-21-98
Temperature of water _____ Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
BROWN HARD CLAY	0	26
GRAY CLAY, BROKEN BASALT	26	47
BROWNISH/GRAY CLAY	47	54
STICKY SHALE	54	66
GRAY CLAYSTONE/SANDSTONE 1GPM @ 66'	66	78
SHALE 3-5GPM @ 82'-87'	78	87
BROWN CLAY/SHALE	87	95
GRAY SANDSTONE	95	99
BROWN CLAY	99	100
GRAY CLAY/SHALE	100	108
SHALE	108	110
GRAY CLAY/SHALE	110	144
SHALE	144	152
LT GRAY SANDSTONE, CLAY, SHALE MIX	152	174
GRAY SANDSTONE 1-3 GPM	174	178
HARD GRAY (BLUE) CLAY	178	182
GRAY SANDSTONE/CLAY	182	214
SHALE	214	219

RECEIVED JUN 30 1998 DEPARTMENT OF ECOLOGY CENTRAL REGION OFFICE

Work Started 5-20 19. Completed 5-21 1998

WELL CONSTRUCTOR 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.

NAME TUMWATER DRILLING, INC. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address LEAVENWORTH WASH.
(Signed) _____ (WELL DRILLER) License No. 1249
Contractor's Registration No. TUMWADI 1330 C Date 5-22 1998

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93) * * f

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 34141

Water Right Permit No. B

(1) OWNER: Name Steve Pinkins Address

(2) LOCATION OF WELL: County Kittitas NW¼ NE¼ Sec. 30 T. 20 N., R. 16 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) Langin Springs

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one)

Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 180 feet. Depth of completed well 180 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +2 ft. to 37 ft.

Welded ☐ Liner installed ☐ Threaded ☐ " Diam. from ft. to ft.

" Diam. from ft. to ft.

Perforations: Yes ☐ No ☒

Type of perforator used

SIZE of perforations in. by in.

perforations from ft. to ft.

perforations from ft. to ft.

perforations from ft. to ft.

Screens: Yes ☐ No ☒

Manufacturer's Name

Type Model No.

Diam. Slot size from ft. to ft.

Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel

Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.

Material used in seal Bentonite

Did any strata contain unusable water? Yes ☐ No ☐

Type of water? Depth of strata

Method of sealing strata off

(7) PUMP: Manufacturer's Name

Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.

Static level 105 ft. below top of well Date

Artesian pressure lbs. per square inch Date

Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? Yes ☐ No ☐ If yes, by whom?

Yield: gal./min. with ft. drawdown after hrs.

" " " "

" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test

Bailer test gal./min. with ft. drawdown after hrs.

Airtest 10 gal./min. with stem set at 180 ft. for hrs.

Artesian flow g.p.m. Date

Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Sandy Lomb	0	15
Clay Brown	15	28
Clay Gray	28	95
Clay & phiaLite	95	180

ENTERED

RECEIVED
OCT 10 1990
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work started 9-17, 19. Completed 9-20, 19 90

WELL CONSTRUCTOR 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.

NAME American Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address Po Box 398 Cle Elum

(Signed) (WELL DRILLER) License No. 941

Contractor's Registration No. Applied for 12/90 Date 10-1, 19 90

(USE ADDITIONAL SHEETS IF NECESSARY)

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. WU 6101
6180

Water Right Permit No. _____

(1) OWNER: Name Boyce + Brooke Heidenreich Address 3002 Sahalee DR. W Redm WA 98053-(

(2) LOCATION OF WELL: County Kittitas NW ¼ NE ¼ Sec. 30 T. 20 N., R. 16 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) Larrigan Springs #20 Cle Elum WA

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____
Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ]
Deepened [ ] Cable [ ] Driven [ ]
Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 260 feet. Depth of completed well 260 ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: 6 " Diam. from 0' ft. to 40' ft.
Welded [X] 5½ " Diam. from 38' ft. to 260 ft.
Liner installed [X]
Threaded [ ] _____ " Diam. from _____ ft. to _____ ft.

Perforations: Yes [ ] No [X]
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes [ ] No [X]
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes [ ] No [X] Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes [X] No [ ] To what depth? 20 ft.
Material used in seal Bentonite + Water
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level 2200 ft.
Static level 35 ft. below top of well Date 6/10/94
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.))

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 50+ gal./min. with stem set at 257 ft. for 3 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Clay Brown Boulders	0	32
Sandstone Brown	32	44
Phila lite	44	46
Clay Blue	46	52
Clay Blue w/layers phila	52	74
Sand stone gray soft	74	78
Sand stone white hd	78	107
Sand Stone White hd + soft	107	146
Phila lite Brown Black Soft	151	155
Clay Blue Trace phila lite	155	182
Sand stone gray hard	182	188
Clay Blue Trace phalite	188	195
Sand stone gray hard	195	233
Clay Blue + gray phila lite	233	257
Sand stone white	257	260
water bearing		

NOV 17

Work started 6/3/94, 19. Completed 6/10/94, 19

WELL CONSTRUCTOR 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.

NAME Mark Black (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address PO Box 849 Cle Elum WA 98

(Signed) Mark Black (WELL DRILLER) License No. 0887

Contractor's Registration No. AMERIDP98325 Date 6/12/ , 19 9

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329- 3

File Original and First Copy with Department of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Start Card No. W113151
UNIQUE WELL I.D. # AEA674
Water Right Permit No. _____

OWNER: Name Bill Rainvillia Address 3407 34th Ave S.W Seattle Wa 981

(2) LOCATION OF WELL: County Kittitas NW 1/4 NW 1/4 Sec 30 T 20 N.R 16 WM
(2a) STREET ADDRESS OF WELL: (or nearest address) _____ C, D

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____
☒ New well ☐ Deepened ☐ Reconditioned
Method: ☐ Dug ☐ Bored ☐ Cable ☐ Driven ☒ Rotary ☐ Jetted

(5) DIMENSIONS: Diameter of well 10 X 6 inches
Drilled 275 feet. Depth of completed well 275 ft.

(6) CONSTRUCTION DETAILS
Casing Installed:
☒ Welded _____ Diam. from +2 ft. to -103 ft.
☒ Liner installed PVC 4 Diam. from -15 ft. to 225 ft.
☐ Threaded _____ Diam. from _____ ft. to _____ ft.

Perforations: ☒ Yes ☐ No
Type of perforator used Skill saw
SIZE of perforations 7/8 in. by 1/8 in.
90 perforations from 175 ft. to 225 ft.
60 perforations from 225 ft. to 255 ft.
_____ perforations from _____ ft. to _____ ft.

Screens: ☐ Yes ☒ No
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: ☐ Yes ☒ No Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: ☒ Yes ☐ No To what depth? 20
Material used in seal Bentonite
Did any strata contain unusuable water? ☐ Yes ☐ No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level -140 ft. below top of well Date 4-26-99
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☐ No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 5 gal./min. with stem set at _____ ft. for _____ hrs.
Atesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION
Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Topsoil BR m	0	1
Clay Tan m	1	9
Clay Orange Tan m	9	19
Clay Tan	19	27
Sandstone Clay gravel BR m	27	57
Clay gray m	57	61
Clay gravel BR m	61	69
Cemented gravel w/clay B m-y	69	94
Sandstone gray m-y	94	110
Sandstone w/clay Coal gray Black m-y	110	141
Sandstone gray white m-y	141	158
Sandstone Blue green m-y	158	167
Sandstone w/clay Blue green gray m-y	167	187
Sandstone gray	187	192
Sandstone & Coal Black m-y	192	201
Sandstone gray m-y	201	206
Sandstone gray white m-y	206	211
Sandstone w/Coal gray Blk m-y	211	216
Sandstone gray	216	275
Clay Brown	275	275

Work Started 4-21-, 19 99 Completed 4-26, 19 99

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.
NAME Waterman Well Drilling Inc (Person, Firm, or Corporation) (Type of Print)
Address 106 Berriman In Sedah Wa 989
(Signed) Chris Hanna (CHRIS HANNA) License No. 1908
Contractor's Registration No. WATERW0022DB Date 4/28/99

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (360) 407-6600. The TDD number is (360) 407-6006.

ECY 050-1-20 (7/97)

DEPT. OF ECOLOGY Received APR 29 1999 CENTRAL REGION

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 080527

Water Right Permit No. _____

(1) OWNER: Name Bill Rainville Address 3407 34th Ave S.W., Seattle, Wa.

(2) LOCATION OF WELL: County Kittitas NW ¼ NW ¼ Sec 30 T. 20 N., R. 16 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) White Rd., CleElum Wa.

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____

Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 492 feet. Depth of completed well 492 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +2 ft. to 180 ft.
Welded ☒ 4/½ " Diam. from plastic 176 ft. to 492 ft.
Liner installed ☒
Threaded ☐ _____ " Diam. from _____ ft. to _____ ft.

Perforations: Yes ☒ No ☐
Type of perforator used drill
SIZE of perforations 3/8 in. by _____ in.
100 perforations from 220 ft. to 240 ft.
100 perforations from 360 ft. to 380 ft.
100 perforations from 470 ft. to 492 ft.

Screens: Yes ☐ No ☒
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 30 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 220 ft. below top of well Date 1/31/91
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest ½ gal./min. with stem set at 292 ft. for 3 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Br. clay	0	70
Sandstone	70	168
Bn. rock	168	170
Sandstone & rock	170	195
Gray sandrock	195	243
Gray sandstone	243	270
Phyillite, sandrock & water	270	285
Sandstone	285	363
Brown rock	363	365
Gray sandstone	365	393
Sand rock and gray clay	393	410
Sandstone, shale, clay & water	410	415
Gray sandstone	415	478
Gray sandrock	478	492

RECEIVED
MAR - 6 1991
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work started 12/13/90, 19. Completed 1/27/91, 19

WELL CONSTRUCTOR 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.

NAME Water Wells Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 5503 Ahtanum Rd., Yakima, Wa.

(Signed) Vernon L. Rank (WELL DRILLER) License No. 0854

Contractor's Registration No. WATERWD111QB Date 2/7/91, 19

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329-

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W39221

UNIQUE WELL I.D. #

Water Right Permit No.

(1) OWNER: Name CHARLIE PARKS Address 2727 303 SE FALL CITY WA 980[illegible]

(2) LOCATION OF WELL: County KITTITAS NW 1/4 NW 1/4 Sec 30 T. 20 N., R. 16 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) LANAGAN SPRINGS

(3) PROPOSED USE: ☒ Domestic ☐ Irrigation ☐ DeWater ☐ Industrial ☐ Test Well ☐ Municipal ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)

Abandoned ☐ New well ☒ Deepened ☐ Reconditioned ☐ Method: Dug ☐ Cable ☐ Rotary ☒ Bored ☐ Driven ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 380 feet. Depth of completed well 380 ft.

(6) CONSTRUCTION DETAILS:

Casing Installed: Welded ☒ Liner Installed ☒ Threaded ☐

6" Diam. from 0 ft. to 40 ft.

4" Diam. from 5 ft. to 380 ft.

" Diam. from ft. to ft.

Perforations: Yes ☒ No ☐

Type of perforator used SKILSAW

SIZE of perforations 1/8 in. by 7 1/4 in.

60 perforations from 320 ft. to 360 ft.

perforations from ft. to ft.

perforations from ft. to ft.

Screens: Yes ☐ No ☒

Manufacturer's Name

Type Model No.

Diam. Slot size from ft. to ft.

Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel

Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.

Material used in seal BENTONITE

Did any strata contain unusable water? Yes ☐ No ☐

Type of water? Depth of strata

Method of sealing strata off

(7) PUMP: Manufacturer's Name

Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level

Static level 135 ft. below top of well Date 11/18/93

Artesian pressure lbs. per square inch Date

Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? Yes ☐ No ☐ If yes, by whom?

Yield: gal./min. with ft. drawdown after hrs.

" " " "

" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test

Baller test gal./min. with ft. drawdown after hrs.

Airtest 1 1/2 gal./min. with stem set at ft. for hrs.

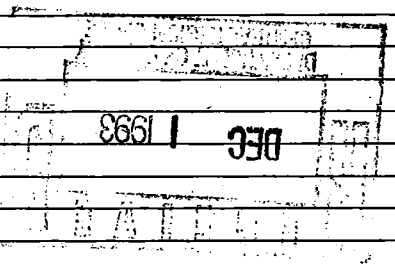
Artesian flow g.p.m. Date

Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
SOIL	0	5
SANDSTONE, BROWN, GRAVEL	5	32
SANDSTONE, BLUE; CLAY	32	125
COAL	125	130
SANDSTONE, BLUE; CLAY	130	260
COAL	260	268
SANDSTONE, BLUE, CLAY	268	320
COAL	320	325
SANDSTONE, BLUE; CLAY	325	360
COAL	360	365
SANDSTONE, BLUE; CLAY	365	380



Work Started 11/13, 19. Completed 11/16, 1993

WELL CONSTRUCTOR 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.

NAME BACH DRILLING CO/ (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address RT 5 BOX 1010

(Signed) (WELL DRILLER) License No. 1778

Contractor's Registration No. MIKEBDC133N4 Date 11/16, 1993

(USE ADDITIONAL SHEETS IF NECESSARY)

ECL 050-1-20 (2/93) * * f

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W208739

UNIQUE WELL I.D. #

Water Right Permit No.

OWNER: Name MIKE SHEA Address

(2) LOCATION OF WELL: County KITTITAS NW 1/4 NW 1/4 Sec 30 T. 20 N., R 16 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) D

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one)

Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 320 feet. Depth of completed well 320 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 48 ft.
Welded [X] 4" Diam. from 0 ft. to 320 ft.
Liner installed [X]
Threaded [ ] " Diam. from ft. to ft.

Perforations: Yes [ ] No [ ]
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes [ ] No [ ]
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes [ ] No [ ] Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes [X] No [ ] To what depth? 18 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 147 ft. below top of well Date AUG 20 96
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [ ] If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Airtest 45 gal./min. with stem set at 300 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes [ ] No [ ]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
CLAY SOIL	0	18
CLAY SOIL & ROCKS	18	30
BROWN CEMENTED GRAVEL	30	48
WHITE GRANITE & WHITE SANDROCK	48	150
WHITE SANDROCK DECOMPOSED LITTLE WATER	150	160
WHITE SANDROCK	160	255
BROWN SANDROCK	255	275
WHITE SANDROCK	275	320

RECEIVED SEP 13 1996 DEPARTMENT OF ECOLOGY CENTRAL REGION OFFICE

Work Started 8/5 19. Completed 8/10 19 96

WELL CONSTRUCTOR 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.

NAME BACH DRILLING (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 3340 WILSON CREEK

(Signed) Bud Bacho (WELL DRILLER) License No. 0997

Contractor's Registration No. MIKEBOC133J4 Date 8/10 19 96

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93) * * f

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) OWNER: Name RUSSELL Q. LAMPHEAR Address P.O. BOX 123 WHITE ROAD, CLE ELUM, WASH.

(2) LOCATION OF WELL: County KITTITAS WITHIN THE W1/2 N.W.1/4 ¼ ¼ Sec 30 T 20 N., R 16E W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) 1
New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 247 ft. Depth of completed well 247 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +1 ft. to 204 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☒ No ☐
Type of perforator used TORCH
SIZE of perforations 1/8 in. by 6" & 4" in.
360 perforations from 63 ft. to 104 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 30 ft.
Material used in seal CEMENT
Did any strata contain unusable water? Yes ☒ No ☐
Type of water? COAL Depth of strata 16'
Method of sealing strata off CASED

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 51 ft. below top of well Date 7/13/78
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" 7 GPM @ 247' " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
TOP SOIL & ROCK BR. MED.	0	3
BR. SHALE HD.	3	14
BR. BLDRS. & CLAY HD.	14	41
BR. CLAY & SHALE HD. (TRACE OF WATER)	41	79
BLUE SHALE HD.	79	88
LAYERS OF SANDSTN & CLAY HD. BLUE	88	127
GREY HD. SANDSTONE	127	167
BROWN SANDSTONE HD.	167	174
GREY SANDSTONE & STREAKS OF SHALE HD	174	186
GREY SNDSTN & LAYERS OF COAL T.OF W.	186	197
GREY SNDSTN & STREAKS OF SHALE	197	228
BROWN SANDSTONE HD.	228	247
SMALL TRACES OF WATER FROM 197 THRU 247' APROX. 6 GPM.		

Work started 6/28/78, 19 Completed 7/13/78, 19

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME RIEBE WELL DRILLING (R.R.BRITTON)
(Person, firm, or corporation) (Type or print)

Address YAKIMA, WASH.

[Signed] John C. Riebe
(Well Driller)

License No. 421 Date 7/13/78, 19

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W093861

UNIQUE WELL I.D. # ACL-653

Water Right Permit No. _____

OWNER: Name Don Nyman Address P.O. Box 148 Cle Elum WA 98922

(2) LOCATION OF WELL: County Kittitas SW 1/4 NW 1/4 Sec 30 T. 20 N., R 16 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) E

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____

Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 10" x 6" inches. Drilled 85' feet. Depth of completed well 69' ft.

(6) CONSTRUCTION DETAILS:

Casing Installed: 6" Diam. from +2 ft. to 43' ft.
Welded ☐ _____" Diam. from _____ ft. to _____ ft.
Liner installed ☒ _____" Diam. from _____ ft. to _____ ft.
Threaded ☐

Perforations: Yes ☒ No ☐
Type of perforator used Skill saw
SIZE of perforations 1/8" in. by 6" in.
40 perforations from 69' ft. to 49' ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name _____
Type _____ Model No. _____
Diam. ____ Slot size _____ from _____ ft. to _____ ft.
Diam. ____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 23+ ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 56' ft. below top of well Date 7/24/98
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 4+ gal./min. with stem set at 65' ft. for 1 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
clay-base Topsoil	0'	2'
clay - brown	2'	15'
clay & gravel - brown	15'	36'
Shale - brown & Sandstone	36'	43'
Sandstone - blue gray & coal	43'	46'
Sandstone - gray & clay	46'	59'
clay - gray	59'	62'
Sandstone - gray (with water)	62'	65'
Shale - dark gray	65'	70'
clay - gray - brown	70'	72'
Shale - gray	72'	85'

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JUL 31 1998
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work Started 7/23 19. Completed 7/24 1998

WELL CONSTRUCTOR 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.

NAME Water man Well Drilling Inc (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 106 Berriman ln Selah Wa 98

(Signed) Kelly Olson (WELL DRILLER) License No. 1217

Contractor's Registration No. WATERWD022DB Date 7/24/1998

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93) * * f

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WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. ~~WA093413~~

UNIQUE WELL I.D. # ACL940

Water Right Permit No. _____

(1) OWNER: Name Hugh Stroh Address 660 Powerline rd Cle Elum Wa 98

(2) LOCATION OF WELL: County Kittitas SW 1/4 NE 1/4 Sec 30 T. 20 N., R. 16 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) _____ 6

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____

Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 10 X 6 inches. Drilled 665 feet. Depth of completed well 440 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +2 ft. to -121 ft.
Welded [X] 4 PVC " Diam. from -5 ft. to -440 ft.
Liner installed [X]
Threaded [ ] _____ " Diam. from _____ ft. to _____ ft.

Perforations: Yes [X] No [ ]
Type of perforator used SKILSAW
SIZE of perforations 7/4 in. by 1/8 in.
224 perforations from 260 ft. to 420 ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes [ ] No [X]
Manufacturer's Name _____
Type _____ Model No. _____
Diam. ____ Slot size ____ from ____ ft. to ____ ft.
Diam. ____ Slot size ____ from ____ ft. to ____ ft.

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CENTRAL REGION OFFICE

Gravel packed: Yes [ ] No [X] Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes [X] No [ ] To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 155 ft. below top of well Date 9-16-98
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom? _____
Yield: 1-1/2 gal./min. with _____ ft. drawdown after _____ hrs.
" ESTIMATED AIRLIFT "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.
Airtest ____ gal./min. with stem set at ____ ft. for ____ hrs.
Artesian flow ____ g.p.m. Date _____
Temperature of water ____ Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL		FROM	TO
Topsoil Brown	m	0	2
Clay + Gravels TAN	m	2	8
Clay Cobbles + gravel Brown	MH	8	28
Clay gravel TAN	MH	28	56
Clay gray	m	56	63
Sandstone white	m	63	83
Clay shell Blue green	m	83	89
Clay + Coal Blue green Black	m	89	111
Clay + blue gray	m	111	119
Sandstone Blue gray	MH	119	133
Sandstone w/Coal lenses white BLK	MH	133	164
Sandstone Blue green	MH	164	171
Sandstone w/Clay lenses Blue gray	MH	171	192
Coal BLK	m	192	198
Sandstone Blue gray	MH	198	209
Sandstone w/Clay lenses Coal Blue gray BLK	MH	209	231
Sandstone w/Clay Blue gray	MH	231	250
Sandstone w/Clay + Coal lenses Blue gray BLK	MH	250	312
Sandstone w/Clay lenses gray	MH	312	328
Fractured sandstone Brown	MH	328	341
Sandstone w/Clay lenses gray	MH	341	358
Sandstone w/Clay shales Brown BLK	MH	358	363
Sandstones w/Clay lenses Blue gray	MH	363	416
Sandstones w/Clay lenses WHITE	MH	416	451
Coal Black	m	451	456
Sandstone gray	MH	456	467
Sandstone w/Clay lenses gray	MH	467	548
Continued on pg. 2			

Work Started 9-8- 19 98 Completed 9-16 19 98

WELL CONSTRUCTOR 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.

NAME Water man Well Drilling Inc (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 106 Bernmasln Selah Wa

(Signed) Chris Hayes (WELL DRILLER) License No. 1908

(Chris Hayes)

Contractor's Registration No WATERW0022DB Date 9/20 19 98

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

Pg 1

ECY 050-1-20 (9/93) * * f

Start Card No. ~~W009393~~

UNIQUE WELL I.D. # ACL 940

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ogy
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WATER WELL REPORT

STATE OF WASHINGTON

Water Right Permit No. _____

(1) OWNER: Name Hugh Stroh Address 6160 Powerline rd Ste Ellensb

(2) LOCATION OF WELL: County Kittitas NW 1/4 SW 1/4 Sec 30 T. 20 N., R. 17 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 6

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____

Abandoned ☐ New well ☐ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well _____ inches. Drilled _____ feet. Depth of completed well _____ ft.

(6) CONSTRUCTION DETAILS:

Casing installed: _____" Diam. from _____ ft. to _____ ft.
Welded ☐ _____" Diam. from _____ ft. to _____ ft.
Liner installed ☐ _____" Diam. from _____ ft. to _____ ft.
Threaded ☐

Perforations: Yes ☐ No ☐
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☐
Manufacturer's Name _____
Type _____ Model No. _____
Diam. ____ Slot size _____ from _____ ft. to _____ ft.
Diam. ____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☐ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☐ No ☐ To what depth? _____ ft.
Material used in seal _____
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level _____ ft. below top of well Date _____
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL		FROM	TO
Sandstone Clay Shell Black	MH	548	556
Sandstone w/Clay lenses gray	MH	556	561
Sandstone Blue gray	MH	561	576
Sandstone White	MH	576	607
Clay Shell Bluegray Black	MH	607	619
Sandstone w/Clay Shell Bluegray Black	MH	619	665

RECEIVED
SEP 28 1998
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work Started 9-8-, 19 98 Completed 8-16, 19 98

WELL CONSTRUCTOR 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.

NAME Waterman Well Drilling Inc (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 106 Berryman Ln Selah Wa 9

(Signed) Chris Hayes (WELL DRILLER) License No. 1908

(Chris Hayes)

Contractor's Registration No. WATERWD022DB Date 9/20/98 19

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

Pg. 2

ECY 050-1-20 (9/93) * * *

File Original with Department of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Notice of Intent W104615

UNIQUE WELL I.D. # ACX-[redacted]632

Water Right Permit No. _____

(1) **OWNER:** Name Hugh Stroh Address 660 Powerline rd Cle Elum WA 98922

(2) **LOCATION OF WELL:** County Kittitas SW 1/4 NE 1/4 Sec 30 T 20 N.R. 16 WM

(2a) **STREET ADDRESS OF WELL:** (or nearest address) _____

TAX PARCEL NO.: _____ G

(3) **PROPOSED USE:** ☒ Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐ DeWater

(4) **TYPE OF WORK:** Owner's number of well (if more than one) _____
☐ New Well ☒ Deepened ☐ Reconditioned ☐ Decommission
Method: ☐ Dug ☐ Cable ☐ Rotary ☐ Bored ☐ Driven ☐ Jetted

(5) **DIMENSIONS:** Diameter of well 10" x 6" x 4" inches
Drilled 305' feet. Depth of completed well 305' ft.

(6) **CONSTRUCTION DETAILS**
Casing Installed:
☒ Welded _____" Diam. from _____ ft. to _____ ft.
☒ Liner installed 4" Diam. from -25 ft. to 305' ft.
☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☒ Yes ☐ No
Type of perforator used Skil saw
SIZE of perforations 1/8" in. by 7 in.
160 perforations from 145' ft. to 305' ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot Size _____ from _____ ft. to _____ ft.
Diam. _____ Slot Size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____
Material placed from _____ ft. to _____ ft.

Surface seal: ☐ Yes ☐ No To what depth? _____ ft.
Material used in seal _____
Did any strata contain unusable water? ☐ Yes ☐ No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) **PUMP:** Manufacturer's Name _____
Type: _____ H.P. _____

(8) **WATER LEVELS:** Land-surface elevation above mean sea level _____ ft.
Static level Aprox. 125' ft. below top of well Date _____
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☐ No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest Aprox 1/2 gal./min. with _____ ft. drawdown after 1 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? ☐ Yes ☐ No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION
Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered.

MATERIAL	FROM	TO
Sandstone + shale - gray-grn. m	160'	166'
Sandstone + shale with	–	–
clay layers - blue-gray. m	166'	200'
shale - brn-gry with	200	207
coal	–	–
shale-gray with clay m	207	251'
shale gray with white clay m	251'	278'
sandstone - white with m	278'	290'
gray shale	–	–
shale-gray with clay m	290'	298'
shale-brn-gry + clay m	298'	305'

RECEIVED
SEP 22 1999
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work Started 9/19/99 Completed 9/20/99

WELL CONSTRUCTION CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and it compliance with all Washington well construction standards. Materials use and the information reported above are true to my best knowledge and belie

Type or Print Name Kelly Olson License No. 1217
(Licensed Driller/Engineer)

Trainee Name _____ License No. _____
Drilling Company Waterman Well Drilling Inc
(Signed) Kelly Olson License No. 1217
(Licensed Driller/Engineer)
Address 1060 Barriman lane Selah W
Contractor's Registration No. WATERMWDC022PB 9/2

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For specia accommodation needs, contact the Water Resources Program at (360) 407 6600. The TDD number is (360) 407-6006.

ECY 050-1-20 (11/98)

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W093937

UNIQUE WELL I.D. # 939 ACL

Water Right Permit No. _____

OWNER: Name Hugh Straoh Address 660 Powerline rd Cle Elum WA 98922

(2) LOCATION OF WELL: County Kittitas - SW 1/4 NE 1/4 Sec 30 T. 20 N., R. 16 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) _____ 6

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____

Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 10X6 inches. Drilled 365 feet. Depth of completed well 365 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +2 ft. to -85 ft.
Welded [X] " Diam. from _____ ft. to _____ ft.
Liner installed [ ] " Diam. from _____ ft. to _____ ft.
Threaded [ ]

Perforations: Yes [ ] No [X]
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

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Screens: Yes [ ] No [X]
Manufacturer's Name _____
Type _____ Model No. _____
Diam. ____ Slot size _____ from _____ ft. to _____ ft.
Diam. ____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes [ ] No [X] Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes [X] No [ ] To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 141 ft. below top of well Date 9-8-98
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom? _____
Yield: 1/2-2 gal./min. with _____ ft. drawdown after _____ hrs.
" ESTIMATED AIRLIFT "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL		FROM	TO
Topsoil Brown	m	0	3
Clays Gravel Brown	mH	3	12
Clay Gravels Cobbles Brown	mH	12	22
Clay Gravels Cobbles Boulders Brown multicolors	H	22	48
Clay Gravels Tan	mH	48	67
Sandstones Blue Gray	mH	67	87
Coal Black	m	87	90
Clayshell Blue green	mH	90	92
Clay Gray	m	92	99
Coal Black	m	99	100
Sandstone Blue gray	mH	100	107
Sandstones w/Clay lenses white	mH	107	135
Sandstones white	mH	135	149
Sandstones w/Clay lenses gray	mH	149	176
Sandstones w/Pe gravel gray	mH	176	193
Coal Black	mS	193	194
Clayshell Blue	mH	194	211
Clay w/Clayshell Blue	m	211	217
Clay w/Clayshell gray	mH	217	230
Sandstone white	mH	230	241
Sandstone gray	mH	241	253
Sandstone white	mH	253	266
Coal Black	mS	266	267
Sandstone Blue gray	mH	267	271
Sandstone w/Clay lenses Blue gray	mH	271	281
Clayshell Blue gray	mH	281	288
Continued			

Work Started 9-1-98 Completed 9-8 19 98

WELL CONSTRUCTOR 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.

NAME Water Man Well Drilling Inc (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 106 Berryman Lane Selah
(Signed) _____ (WELL DRILLER) (Chris Hayes) License No. 1908
Contractor's Registration No. WATERWD022DB Date 9/10/98

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

Page 1

ECY 050-1-20 (9/93) * * f

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W093937

UNIQUE WELL I.D. # ACL939

Water Right Permit No. _____

(1) OWNER: Name Hugh Streoh Address 3444 Teanaway Rd Cle Elum

(2) LOCATION OF WELL: County Kittitas SW 1/4 NE 1/4 Sec 30 T. 20 N., R. 16 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) _____

(3) PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____

Abandoned ☐ New well ☐ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well _____ inches. Drilled _____ feet. Depth of completed well _____ ft.

(6) CONSTRUCTION DETAILS:

Casing installed: _____" Diam. from _____ ft. to _____ ft.
Welded ☐ _____" Diam. from _____ ft. to _____ ft.
Liner installed ☐
Threaded ☐ _____" Diam. from _____ ft. to _____ ft.

Perforations: Yes ☐ No ☐
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☐
Manufacturer's Name _____
Type _____ Model No. _____
Diam. ____ Slot size _____ from _____ ft. to _____ ft.
Diam. ____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☐ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☐ No ☐ To what depth? _____ ft.
Material used in seal _____
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level _____ ft. below top of well Date _____
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Continued from Pg 1		
Sandstones w/Clay lenses Blue Gray mH	288	303
Coal BLK mS	303	304
Sandstones Blue gray mH	304	305
Sandstones w/Clay lenses gray mH	305	309
Sandstones White mH	309	334
Sandstones Blue mH	334	337
Sandstones Fractures Dek Gray mH	337	339
Sandstones Blue mH	339	345
Sandstones gray mH	345	365

RECEIVED
SEP 17 1998
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work Started 9-1 19 98 Completed 9-8 19 98

WELL CONSTRUCTOR 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.

NAME Water Man Well Drilling Inc (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 106 Berriman Ln. Selah Wa

(Signed) _____ (WELL DRILLER) License No. 1908 (Chris Hayes)

Contractor's Registration No. WATERWD022DB Date 9/10/98

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

Page 2

ECY 050-1-20 (9/93) * * *

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W104905
UNIQUE WELL I.D. # AE6456
Water Right Permit No. _____

(1) **OWNER:** Name CURT SAMPSON Address 1701 AIRPORT RD. ELLENSBURG

(2) **LOCATION OF WELL:** County KITTITAS SW 1/4 NE 1/4 Sec 30 T. 20 N., R. 16 W.M.

(2a) **STREET ADDRESS OF WELL** (or nearest address) P.O BOX 171 EASTON, WA. 98925 6

(3) **PROPOSED USE:** [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) **TYPE OF WORK:** Owner's number of well (if more than one) _____
Abandoned [X] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [ ] Rotary [X] Jetted [ ]

(5) **DIMENSIONS:** Diameter of well 6 inches. Drilled 224 feet. Depth of completed well 224 ft.

(6) **CONSTRUCTION DETAILS:**
Casing installed: 6 " Diam. from +3 ft. to 217 ft.
Welded [X] _____ " Diam. from _____ ft. to _____ ft.
Liner installed [ ] _____ " Diam. from _____ ft. to _____ ft.
Threaded [ ]

Perforations: Yes [ ] No [X]
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes [ ] No [X]
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes [ ] No [X] Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes [X] No [ ] To what depth? 18 ft.
Material used in seal Cement Bentonite
Did any strata contain unusable water? Yes [X] No [ ]
Type of water? SAND SILT CLAY Depth of strata 224
Method of sealing strata off CASED

(7) **PUMP:** Manufacturer's Name _____
Type: _____ H.P. _____

(8) **WATER LEVELS:** Land-surface elevation above mean sea level _____ ft.
Static level 50 ft. below top of well Date 9/10/98
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 30 gal./min. with stem set at 200 ft. for 4 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes [ ] No [X]

(10) **WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION**

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL		FROM	TO
SANDY LOAM & GRVL		0	12
GRAY CLAY	H	12	98
GRVL IN CLAY GRAY	H	98	104
CLAY	H	104	110
COARSE GRVL SILT WB SAND PINK	S	110	132
SOUPY CLAY & SAND SOFT 6PM-	S	132	144
WILL NOT CLEAN UP	S	144	195
HEAVING SAND GRVL SILT	S	195	197
CLAY GRAY	H	197	224

RECEIVED
OCT 29 1998
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work Started 9/1/98, 19. Completed 9/10/98, 19

WELL CONSTRUCTOR 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.

NAME BIEBLE WELL DRILLING (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address P.O BOX 10566 YAKIMA, WA. 98901

(Signed) _____ (WELL DRILLER) License No. 0422

Contractor's Registration No. PWB132M1 Date 9-11-98, 19

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93)

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. 268

Permit No. G

(1) OWNER: Name Don Mountjay Address Cle Elum

LOCATION OF WELL: County Kittitas — SW ¼ NE ¼ Sec 30 T 20 N., R 16 W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☑ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)....
New well ☑ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☑ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 185 ft. Depth of completed well 185 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 0 ft. to 85 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☐ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☑
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☑
Manufacturer's Name
Type Model No
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☑ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☑ No ☐ To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level.... ft.
Static level ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 10 gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Clay	0	12
Clay - gravel	12	30
Brown sandstone	30	80
Brown broken basalt	80	85
Brown sandstone	85	120
Gray sandstone	120	180
Blue shale	180	185

RECEIVED
OCT - 1 1987
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work started 9-15, 19 87 Completed 9-17, 19 87

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

ENTERED

NAME Bach Drilling Co.
(Person, firm, or corporation) (Type or print)

Address Rt. 5, Box 1010, Ellensburg

[Signed] Mike Bach
(Well Driller)

License No. 22 Date 9-26, 19 87

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

3

3490

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 10483

Water Right Permit No. G

OWNER: Name RON MOE Address LENNIGAN SPRINGS

(2) LOCATION OF WELL: County KITTITAS SW ¼ NE ¼ Sec 30 T 20 N., R 16 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address)

(3) PROPOSED USE: ☑ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one)
Abandoned ☐ New well ☑ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☑ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 260 feet. Depth of completed well 260 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from 0 ft. to 100 ft.
Welded ☑ Liner installed ☐ Threaded ☐ 4PVC " Diam. from -5 ft. to 260 ft.
" Diam. from ft. to ft.

Perforations: Yes ☐ No ☐
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☐
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☐ Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes ☑ No ☐ To what depth? 20 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test

Bailer test gal./min. with ft. drawdown after hrs.
Airtest 7½ gal./min. with stem set at 260 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
DIRT - GRAVEL	0	40
CLAY	40	85
SANDSTONE (BLUE)	85	200
SANDSTONE (GREEN) 3 GPM	200	220
SANDSTONE (WHITE) 7 GPM	220	260

RECEIVED
JUL 31 1990
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

ENTERED

Work started 6-1, 19. Completed 6-3, 1990

WELL CONSTRUCTOR 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.

NAME BACH DRILLING (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address RT 5 BOX 1010 ELLENSBURG WA.

(Signed) Mike Bach (WELL DRILLER) License No. 22

Contractor's Registration No. MIKEBDC133N4 Date 6-3, 1990

(USE ADDITIONAL SHEETS IF NECESSARY)

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. 34118
Permit No. .... H

OWNER: Name Wally Shear Address Lenniger Springs

LOCATION OF WELL: County Kittitas — SE ¼ NE ¼ Sec. 30 T. 20 N., R. 16 E W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☐ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 238 ft. Depth of completed well 238 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from 0 ft. to 80 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level .... 2,200 ft.
Static level 125 ft. below top of well Date 3/10/91
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Overburden	0	6
Clay lite brown	6	22
boulder grey	22	23
Clay lite brown	23	40
phalite	40	46
Clay lite brown	46	48
phalite	48	55
gravel small	55	65
gravely clay grey	65	73
Clay grey sandy	73	86
Clay dark grey hard	86	89
phalite soft	89	93
Clay grey hard	93	128
Sandstone grey hard	128	130
Clay dark grey sandy	130	180
phalite	180	181
Clay grey sandy	181	228
Sandstone lite water bearing	228	238

Air test with stem at 233 yield 6+ gpm

RECEIVED
APR - 8 1991
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work started 2/11, 19 91. Completed 2/14, 19 91

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME American Drilling
(Person, firm, or corporation) (Type or print)
Address PO Bx 89 Cle Elum WA 98922

[Signed] Mark Blair
(Well Driller)

License No. 1887 Date Feb 26, 19 91

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 083769

Water Right Permit No. K

(1) **OWNER:** Name City of Cle Elum Address Cle Elum, Wa.

(2) **LOCATION OF WELL:** County Kittitas NW ¼ SE ¼ Sec 30 T. 20 N., R. 16 W.M.

(2a) **STREET ADDDRESS OF WELL** (or nearest address) Cle Elum Municipal Air Port

(3) **PROPOSED USE:** [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) **TYPE OF WORK:** Owner's number of well (If more than one) _____

Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [ ] Rotary [X] Jetted [ ]

(5) **DIMENSIONS:** Diameter of well 6 inches. Drilled 180 feet. Depth of completed well 180 ft.

(6) **CONSTRUCTION DETAILS:**

Casing installed: 6 " Diam. from +1 ft. to 180 ft.

Welded [X] _____ " Diam. from _____ ft. to _____ ft.

Liner installed [ ]

Threaded [ ] _____ " Diam. from _____ ft. to _____ ft.

Perforations: Yes [ ] No [X]

Type of perforator used _____

SIZE of perforations _____ in. by _____ in.

_____ perforations from _____ ft. to _____ ft.

_____ perforations from _____ ft. to _____ ft.

_____ perforations from _____ ft. to _____ ft.

Screens: Yes [ ] No [X]

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes [ ] No [X] Size of gravel _____

Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes [X] No [ ] To what depth? 20 ft.

Material used in seal Bentonite

Did any strata contain unusable water? Yes [ ] No [X]

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

(7) **PUMP:** Manufacturer's Name _____

Type: _____ H.P. _____

(8) **WATER LEVELS:** Land-surface elevation above mean sea level _____ ft.

Static level 102 ft. below top of well Date 9/11/91

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (Cap, valve, etc.)

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level

Was a pump test made? Yes [ ] No [X] If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

" " " "

" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Baller test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 10 gal./min. with stem set at 180 ft. for 4 hrs.

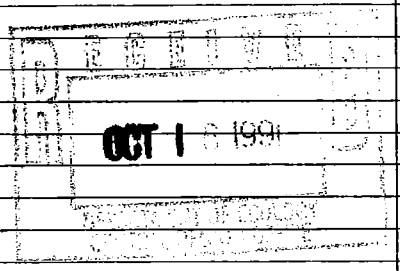
Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? Yes [ ] No [X]

(10) **WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION**

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Overburden and rock	0	12
Br. clay, boulders, & rock	12	32
Small gravel and sand	32	56
Br. clay, sand and small gravel	56	75
Blue clay	75	167
Sand, Gravel and water	167	180



Work started 9/5/91, 19. Completed 9/11/91, 19

WELL CONSTRUCTOR 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 bes knowledge and belief.

NAME Water Wells Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 5503 Ahtanum Rd., Yakima, Wa.

(Signed) Vernon L. Rank (WELL DRILLER) License No. 0854

Contractor's Registration No. WATERWD112QB Date 9/13/91, 19

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329- 3

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. WO 50380

UNIQUE WELL I.D. # ACL - 120

Water Right Permit No. _____

OWNER: Name Clyde Eastwood Address 1110 White rd Cle Elum wa 9896

(2) LOCATION OF WELL: County Kittitas - NW 1/4 SE 1/4 Sec 30 T. 20 N., R 16 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) _____

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (If more than one) _____

Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 10 x 6 inches. Drilled 365 feet. Depth of completed well 365 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from +2 ft. to 216 ft.
Welded ☑ 4 1/2" Diam. from -25 ft. to 365 ft.
Liner installed ☑
Threaded ☐ _____" Diam. from _____ ft. to _____ ft.

Perforations: Yes ☒ No ☐
Type of perforator used Skilsaw
SIZE of perforations 1/8 in. by 6 in.
240 perforations from 305 ft. to 365 ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name _____
Type _____ Model No. _____
Diam. ____ Slot size _____ from _____ ft. to _____ ft.
Diam. ____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 100 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

JAN - 8

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 164 ft. below top of well Date _____
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? _____
Yield: 12-15 gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
	Approx Airlift	12-15	9pm		

Date of test _____
Baller test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Sticky Sandy Clay Orange-Brn	0	14
gravel w/clay w/cobbles grey	14	26
Clay w/ gravels OK grey	26	28
Boulders - multi color w/ gravel	28	37
Clay - Sandstone grey w/ gravel	37	93
Sandstone - gravels w/ Coal - Phyllite	93	114
Sandstone w/ gravels - grey shale	114	121
grey clay w/ sandstone m	121	129
Clay - shale grey w/ Pyrite	129	132
Clay - Sandstone grey m/s	132	146
Sandy Sandstone wh/grey some coal	146	152
grey sandstone w/clay m/H	152	202
Sandy clay grey (S) w/ shale	202	212
Clay grey w/ Brn Sandstone	212	214
Sand Rock grey - Brn (H)	214	230
Sandy Sandroc w/clay grey	230	238
Sandstone grey Blk white m/H	238	296
OK grey Sandstone w/H grey clay	296	327
Sandstone - Shale Blk - Grey	327	331
OK grey Sandstone w/H grey Clay	331	352
Sandroc w/grey shale - Coal	352	365
100' Surface Seal		
16 Bags Bentonite		
6" Prior Shoe		

Work Started DEC 5 19. Completed DEC 13 19 96

WELL CONSTRUCTOR 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.

NAME Water Man Well Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 106 Berrigan lane Selah Wa

(Signed) _____ (WELL DRILLER) License No. 2060

Contractor's Registration No. WATERMW064J2 Date Jan 6 19 97

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93) * * I

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 57133

Water Right Permit No. K

(1) **OWNER:** Name Mike Slack Address Cle Elum, Deveres Airstrip

(2) **LOCATION OF WELL:** County Kittitas NW¼ SE¼ Sec 30 T. 20 N., R. 16E W.M.

(2a) **STREET ADDDRESS OF WELL** (or nearest address) Deveres Airstrip

(3) **PROPOSED USE:** ☒ Domestic ☐ Irrigation ☐ DeWater ☐ Industrial ☐ Test Well ☐ Municipal ☐ Other ☐

(4) **TYPE OF WORK:** Owner's number of well (if more than one) _____
Abandoned ☐ New well ☒ Deepened ☐ Reconditioned ☐ Method: Dug ☐ Cable ☐ Rotary ☒ Bored ☐ Driven ☐ Jetted ☐

(5) **DIMENSIONS:** Diameter of well 6 inches. Drilled 0 feet. Depth of completed well 440 ft.

(6) **CONSTRUCTION DETAILS:**
Casing installed: 6 " Diam. from 0 ft. to 170 ft.
Welded ☒ Liner installed ☐ Threaded ☐ _____ " Diam. from _____ ft. to _____ ft.
_____ " Diam. from _____ ft. to _____ ft.

Perforations: Yes ☐ No ☒
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal _____
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) **PUMP:** Manufacturer's Name _____
Type: _____ H.P. _____

(8) **WATER LEVELS:** Land-surface elevation above mean sea level 1,500 ft.
Static level Flowing ft. below top of well Date 8/8/91
Artesian pressure 2 lbs. per square inch Date 8/8/91
Artesian water is controlled by Watertite cap (Cap, valve, etc.)

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 5 gal./min. with stem set at 43X ft. for 1 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☒

(10) **WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION**

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated with at least one entry for each change of information.

MATERIAL	FROM	TO
Sandy Loam	0	2
Boulders	2	10
Gravel lg w/ boulders + trace of clay gray	10	14
Clay Blue/gray, trace of Phillite	14	45
Clay Gray more phialite	45	52
Clay gray, very sandy trace of phialite - some water	52	84
Clay Gray	84	112
Clay gray w/ a little gravel	112	155
Course sand w/ silt + trace of clay gray	155	168
Sandstone white	168	215
Sandy clay green hard	215	217
Sandstone white, w/ traces of phialite brown + clay white	217	440

RECEIVED
AUG 0 1991
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work started 8/1, 19 91 Completed 8/8, 19 91

WELL CONSTRUCTOR 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 bes knowledge and belief.

NAME American Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address PO Box 89 cle Elum WA 98

(Signed) Mark Black (WELL DRILLER) License No. 1887

Contractor's Registration No. AMERID*124OW Date 9/20, 19 91

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329- 3

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. ....
Permit No. ....

(1) OWNER: Name Mike Willette Address Rt 2, Box 16 Cle Elum

(2) LOCATION OF WELL: County Kititas SE — NW ¼ SE ¼ Sec 30 T 20 N., R 16 W.M.
Bearing and distance from section or subdivision corner Airport Rd.

(3) PROPOSED USE: Domestic [X] Industrial [ ] Municipal [ ]
Irrigation [ ] Test Well [ ] Other [ ]

(4) TYPE OF WORK: Owner's number of well (if more than one).... 1
New well [ ] Method: Dug [ ] Bored [ ]
Deepened [ ] Cable [X] Driven [ ]
Reconditioned [X] Rotary [ ] Jetted [X]

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled .... ft. Depth of completed well .... ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 4½ PVC Diam. from 0 ft. to 322 ft.
Threaded [X] .... " Diam. from .... ft. to .... ft.
Welded [X] .... " Diam. from .... ft. to .... ft.

Perforations: Yes [ ] No [X]
Type of perforator used ....
SIZE of perforations .... in. by .... in.
.... perforations from .... ft. to .... ft.
.... perforations from .... ft. to .... ft.
.... perforations from .... ft. to .... ft.

Screens: Yes [X] No [ ] KOP Johnson
Manufacturer's Name ....
Type PVC Model No ....
Diam. 4½ Slot size 8 from 200 ft. to 205 ft.
Diam. .... Slot size 11 from 230 ft. to 235 ft.
11 245 250

Gravel packed: Yes [ ] No [X] Size of gravel: ....
Gravel placed from .... ft. to .... ft.

Surface seal: Yes [X] No [ ] To what depth? 18' ft.
Material used in seal ....
Did any strata contain unusable water? Yes [ ] No [ ]
Type of water? .... Depth of strata ....
Method of sealing strata off ....

(7) PUMP: Manufacturer's Name ....
Type: .... H.P. ....

(8) WATER LEVELS: Land-surface elevation above mean sea level.... .... ft.
Static level 491 ft. below top of well Date ....
Artesian pressure .... lbs. per square inch Date ....
Artesian water is controlled by .... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [ ] If yes, by whom? ....
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test AUG 20 1985
Bailer test .... gal./min. with .... ft. drawdown after .... hrs.
Artesian flow .... g.p.m. Date ....
Temperature of water .... Was a chemical analysis made? Yes [ ] No [X]

DEPARTMENT OF ECOLOGY CENTRAL REGION

(10) WELL LOG:
Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Poured 5 gal. of gravel in hole, Run bailer and checked hole bottom at 329 ft. Run 5 gal of cement in bottom of hole. Cut 6" casing off at 273.9" Gravel and cement keep settling down hole thru soupy silt. 8 hr.		
Sounded hole out bottom 322 ft. Run 4½" PVC like 11' 6" getting it down where we want it. Had to rig up and drill hole in cap on end of PVC and try to get it down. Put several back together and riged up and started running 1½" in hole. 7 hrs.		
Jetted 4½" PVC to 322 ft. pulled 1½" and rigged up to drive 6" back . Can not get 6" casing to slip over 4½" PVC . PVC keeps comming up hole with 6". 8 Hr		
Cut dive back took off. Run trimmy pipe to 275 ft. Hole was pluged with clay at 273' Pumped 1½ bags revert in hole approx 500 gpm No return, Pulled trimmy pipe, tied on to casing to pull and hammer drive on it with 6" hammer. Finally worked casing back 28 ft. w/ 4½ PVC working up and down. 9 hrs.		
Worked 6" casing back to 183 ft. Run 1½ trimmy pipe with jetting tool and developed screen. There is very little water in screen at 250 ft. at 235 what fluid we had was mostly silt approx 3 gpm. Screen at 200 to 205 is in good shape. But silt is comming in heavy approx 2½ gpm total at 200 ft. 8 hrs.		

Work started .... 19 .... Completed .... 19 ....

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Riebe Well Drilling
(Person, firm, or corporation) (Type or print)

Address 1503 E. Nob Hill Blvd.

[Signed] .... (Well Driller)

License No. 0422 Date 11/28/84, 19....

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

K

Application No. ....

Permit No. ....

(1) OWNER: Name Mike Willette Address Rt 2 Box 16 Ele Elum

(2) LOCATION OF WELL: County Kititas — SE ¼ SE ¼ Sec 30 T 20 N., R 16 W.M.

Bearing and distance from section or subdivision corner Airport Rd. NW

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one).... #1
New well ☐ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☒ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled .... ft. Depth of completed well .... ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 4½ PVC Diam. from 0 ft. to 322 ft.
Threaded ☒ .... Diam. from .... ft. to .... ft.
Welded ☐ .... Diam. from .... ft. to .... ft.

Perforations: Yes ☐ No ☒
Type of perforator used ....
SIZE of perforations .... in. by .... in.
.... perforations from .... ft. to .... ft.
.... perforations from .... ft. to .... ft.
.... perforations from .... ft. to .... ft.

Screens: Yes ☒ No ☐
Manufacturer's Name UOP Johnson
Type PVC Model No ....
Diam. 4½ Slot size 8 from 200 ft. to 205 ft.
Diam. .... Slot size .... from 230 (245) ft. to 235 (250) ft.

Gravel packed: Yes ☐ No ☐ Size of gravel: ....
Gravel placed from .... ft. to .... ft.

Surface seal: Yes ☒ No ☐ To what depth? 18+ ft.
Material used in seal ....
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? .... Depth of strata ....
Method of sealing strata off ....

(7) PUMP: Manufacturer's Name ....
Type: .... H.P. ....

(8) WATER LEVELS: Land-surface elevation above mean sea level.... .... ft.
Static level 491 ft. below top of well Date ....
Artesian pressure .... lbs. per square inch Date ....
Artesian water is controlled by .... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? ....
Yield: .... gal./min. with .... ft. drawdown after .... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ....
Bailer test .... gal./min. with .... ft. drawdown after .... hrs.
Artesian flow .... g.p.m. Date ....
Temperature of water .... Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Brought up load of shot rock. Started back filling well and developing it. Have approx 5 gpm developing at 185 ft. Back filled to 230 ft. gravel is still settling some. water is clearing. 6 h		
Keepback filling hole and developing until water cleared up fairly good. Back billed in to 190 ft.		
We had 5 gals. of water in 40 seconds. from 180 ft. Water is a little cloudy S.W.L. 49' Top of gravel in hole is at 190 ft. 5 hrs.		

RECEIVED
AUG 20 1985
DEPARTMENT OF ECOLOGY
CENTRAL REGION

Work started 11/5/84, 19.... Completed 11/16/84 19....

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Riebe Well Drilling
(Person, firm, or corporation) (Type or print)

Address 1503 E. Nob Hill Blvd.

[Signed] John M. Riebe
(Well Driller)

License No. 0422 Date 11/28/84, 19....

(USE ADDITIONAL SHEETS IF NECESSARY)

050-1-20

3

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

L

Application No. .....

Permit No. ....

(1) OWNER: Name Mike McKoy Address LAWIGAN Springs, Cle Elum, WA.

(2) LOCATION OF WELL: County KITITAS NE ¼ SW ¼ Sec 30 T. 20 N., R. 16 W.M.

...ring and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☑ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well ☑ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☑ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 180 ft. Depth of completed well 180 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 0 ft. to 120 ft.
Threaded ☐ ..... " Diam. from ..... ft. to ..... ft.
Welded ☑ ..... " Diam. from ..... ft. to ..... ft.

Perforations: Yes ☐ No ☑
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☑
Manufacturer's Name .....
Type ..... Model No .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☑ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☑ No ☐ To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level ....ft.
Static level 55 ft. below top of well Date .....
Artesian pressure .....lbs. per square inch Date .....
Artesian water is controlled by .....
(Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? .....
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test 8 gal./min. with ..... ft. drawdown after ..... hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Dirt - gravel	0	15
SANDSTONE	15	180
WATER AT 130FT - 180FT		

RECEIVED
OCT 31 1988
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work started 9-20, 1988 Completed 9-25, 1988

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Bach Drilling
(Person, firm, or corporation) (Type or print)

Address Rt 5, Box 1010, Ellensburg, WA.

[Signed] Mike Bach
(Well Driller)

License No. 22 Date 10-5, 1988

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W37300
Unique Well I.D. # ABL241
Water Right Permit No.

(1) OWNER: Name DENEEN, PAT Address 1890 NELSON SIDING ROAD CLE ELUM, WA 98922-

(2) LOCATION OF WELL: County KITTITAS - N 1/4 SW 1/4 Sec 30 T 20 N., R 16E WM
(2a) STREET ADDRESS OF WELL (or nearest address)

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one) 1
NEW WELL Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 250 ft. Depth of completed well 250 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from +2 ft. to 200 ft.
WELDED 4 " Dia. from 150 ft. to 250 ft.
" Dia. from ft. to ft.

Perforations: YES
Type of perforator used SKILL SAW
SIZE of perforations 1/8 in. by 6 in.
102 perforations from 230 ft. to 250 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: NO
Manufacturer's Name
Type Model No.
Dia. slot size from ft. to ft.
Dia. slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: YES To what depth? 20 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off OVERBORE

(7) PUMP: Manufacturer's Name
Type H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level N/A ft. below top of well Date 09/23/94
Artesian Pressure lbs. per square inch Date
Artesian water controlled by

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? NO If yes, by whom?
Yield: gal./min with ft. drawdown after hrs.

Recovery data
Time Water Level Time Water Level Time Water Level

Date of test / /
Bailer test gal/min. ft. drawdown after hrs.
Air test 30 gal/min. w/ stem set at ft. for hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
HARD CLAY	0	8
COBBLES AND SILT	8	22
SAND GRAVEL LARGE	22	55
DARK GREY CLAY	55	116
GREY CLAY AND GRAVEL	116	125
BASALT BOULDERS HARD	125	133
SAND GRAVEL GREEN	133	173
SANDSTONE CLAY GREEN	173	176
SANDY SANDSTONE GREEN	176	190
SAND ROCK GRAY	190	228
SANDSTONE WHITE SHALE	228	250
	250	

OCT 13 1994

Work started 09/22/94 Completed 09/23/94

WELL CONSTRUCTOR 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.

NAME PONDEROSA DRILLING
(Person, firm, or corporation) (Type or print)

ADDRESS E 6810 BROADWAY

[SIGNED] License No. 2060

Contractor's Registration No. PO-ND-EI*248JE Date 09/30/94

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W37300
Unique Well I.D. # ABL241
Water Right Permit No.

(1) OWNER: Name DENEEN, PAT Address 1890 NELSON SIDING ROAD CLE ELUM, WA 98922-

(2) LOCATION OF WELL: County KITTITAS - N 1/4 SW 1/4 Sec 30 T 20 N., R 16E WM
(2a) STREET ADDRESS OF WELL (or nearest address) ,

L/M

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one) 1
NEW WELL Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 250 ft. Depth of completed well 250 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from + 2 ft. to 200 ft.
WELDED 4 " Dia. from 150 ft. to 250 ft.
" Dia. from ft. to ft.

Perforations: YES
Type of perforator used SKILL SAW
SIZE of perforations 1/8 in. by 6 in.
102 perforations from 230 ft. to 250 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: NO
Manufacturer's Name
Type Model No.
Diam. slot size from ft. to ft.
Diam. slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: YES To what depth? 20 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off OVERBORE

(7) PUMP: Manufacturer's Name
Type H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level N/A ft. below top of well Date 09/23/94
Artesian Pressure lbs. per square inch Date
Artesian water controlled by

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? NO If yes, by whom?
Yield: gal./min with ft. drawdown after hrs.

Recovery data

Time	Water Level	Time	Water Level	Time	Water Level

Date of test / /
Bailer test gal/min. ft. drawdown after hrs.
Air test 30 gal/min. w/ stem set at ft. for hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
HARD CLAY	0	8
COBBLES AND SILT	8	22
SAND GRAVEL LARGE	22	55
DARK GREY CLAY	55	116
GREY CLAY AND GRAVEL	116	125
BASALT BOULDERS HARD	125	133
SAND GRAVEL GREEN	133	173
SANDSTONE CLAY GREEN	173	176
SANDY SANDSTONE GREEN	176	190
SAND ROCK GRAY	190	228
SANDSTONE WHITE SHALE	228	250
	250	

RECEIVED
OCT 17 1994

Work started 09/22/94 Completed 09/23/94

WELL CONSTRUCTOR 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.

NAME PONDEROSA DRILLING
(Person, firm, or corporation) (Type or print)

ADDRESS ~~E 6010~~ BROADWAY

[SIGNED] License No. 2060

Contractor's
Registration No. PO-ND-EI*248JE Date 10/11/94

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W087955

UNIQUE WELL I.D. # ACh-609

Water Right Permit No. _____

OWNER: Name Mike Gavin Address 21720 Nootka rd Edmonds Wa 980

(2) LOCATION OF WELL: County Kittitas SW 1/4 SE 1/4 Sec 30 T. 20 N., R 16 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) _____

(3) PROPOSED USE: ☑ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____

Abandoned ☐ New well ☑ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☑ Jetted ☐

(5) DIMENSIONS: Diameter of well 10 X 6 inches. Drilled 173 feet. Depth of completed well 173 ft.

(6) CONSTRUCTION DETAILS:

Casing Installed: 6 " Diam. from +2 ft. to 172 ft.
Welded ☑
Liner installed ☐ _____ " Diam. from _____ ft. to _____ ft.
Threaded ☐ _____ " Diam. from _____ ft. to _____ ft.

Perforations: Yes ☐ No ☑
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☑
Manufacturer's Name _____
Type _____ Model No. _____
Diam. ____ Slot size _____ from _____ ft. to _____ ft.
Diam. ____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☑ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☑ No ☐ To what depth? 18 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level -0 ft. below top of well Date _____
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by CAP (VALVE - GUAGE (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? _____
Yield: 30 gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
APROX AIRLIFT 30 GPM "
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
loam - gravels DK BRN m	0	4
Sand-n-gravels Cemented BRN/BLK	4	7
gravels & cobbles BRN/gray m/H	7	11
CLAY w/coal seams Blue gray ms	11	90
CLAY Blue gray w/coal seams	90	103
CLAY gray ms	103	155
Sand gray ms	155	164
Sand-n-gravels gray m H	164	173

MAY 12 1997

Work Started APRIL 23, 19. Completed APRIL 29, 1997

WELL CONSTRUCTOR 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.

NAME Water man Well Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 106 Berriman Dr Selah Wa 98942

(Signed) _____ (WELL DRILLER) License No. 2060

Contractor's Registration No. WATERMW064J2 Date may 2, 1997

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93) * * f

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. WO 50992
UNIQUE WELL I.D. # ABL 132
Water Right Permit No.

(1) OWNER: Name Candy Giser Address 9619 166th St Court CT east Pullap Wa 9837

(2) LOCATION OF WELL: County Kittitas SW 1/4 SE 1/4 Sec 30 T. 20 N., R 16 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address)

(3) PROPOSED USE: [X] Domestic [ ] Irrigation [ ] DeWater [ ] Industrial [ ] Test Well [ ] Municipal [ ] Other

(4) TYPE OF WORK: Owner's number of well (If more than one)
[ ] Abandoned [X] New well [ ] Deepened [ ] Reconditioned
Method: [ ] Dug [ ] Cable [X] Rotary [ ] Bored [ ] Driven [ ] Jetted

(5) DIMENSIONS: Diameter of well 10" 6" inches.
Drilled 196 feet. Depth of completed well 196 ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: 6" Diam. from + 2 ft. to 196 ft.
[X] Welded ___" Diam. from ___ ft. to ___ ft.
[ ] Liner installed
[ ] Threaded ___" Diam. from ___ ft. to ___ ft.

Perforations: Yes [ ] No [X]
Type of perforator used
SIZE of perforations ___ in. by ___ in.
___ perforations from ___ ft. to ___ ft.
___ perforations from ___ ft. to ___ ft.
___ perforations from ___ ft. to ___ ft.

Screens: Yes [ ] No [X]
Manufacturer's Name
Type ___ Model No.
Diam. ___ Slot size ___ from ___ ft. to ___ ft.
Diam. ___ Slot size ___ from ___ ft. to ___ ft.

Gravel packed: Yes [ ] No [X] Size of gravel
Gravel placed from ___ ft. to ___ ft.

Surface seal: Yes [X] No [ ] To what depth? 24' ft.
Material used in seal Bentonite + Cement
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? ___ Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: ___ H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ___ ft.
Static level + 2 ft. below top of well Date
Artesian pressure 0 lbs. per square inch Date
Artesian water is controlled by Cap Valve (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom?
Yield: ___ gal./min. with ___ ft. drawdown after ___ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
	Aprox	5 gpm			
	Air	Lift			

Date of test
Bailer test ___ gal./min. with ___ ft. drawdown after ___ hrs.
Airtest ___ gal./min. with stem set at ___ ft. for ___ hrs.
Artesian flow 4 gpm g.p.m. Date
Temperature of water ___ Was a chemical analysis made? Yes [ ] No [ ]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Sand Clay Gravel Brown m	0	4
Sand Gravel cobbels H	4	8
Sand Gravel Clay Brown M H	8	11
Clay with coal seams Blue Gray MS	11	95
Clay Gravel cobbels Blue Gray M H	95	106
Clay Blue Gray m	106	116
Clay Gray m	116	168
Sand Gray S	168	175
Sand Gravel Gray m	175	196

JUL 27 1995

Work Started 7/12/95, 19. Completed 7/14/95, 19

WELL CONSTRUCTOR 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.

NAME Water man Well Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 106 Berriman ln Selah Wa 98
(Signed) Steve Mills (WELL DRILLER) License No. 1335
Contractor's Registration No. WATERMW064J2 Date 7/26/95, 19

(USE ADDITIONAL SHEETS IF NECESSARY)

ECL 050-1-20 (2/93)

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W089668
UNIQUE WELL I.D. # ACL 820
Water Right Permit No. ______

OWNER: Name Nick Coby Address 280 Lanigan P.O. Box 544 Cle Elum WA

(2) LOCATION OF WELL: County Kittitas — SE 1/4 SE 1/4 Sec 30 T. 20 N., R 16 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) ______

(3) PROPOSED USE: [x] Domestic [ ] Irrigation [ ] DeWater Industrial [ ] Test Well [ ] Municipal [ ] Other [ ]

(4) TYPE OF WORK: Owner's number of well (If more than one) ______
Abandoned [ ] New well [x] Deepened [ ] Reconditioned [ ]
Method: Dug [ ] Cable [ ] Rotary [x] Bored [ ] Driven [ ] Jetted [ ]

(5) DIMENSIONS: Diameter of well 10 - 6 inches.
Drilled 77 feet. Depth of completed well 77 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +2 ft. to 58 ft.
Welded [x] ______ " Diam. from ______ ft. to ______ ft.
Liner installed [ ] ______ " Diam. from ______ ft. to ______ ft.
Threaded [ ]

Perforations: Yes [x] No [ ]
Type of perforator used Skillsaw
SIZE of perforations 1/8 in. by 12 in.
40 perforations from 57 ft. to 77 ft.
______ perforations from ______ ft. to ______ ft.
______ perforations from ______ ft. to ______ ft.

Screens: Yes [ ] No [x]
Manufacturer's Name ______
Type ______ Model No. ______
Diam. ______ Slot size ______ from ______ ft. to ______ ft.
Diam. ______ Slot size ______ from ______ ft. to ______ ft.

Gravel packed: Yes [ ] No [x] Size of gravel ______
Gravel placed from ______ ft. to ______ ft.

Surface seal: Yes [x] No [ ] To what depth? 20 ft.
Material used in seal Benonite
Did any strata contain unusable water? Yes [ ] No [x]
Type of water? ______ Depth of strata ______
Method of sealing strata off ______

(7) PUMP: Manufacturer's Name ______
Type: ______ H.P. ______

(8) WATER LEVELS: Land-surface elevation above mean sea level ______ ft.
Static level 25 ft. below top of well Date 10-23-97
Artesian pressure ______ lbs. per square inch Date ______
Artesian water is controlled by ______ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [ ] If yes, by whom? ______
Yield: ______ gal./min. with ______ ft. drawdown after ______ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ______
Bailer test ______ gal./min. with ______ ft. drawdown after ______ hrs.
Airtest 12 gal./min. with stem set at 57 ft. for 1 hrs.
Artesian flow ______ g.p.m. Date ______
Temperature of water ______ Was a chemical analysis made? Yes [ ] No [ ]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Top Soil	0	2
Boulder, BR Clay	2	12
BR Clay	12	15
Gray Clay	15	28
Coal Hard	28	32
Gray Clay & Coal	32	35
Blue & Gray Clay	35	42
Shale & Gray Clay	42	71
Sand Stone white (water)	71	75
Blue & Gray Shale	75	77

RECEIVED
NOV 10 1997
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work Started 10-22 19. Completed 10-23 1997

WELL CONSTRUCTOR 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.

NAME WaTerman Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 106 Berriman ln Selah Wa 9894
(Signed) Jody L Carpenter (WELL DRILLER) License No. 1900
Contractor's Registration No. WATERMW044U2 Date 10/24/97, 19

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93)

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W093573

UNIQUE WELL I.D. # _____

Water Right Permit No. _____

(1) OWNER: Name CECIL CARJETH Address P.O. BOX 310 CLE ELUM 98922

(2) LOCATION OF WELL: County KITTITAS NE 1/4 NE 1/4 Sec 31 T. 20 N., R 16 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) AIRPORT ROAD A

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____

Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 440 feet. Depth of completed well 440 ft.

(6) CONSTRUCTION DETAILS:

Casing Installed: 6" Diam. from 0 ft. to 258 ft.
Welded ☒ 4" Diam. from 20 ft. to 440 ft.
Liner installed ☐
Threaded ☐ _____" Diam. from _____ ft. to _____ ft.

Perforations: Yes ☒ No ☐
Type of perforator used SKILSAW
SIZE of perforations 7 1/4 in. by 1/8 in.
120 perforations from 360 ft. to 420 ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☐
Manufacturer's Name _____
Type _____ Model No. _____
Diam. ____ Slot size _____ from _____ ft. to _____ ft.
Diam. ____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☐ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 20 ft. below top of well Date 4/24/98
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 15-20 gal./min. with stem set at 420 ft. for 2 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
SOIL, COBBLES	0	18
CLAY, MED GRAVEL	18	38
GRAY CLAY	38	145
GRAY SAND	145	218
BLACK SHALE; COAL	218	240
BLACK BASALT; BROKEN	240	254
BLACK BASALT; HARD	254	280
BLACK SHALE	280	360
GRAY SANDSTONE W/ BLK SHALE DEP.	360	420

Work Started _____, 19. Completed 4/24, 19 98

WELL CONSTRUCTOR 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.

NAME BACH DRILLING CO (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 3340 WILSON CREEK

(Signed) _____ (WELL DRILLER) License No. 1778

Contractor's Registration No. MIKEBC133W4 Date 4/24, 19 98

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93) * * f

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W36414
Unique Well I.D. # ABV512
Water Right Permit No.

(1) OWNER: Name CARVETH, CECIL F. Address HC61 BOX 4096 CLE ELUM, WA 98922-

(2) LOCATION OF WELL: County KITTITAS - NE 1/4 NE 1/4 Sec 31 T 20 N., R 16 WM
(2a) STREET ADDRESS OF WELL (or nearest address) ,

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one)
NEW WELL Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 210 ft. Depth of completed well 195 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from +2 ft. to 195 ft.
WELDED " Dia. from ft. to ft.
" Dia. from ft. to ft.

Perforations: NO
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: NO
Manufacturer's Name
Type Model No.
Diam. slot size from ft. to ft.
Diam. slot size from ft. to ft.

Gravel packed: YES Size of gravel 1/4"
Gravel placed from 210 ft. to 168 ft.

Surface seal: YES To what depth? 18 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? YES
Type of water? MUDDY Depth of strata ft.
Method of sealing strata off OVERBURE

(7) PUMP: Manufacturer's Name
Type H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 20 ft. below top of well Date 03/21/95
Artesian Pressure lbs. per square inch Date
Artesian water controlled by

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? NO If yes, by whom?
Yield: gal./min with ft. drawdown after hrs.

Recovery data

Time	Water Level	Time	Water Level	Time	Water Level

Date of test / /
Bailer test gal/min. ft. drawdown after hrs.
Air test 30 gal/min. w/ stem set at 150 ft. for 2 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
SAND GRAVEL	0	12
GRAVEL COBBLES WATER	12	14
SAND GRAVEL BOULDERS	14	16
GREY CLAY	16	64
GREY SHALE	64	65
GREY SILT TRACE OF WATER	65	74
GREY CLAY GRAVEL	74	76
GREY SILT TRACE OF WATER	76	78
GREY CLAY GRAVEL	78	93
GREY CLAY	93	96
CLAY SILT WATER	96	117
GREY CLAY	117	155
GRAVEL SILT TRACE OF WATER	155	168
GREY CLAY	168	188
SAND GRAVEL WATER	188	196
GRAVEL SANDSTONE WATER	196	205
GREY CLAY SILT	205	210

NOTE: PULLED CASING BACK TO 195'
& GRAVEL PACKED TO 168',
WATER IS STILL CLOUDY.
IF SET PUMP, JUST PUMP 8-10 GPM.
IT SHOULD CLEAN UP.

RECEIVED
MAR 29 1995
DEPARTMENT OF ECOLOGY
CENTRAL REGIONAL OFFICE

Work started 03/16/95 Completed 03/21/95

WELL CONSTRUCTOR 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.

NAME PONDEROSA DRILLING
(Person, firm, or corporation) (Type or print)

ADDRESS E 6010 BROADWAY

[SIGNED] [signature] License No. 2154

Contractor's
Registration No. PO-ND-EI*240JE Date 03/24/95

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 041821

Water Right Permit No. _____

(1) OWNER: Name Loyd Garrett Address Ck Elum,

(2) LOCATION OF WELL: County Kittitas NE ¼ NE ¼ Sec. 31 T. 20 N., R. 16 E.W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) Airport Rd Tracts Lot 4

(3) PROPOSED USE: ☒ Domestic ☐ Irrigation ☐ DeWater ☐ Industrial ☐ Test Well ☐ Municipal ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) _____

Abandoned ☐ New well ☒ Deepened ☐ Reconditioned ☐ Method: Dug ☐ Cable ☐ Rotary ☒ Bored ☐ Driven ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 200 feet. Depth of completed well 180 ft.

(6) CONSTRUCTION DETAILS:

Casing Installed: 6 " Diam. from 0 ft. to 180 ft.

Welded ☒ Liner installed ☐ Threaded ☐ _____ " Diam. from _____ ft. to _____ ft.

Perforations: Yes ☐ No ☒

Type of perforator used _____

SIZE of perforations _____ in. by _____ in.

_____ perforations from _____ ft. to _____ ft.

_____ perforations from _____ ft. to _____ ft.

_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☒

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☒ No ☒ Size of gravel _____

Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.

Material used in seal Bentonite + Water

Did any strata contain unusable water? Yes ☒ No ☐

Type of water? Surface Depth of strata 8-15'

Method of sealing strata off Surface seal

(7) PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level 2000 ft.

Static level 2 ft. below top of well Date 5/17/94

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? Yes ☐ No ☒ If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

" " " "

" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 15 gal./min. with stem set at 160 ft. for 3 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Overburden	0'	5'
Boulders hard & gravel	5'	15'
Blue Clay soft	15'	178'
Gravel lg + small sandy, course + fine water bearing	178'	180

NOV 29 1994

Work started 5/10/94, 19. Completed 5/17/94, 19

WELL CONSTRUCTOR 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.

NAME Mark Blacke (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address PO Box 89 Ck Elum WA 9

(Signed) Mark Blacke (WELL DRILLER) License No. 1867

Contractor's Registration No. AMERIDP48325 Date 5/17, 19 9

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329- 3

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W049452

UNIQUE WELL I.D. # ABL 620

Water Right Permit No. _____

OWNER: Name John Uribe Address PO Box 777 2411 Hwy 970 Cle Elum Wash 98

(2) LOCATION OF WELL: County Kittitas NW 1/4 NE 1/4 Sec 31 T. 20 N., R 16 W.M

(2a) STREET ADDRESS OF WELL (or nearest address) _____

(3) PROPOSED USE: ☒ Domestic ☐ Irrigation ☐ DeWater ☐ Industrial ☐ Test Well ☐ Municipal ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (If more than one) _____

Abandoned ☐ New well ☒ Deepened ☐ Reconditioned ☐ Method: Dug ☐ Cable ☐ Rotary ☒ Bored ☐ Driven ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 10" 6" inches. Drilled 393 feet. Depth of completed well 393 ft.

(6) CONSTRUCTION DETAILS:

Casing Installed: 6" Diam. from +2 ft. to 231 ft.
Welded ☒ 4½" Diam. from -5 ft. to 393 ft.
Liner installed ☒ _____" Diam. from _____ ft. to _____ ft.
Threaded ☐

Perforations: Yes ☒ No ☐
Type of perforator used Skill saw
SIZE of perforations 6" Long in. by ⅛" wide in.
200 perforations from -293 ft. to 373 ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 8' ft. below top of well Date _____
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
	Aprox 30 gpm				
	Air Lift				

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL		FROM	TO
top soil Gravel	m	0	1
Sand Gravel cobbels	ft	1	18
Gravel cobbels Brown Clay	m	18	20
Clay with small Gravel lenses Grey	m	20	68
Clay Blue Grey	m	68	128
Clay with small Gravel lenses Blue Grey	m	128	130
Clay Blue Grey	m	130	132
Gravel Sand Clay Blue Grey	m	132	157
Gravel Clay Blue Grey	m	157	165
Clay Blue Grey	m	165	178
Sand Gravel Clay	m3	178	193
Sand Blue Grey	s	193	197
Sand Gravel clay Blue Grey	m	197	203
Sandstone Blue Green	H	203	208
Sand Gravel Clay Blue Grey	m	208	224
Sandstone white Blue	H	224	276
Sandstone with coal lenes	m	276	334
Sandstone white Blue	m	334	387
Sandstone with Coal Lenes	m	387	393

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APR 13
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work Started 4/3/95, 19. Completed 4/7/95, 19

WELL CONSTRUCTOR 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.

NAME Water Man well Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 106 Berriman LN Selah wash 98942

(Signed) _____ (WELL DRILLER) License No. 1335

Contractor's Registration No. Watermw064J2 Date 4/8/95, 19

(USE ADDITIONAL SHEETS IF NECESSARY)

ECL 050-1-20 (2/93) * * f

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W40117
Unique Well I.D. # ABV517
Water Right Permit No.

(1) OWNER: Name HOLTER, DEL (NWA DEVELOP) Address 8797 GAGE BLVD. SUITE A KENNEWICK, WA 99336-

(2) LOCATION OF WELL: County KITTITAS - 1/4 NW 1/4 Sec 31 T 20 N., R 18E WM
(2a) STREET ADDRESS OF WELL (or nearest address)

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one)
NEW WELL Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 398 ft. Depth of completed well 398 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from +2 ft. to 396 ft.
WELDED " Dia. from ft. to ft.
" Dia. from ft. to ft.

Perforations: NO
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: NO
Manufacturer's Name
Type Model No.
Diam. slot size from ft. to ft.
Diam. slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: YES To what depth? 20 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? YES
Type of water? OTHER Depth of strata 6-18 ft.
Method of sealing strata off OVERBURE

(7) PUMP: Manufacturer's Name
Type H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 2 ft. below top of well Date 04/06/95
Artesian Pressure lbs. per square inch Date
Artesian water controlled by

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? NO If yes, by whom?
Yield: gal./min with ft. drawdown after hrs.

Recovery data
Time Water Level Time Water Level Time Water Level

Date of test / /
Bailer test gal/min. ft. drawdown after hrs.
Air test 100 gal/min. w/ stem set at 390 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
TOPSOIL	0	2
COBBLES BOULDERS	2	18
GREY CLAY	18	292
GRAVEL COBBLES	292	310
GRAVEL WATER	310	312
SAND WATER	312	371
SAND GRAVEL WATER	371	376
SAND WATER	376	388
GRAVEL WATER	388	398
	398	

RECEIVED
APR 18 1995
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work started 04/04/95 Completed 04/06/95

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.

NAME PONDEROSA DRILLING
(Person, firm, or corporation) (Type or print)

ADDRESS E 6010 BROADWAY

[SIGNED] Dennis J Shea License No. 2154

Contractor's
Registration No. PO-ND-EI*248JE Date 04/10/95

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. WTC 1515

UNIQUE WELL I.D. # AEM 686

Water Right Permit No. _____

(1) OWNER: Name Russell Stein Address 4312 30th Ave W Seattle Wa 981[illegible]

(2) LOCATION OF WELL: County Kittitas NW 1/4 NW 1/4 Sec 31 T. 20 N., R 16 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) _____

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____

Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 10x6 inches. Drilled 412 feet. Depth of completed well 412 ft.

(6) CONSTRUCTION DETAILS:

Casing Installed: 6 " Diam. from +3 ft. to -412 ft. Welded ☒
Liner installed ☐ " Diam. from _____ ft. to _____ ft.
Threaded ☐ " Diam. from _____ ft. to _____ ft.

Perforations: Yes ☐ No ☒
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name _____
Type _____ Model No. _____
Dam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal Bentonite + Cement
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 18 ft. below top of well Date 8-9-99
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? _____
Yield: 25 gal./min. with _____ ft. drawdown after _____ hrs.
" ESTIMATED AIRLIFT "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL			FROM	TO
Topsoil	Brn	med	0	2
Sand + Gravel	Brn	med/f	2	15
Clay	Blue Gry	med/f	15	40
Siltstone	Blue Gry	med	40	43
Clay	Blue Gry	med	43	410
Coarse Sand + Grabel	multicolor	med	410	412

CENTRAL REGION OFFICE DEPT. OF ECOLOGY Received AUG 12 1999

Work Started Aug 3, 1999 Completed Aug 9, 1999

WELL CONSTRUCTOR 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.

NAME Water man Well Drilling Inc (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 106 Berriman lane Selah Wa 98

(Signed) Chris Hayes (WELL DRILLER) License No. 1908 (Chris Hayes)

Contractor's Registration No. WATERWD022DB Date 8/10/99, 19__

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93) * * f

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. ~~W 016185~~ W06183

Water Right Permit No. _____

(1) OWNER: Name Loyd Garrett Address 808 East 1st Cle Elum WA 985

(2) LOCATION OF WELL: County Kittitas NW ¼ NW ¼ Sec. 31 T. 20 N., R. 16 E W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) Airport Rd Tracts Lot 2

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____

Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 160 feet. Depth of completed well 160 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 0 ft. to 160 ft.

Welded ☒ Liner installed ☐ Threaded ☐ _____ " Diam. from _____ ft. to _____ ft.

Perforations: Yes ☐ No ☒

Type of perforator used _____

SIZE of perforations _____ in. by _____ in.

_____ perforations from _____ ft. to _____ ft.

_____ perforations from _____ ft. to _____ ft.

_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☒

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel _____

Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.

Material used in seal Bentonite + water

Did any strata contain unusable water? Yes ☒ No ☐

Type of water? Surface Depth of strata 6'-23'

Method of sealing strata off Surface seal + into blue clay

(7) PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level 2000 ft.

Static level 39 ft. below top of well Date 4/15/94

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (Cap, valve, etc.))

(9) WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? Yes ☐ No ☒ If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

" " " "

" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 15 gal./min. with stem set at 160 ft. for 4 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Overburden	0'	6'
Gravel large	6'	23'
Blue clay soft	23'	157'
Gravel small w/ sand, course + fine water bearing	157'	160'

NOV 29 [illegible]

Work started 4/15, 19 94 Completed 4/18, 19 94

WELL CONSTRUCTOR 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.

NAME Mark Black (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address PO Box 89 Cle Elum WA 9852[illegible]

(Signed) Mark Black (WELL DRILLER) License No. 1887

Contractor's Registration No. AMRKBD*PH635 Date 4/19, 19 94

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329- 3

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 84407

Water Right Permit No. D

(1) OWNER: Name JANICE WILLIAMS Address

(2) LOCATION OF WELL: County KITTITAS NW¼ NW¼ Sec 31 T. 20 N., R. 16 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) MC DONALD RD

(3) PROPOSED USE: ☑ Domestic ☐ Irrigation ☐ DeWater ☐ Industrial ☐ Test Well ☐ Municipal ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)

Abandoned ☐ New well ☑ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☑ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 80 feet. Depth of completed well 80 ft.

(6) CONSTRUCTION DETAILS:

Casing Installed: 6 " Diam. from 0 ft. to 30 ft.
Welded ☐ 4 " Diam. from 0 ft. to 80 ft.
Liner installed ☐
Threaded ☐ " Diam. from ft. to ft.

Perforations: Yes ☑ No ☐
Type of perforator used SKILSAW
SIZE of perforations 7/4 in. by 1/8 in.
60 perforations from 20 ft. to 40 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☑
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☑ Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes ☑ No ☐ To what depth? 20' ft.
Material used in seal BENTONITE
Did any strata contain unuseable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 25 ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.))

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test

Bailer test gal./min. with ft. drawdown after hrs.
Airtest gal./min. with stem set at ft. for hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
SANDSTONE	0	15
GRAVEL	15	35
CLAY, BLUE	35	80

Work started 7/2, 19. Completed 7/3, 19 9?

WELL CONSTRUCTOR 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.

NAME BACH DRILLING (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address RT 5 BOX 1010

(Signed) (WELL DRILLER) License No. 1778

Contractor's Registration No. MIKEBDC133J4 Date 7/3, 19 9?

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329- 3

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

0421 Start Card No. 027257

Water Right Permit No. D

(1) OWNER: Name DENNIS HANKINS Address E. MASTERSON

(2) LOCATION OF WELL: County KITTITAS NW ¼ NW ¼ Sec. 31 T. 20 N., R. 16 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address)

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one)
Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 220 feet. Depth of completed well 220 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from 0 ft. to 207 ft.
Welded ☒ Liner installed ☐ Threaded ☐ " Diam. from ft. to ft.
" Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☐ Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal # Bentonite
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 8 ft. below top of well Date 8-6-91
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.))

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test

Bailer test gal./min. with ft. drawdown after hrs.
Airtest 50 gal./min. with stem set at 200 ft. for 2 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
DIRT	0	2
DIRT + GRAVEL	2	14
BLUE CLAY	14	190
WATER SAND + CLAY	190	200
HARD BLUE SHALE	200	210
SAND + GRAVEL	210	220

RECEIVED JUL 5 1991 DEPARTMENT OF ECOLOGY CENTRAL REGION

Work started 7-30, 19 91 Completed 8-5, 19 91

WELL CONSTRUCTOR 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.

NAME BART Drilling Co. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address RT 5 BOX 1010 E-BURG

(Signed) (WELL DRILLER) License No. 0836

Contractor's Registration No. MIKE BDC133N4 Date 8-5, 19 91

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329- 3

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W40114
Unique Well I.D. # ABU511
Water Right Permit No.

(1) OWNER: Name CAILLIER, JOE Address 2781 HWY. 970 CLE ELUM, WA 98922-

(2) LOCATION OF WELL: County KITTITAS · SW 1/4 NE 1/4 Sec 31 T 20 N., R 16 WM
(2a) STREET ADDRESS OF WELL (or nearest address) ,

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one)
NEW WELL Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 60 ft. Depth of completed well 60 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from +2 ft. to 20 ft.
WELDED 4 " Dia. from 24 ft. to 60 ft.
" Dia. from ft. to ft.

Perforations: YES
Type of perforator used SKILL SAW
SIZE of perforations 1/4 in. by 12 in.
36 perforations from 40 ft. to 60 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: NO
Manufacturer's Name
Type Model No.
Dia. slot size from ft. to ft.
Dia. slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: YES To what depth? 18 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off OVERBORE

(7) PUMP: Manufacturer's Name
Type H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 18 ft. below top of well Date 03/13/95
Artesian Pressure lbs. per square inch Date
Artesian water controlled by

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? NO If yes, by whom?
Yield: gal./min with ft. drawdown after hrs.

Recovery data

Time	Water Level	Time	Water Level	Time	Water Level

Date of test / /
Bailer test gal/min. ft. drawdown after hrs.
Air test 15 gal/min. w/ stem set at 60 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
TOPSOIL	0	3
GRAVEL COBBLES WATER	3	9
BROWN CLAY	9	12
GREY SHALE SANDSTONE	12	36
GREY SANDSTONE	36	44
GREY SHALE	44	48
BROWN SHALE WATER	48	53
GREY SHALE	53	60
	60	

RECEIVED
APR 29 1995
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work started 03/13/95 Completed 03/13/95

WELL CONSTRUCTOR 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.

NAME PONDEROSA DRILLING
(Person, firm, or corporation) (Type or print)

ADDRESS E 6010 BROADWAY

[SIGNED] Dennis J Chrisman License No. 2154

Contractor's
Registration No. PO-ND-EI*248JE Date 03/20/95

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W047092
UNIQUE WELL I.D. # ACE 813
Water Right Permit No.

(1) OWNER: Name Jerry Mclane Address 509 Butte Ave Pacific Wash 980

(2) LOCATION OF WELL: County Kittitas SE 1/4 NE 1/4 Sec 31 T. 20 N., R. 16 W.M

(2a) STREET ADDRESS OF WELL (or nearest address) H

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (If more than one)
Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 10" 6" inches. Drilled 280 feet. Depth of completed well 280 ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: 6" Diam. from +2 ft. to 98 ft.
Welded [X] 4" Diam. from -5 ft. to 280 ft.
Liner installed [X]
Threaded [ ] " Diam. from ft. to ft.

Perforations: Yes [X] No [ ]
Type of perforator used Skill saw
SIZE of perforations 6" long in. by 1/8" wide in.
140 perforations from 260 ft. to 280 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes [ ] No [X]
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes [ ] No [X] Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes [X] No [ ] To what depth? 20' ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level [redacted] -5 ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

RECEIVED JUN 4 1996 DEPARTMENT OF ECOLOGY CENTRAL REGION OFFICE

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [ ] If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
	Aprx	50	gpm		
	Air Lift				

Date of test
Baller test gal./min. with ft. drawdown after hrs.
Airtest gal./min. with stem set at ft. for hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes [ ] No [ ]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifer and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL			FROM	TO
Top soil	Brown	m	0	2
silt sand gravel cobbels mstly c.		MH	2	9
sand gravel cobbels mstly cobr		VH	9	14
Clay w Gravel	Bl Gray	m	14	33
sandstone	Blue Gray	MH	33	35
Clay Gravel Cobbels		MH	35	54
fine sand	Gray	MS	54	75
Boulder	Black Gray	VH	75	78
Clay Gravel Cobbels	Bl Gray	MH	78	91
clay + clay shale	Bl Gray	M	91	93
siltstone + sandstone	Gray	MH	93	97
siltstone sandstone	Blackish Gray	VH	97	106
sandstone w clay lenes	Bl Gray	MH	106	114
sandstone w clay lenes	White	MH	114	133
Coal	Black	MH	133	137
sandstone	Gray	MH	137	14[illegible]
sandstone w clay lene	bl Gray	MH	143	176
sandstone	White	MH	176	21[illegible]
Coal	Black	M	214	215
sandstone w clay lenes	Gray	MH	215	23[illegible]
Coal	Black Brown	M	233	23[illegible]
sandstone w clay lenes	Gray	MH	235	24[illegible]
sandstone w clay lenes	Gray	MH	240	24[illegible]
sandstone w clay lenes	bl Gray	MH	244	24[illegible]
frac. sandstone	Gray	M	247	25[illegible]
sandstone w clay lenes	bl gray	MH	253	25[illegible]
sandstone Coal	Black Brown	M	258	26[illegible]
Sandstone w coal	Bl ves White	M	264	26[illegible]
sandstone	White	M.	266	28[illegible]

Work Started 5/21/96 19. Completed 5/23/96 19

(11) WELL CONSTRUCTOR 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.

NAME Water man well Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 106 Berriman ln Selah Wa
(Signed) (WELL DRILLER) License No. 1335
Contractor's Registration No. WATERMWA944JA Date 5/24/96 19

(USE ADDITIONAL SHEETS IF NECESSARY)

ECL 050-1-20 (2/93) * * f

2746

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) OWNER: Name Bill Clark Address Kirkland Wash

) LOCATION OF WELL: County Kittitas NW¼ SW¼ Sec. 31 T. 20 N., R. 16 W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic [X] Industrial [ ] Municipal [ ]
Irrigation [ ] Test Well [ ] Other [ ]

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well [X] Method: Dug [ ] Bored [ ]
Deepened [ ] Cable [ ] Driven [ ]
Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6" inches.
Drilled 390 ft. Depth of completed well 390 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from +1 ft. to 280 ft.
Threaded [ ] ." Diam. from ft. to ft.
Welded [ ] ." Diam. from ft. to ft.

Perforations: Yes [ ] No [X]
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes [ ] No [X]
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes [ ] No [X] Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes [X] No [ ] To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: Sub H.P. 3

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 30 ft. below top of well Date June 21-89
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [ ] If yes, by whom?
Yield: 50 gal./min. with ft. drawdown after hrs.
" 9 hr Test " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes [ ] No [ ]

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
gravel	0	90
sandy clay	90	380
gravel	380	390

RECEIVED
FEB 28 1990
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

ENTERED

Work started June 20, 19 89 Completed June 25, 19 89

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Dick Poulin
(Person, firm, or corporation) (Type or print)

Address Po Box 398 Cle Elum

[Signed] Dick Poulin
(Well Driller)

License No. 941 Date June 30, 19 89

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

OnSite Environmental Inc.
Analytical Testing and Mobile Laboratory Services

Phase I - Test Pits & GW results

12/16 & 12/17/97

December 23, 1997

Gary Galloway
Galloway Environmental, Inc.
3102 220th Place SE
Issaquah, WA 98027

Re: Analytical Data for Project 19735
Laboratory Reference No. 9712-070

Dear Gary:

Enclosed are the analytical results and associated quality control data for samples submitted on December 18, 1997.

The standard policy of OnSite Environmental Inc., is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Chemist

Enclosures

Date of Report: December 23, 1997
Samples Submitted: December 18, 1997
Lab Traveler: 12-070
Project: 19735

NWTPH-HCID

Date Extracted: 12-18-97
Date Analyzed: 12-19-97

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	MW-1@15'	MW-2@10'	MW-2@15'
Lab ID:	12-070-01	12-070-02	12-070-03
Dilution Factor:	2.0	2.0	2.0
Gas:	ND	ND	ND
PQL:	23	23	23
Diesel Fuel:	ND	ND	ND
PQL:	58	57	58
Oil:	ND	ND	ND
PQL:	116	114	116
Surrogate Recovery: o-Terphenyl	122%	130%	131%

Date of Report: December 23, 1997
Samples Submitted: December 18, 1997
Lab Traveler: 12-070
Project: 19735

NWTPH-HCID

Date Extracted: 12-18-97
Date Analyzed: 12-19-97

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	MW-3@10'	MW-3@15'	MW-4@5'
Lab ID:	12-070-04	12-070-05	12-070-06
Dilution Factor:	2.0	2.0	2.0
Gas:	ND	ND	ND
PQL:	24	23	22
Diesel Fuel:	ND	ND	ND
PQL:	60	57	55
Oil:	ND	ND	ND
PQL:	119	115	110
Surrogate Recovery: o-Terphenyl	102%	113%	120%

Date of Report: December 23, 1997
Samples Submitted: December 18, 1997
Lab Traveler: 12-070
Project: 19735

NWTPH-HCID

Date Extracted: 12-18-97
Date Analyzed: 12-19-97

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	MW-4@10'	MW-4@15'	STP-15a
Lab ID:	12-070-07	12-070-08	12-070-09
Dilution Factor:	2.0	2.0	2.0
Gas:	ND	ND	ND
PQL:	23	22	24
Diesel Fuel:	ND	ND	ND
PQL:	57	56	61
Oil:	ND	ND	ND
PQL:	115	112	122
Surrogate Recovery: o-Terphenyl	103%	100%	110%

Date of Report: December 23, 1997
Samples Submitted: December 18, 1997
Lab Traveler: 12-070
Project: 19735

NWTPH-HCID

Date Extracted: 12-18-97
Date Analyzed: 12-19-97

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	MW-4@10'	MW-4@15'	STP-15a
Lab ID:	12-070-07	12-070-08	12-070-09
Dilution Factor:	2.0	2.0	2.0
Gas:	ND	ND	ND
PQL:	23	22	24
Diesel Fuel:	ND	ND	ND
PQL:	57	56	61
Oil:	ND	ND	ND
PQL:	115	112	122
Surrogate Recovery: o-Terphenyl	103%	100%	110%

Date of Report: December 23, 1997
Samples Submitted: December 18, 1997
Lab Traveler: 12-070
Project: 19735

NWTPH-HCID

Date Extracted: 12-18-97
Date Analyzed: 12-19-97

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	STP-15b	STP-15c	STP-19a
Lab ID:	12-070-10	12-070-11	12-070-12
Dilution Factor:	2.0	2.0	2.0
Gas:	ND	ND	ND
PQL:	25	21	23
Diesel Fuel:	ND	ND	ND
PQL:	62	53	58
Oil:	ND	ND	Heavy Oil
PQL:	123	105	116
Surrogate Recovery: o-Terphenyl	138%	113%	120%

Date of Report: December 23, 1997
Samples Submitted: December 18, 1997
Lab Traveler: 12-070
Project: 19735

NWTPH-HCID

Date Extracted:	12-18-97
Date Analyzed:	12-19-97
Matrix:	Soil
Units:	mg/Kg (ppm)

Client ID:	STP-19b	STP-19c	STP-20c
Lab ID:	12-070-13	12-070-14	12-070-15
Dilution Factor:	2.0	2.0	2.0
Gas:	ND	ND	ND
PQL:	26	22	21
Diesel Fuel:	ND	ND	ND
PQL:	66	55	52
Oil:	ND	ND	ND
PQL:	132	110	104
Surrogate Recovery: o-Terphenyl	80%	99%	113%

Date of Report: December 23, 1997
Samples Submitted: December 18, 1997
Lab Traveler: 12-070
Project: 19735

NWTPH-HCID
METHOD BLANK QUALITY CONTROL

Date Extracted:	12-18-97
Date Analyzed:	12-19-97
Matrix:	Soil
Units:	mg/Kg (ppm)

Lab ID:	MB1218S1
Dilution Factor:	2.0
Gas:	ND
PQL:	20
Diesel Fuel:	ND
PQL:	50
Oil:	ND
PQL:	100
Surrogate Recovery:	104%
o-Terphenyl	

Date of Report: December 23, 1997
Samples Submitted: December 18, 1997
Lab Traveler: 12-070
Project: 19735

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted:	12-22-97
Date Analyzed:	12-22-97
Matrix:	Soil
Units:	mg/Kg (ppm)

Lab ID:	12-082-01	12-082-01 DUP
Diesel Fuel C12-C24:	104	115
PQL:	25	25
RPD:	10	
Surrogate Recovery: o-Terphenyl	99%	89%
Flags	O1	

Date of Report: December 23, 1997
Samples Submitted: December 18, 1997
Lab Traveler: 12-070
Project: 19735

NWTPH-Dx
SB/SBD QUALITY CONTROL

Date Extracted:	12-22-97
Date Analyzed:	12-22-97
Matrix:	Soil
Units:	mg/Kg (ppm)
Spike Level:	100 ppm

Lab ID:	SB1222S1	SB1222S1 DUP
Diesel Fuel C12-C24:	78.5	79.5
PQL:	25	25
Percent Recovery:	79	80
RPD:	1.3	
Surrogate Recovery: o-Terphenyl	93%	94%
Flags		

OnSite Environmental Inc.

DATA QUALIFIERS AND ABBREVIATIONS

A - Due to high sample concentration, amount spiked insufficient for meaningful MS/MSD data recovery.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD outside control limits due to analyte concentration within five times the quantitation limit.

D - Data from 1:____ dilution.

E - Value reported exceeds the quantitation range. Value is an estimate.

F - Surrogate recovery data not available due to the high concentration in the sample.

G - Insufficient sample quantity for duplicate analysis.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD outside control limits due to sample inhomogeniety. Sample re-extracted and re-analyzed with similar results.

L - Quantitated from C7-C34 as diesel fuel #2.

M - Predominantly _____ range hydrocarbons present in the sample.

N - Hydrocarbons in the gasoline range (C7-toluene) present in the sample.
N1 - Hydrocarbons in the gasoline range (C7-toluene) present in the sample which are elevating the diesel result.

O - Hydrocarbons in the heavy oil range (>C24) present in the sample.
O1 - Hydrocarbons in the heavy oil range (>C24) present in the sample which are elevating the diesel result.

R - Hydrocarbons outside defined gasoline range present in the sample.

S - Surrogate recovery data not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - Matrix Spike/Matrix Spike Duplicate RPD outside control limits due to matrix effects.

V - Matrix Spike/Matrix Spike Duplicate recoveries outside control limits due to matrix effects.

Z - Interferences were present which prevented the quantitation of the analyte below the detection limit reported.

ND - Not Detected

MRL - Method Reporting Limit

PQL - Practical Quantitation

Chain of Custody

OnSite Environmental Inc.
14924 NE 31st Circle • Redmond, WA 98052
Fax: (425) 885-4603 • Phone: (425) 883-3881

Company: Galloway Env. Inc.
Project No.: 19735
Project Name: Storey
Project Manager: G. Galloway

Turn Around Requested (Check One)
- ☐ Same Day
- ☐ 24 Hours
- ☐ 48 Hours
- ☒ Standard
- ☐ _____ (other)

Project Chemist: DAB

Laboratory No.

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8240/624/8260	Halogenated Volatiles by 8260	Semivolatiles by 8270/625	PAHs by 8270/625	PCB's by 8081/608	Total RCRA Metals (8)	TCLP Metals	VPH	EPH	% Moisture
1	MW-1 @ 15'	12/16	11:15	S	1	X												X
2	2 10'		11:30			X												X
3	2 15'		11:45			X												X
4	3 10'		15:10			X												X
5	3 15'		15:30			X												X
6	4 5'	12/17	10:05			X												X
7	4 10'	12/17	10:10			X												X
8	4 15'	12/17	10:15			X												X
9	STP-15a	12/16	12:10			X												X
10	15b		12:15			X												X
11	15c		12:20			X												X
12	19a		13:10			X		⊕										X

RELINQUISHED BY	DATE	RECEIVED BY	DATE
	12/18/97	Kristen Koch	12-18-97
FIRM: GEI	TIME: 10:00	FIRM: On Site Env.	TIME: 10:00
RELINQUISHED BY	DATE	RECEIVED BY	DATE
FIRM	TIME	FIRM	TIME
REVIEWED BY		DATE REVIEWED	

COMMENTS:
Follow up HCIDs as appropriate

⊕ follow up HCID. DB 12/22/97.

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

Chain of Custody

OnSite Environmental Inc.
14924 NE 31st Circle • Redmond, WA 98052
Fax: (425) 885-4603 • Phone: (425) 883-3881

Company: GALLOWAY ENV. Inc.
Project No.: 19735
Project Name: STORFY
Project Manager: G. GALLOWAY

Turn Around Requested (Check One)
- ☐ Same Day
- ☐ 24 Hours
- ☐ 48 Hours
- ☒ Standard
- ☐ _____ (other)

Project Chemist: DAB

Laboratory No. 1

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8240/624/8260	Halogenated Volatiles by 8260	Semivolatiles by 8270/625	PAHs by 8270/625	PCB's by 8081/608	Total RCRA Metals (8)	TCLP Metals	VPH	EPH	% Moisture
13	STP-19b	12/16	13:05	S	1	X												X
14	19c	12/16	13:10	S	1	X												X
15	20c	12/16	13:15	S	1	X												X

RELINQUISHED BY	DATE	RECEIVED BY	DATE
	12/18/97	Kristen Koch	12-18-97
FIRM: GEI	TIME: 10:00	FIRM: On Site ENV.	TIME: 10:00
RELINQUISHED BY	DATE	RECEIVED BY	DATE
FIRM	TIME	FIRM	TIME

REVIEWED BY

DATE REVIEWED

COMMENTS: Follow up HCIDs as appropriate

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

PHASE I

METALS, VOLATILES/SEMI-VOLATILES

STP-19a

[12/16/97]

OnSite Environmental Inc.
Analytical Testing and Mobile Laboratory Services

January 7, 1998

Gary Galloway
Galloway Environmental, Inc.
3102 220th Place SE
Issaquah, WA 98027

Re: Analytical Data for Project 19735
Laboratory Reference No. 9712-070

Dear Gary:

Enclosed are the analytical results and associated quality control data for samples submitted on December 18, 1997.

The standard policy of OnSite Environmental Inc., is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Chemist

Enclosures

14924 NE 31st Circle • Redmond, WA 98052 • (425) 883-3881 • Fax (425) 885-4603

Date of Report: January 7, 1998
Samples Submitted: December 18, 1997
Lab Traveler: 12-070
Project: 19735

VOLATILES by EPA 8260
page 1 of 2

Date Extracted:	12-24-97
Date Analyzed:	1-05-98
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	12-070-12
Client ID:	**STP-19a**
Dilution Factor:	50

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.058
Chloromethane	ND		0.058
Vinyl Chloride	ND		0.058
Bromomethane	ND		0.058
Chloroethane	ND		0.058
Trichlorofluoromethane	ND		0.058
1,1-Dichloroethene	ND		0.058
Methylene Chloride	0.066		0.058
(trans) 1,2-Dichloroethene	ND		0.058
1,1-Dichloroethane	ND		0.058
2,2-Dichloropropane	ND		0.058
(cis) 1,2-Dichloroethene	ND		0.058
Chloroform	ND		0.058
1,1,1-Trichloroethane	ND		0.058
Carbon Tetrachloride	ND		0.58
1,1-Dichloropropene	ND		0.058
Benzene	ND		0.058
1,2-Dichloroethane	ND		0.058
Trichloroethene	ND		0.058
1,2-Dichloropropane	ND		0.058
Dibromomethane	ND		0.058
Bromodichloromethane	ND		0.058
(cis) 1,3-Dichloropropene	ND		0.058
Toluene	0.086		0.058
(trans) 1,3-Dichloropropene	ND		0.058
1,1,2-Trichloroethane	ND		0.058
Tetrachloroethene	ND		0.058
1,3-Dichloropropane	ND		0.058

Date of Report: January 7, 1998
Samples Submitted: December 18, 1997
Lab Traveler: 12-070
Project: 19735

VOLATILES by EPA 8260
page 2 of 2

Lab ID: 12-070-12
Client ID: STP-19a

Dilution Factor: 50

Compound	Results	Flags	PQL
Dibromochloromethane	ND		0.058
1,2-Dibromoethane	ND		0.29
Chlorobenzene	ND		0.058
1,1,1,2-Tetrachloroethane	ND		0.058
Ethylbenzene	ND		0.058
m,p-Xylene	0.20		0.12
o-Xylene	0.092		0.058
Styrene	ND		0.058
Bromoform	ND		0.058
Isopropylbenzene	ND		0.058
Bromobenzene	ND		0.058
1,1,2,2-Tetrachloroethane	ND		0.058
1,2,3-Trichloropropane	ND		0.058
n-Propylbenzene	ND		0.058
2-Chlorotoluene	ND		0.058
4-Chlorotoluene	ND		0.058
1,3,5-Trimethylbenzene	0.072		0.058
tert-Butylbenzene	ND		0.058
1,2,4-Trimethylbenzene	0.18		0.058
sec-Butylbenzene	ND		0.058
1,3-Dichlorobenzene	ND		0.058
p-Isopropyltoluene	ND		0.058
1,4-Dichlorobenzene	ND		0.058
1,2-Dichlorobenzene	ND		0.058
n-Butylbenzene	ND		0.058
1,2-Dibromo-3-chloropropane	ND		0.58
1,2,4-Trichlorobenzene	ND		0.058
Hexachlorobutadiene	ND		0.058
Naphthalene	ND		0.58
1,2,3-Trichlorobenzene	ND		0.058
Surrogate	**Percent Recovery**		**Control Limits**
Dibromofluoromethane	63	*	80-120
Toluene-d8	73	*	81-117
4-Bromofluorobenzene	56	*	74-121

* Surrogate recovery outside control limits.

Date of Report: January 7, 1998
Samples Submitted: December 18, 1997
Lab Traveler: 12-070
Project: 19735

VOLATILES by EPA 8260
METHOD BLANK QUALITY CONTROL
page 1 of 2

Date Extracted: 12-24-97
Date Analyzed: 1-05-98

Matrix: Soil
Units: mg/Kg (ppm)

Lab ID: MB1231S1

Dilution Factor: 50

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.05
Chloromethane	ND		0.05
Vinyl Chloride	ND		0.05
Bromomethane	ND		0.05
Chloroethane	ND		0.05
Trichlorofluoromethane	ND		0.05
1,1-Dichloroethene	ND		0.05
Methylene Chloride	ND		0.05
(trans) 1,2-Dichloroethene	ND		0.05
1,1-Dichloroethane	ND		0.05
2,2-Dichloropropane	ND		0.05
(cis) 1,2-Dichloroethene	ND		0.05
Chloroform	ND		0.05
1,1,1-Trichloroethane	ND		0.05
Carbon Tetrachloride	ND		0.50
1,1-Dichloropropene	ND		0.05
Benzene	ND		0.05
1,2-Dichloroethane	ND		0.05
Trichloroethene	ND		0.05
1,2-Dichloropropane	ND		0.05
Dibromomethane	ND		0.05
Bromodichloromethane	ND		0.05
(cis) 1,3-Dichloropropene	ND		0.05
Toluene	ND		0.05
(trans) 1,3-Dichloropropene	ND		0.05
1,1,2-Trichloroethane	ND		0.05
Tetrachloroethene	ND		0.05
1,3-Dichloropropane	ND		0.05

Date of Report: January 7, 1998
Samples Submitted: December 18, 1997
Lab Traveler: 12-070
Project: 19735

VOLATILES by EPA 8260
METHOD BLANK QUALITY CONTROL
page 2 of 2

Lab ID: MB1231S1

Dilution Factor: 50

Compound	Results	Flags	PQL
Dibromochloromethane	ND		0.05
1,2-Dibromoethane	ND		0.25
Chlorobenzene	ND		0.05
1,1,1,2-Tetrachloroethane	ND		0.05
Ethylbenzene	ND		0.05
m,p-Xylene	ND		0.10
o-Xylene	ND		0.05
Styrene	ND		0.05
Bromoform	ND		0.05
Isopropylbenzene	ND		0.05
Bromobenzene	ND		0.05
1,1,2,2-Tetrachloroethane	ND		0.05
1,2,3-Trichloropropane	ND		0.05
n-Propylbenzene	ND		0.05
2-Chlorotoluene	ND		0.05
4-Chlorotoluene	ND		0.05
1,3,5-Trimethylbenzene	ND		0.05
tert-Butylbenzene	ND		0.05
1,2,4-Trimethylbenzene	ND		0.05
sec-Butylbenzene	ND		0.05
1,3-Dichlorobenzene	ND		0.05
p-Isopropyltoluene	ND		0.05
1,4-Dichlorobenzene	ND		0.05
1,2-Dichlorobenzene	ND		0.05
n-Butylbenzene	ND		0.05
1,2-Dibromo-3-chloropropane	ND		0.50
1,2,4-Trichlorobenzene	ND		0.05
Hexachlorobutadiene	ND		0.05
Naphthalene	ND		0.50
1,2,3-Trichlorobenzene	ND		0.05
Surrogate	**Percent Recovery**		**Control Limits**
Dibromofluoromethane	69	*	80-120
Toluene-d8	85		81-117
4-Bromofluorobenzene	63	*	74-121

* Surrogate recovery outside control limits.

Date of Report: January 7, 1998
Samples Submitted: December 18, 1997
Lab Traveler: 12-070
Project: 19735

VOLATILES by EPA 8260
MS/MSD QUALITY CONTROL

Date Extracted: 12-15-97
Date Analyzed: 12-15-97

Matrix: Soil
Units: mg/Kg (ppm)

Dilution Factor: 50

Lab ID: 12-021-1 MS

Compound	Spike Amount	MS	Percent Recovery	MSD	Percent Recovery	RPD
1,1-Dichloroethene	2.50	2.40	96	2.71	108	12
Benzene	2.50	2.23	89	2.46	98	9.7
Trichloroethene	2.50	2.55	100	2.56	100	0.30
Chlorobenzene-d5	2.50	2.45	95	2.34	91	4.8
Ethylbenzene	2.50	2.47	99	2.51	100	1.6

Date of Report: January 7, 1998
Samples Submitted: December 18, 1997
Lab Traveler: 12-070
Project: 19735

SEMIVOLATILES by EPA 8270
page 1 of 3

Date Extracted:	12-24-97
Date Analyzed:	01-05-98
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	12-070-12
Client ID :	STP-19a
Dilution Factor :	0.033

Compound:	Results	Flags	PQL
Aniline	ND		0.04
bis(2-Chloroethyl)ether	ND		0.04
Phenol	ND		0.04
2-Chlorophenol	ND		0.04
1,3-Dichlorobenzene	ND		0.04
1,4-Dichlorobenzene	ND		0.04
1,2-Dichlorobenzene	ND		0.04
Benzyl alcohol	ND		0.04
bis(2-chloroisopropyl)ether	ND		0.04
2-Methylphenol	ND		0.04
Hexachloroethane	ND		0.04
N-Nitroso-di-n-propylamine	ND		0.04
4-Methylphenol	ND		0.04
Nitrobenzene	ND		0.04
Isophorone	ND		0.04
2-Nitrophenol	ND		0.04
2,4-Dimethylphenol	ND		0.04
bis(2-Chloroethoxy)methane	ND		0.04
2,4-Dichlorophenol	ND		0.04
Benzoic acid	ND		0.58
1,2,4-Trichlorobenzene	ND		0.04
Naphthalene	ND		0.04
4-Chloroaniline	ND		0.04
Hexachlorobutadiene	ND		0.04
4-Chloro-3-methylphenol	ND		0.04
2-Methylnaphthalene	0.11		0.04

Date of Report: January 7, 1998
Samples Submitted: December 18, 1997
Lab Traveler: 12-070
Project: 19735

SEMIVOLATILES by EPA 8270
page 2 of 3

Lab ID: 12-070-12
Client ID : STP-19a

Dilution Factor: 0.033

Compound:	Results	Flags	PQL
Hexachlorocyclopentadiene	ND		0.04
2,4,6-Trichlorophenol	ND		0.04
2,4,5-Trichlorophenol	ND		0.04
2-Chloronaphthalene	ND		0.04
2-Nitroaniline	ND		0.04
Acenaphthylene	ND		0.04
Dimethylphthalate	ND		0.04
2,6-Dinitrotoluene	ND		0.04
Acenaphthene	ND		0.04
3-Nitroaniline	ND		0.04
2,4-Dinitrophenol	ND		0.58
Dibenzofuran	0.068		0.04
2,4-Dinitrotoluene	ND		0.04
4-Nitrophenol	ND		0.04
Fluorene	ND		0.04
4-Chlorophenyl-phenylether	ND		0.04
Diethylphthalate	ND		0.04
4-Nitroaniline	ND		0.04
4,6-Dinitro-2-methylphenol	ND		0.15
n-Nitrosodiphenylamine	ND		0.04
4-Bromophenyl-phenylether	ND		0.04
Hexachlorobenzene	ND		0.04
Pentachlorophenol	ND		0.58
Phenanthrene	0.42		0.04
Anthracene	0.40		0.04
Carbazole	ND		0.04
Di-n-butylphthalate	ND		0.04
Fluoranthene	ND		0.04
Benzidine	ND		0.04
Pyrene	ND		0.04

Date of Report: January 7, 1998
Samples Submitted: December 18, 1997
Lab Traveler: 12-070
Project: 19735

SEMIVOLATILES by EPA 8270
page 3 of 3

Lab ID: 12-070-12
Client ID : STP-19a

Dilution Factor: 0.033

Compound:	Results	Flags	PQL
Butylbenzylphthalate	ND		0.04
3,3'-Dichlorobenzidine	ND		0.04
Benzo[a]anthracene	ND		0.04
Chrysene	ND		0.04
bis(2-Ethylhexyl)phthalate	0.042		0.04
Di-n-octylphthalate	ND		0.04
Benzo[b]fluoranthene	ND		0.04
Benzo[k]fluoranthene	ND		0.04
Benzo[a]pyrene	ND		0.04
Indeno[1,2,3-cd]pyrene	ND		0.04
Dibenz[a,h]anthracene	ND		0.04
Benzo[g,h,i]perylene	ND		0.04

Surrogate :	Percent Recovery	Control Limits
2-Fluorophenol	40	25 - 121
Phenol-d6	55	24 - 113
Nitrobenzene-d5	49	23 - 120
2-Fluorobiphenyl	55	30 - 115
2,4,6-Tribromophenol	75	19 - 122
Terphenyl-d14	62	18 - 137

Date of Report: January 7, 1998
Samples Submitted: December 18, 1997
Lab Traveler: 12-070
Project: 19735

SEMIVOLATILES by EPA 8270
METHOD BLANK QUALITY CONTROL
page 1 of 3

Date Extracted:	12-24-97
Date Analyzed:	01-05-98
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	MB1224S1
Dilution Factor :	0.033

Compound:	Results	Flags	PQL
Aniline	ND		0.03
bis(2-Chloroethyl)ether	ND		0.03
Phenol	ND		0.03
2-Chlorophenol	ND		0.03
1,3-Dichlorobenzene	ND		0.03
1,4-Dichlorobenzene	ND		0.03
1,2-Dichlorobenzene	ND		0.03
Benzyl alcohol	ND		0.03
bis(2-chloroisopropyl)ether	ND		0.03
2-Methylphenol	ND		0.03
Hexachloroethane	ND		0.03
N-Nitroso-di-n-propylamine	ND		0.03
4-Methylphenol	ND		0.03
Nitrobenzene	ND		0.03
Isophorone	ND		0.03
2-Nitrophenol	ND		0.03
2,4-Dimethylphenol	ND		0.03
bis(2-Chloroethoxy)methane	ND		0.03
2,4-Dichlorophenol	ND		0.03
Benzoic acid	ND		0.50
1,2,4-Trichlorobenzene	ND		0.03
Naphthalene	ND		0.03
4-Chloroaniline	ND		0.03
Hexachlorobutadiene	ND		0.03
4-Chloro-3-methylphenol	ND		0.03
2-Methylnaphthalene	ND		0.03

Date of Report: January 7, 1998
Samples Submitted: December 18, 1997
Lab Traveler: 12-070
Project: 19735

SEMIVOLATILES by EPA 8270
METHOD BLANK QUALITY CONTROL
page 2 of 3

Lab ID: MB1224S1

Dilution Factor: 0.033

Compound:	Results	Flags	PQL
Hexachlorocyclopentadiene	ND		0.03
2,4,6-Trichlorophenol	ND		0.03
2,4,5-Trichlorophenol	ND		0.03
2-Chloronaphthalene	ND		0.03
2-Nitroaniline	ND		0.03
Acenaphthylene	ND		0.03
Dimethylphthalate	ND		0.03
2,6-Dinitrotoluene	ND		0.03
Acenaphthene	ND		0.03
3-Nitroaniline	ND		0.03
2,4-Dinitrophenol	ND		0.50
Dibenzofuran	ND		0.03
2,4-Dinitrotoluene	ND		0.03
4-Nitrophenol	ND		0.03
Fluorene	ND		0.03
4-Chlorophenyl-phenylether	ND		0.03
Diethylphthalate	ND		0.03
4-Nitroaniline	ND		0.03
4,6-Dinitro-2-methylphenol	ND		0.13
n-Nitrosodiphenylamine	ND		0.03
4-Bromophenyl-phenylether	ND		0.03
Hexachlorobenzene	ND		0.03
Pentachlorophenol	ND		0.50
Phenanthrene	ND		0.03
Anthracene	ND		0.03
Carbazole	ND		0.03
Di-n-butylphthalate	ND		0.03
Fluoranthene	ND		0.03
Benzidine	ND		0.03
Pyrene	ND		0.03

Date of Report: January 7, 1998
Samples Submitted: December 18, 1997
Lab Traveler: 12-070
Project: 19735

SEMIVOLATILES by EPA 8270
METHOD BLANK QUALITY CONTROL
page 3 of 3

Lab ID: MB1224S1

Dilution Factor: 0.033

Compound:	Results	Flags	PQL
Butylbenzylphthalate	ND		0.03
3,3'-Dichlorobenzidine	ND		0.03
Benzo[a]anthracene	ND		0.03
Chrysene	ND		0.03
bis(2-Ethylhexyl)phthalate	ND		0.03
Di-n-octylphthalate	ND		0.03
Benzo[b]fluoranthene	ND		0.03
Benzo[k]fluoranthene	ND		0.03
Benzo[a]pyrene	ND		0.03
Indeno[1,2,3-cd]pyrene	ND		0.03
Dibenz[a,h]anthracene	ND		0.03
Benzo[g,h,i]perylene	ND		0.03

Surrogate :	Percent Recovery	Control Limits
2-Fluorophenol	52	25 - 121
Phenol-d6	68	24 - 113
Nitrobenzene-d5	61	23 - 120
2-Fluorobiphenyl	62	30 - 115
2,4,6-Tribromophenol	71	19 - 122
Terphenyl-d14	67	18 - 137

Date of Report: January 7, 1998
Samples Submitted: December 18, 1997
Lab Traveler: 12-070
Project: 19735

SEMIVOLATILES by EPA 8270
MS/MSD QUALITY CONTROL

Date Extracted: 12-10-97
Date Analyzed: 12-11-97

Matrix: Soil
Units: mg/kg(ppm)

Lab ID: 12-036-3 MSD

Dilution Factor: 0.033

Compound:	Spike Amount	MS	Percent Recovery	MSD	Percent Recovery	RPD
Phenol	3.30	2.62	79	2.50	76	4.4
2-Chlorophenol	3.30	2.12	64	2.01	61	5.7
1,4-Dichlorobenzene	1.65	1.05	64	0.960	58	9.0
N-Nitroso-di-n-propylamine	1.65	1.28	77	1.22	74	4.3
1,2,4-Trichlorobenzene	1.65	1.16	70	1.06	64	8.9
4-Chloro-3-methylphenol	3.30	2.84	86	2.84	86	0.21
Acenaphthene	1.65	1.30	79	1.28	77	2.1
2,4-Dinitrotoluene	1.65	1.05	63	1.04	63	0.42
4-Nitrophenol	3.30	2.38	72	2.62	79	9.8
Pentachlorophenol	3.30	2.71	82	2.76	84	1.7
Pyrene	1.65	1.50	81	1.63	89	9.0

Date of Report: January 7, 1998
Samples Submitted: December 18, 1997
Lab Traveler: 12-070
Project: 19735

TOTAL METALS
EPA 6010/7471

Date Extracted: 12-29-97
Date Analyzed: 12-29-97

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 12-070-12
Client ID: STP-19a

Analyte	Method	Dilution Factor	Result	PQL
Arsenic	6010	1.0	**ND**	12
Barium	6010	1.0	**81**	0.58
Cadmium	6010	1.0	**ND**	0.58
Chromium	6010	1.0	**33**	0.58
Lead	6010	1.0	**7.3**	5.8
Mercury	7471	1.0	**ND**	0.29
Selenium	6010	1.0	**ND**	12
Silver	6010	1.0	**ND**	0.58

Date of Report: January 7, 1998
Samples Submitted: December 18, 1997
Lab Traveler: 12-070
Project: 19735

TOTAL METALS
EPA 6010/7471
METHOD BLANK QUALITY CONTROL

Date Extracted: 12-29-97
Date Analyzed: 12-29-97

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB1229S1

Analyte	Method	Dilution Factor	Result	PQL
Arsenic	6010	1.0	**ND**	10
Barium	6010	1.0	**ND**	0.50
Cadmium	6010	1.0	**ND**	0.50
Chromium	6010	1.0	**ND**	0.50
Lead	6010	1.0	**ND**	5.0
Mercury	7471	1.0	**ND**	0.25
Selenium	6010	1.0	**ND**	10
Silver	6010	1.0	**ND**	0.50

Date of Report: January 7, 1998
Samples Submitted: December 18, 1997
Lab Traveler: 12-070
Project: 19735

TOTAL METALS
EPA 6010/7471
MS/MSD QUALITY CONTROL

Date Extracted: 12-29-97
Date Analyzed: 12-29-97

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 12-087-1

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**68.1**	68	**82.6**	83	19	
Barium	100	**138**	83	**149**	93	12	
Cadmium	50	**44.3**	89	**44.0**	88	0.68	
Chromium	100	**119**	92	**123**	96	4.3	
Lead	250	**217**	82	**215**	81	0.98	
Mercury	2.5	**2.30**	92	**2.14**	85	7.4	
Selenium	100	**74.4**	74	**72.5**	73	2.6	
Silver	50	**42.0**	84	**42.5**	85	1.2	

OnSite Environmental Inc.

DATA QUALIFIERS AND ABBREVIATIONS

A - Due to high sample concentration, amount spiked insufficient for meaningful MS/MSD data recovery.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD outside control limits due to analyte concentration within five times the quantitation limit.

D - Data from 1:____ dilution.

E - Value reported exceeds the quantitation range. Value is an estimate.

F - Surrogate recovery data not available due to the high concentration in the sample.

G - Insufficient sample quantity for duplicate analysis.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD outside control limits due to sample inhomogeniety. Sample re-extracted and re-analyzed with similar results.

L - Quantitated from C7-C34 as diesel fuel #2.

M - Predominantly _____ range hydrocarbons present in the sample.

N - Hydrocarbons in the gasoline range (C7-toluene) present in the sample.
N1 - Hydrocarbons in the gasoline range (C7-toluene) present in the sample which are elevating the diesel result.

O - Hydrocarbons in the heavy oil range (>C24) present in the sample.
O1 - Hydrocarbons in the heavy oil range (>C24) present in the sample which are elevating the diesel result.

R - Hydrocarbons outside defined gasoline range present in the sample.

S - Surrogate recovery data not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - Matrix Spike/Matrix Spike Duplicate RPD outside control limits due to matrix effects.

V - Matrix Spike/Matrix Spike Duplicate recoveries outside control limits due to matrix effects.

Z - Interferences were present which prevented the quantitation of the analyte below the detection limit reported.

ND - Not Detected

MRL - Method Reporting Limit

PQL - Practical Quantitation

Chain of Custody

OnSite Environmental Inc.
14924 NE 31st Circle • Redmond, WA 98052
Fax: (425) 885-4603 • Phone: (425) 883-3881

Company: Galloway Env. Inc.
Project No.: 19735
Project Name: Storey
Project Manager: G. Galloway

Turn Around Requested (Check One)
- ☐ Same Day
- ☐ 24 Hours
- ☐ 48 Hours
- ☒ Standard
- ☐ _____ (other)

Project Chemist: DAB

Laboratory No. 12-070

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8240/624/8260	Halogenated Volatiles by 8260	Semivolatiles by 8270/625	PAHs by 8270/625	PCB's by 8081/608	Total RCRA Metals (8)	TCLP Metals	VPH	EPH	% Moisture
1	MW-1 @ 15'	12/16	11:15	S	1	X												X
2	2 10'		11:30			X												X
3	2 15'		11:45			X												X
4	3 10'		15:10			X												X
5	3 15'		15:30			X												X
6	4 5'	12/17	10:05			X												X
7	4 10'	12/17	10:10			X												X
8	4 15'	12/17	10:15			X												X
9	STP-15a	12/16	12:10			X												X
10	15b		12:15			X												X
11	15c		12:20			X												X
12	19a		13:10			X		⊕	☒		☒			☒				X

RELINQUISHED BY	DATE	RECEIVED BY	DATE
[signature]	12/18/97	Kristen Koch	12-18-97
FIRM GEI	TIME 10:00	FIRM On Site Env.	TIME 10:00
RELINQUISHED BY	DATE	RECEIVED BY	DATE
FIRM	TIME	FIRM	TIME
REVIEWED BY		DATE REVIEWED	

COMMENTS:
Follow up HCIDs as appropriate
⊕ Follow up HCID. DB 12/22/97.
☒ Added 12/23 by GG.

Chain of Custody

OnSite Environmental Inc.
14924 NE 31st Circle • Redmond, WA 98052
Fax: (425) 885-4603 • Phone: (425) 883-3881

Turn Around Requested
(Check One)
☐ Same Day
☐ 24 Hours
☐ 48 Hours
☒ Standard
☐ _____ (other)

Company: GALLOWAY ENV. Inc.
Project No.: 19735
Project Name: STOREY
Project Manager: G. GALLOWAY

Project Chemist: DAB
Laboratory No. 112-070

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8240/624/8260	Halogenated Volatiles by 8260	Semivolatiles by 8270/625	PAHs by 8270/625	PCB's by 8081/608	Total RCRA Metals (8)	TCLP Metals	VPH	EPH	% Moisture
13	STP-19b	12/16	13:05	S	1	X												X
14	19c	12/16	13:10	S	1	X												X
15	20c	12/16	13:15	S	1	X												X

RELINQUISHED BY	DATE	RECEIVED BY	DATE
	12/18/97	Kristen Koch	12-18-97
FIRM: GEI	TIME: 10:00	FIRM: On Site ENV.	TIME: 10:00
RELINQUISHED BY	DATE	RECEIVED BY	DATE
FIRM	TIME	FIRM	TIME
REVIEWED BY		DATE REVIEWED	

COMMENTS: Follow up HCIDs as appropriate

DISTRIBUTION LEGEND - White - OnSite Copy - Yellow - Report Copy - Pink - Client Copy

PHASE I - Test Pits

12/10/97

OnSite Environmental Inc.
Analytical Testing and Mobile Laboratory Services

December 16, 1997

Gary Galloway
Galloway Environmental, Inc.
3102 220th Place SE
Issaquah, WA 98027

Re: Analytical Data for Project 19735
Laboratory Reference No. 9712-042

Dear Gary:

Enclosed are the analytical results and associated quality control data for samples submitted on December 11, 1997.

The standard policy of OnSite Environmental Inc., is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Chemist

Enclosures

14924 NE 31st Circle • Redmond, WA 98052 • (425) 883-3881 • Fax (425) 885-4603

Date of Report: December 16, 1997
Samples Submitted: December 11, 1997
Lab Traveler: 12-042
Project: 19735

NWTPH-HCID

Date Extracted: 12-11-97
Date Analyzed: 12-11-97

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	STP-1a	STP-2b	STP-3c
Lab ID:	12-042-01	12-042-02	12-042-03
Dilution Factor:	2.0	2.0	2.0
Gas:	ND	ND	ND
PQL:	25	24	21
Diesel Fuel:	ND	ND	ND
PQL:	62	61	53
Oil:	ND	ND	ND
PQL:	123	122	106
Surrogate Recovery: o-Terphenyl	114%	122%	91%

Date of Report: December 16, 1997
Samples Submitted: December 11, 1997
Lab Traveler: 12-042
Project: 19735

NWTPH-HCID

Date Extracted: 12-11-97
Date Analyzed: 12-11-97

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	STP-4c	STP-5a	STP-6a
Lab ID:	12-042-04	12-042-05	12-042-06
Dilution Factor:	2.0	2.0	2.0
Gas:	ND	ND	ND
PQL:	21	23	23
Diesel Fuel:	ND	Diesel Fuel #2	Diesel Fuel #2
PQL:	53	57	58
Oil:	ND	Heavy Oil	Heavy Oil
PQL:	105	115	116
Surrogate Recovery: o-Terphenyl	115%	125%	125%

Date of Report: December 16, 1997
Samples Submitted: December 11, 1997
Lab Traveler: 12-042
Project: 19735

NWTPH-HCID

Date Extracted: 12-11-97
Date Analyzed: 12-11-97

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	STP-7b	STP-8a	STP-9c
Lab ID:	12-042-07	12-042-08	12-042-09
Dilution Factor:	2.0	2.0	2.0
Gas:	ND	ND	ND
PQL:	25	23	21
Diesel Fuel:	ND	Diesel Fuel #2	ND
PQL:	62	58	53
Oil:	Heavy Oil	Heavy Oil	ND
PQL:	123	116	105
Surrogate Recovery: o-Terphenyl	125%	112%	124%

Date of Report: December 16, 1997
Samples Submitted: December 11, 1997
Lab Traveler: 12-042
Project: 19735

NWTPH-HCID
METHOD BLANK QUALITY CONTROL

Date Extracted:	12-11-97
Date Analyzed:	12-11-97
Matrix:	Soil
Units:	mg/Kg (ppm)

Lab ID:	MB1211S1
Dilution Factor:	2.0
Gas:	ND
PQL:	20
Diesel Fuel:	ND
PQL:	50
Oil:	ND
PQL:	100
Surrogate Recovery:	124%
o-Terphenyl	

Date of Report: December 16, 1997
Samples Submitted: December 11, 1997
Lab Traveler: 12-042
Project: 19735

NWTPH-Dx

Date Extracted: 12-12-97
Date Analyzed: 12-12-97

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	STP-5a	STP-6a	STP-7b	STP-8a
Lab ID:	12-042-05	12-042-06	12-042-07	12-042-08
Dilution Factor:	1.0	1.0	1.0	1.0
Diesel Fuel C12-C24:	140	490	40	60
PQL:	29	29	31	29
Oil C24-C34:	440	1300	ND	180
PQL:	57	58	62	58
Surrogate Recovery: o-Terphenyl	85%	96%	112%	108%
Flags	O1	O1		O1

Date of Report: December 16, 1997
Samples Submitted: December 11, 1997
Lab Traveler: 12-042
Project: 19735

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	12-12-97
Date Analyzed:	12-12-97
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	MB1212S1
Dilution Factor:	1.0
Diesel Fuel C12-C24:	ND
PQL:	25
Surrogate Recovery: o-Terphenyl	89%

Flags

Date of Report: December 16, 1997
Samples Submitted: December 11, 1997
Lab Traveler: 12-042
Project: 19735

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted:	12-10-97
Date Analyzed:	12-10-97
Matrix:	Soil
Units:	mg/Kg (ppm)

Lab ID:	12-037-01	12-037-01 DUP
Diesel Fuel C12-C24:	105	130
PQL:	25	25
RPD:	21.3%	
Surrogate Recovery: o-Terphenyl	84%	89%
Flags		

Date of Report: December 16, 1997
Samples Submitted: December 11, 1997
Lab Traveler: 12-042
Project: 19735

NWTPH-Dx
SB/SBD QUALITY CONTROL

Date Extracted:	12-10-97	
Date Analyzed:	12-10-97	
Matrix:	Soil	
Units:	mg/Kg (ppm)	
Spike Level:	100 ppm	
Lab ID:	SB1210S1	SB1210S1 DUP
Diesel Fuel C12-C24:	78.6	78.7
PQL:	25	25
Percent Recovery:	79%	79%
RPD:	0.10%	
Surrogate Recovery: o-Terphenyl	81%	72%
Flags		

Date of Report: December 16, 1997
Samples Submitted: December 11, 1997
Lab Traveler: 12-042
Project: 19735

Date Analyzed: 12-11-97

% MOISTURE

Client ID	Lab ID	% Moisture
STP-1a	12-042-1	19
STP-2b	12-042-2	18
STP-3c	12-042-3	6.0
STP-4c	12-042-4	5.0
STP-5a	12-042-5	13
STP-6a	12-042-6	14
STP-7b	12-042-7	19
STP-8a	12-042-8	14
STP-9c	12-042-9	5.0

OnSite Environmental Inc.

DATA QUALIFIERS AND ABBREVIATIONS

A - Due to high sample concentration, amount spiked insufficient for meaningful MS/MSD data recovery.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD outside control limits due to analyte concentration within five times the quantitation limit.

D - Data from 1:____ dilution.

E - Value reported exceeds the quantitation range. Value is an estimate.

F - Surrogate recovery data not available due to the high concentration in the sample.

G - Insufficient sample quantity for duplicate analysis.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD outside control limits due to sample inhomogeniety. Sample re-extracted and re-analyzed with similar results.

L - Quantitated from C7-C34 as diesel fuel #2.

M - Predominantly _____ range hydrocarbons present in the sample.

N - Hydrocarbons in the gasoline range (C7-toluene) present in the sample.
N1 - Hydrocarbons in the gasoline range (C7-toluene) present in the sample which are elevating the diesel result.

O - Hydrocarbons in the heavy oil range (>C24) present in the sample.
O1 - Hydrocarbons in the heavy oil range (>C24) present in the sample which are elevating the diesel result.

R - Hydrocarbons outside defined gasoline range present in the sample.

S - Surrogate recovery data not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - Matrix Spike/Matrix Spike Duplicate RPD outside control limits due to matrix effects.

V - Matrix Spike/Matrix Spike Duplicate recoveries outside control limits due to matrix effects.

Z - Interferences were present which prevented the quantitation of the analyte below the detection limit reported.

ND - Not Detected

MRL - Method Reporting Limit

PQL - Practical Quantitation

Chain Of Custody

OnSite Environmental Inc.
14924 NE 31st Circle • Redmond, WA 98052
Fax: (206) 885-4603 • **Phone: (206) 883-3881**

Turn Around Requested (Check One)
- ☐ Same Day
- ☐ 24 Hours
- ☐ 48 Hours
- ☒ Standard
- ☐ _____ (other)

Project Chemist: DAB

Laboratory No.

Company: GALLOWAY ENV. Inc.
Project No: 19735
Project Name: GARY GALLOWAY
Project Manager: (STOREY RI/FS)

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	#of Cont.	WTPH-HCID	WTPH-G/BTEX	WTPH-D EXT.	WTPH-418.1	Volatiles by 8240/624	Volatiles by 8260	Chlorinated Volatiles by 8240/8260/624	Semivolatiles by 8270/625	PAHs by 8270/625	PCB's by 8080/608	Total RCRA Metals (8)	TCLP Metals	% Moisture
1	STP-1a	12/10/97	10:40	S	1	X												X
2	2b		11:00			X												X
3	3c		11:20			X												X
4	4c		11:40			X												X
5	5a		11:55			X		⊗										X
6	6a		12:10			X		⊗										X
7	7b		12:20			X		⊗										X
8	8a		12:40			X		⊗										X
9	9c		13:00			X												X

RELINQUISHED BY	DATE	RECEIVED BY	DATE
Mary Murray	12/11/97	Kristen Koch	12/11
FIRM: GALLOWAY ENV. Inc.	TIME: 10:58	FIRM: On Site ENV.	TIME: 11:00
RELINQUISHED BY	DATE	RECEIVED BY	DATE
FIRM	TIME	FIRM	TIME
REVIEWED BY		DATE REVIEWED	

COMMENTS:
⊗ Added 12/12/97 per HCD
DAB.

DISTRIBUTION: White - Report Copy; Yellow - Report Copy; Pink - Client Copy

PHASE 1 Test Pits

METALS,
VOLATILES SCAN,
SEMIVOLATILES
12/10/97

(S.NOS. STP-5a
& STP-6a

OnSite Environmental Inc.
Analytical Testing and Mobile Laboratory Services

January 7, 1998

Gary Galloway
Galloway Environmental, Inc.
3102 220th Place SE
Issaquah, WA 98027

Re: Analytical Data for Project 19735
Laboratory Reference No. 9712-042

Dear Gary:

Enclosed are the analytical results and associated quality control data for samples submitted on December 11, 1997.

The standard policy of OnSite Environmental Inc., is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Chemist

Enclosures

14924 NE 31st Circle • Redmond, WA 98052 • (425) 883-3881 • Fax (425) 885-4603

Date of Report: January 7, 1998
Samples Submitted: December 11, 1997
Lab Traveler: 12-042
Project: 19735

VOLATILES by EPA 8260
page 1 of 2

Date Extracted: 12-24-97
Date Analyzed: 1-05-98

Matrix: Soil
Units: mg/Kg (ppm)

Lab ID: 12-042-5
Client ID: STP-5a

Dilution Factor: 50

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.057
Chloromethane	ND		0.057
Vinyl Chloride	ND		0.057
Bromomethane	ND		0.057
Chloroethane	ND		0.057
Trichlorofluoromethane	ND		0.057
1,1-Dichloroethene	ND		0.057
Methylene Chloride	0.092		0.057
(trans) 1,2-Dichloroethene	ND		0.057
1,1-Dichloroethane	ND		0.057
2,2-Dichloropropane	ND		0.057
(cis) 1,2-Dichloroethene	ND		0.057
Chloroform	ND		0.057
1,1,1-Trichloroethane	ND		0.057
Carbon Tetrachloride	ND		0.57
1,1-Dichloropropene	ND		0.057
Benzene	ND		0.057
1,2-Dichloroethane	ND		0.057
Trichloroethene	ND		0.057
1,2-Dichloropropane	ND		0.057
Dibromomethane	ND		0.057
Bromodichloromethane	ND		0.057
(cis) 1,3-Dichloropropene	ND		0.057
Toluene	0.32		0.057
(trans) 1,3-Dichloropropene	ND		0.057
1,1,2-Trichloroethane	ND		0.057
Tetrachloroethene	ND		0.057
1,3-Dichloropropane	ND		0.057

Date of Report: January 7, 1998
Samples Submitted: December 11, 1997
Lab Traveler: 12-042
Project: 19735

VOLATILES by EPA 8260
page 2 of 2

Lab ID: 12-042-5
Client ID: STP-5a

Dilution Factor: 50

Compound	Results	Flags	PQL
Dibromochloromethane	ND		0.057
1,2-Dibromoethane	ND		0.29
Chlorobenzene	ND		0.057
1,1,1,2-Tetrachloroethane	ND		0.057
Ethylbenzene	0.11		0.057
m,p-Xylene	0.34		0.11
o-Xylene	0.19		0.057
Styrene	ND		0.057
Bromoform	ND		0.057
Isopropylbenzene	ND		0.057
Bromobenzene	ND		0.057
1,1,2,2-Tetrachloroethane	ND		0.057
1,2,3-Trichloropropane	ND		0.057
n-Propylbenzene	ND		0.057
2-Chlorotoluene	ND		0.057
4-Chlorotoluene	ND		0.057
1,3,5-Trimethylbenzene	0.067		0.057
tert-Butylbenzene	ND		0.057
1,2,4-Trimethylbenzene	0.23		0.057
sec-Butylbenzene	ND		0.057
1,3-Dichlorobenzene	ND		0.057
p-Isopropyltoluene	0.065		0.057
1,4-Dichlorobenzene	ND		0.057
1,2-Dichlorobenzene	ND		0.057
n-Butylbenzene	ND		0.057
1,2-Dibromo-3-chloropropane	ND		0.57
1,2,4-Trichlorobenzene	ND		0.057
Hexachlorobutadiene	ND		0.057
Naphthalene	ND		0.57
1,2,3-Trichlorobenzene	ND		0.057
Surrogate	**Percent Recovery**		**Control Limits**
Dibromofluoromethane	64	*	80-120
Toluene-d8	74	*	81-117
4-Bromofluorobenzene	55	*	74-121

* Surrogate recovery outside control limits.

Date of Report: January 7, 1998
Samples Submitted: December 11, 1997
Lab Traveler: 12-042
Project: 19735

VOLATILES by EPA 8260
page 1 of 2

Date Extracted:	12-24-97
Date Analyzed:	1-05-98
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	12-042-6
Client ID:	**STP-6a**
Dilution Factor:	50

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.058
Chloromethane	ND		0.058
Vinyl Chloride	ND		0.058
Bromomethane	ND		0.058
Chloroethane	ND		0.058
Trichlorofluoromethane	ND		0.058
1,1-Dichloroethene	ND		0.058
Methylene Chloride	ND		0.058
(trans) 1,2-Dichloroethene	ND		0.058
1,1-Dichloroethane	ND		0.058
2,2-Dichloropropane	ND		0.058
(cis) 1,2-Dichloroethene	ND		0.058
Chloroform	ND		0.058
1,1,1-Trichloroethane	ND		0.058
Carbon Tetrachloride	ND		0.58
1,1-Dichloropropene	ND		0.058
Benzene	ND		0.058
1,2-Dichloroethane	ND		0.058
Trichloroethene	ND		0.058
1,2-Dichloropropane	ND		0.058
Dibromomethane	ND		0.058
Bromodichloromethane	ND		0.058
(cis) 1,3-Dichloropropene	ND		0.058
Toluene	0.3		0.058
(trans) 1,3-Dichloropropene	ND		0.058
1,1,2-Trichloroethane	ND		0.058
Tetrachloroethene	ND		0.058
1,3-Dichloropropane	ND		0.058

Date of Report: January 7, 1998
Samples Submitted: December 11, 1997
Lab Traveler: 12-042
Project: 19735

VOLATILES by EPA 8260
METHOD BLANK QUALITY CONTROL
page 1 of 2

Date Extracted: 12-24-97
Date Analyzed: 1-05-98

Matrix: Soil
Units: mg/Kg (ppm)

Lab ID: MB1231S1

Dilution Factor: 50

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.05
Chloromethane	ND		0.05
Vinyl Chloride	ND		0.05
Bromomethane	ND		0.05
Chloroethane	ND		0.05
Trichlorofluoromethane	ND		0.05
1,1-Dichloroethene	ND		0.05
Methylene Chloride	ND		0.05
(trans) 1,2-Dichloroethene	ND		0.05
1,1-Dichloroethane	ND		0.05
2,2-Dichloropropane	ND		0.05
(cis) 1,2-Dichloroethene	ND		0.05
Chloroform	ND		0.05
1,1,1-Trichloroethane	ND		0.05
Carbon Tetrachloride	ND		0.50
1,1-Dichloropropene	ND		0.05
Benzene	ND		0.05
1,2-Dichloroethane	ND		0.05
Trichloroethene	ND		0.05
1,2-Dichloropropane	ND		0.05
Dibromomethane	ND		0.05
Bromodichloromethane	ND		0.05
(cis) 1,3-Dichloropropene	ND		0.05
Toluene	ND		0.05
(trans) 1,3-Dichloropropene	ND		0.05
1,1,2-Trichloroethane	ND		0.05
Tetrachloroethene	ND		0.05
1,3-Dichloropropane	ND		0.05

Date of Report: January 7, 1998
Samples Submitted: December 11, 1997
Lab Traveler: 12-042
Project: 19735

VOLATILES by EPA 8260
METHOD BLANK QUALITY CONTROL
page 2 of 2

Lab ID: MB1231S1

Dilution Factor: 50

Compound	Results	Flags	PQL
Dibromochloromethane	ND		0.05
1,2-Dibromoethane	ND		0.25
Chlorobenzene	ND		0.05
1,1,1,2-Tetrachloroethane	ND		0.05
Ethylbenzene	ND		0.05
m,p-Xylene	ND		0.10
o-Xylene	ND		0.05
Styrene	ND		0.05
Bromoform	ND		0.05
Isopropylbenzene	ND		0.05
Bromobenzene	ND		0.05
1,1,2,2-Tetrachloroethane	ND		0.05
1,2,3-Trichloropropane	ND		0.05
n-Propylbenzene	ND		0.05
2-Chlorotoluene	ND		0.05
4-Chlorotoluene	ND		0.05
1,3,5-Trimethylbenzene	ND		0.05
tert-Butylbenzene	ND		0.05
1,2,4-Trimethylbenzene	ND		0.05
sec-Butylbenzene	ND		0.05
1,3-Dichlorobenzene	ND		0.05
p-Isopropyltoluene	ND		0.05
1,4-Dichlorobenzene	ND		0.05
1,2-Dichlorobenzene	ND		0.05
n-Butylbenzene	ND		0.05
1,2-Dibromo-3-chloropropane	ND		0.50
1,2,4-Trichlorobenzene	ND		0.05
Hexachlorobutadiene	ND		0.05
Naphthalene	ND		0.50
1,2,3-Trichlorobenzene	ND		0.05

Surrogate	Percent Recovery		Control Limits
Dibromofluoromethane	69	*	80-120
Toluene-d8	85		81-117
4-Bromofluorobenzene	63	*	74-121

* Surrogate recovery outside control limits.

Date of Report: January 7, 1998
Samples Submitted: December 11, 1997
Lab Traveler: 12-042
Project: 19735

VOLATILES by EPA 8260
MS/MSD QUALITY CONTROL

Date Extracted: 12-15-97
Date Analyzed: 12-15-97

Matrix: Soil
Units: mg/Kg (ppm)

Dilution Factor: 50

Lab ID: 12-021-1 MS

Compound	Spike Amount	MS	Percent Recovery	MSD	Percent Recovery	RPD
1,1-Dichloroethene	2.50	2.40	96	2.71	108	12
Benzene	2.50	2.23	89	2.46	98	9.7
Trichloroethene	2.50	2.55	100	2.56	100	0.30
Chlorobenzene-d5	2.50	2.45	95	2.34	91	4.8
Ethylbenzene	2.50	2.47	99	2.51	100	1.6

Date of Report: January 7, 1998
Samples Submitted: December 11, 1997
Lab Traveler: 12-042
Project: 19735

SEMIVOLATILES by EPA 8270
page 2 of 3

Lab ID: 12-042-5
Client ID : STP-5a

Dilution Factor: 0.033

Compound:	Results	Flags	PQL
Hexachlorocyclopentadiene	ND		0.04
2,4,6-Trichlorophenol	ND		0.04
2,4,5-Trichlorophenol	ND		0.04
2-Chloronaphthalene	ND		0.04
2-Nitroaniline	ND		0.04
Acenaphthylene	ND		0.04
Dimethylphthalate	ND		0.04
2,6-Dinitrotoluene	ND		0.04
Acenaphthene	ND		0.04
3-Nitroaniline	ND		0.04
2,4-Dinitrophenol	ND		0.57
Dibenzofuran	ND		0.04
2,4-Dinitrotoluene	ND		0.04
4-Nitrophenol	ND		0.04
Fluorene	ND		0.04
4-Chlorophenyl-phenylether	ND		0.04
Diethylphthalate	ND		0.04
4-Nitroaniline	ND		0.04
4,6-Dinitro-2-methylphenol	ND		0.15
n-Nitrosodiphenylamine	ND		0.04
4-Bromophenyl-phenylether	ND		0.04
Hexachlorobenzene	ND		0.04
Pentachlorophenol	ND		0.57
Phenanthrene	0.22		0.04
Anthracene	ND		0.04
Carbazole	ND		0.04
Di-n-butylphthalate	ND		0.04
Fluoranthene	0.04		0.04
Benzidine	ND		0.04
Pyrene	0.06		0.04

Date of Report: January 7, 1998
Samples Submitted: December 11, 1997
Lab Traveler: 12-042
Project: 19735

SEMIVOLATILES by EPA 8270
page 3 of 3

Lab ID: 12-042-5
Client ID : STP-5a

Dilution Factor: 0.033

Compound:	Results	Flags	PQL
Butylbenzylphthalate	ND		0.04
3,3'-Dichlorobenzidine	ND		0.04
Benzo[a]anthracene	ND		0.04
Chrysene	ND		0.04
bis(2-Ethylhexyl)phthalate	0.16		0.04
Di-n-octylphthalate	ND		0.04
Benzo[b]fluoranthene	ND		0.04
Benzo[k]fluoranthene	ND		0.04
Benzo[a]pyrene	ND		0.04
Indeno[1,2,3-cd]pyrene	ND		0.04
Dibenz[a,h]anthracene	ND		0.04
Benzo[g,h,i]perylene	ND		0.04

Surrogate :	Percent Recovery	Control Limits
2-Fluorophenol	43	25 - 121
Phenol-d6	60	24 - 113
Nitrobenzene-d5	52	23 - 120
2-Fluorobiphenyl	57	30 - 115
2,4,6-Tribromophenol	74	19 - 122
Terphenyl-d14	62	18 - 137

Date of Report: January 7, 1998
Samples Submitted: December 11, 1997
Lab Traveler: 12-042
Project: 19735

SEMIVOLATILES by EPA 8270
page 1 of 3

Date Extracted:	12-24-97
Date Analyzed:	01-05-98
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	12-042-6
Client ID :	STP-6a
Dilution Factor :	0.033

Compound:	Results	Flags	PQL
Aniline	ND		0.04
bis(2-Chloroethyl)ether	ND		0.04
Phenol	ND		0.04
2-Chlorophenol	ND		0.04
1,3-Dichlorobenzene	ND		0.04
1,4-Dichlorobenzene	ND		0.04
1,2-Dichlorobenzene	ND		0.04
Benzyl alcohol	ND		0.04
bis(2-chloroisopropyl)ether	ND		0.04
2-Methylphenol	ND		0.04
Hexachloroethane	ND		0.04
N-Nitroso-di-n-propylamine	ND		0.04
4-Methylphenol	ND		0.04
Nitrobenzene	ND		0.04
Isophorone	ND		0.04
2-Nitrophenol	ND		0.04
2,4-Dimethylphenol	ND		0.04
bis(2-Chloroethoxy)methane	ND		0.04
2,4-Dichlorophenol	ND		0.04
Benzoic acid	ND		0.58
1,2,4-Trichlorobenzene	ND		0.04
Naphthalene	0.097		0.04
4-Chloroaniline	ND		0.04
Hexachlorobutadiene	ND		0.04
4-Chloro-3-methylphenol	ND		0.04
2-Methylnaphthalene	0.22		0.04

Date of Report: January 7, 1998
Samples Submitted: December 11, 1997
Lab Traveler: 12-042
Project: 19735

SEMIVOLATILES by EPA 8270
page 2 of 3

Lab ID: 12-042-6
Client ID : STP-6a

Dilution Factor: 0.033

Compound:	Results	Flags	PQL
Hexachlorocyclopentadiene	ND		0.04
2,4,6-Trichlorophenol	ND		0.04
2,4,5-Trichlorophenol	ND		0.04
2-Chloronaphthalene	ND		0.04
2-Nitroaniline	ND		0.04
Acenaphthylene	ND		0.04
Dimethylphthalate	ND		0.04
2,6-Dinitrotoluene	ND		0.04
Acenaphthene	ND		0.04
3-Nitroaniline	ND		0.04
2,4-Dinitrophenol	ND		0.58
Dibenzofuran	0.087		0.04
2,4-Dinitrotoluene	ND		0.04
4-Nitrophenol	ND		0.04
Fluorene	ND		0.04
4-Chlorophenyl-phenylether	ND		0.04
Diethylphthalate	ND		0.04
4-Nitroaniline	ND		0.04
4,6-Dinitro-2-methylphenol	ND		0.15
n-Nitrosodiphenylamine	ND		0.04
4-Bromophenyl-phenylether	ND		0.04
Hexachlorobenzene	ND		0.04
Pentachlorophenol	ND		0.58
Phenanthrene	0.42		0.04
Anthracene	ND		0.04
Carbazole	ND		0.04
Di-n-butylphthalate	ND		0.04
Fluoranthene	0.054		0.04
Benzidine	ND		0.04
Pyrene	0.087		0.04

Date of Report: January 7, 1998
Samples Submitted: December 11, 1997
Lab Traveler: 12-042
Project: 19735

SEMIVOLATILES by EPA 8270
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Lab ID: 12-042-6
Client ID : STP-6a

Dilution Factor: 0.033

Compound:	Results	Flags	PQL
Butylbenzylphthalate	ND		0.04
3,3'-Dichlorobenzidine	ND		0.04
Benzo[a]anthracene	ND		0.04
Chrysene	0.047		0.04
bis(2-Ethylhexyl)phthalate	0.12		0.04
Di-n-octylphthalate	0.12		0.04
Benzo[b]fluoranthene	ND		0.04
Benzo[k]fluoranthene	ND		0.04
Benzo[a]pyrene	ND		0.04
Indeno[1,2,3-cd]pyrene	ND		0.04
Dibenz[a,h]anthracene	ND		0.04
Benzo[g,h,i]perylene	ND		0.04

Surrogate :	Percent Recovery	Control Limits
2-Fluorophenol	45	25 - 121
Phenol-d6	65	24 - 113
Nitrobenzene-d5	58	23 - 120
2-Fluorobiphenyl	60	30 - 115
2,4,6-Tribromophenol	82	19 - 122
Terphenyl-d14	69	18 - 137

Date of Report: January 7, 1998
Samples Submitted: December 11, 1997
Lab Traveler: 12-042
Project: 19735

SEMIVOLATILES by EPA 8270
METHOD BLANK QUALITY CONTROL
page 1 of 3

Date Extracted:	12-24-97
Date Analyzed:	01-05-98
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	MB1224S1
Dilution Factor :	0.033

Compound:	Results	Flags	PQL
Aniline	ND		0.03
bis(2-Chloroethyl)ether	ND		0.03
Phenol	ND		0.03
2-Chlorophenol	ND		0.03
1,3-Dichlorobenzene	ND		0.03
1,4-Dichlorobenzene	ND		0.03
1,2-Dichlorobenzene	ND		0.03
Benzyl alcohol	ND		0.03
bis(2-chloroisopropyl)ether	ND		0.03
2-Methylphenol	ND		0.03
Hexachloroethane	ND		0.03
N-Nitroso-di-n-propylamine	ND		0.03
4-Methylphenol	ND		0.03
Nitrobenzene	ND		0.03
Isophorone	ND		0.03
2-Nitrophenol	ND		0.03
2,4-Dimethylphenol	ND		0.03
bis(2-Chloroethoxy)methane	ND		0.03
2,4-Dichlorophenol	ND		0.03
Benzoic acid	ND		0.50
1,2,4-Trichlorobenzene	ND		0.03
Naphthalene	ND		0.03
4-Chloroaniline	ND		0.03
Hexachlorobutadiene	ND		0.03
4-Chloro-3-methylphenol	ND		0.03
2-Methylnaphthalene	ND		0.03

Date of Report: January 7, 1998
Samples Submitted: December 11, 1997
Lab Traveler: 12-042
Project: 19735

SEMIVOLATILES by EPA 8270
METHOD BLANK QUALITY CONTROL
page 2 of 3

Lab ID: MB1224S1

Dilution Factor: 0.033

Compound:	Results	Flags	PQL
Hexachlorocyclopentadiene	ND		0.03
2,4,6-Trichlorophenol	ND		0.03
2,4,5-Trichlorophenol	ND		0.03
2-Chloronaphthalene	ND		0.03
2-Nitroaniline	ND		0.03
Acenaphthylene	ND		0.03
Dimethylphthalate	ND		0.03
2,6-Dinitrotoluene	ND		0.03
Acenaphthene	ND		0.03
3-Nitroaniline	ND		0.03
2,4-Dinitrophenol	ND		0.50
Dibenzofuran	ND		0.03
2,4-Dinitrotoluene	ND		0.03
4-Nitrophenol	ND		0.03
Fluorene	ND		0.03
4-Chlorophenyl-phenylether	ND		0.03
Diethylphthalate	ND		0.03
4-Nitroaniline	ND		0.03
4,6-Dinitro-2-methylphenol	ND		0.13
n-Nitrosodiphenylamine	ND		0.03
4-Bromophenyl-phenylether	ND		0.03
Hexachlorobenzene	ND		0.03
Pentachlorophenol	ND		0.50
Phenanthrene	ND		0.03
Anthracene	ND		0.03
Carbazole	ND		0.03
Di-n-butylphthalate	ND		0.03
Fluoranthene	ND		0.03
Benzidine	ND		0.03
Pyrene	ND		0.03

Date of Report: January 7, 1998
Samples Submitted: December 11, 1997
Lab Traveler: 12-042
Project: 19735

SEMIVOLATILES by EPA 8270
METHOD BLANK QUALITY CONTROL
page 3 of 3

Lab ID: MB1224S1

Dilution Factor: 0.033

Compound:	Results	Flags	PQL
Butylbenzylphthalate	ND		0.03
3,3'-Dichlorobenzidine	ND		0.03
Benzo[a]anthracene	ND		0.03
Chrysene	ND		0.03
bis(2-Ethylhexyl)phthalate	ND		0.03
Di-n-octylphthalate	ND		0.03
Benzo[b]fluoranthene	ND		0.03
Benzo[k]fluoranthene	ND		0.03
Benzo[a]pyrene	ND		0.03
Indeno[1,2,3-cd]pyrene	ND		0.03
Dibenz[a,h]anthracene	ND		0.03
Benzo[g,h,i]perylene	ND		0.03

Surrogate :	Percent Recovery	Control Limits
2-Fluorophenol	52	25 - 121
Phenol-d6	68	24 - 113
Nitrobenzene-d5	61	23 - 120
2-Fluorobiphenyl	62	30 - 115
2,4,6-Tribromophenol	71	19 - 122
Terphenyl-d14	67	18 - 137

Date of Report: January 7, 1998
Samples Submitted: December 11, 1997
Lab Traveler: 12-042
Project: 19735

SEMIVOLATILES by EPA 8270
MS/MSD QUALITY CONTROL

Date Extracted: 12-10-97
Date Analyzed: 12-11-97

Matrix: Soil
Units: mg/kg(ppm)

Lab ID: 12-036-3 MSD

Dilution Factor: 0.033

Compound:	Spike Amount	MS	Percent Recovery	MSD	Percent Recovery	RPD
Phenol	3.30	2.62	79	2.50	76	4.4
2-Chlorophenol	3.30	2.12	64	2.01	61	5.7
1,4-Dichlorobenzene	1.65	1.05	64	0.960	58	9.0
N-Nitroso-di-n-propylamine	1.65	1.28	77	1.22	74	4.3
1,2,4-Trichlorobenzene	1.65	1.16	70	1.06	64	8.9
4-Chloro-3-methylphenol	3.30	2.84	86	2.84	86	0.21
Acenaphthene	1.65	1.30	79	1.28	77	2.1
2,4-Dinitrotoluene	1.65	1.05	63	1.04	63	0.42
4-Nitrophenol	3.30	2.38	72	2.62	79	9.8
Pentachlorophenol	3.30	2.71	82	2.76	84	1.7
Pyrene	1.65	1.50	81	1.63	89	9.0

Date of Report: January 7, 1998
Samples Submitted: December 11, 1997
Lab Traveler: 12-042
Project: 19735

TOTAL METALS
EPA 6010/7471

Date Extracted: 12-29-97
Date Analyzed: 12-29-97

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 12-042-5
Client ID: STP-5a

Analyte	Method	Dilution Factor	Result	PQL
Arsenic	6010	1.0	**ND**	11
Barium	6010	1.0	**140**	0.57
Cadmium	6010	1.0	**1.1**	0.57
Chromium	6010	1.0	**38**	0.57
Lead	6010	1.0	**180**	5.7
Mercury	7471	1.0	**ND**	0.29
Selenium	6010	1.0	**ND**	11
Silver	6010	1.0	**ND**	0.57

Date of Report: January 7, 1998
Samples Submitted: December 11, 1997
Lab Traveler: 12-042
Project: 19735

TOTAL METALS
EPA 6010/7471

Date Extracted: 12-29-97
Date Analyzed: 12-29-97

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 12-042-6
Client ID: STP-6a

Analyte	Method	Dilution Factor	Result	PQL
Arsenic	6010	1.0	**ND**	12
Barium	6010	1.0	**120**	0.58
Cadmium	6010	1.0	**1.9**	0.58
Chromium	6010	1.0	**49**	0.58
Lead	6010	1.0	**310**	5.8
Mercury	7471	1.0	**ND**	0.29
Selenium	6010	1.0	**ND**	12
Silver	6010	1.0	**4.3**	0.58

Date of Report: January 7, 1998
Samples Submitted: December 11, 1997
Lab Traveler: 12-042
Project: 19735

TOTAL METALS
EPA 6010/7471
METHOD BLANK QUALITY CONTROL

Date Extracted: 12-29-97
Date Analyzed: 12-29-97

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB1229S1

Analyte	Method	Dilution Factor	Result	PQL
Arsenic	6010	1.0	**ND**	10
Barium	6010	1.0	**ND**	0.50
Cadmium	6010	1.0	**ND**	0.50
Chromium	6010	1.0	**ND**	0.50
Lead	6010	1.0	**ND**	5.0
Mercury	7471	1.0	**ND**	0.25
Selenium	6010	1.0	**ND**	10
Silver	6010	1.0	**ND**	0.50

Date of Report: January 7, 1998
Samples Submitted: December 11, 1997
Lab Traveler: 12-042
Project: 19735

TOTAL METALS
EPA 6010/7471
DUPLICATE QUALITY CONTROL

Date Extracted: 12-29-97
Date Analyzed: 12-29-97

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 12-087-1

Analyte	Dilution	Sample Result	Duplicate Result	RPD	Flags	PQL
Arsenic	1.0	**ND**	**ND**	NA		10
Barium	1.0	**55.7**	**62.5**	11		0.50
Cadmium	1.0	**ND**	**ND**	NA		0.50
Chromium	1.0	**26.4**	**29.1**	9.7		0.50
Lead	1.0	**11.9**	**11.5**	3.9		5.0
Mercury	1.0	**ND**	**ND**	NA		0.25
Selenium	1.0	**ND**	**ND**	NA		10
Silver	1.0	**ND**	**ND**	NA		0.50

Date of Report: January 7, 1998
Samples Submitted: December 11, 1997
Lab Traveler: 12-042
Project: 19735

TOTAL METALS
EPA 6010/7471
MS/MSD QUALITY CONTROL

Date Extracted: 12-29-97
Date Analyzed: 12-29-97

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 12-087-1

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**68.1**	68	**82.6**	83	19	
Barium	100	**138**	83	**149**	93	12	
Cadmium	50	**44.3**	89	**44.0**	88	0.68	
Chromium	100	**119**	92	**123**	96	4.3	
Lead	250	**217**	82	**215**	81	0.98	
Mercury	2.5	**2.30**	92	**2.14**	85	7.4	
Selenium	100	**74.4**	74	**72.5**	73	2.6	
Silver	50	**42.0**	84	**42.5**	85	1.2	

Date of Report: January 22, 1998
Samples Submitted: January 16, 1998
Lab Traveler: 01-045
Project: 19735

NWTPH-HCID

Date Extracted: 1-16-98
Date Analyzed: 1-16-98

Matrix: Water
Units: mg/L (ppm)

Client ID:	MW-4	MW-23	MW-24
Lab ID:	01-045-04	01-045-05	01-045-06
Gas:	ND	Gasoline	Gasoline
PQL:	0.25	0.25	0.25
Diesel Fuel:	ND	ND	ND
PQL:	0.63	0.50	0.50
Oil:	ND	ND	ND
PQL:	0.63		
Surrogate Recovery: o-Terphenyl	87%	84%	101%

Date of Report: January 22, 1998
Samples Submitted: January 16, 1998
Lab Traveler: 01-045
Project: 19735

NWTPH-HCID

Date Extracted:	1-16-98
Date Analyzed:	1-16-98
Matrix:	Water
Units:	mg/L (ppm)

Client ID:	MW-25
Lab ID:	01-045-07
Gas:	ND
PQL:	0.25
Diesel Fuel:	ND
PQL:	0.63
Oil:	ND
PQL:	0.63
Surrogate Recovery:	95%
o-Terphenyl	

Date of Report: January 22, 1998
Samples Submitted: January 16, 1998
Lab Traveler: 01-045
Project: 19735

NWTPH-HCID

Date Extracted: 1-16-98
Date Analyzed: 1-16-98

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	SS-1 East	SS-2 West
Lab ID:	01-045-08	01-045-09
Gas:	ND	ND
PQL:	24	26
Diesel Fuel:	ND	Diesel Fuel #2
PQL:	61	65
Oil:	Heavy Oil	Heavy Oil
PQL:	122	130
Surrogate Recovery: o-Terphenyl	110%	93%

Date of Report: January 22, 1998
Samples Submitted: January 16, 1998
Lab Traveler: 01-045
Project: 19735

NWTPH-G/BTEX

Date Extracted: 1-19-98
Date Analyzed: 1-19&20-98

Matrix: Water
Units: ug/L (ppb)

Lab ID:	01-045-05			01-045-06		
Client ID:	**MW-23**			**MW-24**		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**71**		5.0	**480**	D	100
Toluene	**31**		5.0	**3.0**		1.0
Ethyl Benzene	**79**		5.0	**39**		1.0
m,p-Xylene	**150**		5.0	**16**		1.0
o-Xylene	**29**		5.0	**7.6**		1.0
TPH-Gas	**2600**		500	**630**		100
Surrogate Recovery: Fluorobenzene	83%			93%		

Date of Report: January 22, 1998
Samples Submitted: January 16, 1998
Lab Traveler: 01-045
Project: 19735

NWTPH-Dx

Date Extracted:	01-19-98
Date Analyzed:	01-19-98
Matrix:	Soil
Units:	mg/Kg (ppm)

Client ID:	SS-1 East	SS-2 West
Lab ID:	01-045-08	01-045-09
Diesel Fuel C12-C24:	190	280
PQL:	32	30
Oil C24-C34:	590	400
PQL:	65	61
Surrogate Recovery:		
o-Terphenyl	92%	104%
Flags	O1	O1

Date of Report: January 22, 1998
Samples Submitted: January 16, 1998
Lab Traveler: 01-045
Project: 19735

NWTPH-HCID
METHOD BLANK QUALITY CONTROL

Date Extracted:	1-16-98
Date Analyzed:	1-16-98
Matrix:	Water
Units:	mg/L (ppm)

Lab ID:	MB0116W1
Gas:	ND
PQL:	0.25
Diesel Fuel:	ND
PQL:	0.63
Oil:	ND
PQL:	0.63
Surrogate Recovery:	85%
o-Terphenyl	

Date of Report: January 22, 1998
Samples Submitted: January 16, 1998
Lab Traveler: 01-045
Project: 19735

NWTPH-HCID
METHOD BLANK QUALITY CONTROL

Date Extracted:	1-16-98
Date Analyzed:	1-16-98
Matrix:	Soil
Units:	mg/Kg (ppm)

Lab ID:	MB0116S1
Gas:	ND
PQL:	20
Diesel Fuel:	ND
PQL:	50
Oil:	ND
PQL:	100
Surrogate Recovery:	106%
o-Terphenyl	

Date of Report: January 22, 1998
Samples Submitted: January 16, 1998
Lab Traveler: 01-045
Project: 19735

NWTPH-G/BTEX
METHOD BLANK QUALITY CONTROL

Date Extracted: 1-19-98
Date Analyzed: 1-19-98

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0119W1

Dilution Factor 1.0

	Result	Flags	PQL
Benzene	**ND**		1.0
Toluene	**ND**		1.0
Ethyl Benzene	**ND**		1.0
m,p-Xylene	**ND**		1.0
o-Xylene	**ND**		1.0
TPH-Gas	**ND**		100

Surrogate Recovery:
Fluorobenzene 85%

Date of Report: January 22, 1998
Samples Submitted: January 16, 1998
Lab Traveler: 01-045
Project: 19735

NWTPH-G/BTEX
DUPLICATE QUALITY CONTROL

Date Extracted: 1-19-98
Date Analyzed: 1-19-98

Matrix: Water
Units: ug/L (ppb)

Lab ID	01-045-06 **Original**	01-045-06 **Duplicate**	**RPD**	**Flags**
Dilution Factor	1.0	1.0		
Benzene	**480**	**474**	2.4	D
Toluene	**2.97**	**4.30**	37	C
Ethyl Benzene	**38.8**	**38.4**	1.0	
m,p-Xylene	**15.5**	**17.2**	10	
o-Xylene	**7.63**	**8.05**	5.4	
TPH-Gas	**628**	**637**	1.4	
Surrogate Recovery:				
Fluorobenzene	93%	86%		

Date of Report: January 22, 1998
Samples Submitted: January 16, 1998
Lab Traveler: 01-045
Project: 19735

NWTPH-G/BTEX
SPIKE BLANK QUALITY CONTROL

Date Extracted: 1-19-98
Date Analyzed: 1-19-98

Matrix: Water
Units: ug/L (ppb)

Lab ID Spiked @ 50 ppb	**Spike Blank**	Percent Recovery	**Duplicate**	Percent Recovery	RPD
Dilution Factor	1.0		1.0		
Benzene	**43.1**	**86%**	**38.4**	**77%**	12
Toluene	**43.3**	**87%**	**38.7**	**77%**	11
Ethyl Benzene	**43.6**	**87%**	**39**	**78%**	11
m,p-Xylene	**43**	**86%**	**38.3**	**77%**	12
o-Xylene	**43.3**	**87%**	**38.5**	**77%**	12
Surrogate Recovery:					
Fluorobenzene	84%		78%		

Date of Report: January 22, 1998
Samples Submitted: January 16, 1998
Lab Traveler: 01-045
Project: 19735

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	01-19-98
Date Analyzed:	01-19-98
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	MB0119S1
Diesel Fuel C12-C24:	ND
PQL:	25
Oil C24-C34:	ND
PQL:	50
Surrogate Recovery:	
o-Terphenyl	105%

Flags

Date of Report: January 22, 1998
Samples Submitted: January 16, 1998
Lab Traveler: 01-045
Project: 19735

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted: 01-16-98
Date Analyzed: 01-19-98

Matrix: Soil
Units: mg/Kg (ppm)

Lab ID:	01-043-01	01-043-01DUP
Diesel Fuel C12-C24:	11500	11100
PQL:	250	250
RPD:	3.5	
Surrogate Recovery:		
o-Terphenyl	---	---
Flags	S	S

Date of Report: January 22, 1998
Samples Submitted: January 16, 1998
Lab Traveler: 01-045
Project: 19735

NWTPH-Dx
SB/SBD QUALITY CONTROL

Date Extracted:	01-15-98	
Date Analyzed:	01-15-98	
Matrix:	Soil	
Units:	mg/Kg (ppm)	
Spike Level:	100 ppm	
Lab ID:	SB0115S1	SBD0115S1
Diesel Fuel C12-C24:	98.1	93.5
Percent Recovery:	98%	94%
RPD:	4.8	
Surrogate Recovery:		
o-Terphenyl	103%	90%
Flags		

Date of Report: January 22, 1998
Samples Submitted: January 16, 1998
Lab Traveler: 01-045
Project: 19735

Date Analyzed: 1-16-98

% MOISTURE

Client ID	Lab ID	% Moisture
SS-1 East	01-045-08	23
SS-2 West	01-045-09	18

OnSite Environmental Inc.

DATA QUALIFIERS AND ABBREVIATIONS

A - Due to high sample concentration, amount spiked insufficient for meaningful MS/MSD data recovery.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD outside control limits due to analyte concentration within five times the quantitation limit.

D - Data from 1:100 dilution.

E - Value reported exceeds the quantitation range. Value is an estimate.

F - Surrogate recovery data not available due to the high concentration in the sample.

G - Insufficient sample quantity for duplicate analysis.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD outside control limits due to sample inhomogeniety. Sample re-extracted and re-analyzed with similar results.

L - Quantitated from C7-C34 as diesel fuel #2.

M - Predominantly _____ range hydrocarbons present in the sample.

N - Hydrocarbons in the gasoline range (C7-toluene) present in the sample.
N1 - Hydrocarbons in the gasoline range (C7-toluene) present in the sample which are elevating the diesel result.

O - Hydrocarbons in the heavy oil range (>C24) present in the sample.
O1 - Hydrocarbons in the heavy oil range (>C24) present in the sample which are elevating the diesel result.

R - Hydrocarbons outside defined gasoline range present in the sample.

S - Surrogate recovery data not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - Matrix Spike/Matrix Spike Duplicate RPD outside control limits due to matrix effects.

V - Matrix Spike/Matrix Spike Duplicate recoveries outside control limits due to matrix effects.

Z - Interferences were present which prevented the quantitation of the analyte below the detection limit reported.

ND - Not Detected

MRL - Method Reporting Limit

PQL - Practical Quantitation

Chain of Custody

OnSite Environmental Inc.
14924 NE 31st Circle • Redmond, WA 98052
Fax: (425) 885-4603 • Phone: (425) 883-3881

Company: GALLOWAY ENV. Inc.
Project No.: 19735
Project Name: STOREY
Project Manager: GALLOWAY

Turn Around Requested (Check One)
- ☐ Same Day
- ☐ 24 Hours
- ☐ 48 Hours
- ☒ Standard
- ☐ _____ (other)

Project Chemist: DAB

Laboratory No.

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8240/624/8260	Halogenated Volatiles by 8260	Semivolatiles by 8270/625	PAHs by 8270/625	PCB's by 8081/608	Total RCRA Metals (8)	TCLP Metals	VPH	EPH	% Moisture
1	MW-1	1/15/98	12:35	W	3	X												
2	-2		13:15	W	3	X												
3	-3		14:50	W	3	X												
4	-4		15:20	W	3	X												
5	-23		15:45	W	3	X	⊗											
6	-24		16:20	W	3	X	⊗											
7	-25		16:40	W	3	X												
8	SS-1 East		15:20	S	1	X		⊗										X
9	SS-2 West		15:15	S	1	X		⊗										X

RELINQUISHED BY	DATE	RECEIVED BY	DATE
Mary	1/16/98	Mark Lybeer	1/16/98
FIRM: GALLOWAY ENV. Inc.	TIME: 9:38	FIRM: On Site	TIME: 9:40
RELINQUISHED BY	DATE	RECEIVED BY	DATE
FIRM	TIME	FIRM	TIME
REVIEWED BY		DATE REVIEWED	

COMMENTS:
fax HCID results to (425) 688-8879 & follow-up w/ NWTPH-G or Dx as appropriate.

@ Added 1/19/98 Re: HCID. DB-

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

WATER AND
SEDIMENT SAMPLES
6/4/98

OnSite Environmental Inc.
Analytical Testing and Mobile Laboratory Services

June 22, 1998

Gary Galloway
Galloway Environmental, Inc.
3102 220th Place SE
Issaquah, WA 98027

Re: Analytical Data for Project 19735.1
Laboratory Reference No. 9806-038

Dear Gary:

Enclosed are the analytical results and associated quality control data for samples submitted on June 4, 1998.

The standard policy of OnSite Environmental Inc., is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Chemist

Enclosures

14924 NE 31st Circle • Redmond, WA 98052 • (425) 883-3881 • Fax (425) 885-4603

Date of Report: June 22, 1998
Samples Submitted: June 4, 1998
Lab Traveler: 06-038
Project: 19735.1

NWTPH-HCID

Date Extracted: 6-9-98
Date Analyzed: 6-9-98

Matrix: Water
Units: mg/L (ppm)

Client ID:	MW-1	MW-2	MW-3
Lab ID:	06-038-01	06-038-02	06-038-03
Gas C7-C12:	ND	Gasoline	ND
PQL:	0.25	0.25	0.25
Diesel Fuel C12-C24:	ND	ND	ND
PQL:	0.63	0.63	0.63
Heavy Oil C24-C34:	ND	ND	ND
PQL:	0.63	0.63	0.63
Surrogate Recovery:			
o-Terphenyl	80%	66%	75%

Flags:

Date of Report: June 22, 1998
Samples Submitted: June 4, 1998
Lab Traveler: 06-038
Project: 19735.1

NWTPH-HCID

Date Extracted: 6-9-98
Date Analyzed: 6-9-98

Matrix: Water
Units: mg/L (ppm)

Client ID:	MW-4	MW-25	MW-24
Lab ID:	06-038-04	06-038-05	06-038-06
Gas C7-C12:	ND	ND	Gasoline
PQL:	0.25	0.25	0.25
Diesel Fuel C12-C24:	ND	ND	Diesel Fuel
PQL:	0.63	0.63	0.63
Heavy Oil C24-C34:	ND	ND	ND
PQL:	0.63	0.63	0.63
Surrogate Recovery:			
o-Terphenyl	78%	91%	89%

Flags:

Date of Report: June 22, 1998
Samples Submitted: June 4, 1998
Lab Traveler: 06-038
Project: 19735.1

NWTPH-HCID

Date Extracted: 6-9-98
Date Analyzed: 6-9-98

Matrix: Water
Units: mg/L (ppm)

Client ID:	MW-23	4C-UP	4C-DOWN
Lab ID:	06-038-07	06-038-08	06-038-09
Gas C7-C12:	Gasoline	ND	ND
PQL:	0.25	0.25	0.25
Diesel Fuel C12-C24:	Diesel Fuel	ND	ND
PQL:	0.63	0.63	0.63
Heavy Oil C24-C34:	ND	ND	ND
PQL:	0.63	0.63	0.63
Surrogate Recovery:			
o-Terphenyl	76%	90%	92%

Flags:

Date of Report: June 22, 1998
Samples Submitted: June 4, 1998
Lab Traveler: 06-038
Project: 19735.1

NWTPH-HCID
METHOD BLANK QUALITY CONTROL

Date Extracted:	6-9-98
Date Analyzed:	6-9-98
Matrix:	Water
Units:	mg/L (ppm)
Lab ID:	MB0609W1
Gas C7-C12:	ND
PQL:	0.25
Diesel Fuel C12-C24:	ND
PQL:	0.63
Heavy Oil C24-C34:	ND
PQL:	0.63
Surrogate Recovery:	
o-Terphenyl	76%

Flags

Date of Report: June 22, 1998
Samples Submitted: June 4, 1998
Lab Traveler: 06-038
Project: 19735.1

NWTPH-HCID

Date Extracted:	6-5-98
Date Analyzed:	6-8-98
Matrix:	Soil
Units:	mg/Kg (ppm)

Client ID:	SS-4 WEST	SS-3 EAST
Lab ID:	06-038-10	06-038-11
Gas C7-C12:	ND	ND
PQL:	30	38
Diesel Fuel C12-C24:	ND	ND
PQL:	61	76
Heavy Oil C24-C34:	ND	ND
PQL:	120	150
Surrogate Recovery:		
o-Terphenyl	101%	103%

Flags:

Date of Report: June 22, 1998
Samples Submitted: June 4, 1998
Lab Traveler: 06-038
Project: 19735.1

NWTPH-HCID
METHOD BLANK QUALITY CONTROL

Date Extracted:	6-5-98
Date Analyzed:	6-8-98
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	MB0605S1
Gas C7-C12:	ND
PQL:	25
Diesel Fuel C12-C24:	ND
PQL:	50
Heavy Oil C24-C34:	ND
PQL:	100
Surrogate Recovery:	
o-Terphenyl	100%

Flags

Date of Report: June 22, 1998
Samples Submitted: June 4, 1998
Lab Traveler: 06-038
Project: 19735.1

NWTPH-G/BTEX
DUPLICATE QUALITY CONTROL

Date Extracted: 6-12-98
Date Analyzed: 6-15-98

Matrix: Water
Units: ug/L (ppb)

Lab ID:	06-085-07 Original	06-085-07 Duplicate	RPD	Flags
Benzene	ND	ND	NA	
Toluene	ND	ND	NA	
Ethyl Benzene	ND	ND	NA	
m,p-Xylene	ND	ND	NA	
o-Xylene	ND	ND	NA	
TPH-Gas	100	106	5.8	
Surrogate Recovery:				
Fluorobenzene	86%	88%		

Date of Report: June 22, 1998
Samples Submitted: June 4, 1998
Lab Traveler: 06-038
Project: 19735.1

NWTPH-G/BTEX
MS/MSD QUALITY CONTROL

Date Extracted: 6-12-98
Date Analyzed: 6-12-98

Matrix: Water
Units: ug/L (ppb)
Spike Level: 50.0 ppb

Lab ID:	06-085-07 **MS**	Percent Recovery	06-085-07 **MSD**	Percent Recovery	RPD
Benzene	**45.7**	**92**	**44.3**	**89**	3.3
Toluene	**48.7**	**98**	**47.5**	**95**	2.7
Ethyl Benzene	**51.0**	**102**	**49.3**	**99**	3.4
m,p-Xylene	**50.1**	**100**	**48.4**	**97**	3.4
o-Xylene	**49.8**	**100**	**48.2**	**96**	3.3
Surrogate Recovery:					
Fluorobenzene	90%		87%		

Date of Report: June 22, 1998
Samples Submitted: June 4, 1998
Lab Traveler: 06-038
Project: 19735.1

NWTPH-Dx

Date Extracted:	6-9-98
Date Analyzed:	6-9-98
Matrix:	Water
Units:	mg/L (ppm)

Client ID:	MW-24	MW-23
Lab ID:	06-038-06	06-038-07
Diesel Fuel C12-C24:	1.40	1.70
PQL:	0.25	0.25
Oil C24-C34:	0.52	0.54
PQL:	0.50	0.50
Surrogate Recovery:		
o-Terphenyl	89%	76%
Flags:	P	P

Date of Report: June 22, 1998
Samples Submitted: June 4, 1998
Lab Traveler: 06-038
Project: 19735.1

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	6-9-98
Date Analyzed:	6-9-98
Matrix:	Water
Units:	mg/L (ppm)
Lab ID:	MB0609W1
Diesel Fuel C12-C24:	ND
PQL:	0.25
Oil C24-C34:	ND
PQL:	0.50
Surrogate Recovery:	
o-Terphenyl	76%

Flags:

Date of Report: June 22, 1998
Samples Submitted: June 4, 1998
Lab Traveler: 06-038
Project: 19735.1

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted:	6-9-98
Date Analyzed:	6-9-98
Matrix:	Water
Units:	mg/L (ppm)

Lab ID:	05-129-04	05-129-04 DUP
Diesel Fuel C12-C24:	2.94	2.73
PQL:	0.25	0.25
RPD:	7.4	
Surrogate Recovery:		
o-Terphenyl	58%	66%

Flags:

Date of Report: June 22, 1998
Samples Submitted: June 4, 1998
Lab Traveler: 06-038
Project: 19735.1

NWTPH-Dx
SB/SBD QUALITY CONTROL

Date Extracted:	6-9-98	
Date Analyzed:	6-9-98	
Matrix:	Water	
Units:	mg/L (ppm)	
Spike Level:	1.00 ppm	
Lab ID:	SB0609W1	SB0609W1 DUP
Diesel Fuel C12-C24:	0.747	0.800
PQL:	0.25	0.25
Percent Recovery:	75	80
RPD:	6.9	
Surrogate Recovery:		
o-Terphenyl	75%	81%

Flags:

Date of Report: June 22, 1998
Samples Submitted: June 4, 1998
Lab Traveler: 06-038
Project: 19735.1

Date Analyzed: 6-5-98

% MOISTURE

Client ID	Lab ID	% Moisture
SS-4 West	06-038-10	18
SS-3 East	06-038-11	34

OnSite Environmental Inc.

DATA QUALIFIERS AND ABBREVIATIONS

A - Due to high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

D - Data from 1:____ dilution.

E - The value reported exceeds the quantitation range, and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

G - Insufficient sample quantity for duplicate analysis.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeniety. The sample was re-extracted and re-analyzed with similar results.

L - Quantitated from C7-C34 as diesel fuel #2.

M - Predominantly _____ range hydrocarbons present in the sample.

N - Hydrocarbons in the gasoline range (C7-toluene) are present in the sample which are elevating the diesel result.

O - Hydrocarbons in the heavy oil range (>C24) are present in the sample which are elevating the diesel result.

P - Hydrocarbons in the diesel range (C12-C24) are present in the sample which are elevating the oil result.

Q - The RPD of the results between the two columns is greater than 25.

R - Hydrocarbons outside the defined gasoline range are present in the sample and are elevating the gasoline result.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

Y - Acid Cleaned.

Z - Interferences were present which prevented the quantitation of the analyte below the detection limit reported.

ND - Not Detected
MRL - Method Reporting Limit
PQL - Practical Quantitation

Chain of Custody

Page 1 of 2

OnSite Environmental Inc.
14924 NE 31st Circle • Redmond, WA 98052
Fax: (425) 885-4603 • Phone: (425) 883-3881

Company: GALLOWAY ENV. Inc.
Project No.: 19735.1
Project Name: STORET
Project Manager: GALLOWAY

Turn Around Requested (Check One)
- ☐ Same Day
- ☐ 24 Hours
- ☐ 48 Hours
- ☒ Standard
- ☐ _____ (other)

Project Chemist: DB

Laboratory No.

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8240/624/8260	Halogenated Volatiles by 8260	Semivolatiles by 8270/625	PAHs by 8270/625	PCB's by 8081/608	Total RCRA Metals (8)	TCLP Metals	VPH	EPH	% Moisture
1	MW-1	6/4/98	11:34	W	3	X												
2	-2		12:39				⊗											
3	-3		13:00															
4	-4		13:45															
5	-25		13:56															
6	-24		14:30				⊗	⊗										
7	-23		14:45				⊗	⊗										
8	VC-UP		15:10															
9	VC-DOWN		13:55															
10	SS-4 West		13:55	S	1													X
11	SS-3 East		15:10	S	1													X

RELINQUISHED BY	DATE	RECEIVED BY	DATE
[signature]	6/4/98	[signature]	6/4/98
FIRM: GAE	TIME: 17:00	FIRM: OnSite Environ.	TIME: 5:00
RELINQUISHED BY	DATE	RECEIVED BY	DATE
FIRM	TIME	FIRM	TIME
REVIEWED BY		DATE REVIEWED	

COMMENTS:
Follow up hits as appropriate - fax results to (425) 688-8879
⊗ Added per HCID - DB 6/7/98

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

PHASE II - Test Pits

6/10/98

OnSite Environmental Inc.
Analytical Testing and Mobile Laboratory Services

June 24, 1998

Gary Galloway
Galloway Environmental, Inc.
3102 220th Place SE
Issaquah, WA 98027

Re: Analytical Data for Project 19824
Laboratory Reference No. 9806-105

Dear Gary:

Enclosed are the analytical results and associated quality control data for samples submitted on June 15, 1998.

The standard policy of OnSite Environmental Inc., is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Chemist

Enclosures

14924 NE 31st Circle • Redmond, WA 98052 • (425) 883-3881 • Fax (425) 885-4603

Date of Report: June 24, 1998
Samples Submitted: June 15, 1998
Lab Traveler: 06-105
Project: 19824

NWTPH-HCID

Date Extracted: 6-15-98
Date Analyzed: 6-15-98

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	STP-10c	STP-11b	STP-11c
Lab ID:	06-105-01	06-105-02	06-105-03
Gas C7-C12:	ND	ND	ND
PQL:	31	30	26
Diesel Fuel C12-C24:	ND	ND	ND
PQL:	62	60	53
Heavy Oil C24-C34:	ND	Heavy Oil	ND
PQL:	120	120	110
Surrogate Recovery:			
o-Terphenyl	106%	106%	108%

Flags:

Date of Report: June 24, 1998
Samples Submitted: June 15, 1998
Lab Traveler: 06-105
Project: 19824

NWTPH-HCID

Date Extracted: 6-15-98
Date Analyzed: 6-15-98

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	STP-12b	STP-13a	STP-14c
Lab ID:	06-105-05	06-105-07	06-105-11
Gas C7-C12:	ND	Gasoline	ND
PQL:	33	28	27
Diesel Fuel C12-C24:	ND	ND	ND
PQL:	67	57	54
Heavy Oil C24-C34:	ND	ND	ND
PQL:	130	110	110
Surrogate Recovery:			
o-Terphenyl	110%	115%	110%

Flags:

Date of Report: June 24, 1998
Samples Submitted: June 15, 1998
Lab Traveler: 06-105
Project: 19824

NWTPH-HCID

Date Extracted: 6-15-98
Date Analyzed: 6-15-98

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	STP-16c	STP-18c	STP-21d
Lab ID:	06-105-12	06-105-13	06-105-17
Gas C7-C12:	ND	Gasoline	ND
PQL:	26	31	27
Diesel Fuel C12-C24:	ND	Diesel Fuel #2	Diesel Fuel #2
PQL:	53	62	54
Heavy Oil C24-C34:	ND	ND	ND
PQL:	110	120	110
Surrogate Recovery:			
o-Terphenyl	111%	---	---
Flags:		F	F

Date of Report: June 24, 1998
Samples Submitted: June 15, 1998
Lab Traveler: 06-105
Project: 19824

NWTPH-HCID

Date Extracted: 6-15-98
Date Analyzed: 6-15-98

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	STP-22d	STP-23a	STP-23d
Lab ID:	06-105-18	06-105-19	06-105-22
Gas C7-C12:	ND	ND	Gasoline
PQL:	27	27	28
Diesel Fuel C12-C24:	Diesel Fuel #2	ND	Diesel Fuel #2
PQL:	54	54	57
Heavy Oil C24-C34:	ND	Heavy Oil	Heavy Oil
PQL:	110	110	110
Surrogate Recovery:			
o-Terphenyl	---	110%	---
Flags:	F		F

Date of Report: June 24, 1998
Samples Submitted: June 15, 1998
Lab Traveler: 06-105
Project: 19824

NWTPH-HCID

Date Extracted: 6-17-98
Date Analyzed: 6-17-98

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	STP-12a	STP-12c
Lab ID:	06-105-04	06-105-06
Gas C7-C12:	Gasoline	Gasoline
PQL:	29	27
Diesel Fuel C12-C24:	Unidentified	Diesel Fuel # 2
PQL:	57	54
Heavy Oil C24-C34:	ND	ND
PQL:	110	110
Surrogate Recovery:		
o-Terphenyl	113%	118%

Flags:

Date of Report: June 24, 1998
Samples Submitted: June 15, 1998
Lab Traveler: 06-105
Project: 19824

NWTPH-HCID
METHOD BLANK QUALITY CONTROL

Date Extracted:	6-15-98
Date Analyzed:	6-15-98
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	MB0615S1
Gas C7-C12:	ND
PQL:	25
Diesel Fuel C12-C24:	ND
PQL:	50
Heavy Oil C24-C34:	ND
PQL:	100
Surrogate Recovery:	
o-Terphenyl	104%

Flags

Date of Report: June 24, 1998
Samples Submitted: June 15, 1998
Lab Traveler: 06-105
Project: 19824

NWTPH-HCID
METHOD BLANK QUALITY CONTROL

Date Extracted:	6-17-98
Date Analyzed:	6-17-98
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	MB0617S1
Gas C7-C12:	ND
PQL:	25
Diesel Fuel C12-C24:	ND
PQL:	50
Heavy Oil C24-C34:	ND
PQL:	100
Surrogate Recovery:	
o-Terphenyl	116%

Flags

Date of Report: June 24, 1998
Samples Submitted: June 15, 1998
Lab Traveler: 06-105
Project: 19824

NWTPH-G/BTEX

Date Extracted: 6-17-98
Date Analyzed: 6-18-98

Matrix: Soil
Units: mg/Kg (ppm)

Lab ID:	06-105-07			06-105-13		
Client ID:	**STP-13a**			**STP-18c**		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**		0.28	**0.70**		0.31
Toluene	**0.46**		0.28	**0.94**		0.31
Ethyl Benzene	**ND**		0.28	**1.1**		0.31
m,p-Xylene	**1.2**		0.28	**5.3**		0.31
o-Xylene	**1.1**		0.28	**2.7**		0.31
TPH-Gas	**82**		28	**580**		31
Surrogate Recovery: Fluorobenzene	---	S		---	S	

Date of Report: June 24, 1998
Samples Submitted: June 15, 1998
Lab Traveler: 06-105
Project: 19824

NWTPH-G/BTEX
METHOD BLANK QUALITY CONTROL

Date Extracted: 6-17-98
Date Analyzed: 6-17-98

Matrix: Soil
Units: mg/Kg (ppm)

Lab ID: MB0617S2

	Result	Flags	PQL
Benzene	ND		0.050
Toluene	ND		0.050
Ethyl Benzene	ND		0.050
m,p-Xylene	ND		0.050
o-Xylene	ND		0.050
TPH-Gas	ND		5.0

Surrogate Recovery:
Fluorobenzene 118%

Date of Report: June 24, 1998
Samples Submitted: June 15, 1998
Lab Traveler: 06-105
Project: 19824

NWTPH-G/BTEX
DUPLICATE QUALITY CONTROL

Date Extracted: 6-17-98
Date Analyzed: 6-18-98

Matrix: Soil
Units: mg/Kg (ppm)

Lab ID:	06-127-02 **Original**	06-127-02 **Duplicate**	**RPD**	**Flags**
Benzene	**ND**	**ND**	NA	
Toluene	**ND**	**ND**	NA	
Ethyl Benzene	**ND**	**ND**	NA	
m,p-Xylene	**ND**	**ND**	NA	
o-Xylene	**ND**	**ND**	NA	
TPH-Gas	**ND**	**ND**	NA	
Surrogate Recovery:				
Fluorobenzene	107%	98%		

Date of Report: June 24, 1998
Samples Submitted: June 15, 1998
Lab Traveler: 06-105
Project: 19824

NWTPH-G/BTEX
MS/MSD QUALITY CONTROL

Date Extracted: 6-17-98
Date Analyzed: 6-18-98

Matrix: Soil
Units: mg/Kg (ppm)

Spike Level: 1.00 ppm

Lab ID:	06-127-02 **MS**	Percent Recovery	06-127-02 **MSD**	Percent Recovery	RPD
Benzene	**0.974**	**97**	**0.965**	**97**	0.88
Toluene	**1.05**	**105**	**1.04**	**104**	0.86
Ethyl Benzene	**1.12**	**112**	**1.10**	**110**	1.3
m,p-Xylene	**1.08**	**108**	**1.07**	**107**	1.1
o-Xylene	**1.09**	**109**	**1.08**	**108**	1.1
Surrogate Recovery:					
Fluorobenzene	110%		109%		

Date of Report: June 24, 1998
Samples Submitted: June 15, 1998
Lab Traveler: 06-105
Project: 19824

NWTPH-Dx

Date Extracted: 6-17-98
Date Analyzed: 6-18-98

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	STP-11b	STP-12a	STP-12c
Lab ID:	06-105-02	06-105-04	06-105-06
Diesel Fuel C12-C24:	120	310	430
PQL:	30	29	27
Oil C24-C34:	170	220	61
PQL:	60	57	54
Surrogate Recovery:			
o-Terphenyl	95%	96%	96%
Flags:	O	O	P,N

Date of Report: June 24, 1998
Samples Submitted: June 15, 1998
Lab Traveler: 06-105
Project: 19824

NWTPH-Dx

Date Extracted:	6-17-98
Date Analyzed:	6-18-98
Matrix:	Soil
Units:	mg/Kg (ppm)

Client ID:	STP-23a	STP-23d
Lab ID:	06-105-19	06-105-22
Diesel Fuel C12-C24:	40	4500
PQL:	27	140
Oil C24-C34:	140	360
PQL:	54	110
Surrogate Recovery:		
o-Terphenyl	97%	---
Flags:	O	S,P

Date of Report: June 24, 1998
Samples Submitted: June 15, 1998
Lab Traveler: 06-105
Project: 19824

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	6-17-98
Date Analyzed:	6-17-98
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	MB0617S2
Diesel Fuel C12-C24:	ND
PQL:	25
Oil C24-C34:	ND
PQL:	50
Surrogate Recovery:	
o-Terphenyl	102%

Flags:

Date of Report: June 24, 1998
Samples Submitted: June 15, 1998
Lab Traveler: 06-105
Project: 19824

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted:	6-17-98
Date Analyzed:	6-17-98
Matrix:	Soil
Units:	mg/Kg (ppm)

Lab ID:	06-105-02	06-105-02 DUP
Diesel Fuel C12-C24:	105	59.5
PQL:	25	25
RPD:	55	
Surrogate Recovery:		
o-Terphenyl	95%	88%

Flags:

Date of Report: June 24, 1998
Samples Submitted: June 15, 1998
Lab Traveler: 06-105
Project: 19824

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted:	6-17-98
Date Analyzed:	6-17-98
Matrix:	Soil
Units:	mg/Kg (ppm)

Lab ID:	06-128-03	06-128-03 DUP
Diesel Fuel C12-C24:	37.9	39.4
PQL:	25	25
RPD:	3.9	
Surrogate Recovery:		
o-Terphenyl	92%	90%

Flags:

Date of Report: June 24, 1998
Samples Submitted: June 15, 1998
Lab Traveler: 06-105
Project: 19824

NWTPH-Dx
SB/SBD QUALITY CONTROL

Date Extracted:	6-17-98
Date Analyzed:	6-17-98
Matrix:	Soil
Units:	mg/Kg (ppm)
Spike Level:	100 ppm

Lab ID:	SB0617S2	SB0617S2 DUP
Diesel Fuel C12-C24:	85.6	84.6
PQL:	25	25
Percent Recovery:	86	85
RPD:	1.2	
Surrogate Recovery:		
o-Terphenyl	108%	106%

Flags:

Date of Report: June 24, 1998
Samples Submitted: June 15, 1998
Lab Traveler: 06-105
Project: 19824

TOTAL METALS
EPA 6010B/7471A

Date Extracted: 6-17-98
Date Analyzed: 6-17&18-98

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 06-105-02
Client ID: STP-11b

Analyte	Method	Result	PQL
Arsenic	6010B	**ND**	12
Barium	6010B	**78**	0.60
Cadmium	6010B	**ND**	0.60
Chromium	6010B	**55**	0.60
Lead	6010B	**7.0**	6.0
Mercury	7471A	**ND**	0.30
Selenium	6010B	**ND**	12
Silver	6010B	**ND**	0.60

Date of Report: June 24, 1998
Samples Submitted: June 15, 1998
Lab Traveler: 06-105
Project: 19824

TOTAL METALS
EPA 6010B/7471A

Date Extracted: 6-17-98
Date Analyzed: 6-17&18-98

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 06-105-19
Client ID: STP-23a

Analyte	Method	Result	PQL
Arsenic	6010B	**ND**	11
Barium	6010B	**67**	0.54
Cadmium	6010B	**ND**	0.54
Chromium	6010B	**36**	0.54
Lead	6010B	**6.5**	5.4
Mercury	7471A	**ND**	0.27
Selenium	6010B	**ND**	11
Silver	6010B	**ND**	0.54

Date of Report: June 24, 1998
Samples Submitted: June 15, 1998
Lab Traveler: 06-105
Project: 19824

TOTAL METALS
EPA 6010B/7471A

Date Extracted: 6-17-98
Date Analyzed: 6-17&18-98

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 06-105-22
Client ID: STP-23d

Analyte	Method	Result	PQL
Arsenic	6010B	**ND**	11
Barium	6010B	**34**	0.57
Cadmium	6010B	**ND**	0.57
Chromium	6010B	**22**	0.57
Lead	6010B	**7.6**	5.7
Mercury	7471A	**ND**	0.28
Selenium	6010B	**ND**	11
Silver	6010B	**ND**	0.57

Date of Report: June 24, 1998
Samples Submitted: June 15, 1998
Lab Traveler: 06-105
Project: 19824

TOTAL METALS
EPA 6010B/7471A
METHOD BLANK QUALITY CONTROL

Date Extracted: 6-17-98
Date Analyzed: 6-17&18-98

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0617S1

Analyte	Method	Result	PQL
Arsenic	6010B	**ND**	10
Barium	6010B	**ND**	0.50
Cadmium	6010B	**ND**	0.50
Chromium	6010B	**ND**	0.50
Lead	6010B	**ND**	5.0
Mercury	7471A	**ND**	0.25
Selenium	6010B	**ND**	10
Silver	6010B	**ND**	0.50

Date of Report: June 24, 1998
Samples Submitted: June 15, 1998
Lab Traveler: 06-105
Project: 19824

TOTAL METALS
EPA 6010B/7471A
DUPLICATE QUALITY CONTROL

Date Extracted: 6-17&98
Date Analyzed: 6-17&18-98

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 06-108-05

Analyte	Sample Result	Duplicate Result	RPD	Flags	PQL
Arsenic	**ND**	**ND**	NA		10
Barium	**10.9**	**11.9**	8.8		0.50
Cadmium	**ND**	**ND**	NA		0.50
Chromium	**10.2**	**11.2**	8.9		0.50
Lead	**ND**	**ND**	NA		5.0
Mercury	**ND**	**ND**	NA		0.25
Selenium	**ND**	**ND**	NA		10
Silver	**ND**	**ND**	NA		0.50

Date of Report: June 24, 1998
Samples Submitted: June 15, 1998
Lab Traveler: 06-105
Project: 19824

TOTAL METALS
EPA 6010B/7471A
MS/MSD QUALITY CONTROL

Date Extracted: 6-17-98
Date Analyzed: 6-17&18-98

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 06-108-05

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**68.5**	69	**75.9**	76	10	
Barium	100	**84.8**	74	**94.0**	83	10	
Cadmium	50	**37.7**	75	**40.9**	82	8.2	
Chromium	100	**87.4**	77	**98.6**	88	12	
Lead	250	**180**	72	**187**	75	3.9	
Mercury	1.0	**0.876**	88	**0.894**	89	2.0	
Selenium	100	**75.3**	75	**75.7**	76	0.53	
Silver	50	**35.5**	71	**39.9**	80	12	

Date of Report: June 24, 1998
Samples Submitted: June 15, 1998
Lab Traveler: 06-105
Project: 19824

Date Analyzed: 6-15&17-98

% MOISTURE

Client ID	Lab ID	% Moisture
STP-10c	06-105-01	19
STP-11b	06-105-02	16
STP-11c	06-105-03	5.0
STP-12a	06-105-04	13
STP-12b	06-105-05	25
STP-12c	06-105-06	7.0
STP-13a	06-105-07	12
STP-14c	06-105-11	7.0
STP-16c	06-105-12	5.0
STP-18c	06-105-13	19
STP-21d	06-105-17	8.0
STP-22d	06-105-18	7.0
STP-23a	06-105-19	7.0
STP-23d	06-105-22	12

OnSite Environmental Inc.

DATA QUALIFIERS AND ABBREVIATIONS

A - Due to high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

D - Data from 1:____ dilution.

E - The value reported exceeds the quantitation range, and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

G - Insufficient sample quantity for duplicate analysis.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeniety. The sample was re-extracted and re-analyzed with similar results.

L - Quantitated from C7-C34 as diesel fuel #2.

M - Predominantly _____ range hydrocarbons present in the sample.

N - Hydrocarbons in the gasoline range (C7-toluene) are present in the sample which are elevating the diesel result.

O - Hydrocarbons in the heavy oil range (>C24) are present in the sample which are elevating the diesel result.

P - Hydrocarbons in the diesel range (C12-C24) are present in the sample which are elevating the oil result.

Q - The RPD of the results between the two columns is greater than 25.

R - Hydrocarbons outside the defined gasoline range are present in the sample and are elevating the gasoline result.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

Y - Acid Cleaned.

Z - Interferences were present which prevented the quantitation of the analyte below the detection limit reported.

ND - Not Detected
MRL - Method Reporting Limit
PQL - Practical Quantitation

Chain of Custody

OnSite Environmental Inc.
14924 NE 31st Circle • Redmond, WA 98052
Fax: (425) 885-4603 • Phone: (425) 883-3881

Company: GALLOWAY ENV. Inc.
Project No.: 19824
Project Name: STOREY Phase II
Project Manager: GALLOWAY

Turn Around Requested (Check One)
- ☐ Same Day
- ☒ 24 Hours
- ☐ 48 Hours
- ☐ Standard
- ☐ ______ (other)

Project Chemist: DB
Laboratory No.

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8240/624/8260	Halogenated Volatiles by 8260	Semivolatiles by 8270/625	PAHs by 8270/625	PCB's by 8081/608	Total RCRA Metals (8)	TCLP Metals	VPH	EPH	% Moisture
1	STP-10c	6/10	15:30	S	1	X												X
2	11b		15:40			X		⊗						⊗				X
3	11c		15:45			X												X
4	12a		16:00			⊗	⊗	⊗										⊗
5	12b		16:05			X												X
6	12c		16:10			⊗	⊗	⊗										⊗
7	13a		16:30			X	⊗											X
8	13b		16:40			HOLD												
9	13c		16:45			HOLD												
10	14a		16:55			HOLD												
11	14c		17:00			X												X
12	16c		17:10			X												X

Relinquished By	Date	Received By	Date
[signature]	6/10/98	Kirsten Kah	6/15/98
Firm: GAIE	Time: 11:58	Firm: OSE	Time: 12:00
Relinquished By	Date	Received By	Date
Firm	Time	Firm	Time
Reviewed By		Date Reviewed	

COMMENTS: ⊗ Follow-up Added 6/22/98 ... Please call (425) 688-8852 @ HCID results.
- 48 hour T.O.T.
⊗ Added 6/17/98 per HCID + G.G.
Accession- ∞

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

Chain of Custody

OnSite Environmental Inc.
14924 NE 31st Circle • Redmond, WA 98052
Fax: (425) 885-4603 • Phone: (425) 883-3881

Company: GALLOWAY ENV. Inc.
Project No.: 19824
Project Name: STOREY Phase II
Project Manager: GALLOWAY

Turn Around Requested (Check One)
- ☐ Same Day
- ☒ 24 Hours
- ☐ 48 Hours
- ☐ Standard
- ☐ _____ (other)

Project Chemist: DB

Laboratory No.

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8240/624/8260	Halogenated Volatiles by 8260	Semivolatiles by 8270/625	PAHs by 8270/625	PCB's by 8081/608	Total RCRA Metals (8)	TCLP Metals	VPH	EPH	% Moisture
13	STP-18c	6/10	17:15	S	1	X	⊗	⊗										X
14	21a		17:20			HOLD												
15	21b		17:25			HOLD												
16	21c		17:30			HOLD												
17	21d		17:35			X		⊗										X
18	22d		17:50			X		⊗										X
19	23a		17:55			X		⊗						⊗				X
20	23b		17:58			HOLD												
21	23c		18:00			HOLD												
22	23d		18:05			X	⊗	⊗						⊗				X

RELINQUISHED BY	DATE	RECEIVED BY	DATE
FIRM GPE	TIME 11:58	FIRM OSE	TIME 12:00
RELINQUISHED BY	DATE	RECEIVED BY	DATE
FIRM	TIME	FIRM	TIME
REVIEWED BY		DATE REVIEWED	

COMMENTS:
Please call (425) 688-8852 w/ HCID results
-48 hour T.O.T.
⊗ Added chrlg8 per HCID/GG Discussion

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

PHASE II - Test Pits

6/10/98

OnSite Environmental Inc.
Analytical Testing and Mobile Laboratory Services

July 1, 1998

Gary Galloway
Galloway Environmental, Inc.
3102 220th Place SE
Issaquah, WA 98027

Re: Analytical Data for Project 19824
Laboratory Reference No. 9806-105

Dear Gary:

Enclosed are the analytical results and associated quality control data for samples submitted on June 15, 1998.

The standard policy of OnSite Environmental Inc., is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Chemist

Enclosures

14924 NE 31st Circle • Redmond, WA 98052 • (425) 883-3881 • Fax (425) 885-4603

Date of Report: July 1, 1998
Samples Submitted: June 15, 1998
Lab Traveler: 06-105
Project: 19824

NWTPH-G/BTEX

Date Extracted: 6-24-98
Date Analyzed: 6-26-98

Matrix: Soil
Units: mg/Kg (ppm)

Lab ID:	06-105-04			06-105-06		
Client ID:	**STP-12a**			**STP-12c**		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**0.079**		0.057	**ND**		0.27
Toluene	**1.0**		0.057	**0.27**		0.27
Ethyl Benzene	**0.28**		0.057	**0.38**		0.27
m,p-Xylene	**2.0**		0.057	**15**		0.27
o-Xylene	**0.90**		0.057	**9.7**		0.27
TPH-Gas	**55**		5.7	**2300**		27
Surrogate Recovery: Fluorobenzene	116%			---	S	

Date of Report: July 1, 1998
Samples Submitted: June 15, 1998
Lab Traveler: 06-105
Project: 19824

NWTPH-G/BTEX
METHOD BLANK QUALITY CONTROL

Date Extracted: 6-24-98
Date Analyzed: 6-26-98

Matrix: Soil
Units: mg/Kg (ppm)

Lab ID: MB0624S1

	Result	Flags	PQL
Benzene	ND		0.050
Toluene	ND		0.050
Ethyl Benzene	ND		0.050
m,p-Xylene	ND		0.050
o-Xylene	ND		0.050
TPH-Gas	ND		5.0

Surrogate Recovery:
Fluorobenzene 132%

Date of Report: July 1, 1998
Samples Submitted: June 15, 1998
Lab Traveler: 06-105
Project: 19824

NWTPH-G/BTEX
DUPLICATE QUALITY CONTROL

Date Extracted: 6-24-98
Date Analyzed: 6-26-98

Matrix: Soil
Units: mg/Kg (ppm)

Lab ID:	06-105-04 **Original**	06-105-04 **Duplicate**	**RPD**	**Flags**
Benzene	**0.0685**	**0.0655**	4.5	
Toluene	**0.888**	**0.857**	3.6	
Ethyl Benzene	**0.241**	**0.241**	0.39	
m,p-Xylene	**1.72**	**1.66**	3.0	
o-Xylene	**0.786**	**0.771**	1.9	
TPH-Gas	**47.6**	**44.9**	5.8	
Surrogate Recovery:				
Fluorobenzene	116%	111%		

Date of Report: July 1, 1998
Samples Submitted: June 15, 1998
Lab Traveler: 06-105
Project: 19824

NWTPH-G/BTEX
MS/MSD QUALITY CONTROL

Date Extracted: 6-24-98
Date Analyzed: 6-27-98

Matrix: Soil
Units: mg/Kg (ppm)

Spike Level: 1.00 ppm

Lab ID:	06-105-04 **MS**	Percent Recovery	06-105-04 **MSD**	Percent Recovery	RPD
Benzene	**1.04**	**97**	**1.03**	**97**	0.77
Toluene	**1.71**	**82**	**1.69**	**81**	2.1
Ethyl Benzene	**1.20**	**96**	**1.22**	**98**	1.6
m,p-Xylene	**2.32**	**60**	**2.31**	**60**	0.50
o-Xylene	**1.55**	**76**	**1.57**	**78**	2.1

Surrogate Recovery:

Fluorobenzene	102%	101%

OnSite Environmental Inc.

DATA QUALIFIERS AND ABBREVIATIONS

A - Due to high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

D - Data from 1:____ dilution.

E - The value reported exceeds the quantitation range, and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

G - Insufficient sample quantity for duplicate analysis.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeniety. The sample was re-extracted and re-analyzed with similar results.

L - Quantitated from C7-C34 as diesel fuel #2.

M - Predominantly _____ range hydrocarbons present in the sample.

N - Hydrocarbons in the gasoline range (C7-toluene) are present in the sample which are elevating the diesel result.

O - Hydrocarbons in the heavy oil range (>C24) are present in the sample which are elevating the diesel result.

P - Hydrocarbons in the diesel range (C12-C24) are present in the sample which are elevating the oil result.

Q - The RPD of the results between the two columns is greater than 25.

R - Hydrocarbons outside the defined gasoline range are present in the sample and are elevating the gasoline result.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

Y - Acid Cleaned.

Z - Interferences were present which prevented the quantitation of the analyte below the detection limit reported.

ND - Not Detected
MRL - Method Reporting Limit
PQL - Practical Quantitation

Chain of Custody

OnSite Environmental Inc.
14924 NE 31st Circle • Redmond, WA 98052
Fax: (425) 885-4603 • Phone: (425) 883-3881

Company: GALLOWAY ENV. Inc.
Project No.: 1982Y
Project Name: STOREY Phase II
Project Manager: GALLOWAY

Turn Around Requested (Check One)
- ☐ Same Day
- ☒ 24 Hours
- ☐ 48 Hours
- ☐ Standard
- ☐ _____ (other)

Project Chemist: DB
Laboratory No. 06-105

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8240/624/8260	Halogenated Volatiles by 8260	Semivolatiles by 8270/625	PAHs by 8270/625	PCB's by 8081/608	Total RCRA Metals (8)	TCLP Metals	VPH	EPH	% Moisture
1	STP-10c	6/10	15:30	S	1	X												X
2	11b		15:40			X		⊗						⊗				X
3	11c		15:45			X												X
4	12a		16:00			⊗	⊗	⊗										⊗
5	12b		16:05			X												X
6	12c		16:10			⊗	⊗	⊗										⊗
7	13a		16:30			X	⊗											X
8	13b		16:40			HOLD												
9	13c		16:45			HOLD												
10	14a		16:55			HOLD												
11	14c		17:00			~~X~~												X
12	16c		17:10			X												X

RELINQUISHED BY	DATE	RECEIVED BY	DATE
[signature]	6/10/98	Kristen Koch	6/15/98
FIRM GAL	TIME 11:58	FIRM OSE	TIME 12:00
RELINQUISHED BY	DATE	RECEIVED BY	DATE
FIRM	TIME	FIRM	TIME
REVIEWED BY		DATE REVIEWED	

COMMENTS: ⊗ Follow-up added 6/22/98 ~~HCID~~
Please call (425) 688-8852 w/ HCID results.
-48 hour T.O.T.
⊗ Added 6/17/98 per HCID + 6.6.

NEW CONCRETE
TANK FARM CONTAINMENT
AREA - Surface Sample
(prior to pad placement)

11/9/98

OnSite Environmental Inc.
Analytical Testing and Mobile Laboratory Services

November 10, 1998

Gary Galloway
Galloway Environmental, Inc.
3102 220th Place SE
Issaquah, WA 98027

Re: Analytical Data for Project Storey
Laboratory Reference No. 9811-054

Dear Gary:

Enclosed are the analytical results and associated quality control data for samples submitted on November 9, 1998.

The standard policy of OnSite Environmental Inc., is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Chemist

Enclosures

14924 NE 31st Circle • Redmond, WA 98052 • (425) 883-3881 • Fax (425) 885-4603

Date of Report: November 10, 1998
Samples Submitted: November 9, 1998
Lab Traveler: 11-054
Project: Storey

NWTPH-HCID

Date Extracted: 11-09-98
Date Analyzed: 11-09-98

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	SC-1	SC-2	SC-3
Lab ID:	11-054-01	11-054-02	11-054-03
Gasoline:	ND	ND	ND
PQL:	26	27	27
Diesel Fuel:	ND	ND	ND
PQL:	52	54	53
Heavy Oil:	ND	ND	ND
PQL:	100	110	110
Surrogate Recovery:			
o-Terphenyl	110%	100%	96%

Flags:

Date of Report: November 10, 1998
Samples Submitted: November 9, 1998
Lab Traveler: 11-054
Project: Storey

NWTPH-HCID

Date Extracted:	11-09-98
Date Analyzed:	11-09-98
Matrix:	Soil
Units:	mg/Kg (ppm)

Client ID:	SC-4
Lab ID:	11-054-04
Gasoline:	ND
PQL:	26
Diesel Fuel:	ND
PQL:	52
Heavy Oil:	ND
PQL:	100
Surrogate Recovery:	
o-Terphenyl	96%

Flags:

Date of Report: November 10, 1998
Samples Submitted: November 9, 1998
Lab Traveler: 11-054
Project: Storey

NWTPH-HCID
METHOD BLANK QUALITY CONTROL

Date Extracted:	11-09-98
Date Analyzed:	11-09-98
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	MB1109S2
Gasoline:	ND
PQL:	25
Diesel Fuel:	ND
PQL:	50
Heavy Oil:	ND
PQL:	100
Surrogate Recovery:	
o-Terphenyl	106%

Flags

OnSite Environmental Inc.

DATA QUALIFIERS AND ABBREVIATIONS

A - Due to high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

D - Data from 1:____ dilution.

E - The value reported exceeds the quantitation range, and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

G - Insufficient sample quantity for duplicate analysis.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeniety. The sample was re-extracted and re-analyzed with similar results.

M - Predominantly _____ range hydrocarbons present in the sample.

N - Hydrocarbons in the gasoline range (C7-toluene) are present in the sample.

O - Hydrocarbons in the heavy oil range (>C24) are present in the sample.

P - Hydrocarbons in the diesel range (C12-C24) are present in the sample which are elevating the oil result.

Q - The RPD of the results between the two columns is greater than 25.

R - Hydrocarbons outside the defined gasoline range are present in the sample; NWTPH-Dx recommended.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

X - Sample underwent silica gel cleanup procedures.

Y - Sample underwent acid cleanup procedures.

Z - Interferences were present which prevented the quantitation of the analyte below the detection limit reported.

ND - Not Detected
MRL - Method Reporting Limit
PQL - Practical Quantitation

Chain of Custody

Page 1 of 1

OnSite Environmental Inc.
14924 NE 31st Circle • Redmond, WA 98052
Fax: (425) 885-4603 • Phone: (425) 883-3881

Company: GALLOWAY ENV. Inc
Project No.:
Project Name: STOREY
Project Manager: GALLOWAY

Turn Around Requested (Check One)
- ☐ Same Day
- ☒ ~~24 Hours~~
- ☐ 48 Hours
- ☐ Standard
- ☐ WED PM (other)

Project Chemist: DAB

Laboratory No.

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8240/624/8260	Halogenated Volatiles by 8260	Semivolatiles by 8270/625	PAHs by 8270/625	PCB's by 8081/608	Total RCRA Metals (8)	TCLP Metals	VPH	EPH	% Moisture
1	SC-1	11/5/98	12:40	S	1	X												4
2	2		12:45			X												4
3	3		12:50			X												4
4	4		12:55			X												4

RELINQUISHED BY	DATE	RECEIVED BY	DATE
	11/5/98	Rachel Anderson	11/9/98
FIRM: GAIE	TIME: 15:15	FIRM: OnSite	TIME: 5:20pm
RELINQUISHED BY	DATE	RECEIVED BY	DATE
FIRM	TIME	FIRM	TIME
REVIEWED BY		DATE REVIEWED	

COMMENTS: Please fax results to 425 688-8879

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

OnSite Environmental Inc.
Analytical Testing and Mobile Laboratory Services

SOURCE AREA REMOVALS

9/7/99

September 14, 1999

Gary Galloway
Galloway Environmental, Inc.
3102 220th Place SE
Issaquah, WA 98027

Re: Analytical Data for Project 19904
Laboratory Reference No. 9909-043

Dear Gary:

Enclosed are the analytical results and associated quality control data for samples submitted on September 8, 1999.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: September 14, 1999
Samples Submitted: September 8, 1999
Lab Traveler: 09-043
Project: 19904

NWTPH-HCID

Date Extracted:	9-8-99
Date Analyzed:	9-8-99
Matrix:	Soil
Units:	mg/Kg (ppm)

Client ID:	9/7-SP1	9/7-SP2	9/7-SP3
Lab ID:	09-043-01	09-043-02	09-043-03
Gasoline:	Gasoline Range Hydrocarbons	Gasoline Range Hydrocarbons	Gasoline Range Hydrocarbons
PQL:	28	27	27
Diesel Fuel:	Diesel Fuel #2	Diesel Fuel #2	Diesel Fuel #2
PQL:	56	55	55
Heavy Oil:	Heavy Oil	Heavy Oil	Heavy Oil
PQL:	110	110	110
Surrogate Recovery:			
o-Terphenyl	103%	---	103%
Flags:		F	

Date of Report: September 14, 1999
Samples Submitted: September 8, 1999
Lab Traveler: 09-043
Project: 19904

NWTPH-HCID

Date Extracted: 9-8-99
Date Analyzed: 9-8-99

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	9/7-PI1@6	9/7-PI2@10	9/7-PI3@9.5
Lab ID:	09-043-04	09-043-05	09-043-06
Gasoline:	ND	ND	ND
PQL:	30	27	26
Diesel Fuel:	ND	Diesel Fuel #2	ND
PQL:	60	53	52
Heavy Oil:	ND	ND	ND
PQL:	120	110	100
Surrogate Recovery:			
o-Terphenyl	108%	---	112%
Flags:		F	

Date of Report: September 14, 1999
Samples Submitted: September 8, 1999
Lab Traveler: 09-043
Project: 19904

NWTPH-HCID

Date Extracted:	9-8-99
Date Analyzed:	9-8-99
Matrix:	Soil
Units:	mg/Kg (ppm)

Client ID:	9/7-PI4@6	9/7-PI5@9.5	9/7-PI6@9.5
Lab ID:	09-043-07	09-043-08	09-043-09
Gasoline:	ND	Gasoline Range Hydrocarbons	ND
PQL:	30	27	26
Diesel Fuel:	ND	Diesel Fuel #2	ND
PQL:	60	53	52
Heavy Oil:	ND	Heavy Oil	ND
PQL:	120	110	100
Surrogate Recovery:			
o-Terphenyl	114%	---	111%
Flags:		F	

Date of Report: September 14, 1999
Samples Submitted: September 8, 1999
Lab Traveler: 09-043
Project: 19904

NWTPH-HCID

Date Extracted: 9-8-99
Date Analyzed: 9-8-99

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	9/7-PI7@6	9/7-PI8@9.5	9/7-PI9@6
Lab ID:	09-043-10	09-043-11	09-043-12
Gasoline:	ND	ND	ND
PQL:	30	27	26
Diesel Fuel:	Diesel Fuel #2	Diesel Fuel #2	Diesel Fuel #2
PQL:	60	53	52
Heavy Oil:	ND	ND	ND
PQL:	120	110	100
Surrogate Recovery:			
o-Terphenyl	119%	---	116%
Flags:		F	

Date of Report: September 14, 1999
Samples Submitted: September 8, 1999
Lab Traveler: 09-043
Project: 19904

NWTPH-HCID

Date Extracted: 9-8-99
Date Analyzed: 9-8-99

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	9/7-PI10@9.5	9/7-PI11@9.5	9/7-1@9.5
Lab ID:	09-043-13	09-043-14	09-043-15
Gasoline:	ND	ND	ND
PQL:	28	26	26
Diesel Fuel:	Diesel Fuel #2	Diesel Fuel #2	Diesel Fuel #2
PQL:	56	52	53
Heavy Oil:	ND	ND	ND
PQL:	110	100	110
Surrogate Recovery:			
o-Terphenyl	---	---	112%
Flags:	F	F	

Date of Report: September 14, 1999
Samples Submitted: September 8, 1999
Lab Traveler: 09-043
Project: 19904

NWTPH-HCID

Date Extracted:	9-8-99
Date Analyzed:	9-8-99
Matrix:	Soil
Units:	mg/Kg (ppm)

Client ID:	9/7-2@6	9/7-3@11	9/7-4@6
Lab ID:	09-043-16	09-043-17	09-043-18
Gasoline:	ND	ND	ND
PQL:	26	28	27
Diesel Fuel:	ND	ND	Diesel Fuel #2
PQL:	52	56	53
Heavy Oil:	ND	ND	Heavy Oil
PQL:	100	110	110
Surrogate Recovery:			
o-Terphenyl	101%	112%	108%

Flags:

Date of Report: September 14, 1999
Samples Submitted: September 8, 1999
Lab Traveler: 09-043
Project: 19904

NWTPH-HCID

Date Extracted:	9-8-99
Date Analyzed:	9-8-99
Matrix:	Soil
Units:	mg/Kg (ppm)

Client ID:	9/7-5@9.5	9/7-6@6	9/7-7@9.5
Lab ID:	09-043-19	09-043-20	09-043-21
Gasoline:	ND	ND	Gasoline Range Hydrocarbons
PQL:	25	31	26
Diesel Fuel:	Diesel Fuel #2	ND	Diesel Fuel #2
PQL:	50	62	53
Heavy Oil:	ND	ND	ND
PQL:	100	120	110
Surrogate Recovery:			
o-Terphenyl	---	102%	---
Flags:	F		F

Date of Report: September 14, 1999
Samples Submitted: September 8, 1999
Lab Traveler: 09-043
Project: 19904

NWTPH-HCID

Date Extracted:	9-8-99
Date Analyzed:	9-8-99
Matrix:	Soil
Units:	mg/Kg (ppm)

Client ID:	9/7-8@11	9/7-9@6	9/7-10@9.5
Lab ID:	09-043-22	09-043-23	09-043-24
Gasoline:	Gasoline Range Hydrocarbons	ND	Gasoline Range Hydrocarbons
PQL:	30	30	29
Diesel Fuel:	Diesel Fuel #2	ND	Diesel Fuel #2
PQL:	60	60	58
Heavy Oil:	ND	ND	ND
PQL:	120	120	120
Surrogate Recovery:			
o-Terphenyl	128%	117%	---
Flags:			F

Date of Report: September 14, 1999
Samples Submitted: September 8, 1999
Lab Traveler: 09-043
Project: 19904

NWTPH-HCID

Date Extracted:	9-8-99
Date Analyzed:	9-8&9-99
Matrix:	Soil
Units:	mg/Kg (ppm)

Client ID:	9/7-11@6	9/7-12@9.5	9/7-13@6
Lab ID:	09-043-25	09-043-26	09-043-27
Gasoline:	ND	Gasoline Range Hydrocarbons	ND
PQL:	29	26	30
Diesel Fuel:	Diesel Fuel #2	Diesel Fuel #2	ND
PQL:	59	53	60
Heavy Oil:	Heavy Oil	ND	ND
PQL:	120	110	120
Surrogate Recovery:			
o-Terphenyl	106%	---	107%
Flags:		F	

Date of Report: September 14, 1999
Samples Submitted: September 8, 1999
Lab Traveler: 09-043
Project: 19904

NWTPH-HCID

Date Extracted: 9-8-99
Date Analyzed: 9-8-99

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	9/7-14@9.5	9/7-QA1	9/7-QA2
Lab ID:	09-043-28	09-043-29	09-043-30
Gasoline:	Gasoline Range Hydrocarbons	ND	ND
PQL:	27	27	27
Diesel Fuel:	Diesel Fuel #2	ND	Diesel Fuel #2
PQL:	54	54	53
Heavy Oil:	ND	ND	ND
PQL:	110	110	110
Surrogate Recovery:			
o-Terphenyl	---	117%	---
Flags:	F		F

Date of Report: September 14, 1999
Samples Submitted: September 8, 1999
Lab Traveler: 09-043
Project: 19904

NWTPH-HCID
METHOD BLANK QUALITY CONTROL

Date Extracted:	9-8-99
Date Analyzed:	9-8-99
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	MB0908S1
Gasoline:	ND
PQL:	25
Diesel Fuel:	ND
PQL:	50
Heavy Oil:	ND
PQL:	100
Surrogate Recovery:	
o-Terphenyl	108%

Flags

Date of Report: September 14, 1999
Samples Submitted: September 8, 1999
Lab Traveler: 09-043
Project: 19904

NWTPH-HCID
METHOD BLANK QUALITY CONTROL

Date Extracted:	9-8-99
Date Analyzed:	9-8-99
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	MB0908S2
Gasoline:	ND
PQL:	25
Diesel Fuel:	ND
PQL:	50
Heavy Oil:	ND
PQL:	100
Surrogate Recovery:	
o-Terphenyl	102%

Flags

Date of Report: September 14, 1999
Samples Submitted: September 8, 1999
Lab Traveler: 09-043
Project: 19904

NWTPH-G/BTEX

Date Extracted: 9-10-99
Date Analyzed: 9-10&13-99

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	**9/7-7@9.5**			**9/7-8@11**		
Lab ID:	09-043-21			09-043-22		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**		0.26	**ND**		0.30
Toluene	**16**		0.26	**ND**		0.30
Ethyl Benzene	**9.3**		0.26	**ND**		0.30
m,p-Xylene	**43**		1.1	**0.76**		0.30
o-Xylene	**18**		0.26	**ND**		0.30
TPH-Gas	**870**		26	**ND**		30
Surrogate Recovery: Fluorobenzene	106%			78%		

Date of Report: September 14, 1999
Samples Submitted: September 8, 1999
Lab Traveler: 09-043
Project: 19904

NWTPH-Dx

Date Extracted:	9-10-99
Date Analyzed:	9-10-99
Matrix:	Soil
Units:	mg/Kg (ppm)

Client ID:	9/7-SP1	9/7-SP2	9/7-SP3
Lab ID:	09-043-01	09-043-02	09-043-03
Diesel Fuel:	57	1000	110
PQL:	28	28	28
Heavy Oil:	87	470	290
PQL:	56	55	55
Surrogate Recovery:			
o-Terphenyl	69%	134%	138%

Flags:

Date of Report: September 14, 1999
Samples Submitted: September 8, 1999
Lab Traveler: 09-043
Project: 19904

NWTPH-Dx

Date Extracted:	9-10-99		
Date Analyzed:	9-10-99		
Matrix:	Soil		
Units:	mg/Kg (ppm)		
Client ID:	9/7-PI2@10	9/7-PI5@9.5	9/7-PI7@6
Lab ID:	09-043-05	09-043-08	09-043-10
Diesel Fuel:	1200	440	53
PQL:	27	27	30
Heavy Oil:	ND	120	ND
PQL:	53	53	60
Surrogate Recovery:			
o-Terphenyl	---	---	98%
Flags:	F	F	

Date of Report: September 14, 1999
Samples Submitted: September 8, 1999
Lab Traveler: 09-043
Project: 19904

NWTPH-Dx

Date Extracted:	9-10-99		
Date Analyzed:	9-10-99		
Matrix:	Soil		
Units:	mg/Kg (ppm)		
Client ID:	9/7-PI8@9.5	9/7-PI9@6	9/7-PI10@9.5
Lab ID:	09-043-11	09-043-12	09-043-13
Diesel Fuel:	4100	220	9600
PQL:	130	26	280
Heavy Oil:	ND	ND	ND
PQL:	110	52	220
Surrogate Recovery:			
o-Terphenyl	---	108%	---
Flags:	S		S

Date of Report: September 14, 1999
Samples Submitted: September 8, 1999
Lab Traveler: 09-043
Project: 19904

NWTPH-Dx

Date Extracted:	9-10-99		
Date Analyzed:	9-10-99		
Matrix:	Soil		
Units:	mg/Kg (ppm)		
Client ID:	9/7-PI11@9.5	9/7-1@9.5	9/7-4@6
Lab ID:	09-043-14	09-043-15	09-043-18
Diesel Fuel:	5800	130	440
PQL:	260	26	27
Heavy Oil:	ND	70	230
PQL:	210	53	53
Surrogate Recovery:			
o-Terphenyl	---	72%	---
Flags:	S		F

Date of Report: September 14, 1999
Samples Submitted: September 8, 1999
Lab Traveler: 09-043
Project: 19904

NWTPH-Dx

Date Extracted:	9-10-99		
Date Analyzed:	9-10-99		
Matrix:	Soil		
Units:	mg/Kg (ppm)		
Client ID:	9/7-5@9.5	9/7-7@9.5	9/7-8@11
Lab ID:	09-043-19	09-043-21	09-043-22
Diesel Fuel:	3600	1600	92
PQL:	130	26	30
Heavy Oil:	ND	ND	ND
PQL:	100	53	60
Surrogate Recovery:			
o-Terphenyl	---	---	143%
Flags:	S	F	

Date of Report: September 14, 1999
Samples Submitted: September 8, 1999
Lab Traveler: 09-043
Project: 19904

NWTPH-Dx

Date Extracted:	9-10-99		
Date Analyzed:	9-10-99		
Matrix:	Soil		
Units:	mg/Kg (ppm)		
Client ID:	9/7-10@9.5	9/7-11@6	9/7-12@9.5
Lab ID:	09-043-24	09-043-25	09-043-26
Diesel Fuel:	5600	64	3500
PQL:	290	29	130
Heavy Oil:	ND	170	ND
PQL:	230	59	110
Surrogate Recovery:			
o-Terphenyl	---	85%	---
Flags:	S		S

Date of Report: September 14, 1999
Samples Submitted: September 8, 1999
Lab Traveler: 09-043
Project: 19904

NWTPH-Dx

Date Extracted:	9-10-99	
Date Analyzed:	9-10-99	
Matrix:	Soil	
Units:	mg/Kg (ppm)	
Client ID:	9/7-14@9.5	9/7-QA2
Lab ID:	09-043-28	09-043-30
Diesel Fuel:	2200	12000
PQL:	130	270
Heavy Oil:	ND	ND
PQL:	110	210
Surrogate Recovery:		
o-Terphenyl	---	---
Flags:	S	S

Date of Report: September 14, 1999
Samples Submitted: September 8, 1999
Lab Traveler: 09-043
Project: 19904

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	9-10-99
Date Analyzed:	9-10-99
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	MB0910S1
Diesel Fuel:	ND
PQL:	25
Heavy Oil:	ND
PQL:	50
Surrogate Recovery:	
o-Terphenyl	82%
Flags:	

Date of Report: September 14, 1999
Samples Submitted: September 8, 1999
Lab Traveler: 09-043
Project: 19904

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted:	9-10-99	
Date Analyzed:	9-10-99	
Matrix:	Soil	
Units:	mg/Kg (ppm)	
Lab ID:	09-043-02	09-043-02 DUP
Diesel Fuel:	1010	798
PQL:	25	25
RPD:	24	
Surrogate Recovery:		
o-Terphenyl	134%	115%
Flags:		

Date of Report: September 14, 1999
Samples Submitted: September 8, 1999
Lab Traveler: 09-043
Project: 19904

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted:	9-10-99
Date Analyzed:	9-10-99
Matrix:	Soil
Units:	mg/Kg (ppm)

Lab ID:	09-043-10	09-043-10 DUP
Diesel Fuel:	43.9	34.7
PQL:	25	25
RPD:	24	
Surrogate Recovery:		
o-Terphenyl	98%	102%

Flags:

Date of Report: September 14, 1999
Samples Submitted: September 8, 1999
Lab Traveler: 09-043
Project: 19904

Date Analyzed: 9-8-99

% MOISTURE

Client ID	Lab ID	% Moisture
9/7-SP1	09-043-01	11
9/7-SP2	09-043-02	9.0
9/7-SP3	09-043-03	9.0
9/7-PI 1@6	09-043-04	16
9/7- PI 2@10	09-043-05	6.0
9/7- PI 3@9.5	09-043-06	4.0
9/7- PI 4@6	09-043-07	14
9/7- PI 5@9.5	09-043-08	6.0
9/7- PI 6@9.5	09-043-09	4.0
9/7- PI 7@6	09-043-10	17
9/7- PI 8@9.5	09-043-11	6.0

Date of Report: September 14, 1999
Samples Submitted: September 8, 1999
Lab Traveler: 09-043
Project: 19904

Date Analyzed: 9-8-99

% MOISTURE

Client ID	Lab ID	% Moisture
9/7- PI 9@6	09-043-12	3.0
9/7- PI 10@9.5	09-043-13	10
9/7-11@9.5	09-043-14	4.0
9/7-1@9.5	09-043-15	5.0
9/7-2@6	09-043-16	3.0
9/7-3@11	09-043-17	11
9/7-4@6	09-043-18	6.0
9/7-5@9.5	09-043-19	0
9/7-6@6	09-043-20	19
9/7-7@9.5	09-043-21	5.0
9/7-8@11	09-043-22	16

Date of Report: September 14, 1999
Samples Submitted: September 8, 1999
Lab Traveler: 09-043
Project: 19904

Date Analyzed: 9-8-99

% MOISTURE

Client ID	Lab ID	% Moisture
9/7-9@6	09-043-23	16
9/7-10@9.5	09-043-24	14
9/7-11@6	09-043-25	15
9/7-12@9.5	09-043-26	5.0
9/7-13@6	09-043-27	16
9/7-14@9.5	09-043-28	7.0
9/7-QA1	09-043-29	7.0
9/7-QA2	09-043-30	6.0

OnSite Environmental Inc.

DATA QUALIFIERS AND ABBREVIATIONS

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

D - Data from 1:____ dilution.

E - The value reported exceeds the quantitation range, and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

G - Insufficient sample quantity for duplicate analysis.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeniety. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

O - Hydrocarbons outside the defined gasoline range are present in the sample; NWTPH-Dx recommended.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a silica gel cleanup procedure.

Y - Sample extract treated with an acid cleanup procedure.

Z -

ND - Not Detected
MRL - Method Reporting Limit
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

OnSite Environmental Inc.
14648 NE 95th Street • Redmond, WA 98052
Fax: (425) 885-4603 • Phone: (425) 883-3881

Turnaround Request (in working days)

(Check One)

☐ Same Day ☑ 1 Day

☐ 2 Day ☐ 3 Day

~~☐ Standard~~ DB

(Hydrocarbon analyses: 5 days, All other analyses: 7 days)

☐ 9/9 (other)

Company: Galloway Envl. Inc GEI

Project No.: 19904

Project Name: Chelan Gas Station

Project Manager: Gary Galloway

Project Chemist: DB

Laboratory No. 09-043

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270C	PAHs by 8270C	PCB's by 8082	Pesticides by 8081	Total RCRA Metals (8)	TCLP Metals	VPH	EPH	% Moisture
1	9/7-SP1	9/7/99	16:45	S	1	✓	⊗	⊗											
2	9/7-SP2		16:45			✓	⊗	⊗											
3	9/7-SP3		16:45			✓	⊗	⊗											
4	9/7-PI 1@6		14:50			✓													
5	9/7-PI 2@10		15:00			✓		⊗											
6	9/7-PI 3@9.5		15:05			✓													
7	9/7-PI 4@6		15:20			✓													
8	9/7-PI 5@9.5		15:30			✓	⊗	⊗											
9	9/7-PI 6@9.5		15:35			✓													
10	9/7-PI 7@6		15:50			✓		⊗											
11	9/7-PI 8@9.5		15:55			✓		⊗											
12	9/7-PI 9@6		16:10			✓		⊗											

RELINQUISHED BY	DATE	RECEIVED BY	DATE
Dylan Galloway	9/8/99		9/8/99
FIRM GEI	TIME 13:10	FIRM OSE	TIME 1:10
RELINQUISHED BY	DATE	RECEIVED BY	DATE
FIRM	TIME	FIRM	TIME
REVIEWED BY		DATE REVIEWED	

COMMENTS:
⊗ Added 9/9/99. DB.
Due MONDAY.

Chromatographs with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

Chain of Custody

OnSite Environmental Inc.
14648 NE 95th Street • Redmond, WA 98052
Fax: (425) 885-4603 • Phone: (425) 883-3881

Turnaround Request (in working days)

(Check One)

☐ Same Day ☑ 1 Day

☐ 2 Day ☐ 3 Day

~~☐ Standard~~

(Hydrocarbon analyses: 5 days, All other analyses: 7 days)

☐ 9/9 (other)

Project Chemist: DB

Laboratory No. 09-043

Company: Galloway Envl. Inc GEI

Project No.: 19904

Project Name: Ulealum Gas Station

Project Manager: Gary Galloway

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270C	PAHs by 8270C	PCB's by 8082	Pesticides by 8081	Total RCRA Metals (8)	TCLP Metals	VPH	EPH	% Moisture
13	9/7-PI10@9.5	9/7/99	16:15	S	1	X		⊗											X
14	9/7-PI11@9.5		16:30			X		⊗											X
15	9/7-1@9.5		09:54			X		⊗											X
16	9/7-2@6		09:59			X													X
17	9/7-3@11		10:04			X													X
18	9/7-4@6		10:18			X		⊗											X
19	9/7-5@9.5		10:20			X		⊗											X
20	9/7-6@6		10:53			X													X
21	9/7-7@9.5		10:53			X	⊗	⊗											X
22	9/7-8@11		11:39			X	⊗	⊗											X
23	9/7-9@6		11:43			X													X
24	9/7-10@9.5		11:45			X	⊗	⊗											X

RELINQUISHED BY	DATE	RECEIVED BY	DATE
Dylan Galloway	9/8/99	Allard	9/8/99
FIRM GEI	TIME 13:10	FIRM OSE	TIME 1:10
RELINQUISHED BY	DATE	RECEIVED BY	DATE
FIRM	TIME	FIRM	TIME
REVIEWED BY		DATE REVIEWED	

COMMENTS:
⊗ Added 9/9/99. DB.
Due Monday.

Chromatographs with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

Chain of Custody

OnSite Environmental Inc.
14648 NE 95th Street • Redmond, WA 98052
Fax: (425) 885-4603 • Phone: (425) 883-3881

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☑ 1 Day
- ☐ 2 Day
- ☐ 3 Day
- ☑ ~~Standard~~ (Hydrocarbon analyses: 5 days, All other analyses: 7 days)
- ☐ 9/9 (other)

Project Chemist: DB

Laboratory No. 09-043

Company: Galloway Envl. Inc GEI

Project No.: 19904

Project Name: Chestnut Gas Station

Project Manager: Gary Galloway

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270C	PAHs by 8270C	PCB's by 8082	Pesticides by 8081	Total RCRA Metals (8)	TCLP Metals	VPH	EPH	% Moisture
25	* 9/7-11@6	9/7/99	12:11	S	1	✓		⊗											X
26	9/7-12@9.5		12:35			✓	⊗	⊗											
27	9/7-13@6		13:08			✓													
28	9/7-14@9.5		13:05			✓	⊗	⊗											
29	9/7-QA1					✓													
30	9/7-QA2					✓		⊗											

RELINQUISHED BY	DATE	RECEIVED BY	DATE
Dylan Galloway	9/8/99		9/8/99
FIRM GEI	TIME 13:10	FIRM OSE	TIME 1:10
RELINQUISHED BY	DATE	RECEIVED BY	DATE
FIRM	TIME	FIRM	TIME
REVIEWED BY		DATE REVIEWED	

COMMENTS:
⊗ Added 9/9/99. DB.
Due Monday.

Chromatographs with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

SOURCE AREA REMOVALS

EXCAVATION SAMPLES

9/15 & 9/16/1999

OnSite Environmental Inc.
Analytical Testing and Mobile Laboratory Services

September 30, 1999

Gary Galloway
Galloway Environmental, Inc.
3102 220th Place SE
Issaquah, WA 98027

Re: Analytical Data for Project 19904
Laboratory Reference No. 9909-119

Dear Gary:

Enclosed are the analytical results and associated quality control data for samples submitted on September 17, 1999.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881 • Fax (425) 885-4603

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

NWTPH-HCID

Date Extracted:	9-21-99
Date Analyzed:	9-23&24-99
Matrix:	Soil
Units:	mg/Kg (ppm)

Client ID:	9/15-1@6	9/15-2@8	9/15-3@10
Lab ID:	09-119-01	09-119-02	09-119-03
Gasoline:	ND	ND	ND
PQL:	30	26	29
Diesel Fuel:	Diesel Fuel #2	Diesel Fuel #2	Diesel Fuel #2
PQL:	60	53	57
Heavy Oil:	ND	ND	ND
PQL:	120	110	110
Surrogate Recovery:			
o-Terphenyl	122%	111%	111%

Flags:

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

NWTPH-HCID

Date Extracted:	9-21-99		
Date Analyzed:	9-23&24-99		
Matrix:	Soil		
Units:	mg/Kg (ppm)		
Client ID:	9/15-4@10	9/15-5@6	9/15-6@10
Lab ID:	09-119-04	09-119-05	09-119-06
Gasoline:	ND	ND	ND
PQL:	30	29	27
Diesel Fuel:	Diesel Fuel #2	ND	Diesel Fuel #2
PQL:	60	57	54
Heavy Oil:	Heavy Oil	ND	ND
PQL:	120	110	110
Surrogate Recovery:			
o-Terphenyl	114%	115%	---
Flags:			F

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

NWTPH-HCID

Date Extracted:	9-21-99
Date Analyzed:	9-23&24-99
Matrix:	Soil
Units:	mg/Kg (ppm)

Client ID:	9/15-7@10	9/15-8@10	9/15-9@6
Lab ID:	09-119-07	09-119-08	09-119-09
Gasoline:	ND	ND	ND
PQL:	27	27	29
Diesel Fuel:	ND	ND	ND
PQL:	54	55	59
Heavy Oil:	ND	ND	ND
PQL:	110	110	120
Surrogate Recovery:			
o-Terphenyl	130%	111%	98%

Flags:

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

NWTPH-HCID

Date Extracted:	9-21-99
Date Analyzed:	9-23&24-99
Matrix:	Soil
Units:	mg/Kg (ppm)

Client ID:	9/15-10@10	9/15-11@6	9/15-12@9.5
Lab ID:	09-119-10	09-119-11	09-119-12
Gasoline:	Gasoline Range Hydrocarbons	ND	ND
PQL:	28	29	26
Diesel Fuel:	Diesel Fuel #2	ND	ND
PQL:	57	58	52
Heavy Oil:	ND	ND	ND
PQL:	110	120	100
Surrogate Recovery:			
o-Terphenyl	133%	101%	93%

Flags:

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

NWTPH-HCID

Date Extracted: 9-21-99
Date Analyzed: 9-23-99

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	9/15-QA1	9/16-1@11	9/16-2@9.5
Lab ID:	09-119-13	09-119-14	09-119-15
Gasoline:	ND	ND	ND
PQL:	28	29	28
Diesel Fuel:	ND	Diesel Fuel #2	Diesel Fuel #2
PQL:	56	58	57
Heavy Oil:	ND	ND	ND
PQL:	110	120	110
Surrogate Recovery:			
o-Terphenyl	97%	105%	106%

Flags:

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

NWTPH-HCID

Date Extracted: 9-21-99
Date Analyzed: 9-23&24-99

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	9/16-3@11	9/16-4@	9/16-5@
Lab ID:	09-119-16	09-119-17	09-119-18
Gasoline:	ND	ND	ND
PQL:	27	31	26
Diesel Fuel:	Diesel Fuel #2	Diesel Fuel #2	ND
PQL:	55	62	53
Heavy Oil:	ND	ND	ND
PQL:	110	120	110
Surrogate Recovery:			
o-Terphenyl	119%	103%	122%

Flags:

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

NWTPH-HCID

Date Extracted: 9-21-99
Date Analyzed: 9-23-99

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	9/16-6@	9/16-7@	9/16-8@
Lab ID:	09-119-19	09-119-20	09-119-21
Gasoline:	ND	ND	ND
PQL:	26	29	27
Diesel Fuel:	Diesel Fuel #2	ND	Diesel Fuel #2
PQL:	53	58	55
Heavy Oil:	ND	ND	ND
PQL:	110	120	110
Surrogate Recovery:			
o-Terphenyl	---	126%	83%
Flags:	F		

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

NWTPH-HCID

Date Extracted: 9-22-99
Date Analyzed: 9-23&24-99

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	9/16-9@	9/16-10@	9/16-11@
Lab ID:	09-119-22	09-119-23	09-119-24
Gasoline:	ND	ND	ND
PQL:	28	26	26
Diesel Fuel:	Diesel Fuel #2	ND	ND
PQL:	57	51	52
Heavy Oil:	ND	ND	ND
PQL:	110	100	100
Surrogate Recovery:			
o-Terphenyl	123%	97%	89%

Flags:

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

NWTPH-HCID

Date Extracted: 9-22-99
Date Analyzed: 9-23&24-99

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	9/16-12@6	9/16-13@9.5	9/16-14@6
Lab ID:	09-119-25	09-119-26	09-119-27
Gasoline:	ND	Gasoline Range Hydrocarbons	ND
PQL:	26	30	28
Diesel Fuel:	Diesel Fuel #2	Diesel Fuel #2	ND
PQL:	53	60	57
Heavy Oil:	Heavy Oil	ND	ND
PQL:	110	120	110
Surrogate Recovery:			
o-Terphenyl	135%	136%	104%

Flags:

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

NWTPH-HCID

Date Extracted: 9-22-99
Date Analyzed: 9-23-99

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	9/16-15@9.5	9/16-16@9.5	9/16-SP1
Lab ID:	09-119-28	09-119-29	09-119-30
Gasoline:	ND	ND	ND
PQL:	27	28	27
Diesel Fuel:	ND	ND	Diesel Fuel #2
PQL:	54	57	53
Heavy Oil:	ND	ND	Heavy Oil
PQL:	110	110	110
Surrogate Recovery:			
o-Terphenyl	89%	97%	110%

Flags:

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

NWTPH-HCID

Date Extracted:	9-22-99
Date Analyzed:	9-23-99
Matrix:	Soil
Units:	mg/Kg (ppm)

Client ID:	9/16-SP2	9/16-SP3	9/16-SP4
Lab ID:	09-119-31	09-119-32	09-119-33
Gasoline:	ND	ND	ND
PQL:	28	31	27
Diesel Fuel:	Diesel Fuel #2	ND	ND
PQL:	56	63	55
Heavy Oil:	Heavy Oil	ND	ND
PQL:	110	130	110
Surrogate Recovery:			
o-Terphenyl	99%	65%	96%

Flags:

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

NWTPH-HCID

Date Extracted:	9-22-99
Date Analyzed:	9-23-99
Matrix:	Soil
Units:	mg/Kg (ppm)

Client ID:	9/16-QA1	9/16-QA2
Lab ID:	09-119-34	09-119-35
Gasoline:	ND	Gasoline Range Hydrocarbons
PQL:	26	28
Diesel Fuel:	Diesel Fuel #2	ND
PQL:	53	56
Heavy Oil:	ND	ND
PQL:	110	110
Surrogate Recovery:		
o-Terphenyl	112%	107%

Flags:

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

NWTPH-HCID
METHOD BLANK QUALITY CONTROL

Date Extracted:	9-21-99
Date Analyzed:	9-24-99
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	MB0921S1
Gasoline:	ND
PQL:	25
Diesel Fuel:	ND
PQL:	50
Heavy Oil:	ND
PQL:	100
Surrogate Recovery:	
o-Terphenyl	113%

Flags

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

NWTPH-HCID
METHOD BLANK QUALITY CONTROL

Date Extracted:	9-22-99
Date Analyzed:	9-23-99
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	MB0922S1
Gasoline:	ND
PQL:	25
Diesel Fuel:	ND
PQL:	50
Heavy Oil:	ND
PQL:	100
Surrogate Recovery:	
o-Terphenyl	85%

Flags

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

NWTPH-HCID

Date Extracted: 9-21-99
Date Analyzed: 9-21-99

Matrix: Water
Units: mg/L (ppm)

Client ID:	9/16-MW1	9/16-MW2	9/16-MW3
Lab ID:	09-119-36	09-119-37	09-119-38
Gasoline:	ND	ND	ND
PQL:	0.25	0.25	0.25
Diesel Fuel:	ND	ND	ND
PQL:	0.63	0.63	0.63
Heavy Oil:	ND	ND	ND
PQL:	0.63	0.63	0.63
Surrogate Recovery:			
o-Terphenyl	93%	82%	104%

Flags:

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

NWTPH-HCID

Date Extracted:	9-21-99
Date Analyzed:	9-21-99
Matrix:	Water
Units:	mg/L (ppm)
Client ID:	9/16-MW4
Lab ID:	09-119-39
Gasoline:	ND
PQL:	0.25
Diesel Fuel:	ND
PQL:	0.63
Heavy Oil:	ND
PQL:	0.63
Surrogate Recovery:	
o-Terphenyl	82%

Flags:

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

NWTPH-HCID
METHOD BLANK QUALITY CONTROL

Date Extracted:	9-21-99
Date Analyzed:	9-21-99
Matrix:	Water
Units:	mg/L (ppm)
Lab ID:	MB0921W1
Gasoline:	ND
PQL:	0.25
Diesel Fuel:	ND
PQL:	0.63
Heavy Oil:	ND
PQL:	0.63
Surrogate Recovery:	
o-Terphenyl	89%

Flags

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

NWTPH-G/BTEX

Date Extracted: 9-28-99
Date Analyzed: 9-28&29-99

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	**9/15-10@10**			**9/16-13@9.5**		
Lab ID:	09-119-10			09-119-26		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**		0.28	**ND**		0.30
Toluene	**0.33**		0.28	**0.80**		0.30
Ethyl Benzene	**ND**		0.28	**0.33**		0.30
m,p-Xylene	**1.3**		0.28	**8.9**		0.30
o-Xylene	**0.59**		0.28	**5.9**		0.30
TPH-Gas	**87**	O	28	**480**		30
Surrogate Recovery:						
Fluorobenzene	85%			75%		

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

NWTPH-G/BTEX

Date Extracted: 9-28-99
Date Analyzed: 9-28-99

Matrix: Soil
Units: mg/Kg (ppm)

Client ID: **9/16-QA2**
Lab ID: 09-119-35

	Result	Flags	PQL
Benzene	**ND**		0.28
Toluene	**ND**		0.28
Ethyl Benzene	**ND**		0.28
m,p-Xylene	**6.5**		0.28
o-Xylene	**3.5**		0.28
TPH-Gas	**170**		28
Surrogate Recovery:			
Fluorobenzene	81%		

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

NWTPH-G/BTEX
METHOD BLANK QUALITY CONTROL

Date Extracted: 9-28-99
Date Analyzed: 9-28-99

Matrix: Soil
Units: mg/Kg (ppm)

Lab ID: MB0928S1

	Result	Flags	PQL
Benzene	**ND**		0.050
Toluene	**ND**		0.050
Ethyl Benzene	**ND**		0.050
m,p-Xylene	**ND**		0.050
o-Xylene	**ND**		0.050
TPH-Gas	**ND**		5.0
Surrogate Recovery: Fluorobenzene	93%		

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

NWTPH-G/BTEX
DUPLICATE QUALITY CONTROL

Date Extracted: 9-28-99
Date Analyzed: 9-29-99

Matrix: Soil
Units: mg/Kg (ppm)

Lab ID:	09-196-01 Original	09-196-01 Duplicate	RPD	Flags
Benzene	ND	ND	NA	
Toluene	ND	ND	NA	
Ethyl Benzene	ND	ND	NA	
m,p-Xylene	ND	ND	NA	
o-Xylene	ND	ND	NA	
TPH-Gas	260	306	16	
Surrogate Recovery:				
Fluorobenzene	63%	50%		

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

NWTPH-G/BTEX
SB/SBD QUALITY CONTROL

Date Extracted: 9-28-99
Date Analyzed: 9-29-99

Matrix: Soil
Units: mg/Kg (ppm)

Spike Level: 1.00 ppm

Lab ID:	SB0928S1 **Spike Blank**	Percent Recovery	SB0928S1 DUP **Duplicate**	Percent Recovery	RPD
Benzene	**0.877**	**88**	**0.860**	**86**	2.0
Toluene	**0.905**	**91**	**0.859**	**86**	5.2
Ethyl Benzene	**0.895**	**90**	**0.871**	**87**	2.7
m,p-Xylene	**0.879**	**88**	**0.863**	**86**	1.9
o-Xylene	**0.880**	**88**	**0.878**	**88**	0.23
Surrogate Recovery:					
Fluorobenzene	93%		88%		

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

NWTPH-Dx

Date Extracted:	9-27-99		
Date Analyzed:	9-28-99		
Matrix:	Soil		
Units:	mg/Kg (ppm)		
Client ID:	9/15-1@6	9/15-2@8	9/15-3@10
Lab ID:	09-119-01	09-119-02	09-119-03
Diesel Fuel:	1900	1700	51
PQL:	150	130	29
Heavy Oil:	ND	ND	ND
PQL:	120	110	57
Surrogate Recovery:			
o-Terphenyl	---	---	104%
Flags:	S	S	

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

NWTPH-Dx

Date Extracted:	9-27-99		
Date Analyzed:	9-28-99		
Matrix:	Soil		
Units:	mg/Kg (ppm)		
Client ID:	9/16-1@11	9/16-2@9.5	9/16-3@11
Lab ID:	09-119-14	09-119-15	09-119-16
Diesel Fuel:	570	380	2800
PQL:	29	28	140
Heavy Oil:	ND	ND	ND
PQL:	58	57	110
Surrogate Recovery:			
o-Terphenyl	71%	108%	---
Flags:			S

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

NWTPH-Dx

Date Extracted:	9-27-99		
Date Analyzed:	9-28-99		
Matrix:	Soil		
Units:	mg/Kg (ppm)		
Client ID:	9/16-4@	9/16-6@	9/16-8@
Lab ID:	09-119-17	09-119-19	09-119-21
Diesel Fuel:	660	2400	460
PQL:	31	130	27
Heavy Oil:	ND	ND	ND
PQL:	62	110	55
Surrogate Recovery:			
o-Terphenyl	94%	---	92%
Flags:		S	

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

NWTPH-Dx

Date Extracted:	9-27-99
Date Analyzed:	9-28-99
Matrix:	Soil
Units:	mg/Kg (ppm)

Client ID:	9/16-9@	9/16-12@6	9/16-13@9.5
Lab ID:	09-119-22	09-119-25	09-119-26
Diesel Fuel:	2400	68	300
PQL:	140	26	30
Heavy Oil:	ND	170	200
PQL:	110	53	60
Surrogate Recovery:			
o-Terphenyl	---	122%	92%
Flags:	S		

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

NWTPH-Dx

Date Extracted:	9-27-99
Date Analyzed:	9-28-99
Matrix:	Soil
Units:	mg/Kg (ppm)

Client ID:	9/16-SP1	9/16-SP2	9/16-QA1
Lab ID:	09-119-30	09-119-31	09-119-34
Diesel Fuel:	380	1100	600
PQL:	27	28	26
Heavy Oil:	560	520	ND
PQL:	53	56	53
Surrogate Recovery:			
o-Terphenyl	107%	---	113%
Flags:		F	

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	9-28-99
Date Analyzed:	9-28-99
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	MB0928S1
Diesel Fuel:	ND
PQL:	25
Heavy Oil:	ND
PQL:	50
Surrogate Recovery:	
o-Terphenyl	88%

Flags:

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	9-27-99
Date Analyzed:	9-28-99
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	MB0927S2
Diesel Fuel:	ND
PQL:	25
Heavy Oil:	ND
PQL:	50
Surrogate Recovery:	
o-Terphenyl	60%

Flags:

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted:	9-27-99
Date Analyzed:	9-28-99
Matrix:	Soil
Units:	mg/Kg (ppm)

Lab ID:	09-119-30	09-119-30 DUP
Diesel Fuel:	361	315
PQL:	25	25
RPD:	13.6	
Surrogate Recovery:		
o-Terphenyl	107%	121%

Flags:

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted:	9-27-99	
Date Analyzed:	9-28-99	
Matrix:	Soil	
Units:	mg/Kg (ppm)	
Lab ID:	09-119-31	09-119-31 DUP
Diesel Fuel:	987	953
PQL:	25	25
RPD:	3.5	
Surrogate Recovery:		
o-Terphenyl	--	--
Flags:	F	F

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

Date Analyzed: 9-21-99

% MOISTURE

Client ID	Lab ID	% Moisture
9/15 - 1@6	09-119-01	16
9/15 - 2@8	09-119-02	5.0
9/15 - 3@10	09-119-03	13
9/15 - 4@10	09-119-04	17
9/15 - 5@6	09-119-05	13
9/15 - 6@10	09-119-06	7.0
9/15 - 7@10	09-119-07	7.0
9/15 - 8@10	09-119-08	8.0

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

Date Analyzed: 9-21-99

% MOISTURE

Client ID	Lab ID	% Moisture
9/15 - 9@6	09-119-09	15
9/15 - 10@10	09-119-10	22
9/15 - 11@6	09-119-11	14
9/15 - 12@9.5	09-119-12	4.0
9/15 – QA1	09-119-13	11
9/16 - 1@11	09-119-14	14
9/16 - 2@9.5	09-119-15	22
9/16 - 3@11	09-119-16	8.0

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

Date Analyzed: 9-21-99

% MOISTURE

Client ID	Lab ID	% Moisture
9/16 - 4@	09-119-17	19
9/16 - 5@	09-119-18	5.0
9/16 - 6@	09-119-19	5.0
9/16 - 7@	09-119-20	4.0
9/16 - 8@	09-119-21	9.0
9/16 - 9@	09-119-22	12
9/16 - 10@	09-119-23	2.0
9/16 - 11@	09-119-24	4.0

Date of Report: September 30, 1999
Samples Submitted: September 17, 1999
Lab Traveler: 09-119
Project: 19904

Date Analyzed: 9-21-99

% MOISTURE

Client ID	Lab ID	% Moisture
9/16 - 12@6	09-119-25	5.0
9/16 - 13@9.5	09-119-26	17
9/16 - 14@6	09-119-27	12
9/16 - 15@9.5	09-119-28	8.0
9/16 - 16@9.5	09-119-29	12
9/16 – SP1	09-119-30	6.0
9/16 – SP2	09-119-31	10
9/16 – SP3	09-119-32	20
9/16 – SP4	09-119-33	9.0
9/16 – QA1	09-119-34	5.0
9/16 – QA2	09-119-35	11

Chain of Custody

OnSite Environmental Inc.
14648 NE 95th Street • Redmond, WA 98052
Fax: (425) 885-4603 • Phone: (425) 883-3881

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☑ ~~1 Day~~
- ☐ 2 Day
- ☐ 3 Day
- ☒ Standard (Hydrocarbon analyses: 5 days, All other analyses: 7 days)
- ☐ 9/24 (other)

Project Chemist: DB

Laboratory No. 09-119

Company: Galloway Envl Inc. GEI

Project No.: 1990 4

Project Name: Storey Station

Project Manager: Gary Galloway

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270C	PAHs by 8270C	PCB's by 8082	Pesticides by 8081	Total RCRA Metals (8)	TCLP Metals	VPH	EPH	% Moisture
1	9/15-1@6	9/15/99	10:20	S	1	✓		⊗											X
2	9/15-2@8	"	10:22					⊗											
3	9/15-3@10		10:25					⊗											
4	9/15-4@10		10:27					⊗											
5	9/15-5@6		10:50																
6	9/15-6@10		10:52					⊗											
7	9/15-7@10		10:55																
8	9/15-8@10		11:00																
9	9/15-9@6		12:26																
10	9/15-10@10		12:40				⊗	⊗											
11	9/15-11@6		12:50																
12	9/15-12@9.5		12:58			✓					✓								✓

RELINQUISHED BY	DATE	RECEIVED BY	DATE
Dylan Galloway	9/17/99	Ollard	9/17/99
FIRM: Galloway Envl Inc	TIME: 11:50	FIRM: OSE	TIME: 11.50
RELINQUISHED BY	DATE	RECEIVED BY	DATE
FIRM	TIME	FIRM	TIME
REVIEWED BY		DATE REVIEWED	

COMMENTS:
follow up as appropriate
⊗ Added 9/27/99. DB

Chromatographs with final report ☐

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Turnaround Request (in working days)

(Check One)

☐ Same Day ☐ 1 Day

☐ 2 Day ☐ 3 Day

☒ Standard
(Hydrocarbon analyses: 5 days, All other analyses: 7 days)

☐ 9/24 (other)

Project Chemist: DB

Laboratory No. 09-119

Company: Galloway Envl Inc CEI

Project No.: 19904

Project Name: Storey Station

Project Manager: Gary Galloway

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270C	PAHs by 8270C	PCB's by 8082	Pesticides by 8081	Total RCRA Metals (8)	TCLP Metals	VPH	EPH	% Moisture
37	9/16-MW2	9/16/99	18:05	W	2	X													
38	9/16-MW3	9/16/99	17:05	W	2	X													
39	9/16-MW4	9/16/99	16:00	W	1	X													

RELINQUISHED BY	DATE	RECEIVED BY	DATE
Dylan Galloway	9/17/99		9/17/99
FIRM: Galloway Envl Inc.	TIME: 11:50	FIRM: OSE	TIME: 11:50
RELINQUISHED BY	DATE	RECEIVED BY	DATE
FIRM	TIME	FIRM	TIME
REVIEWED BY		DATE REVIEWED	

COMMENTS:
follow up as appropriate
⊗ Added 9/27/99. DB

Chromatographs with final report ☐

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Chain of Custody

OnSite Environmental Inc.
14648 NE 95th Street • Redmond, WA 98052
Fax: (425) 885-4603 • Phone: (425) 883-3881

Turnaround Request (in working days)

(Check One)

☐ Same Day ☐ 1 Day

☐ 2 Day ☐ 3 Day

☒ Standard
(Hydrocarbon analyses: 5 days, All other analyses: 7 days)

☐ 9/24 (other)

Project Chemist: DB

Laboratory No. 09-119

Company: Galloway Envl Inc GEI

Project No.: 19904

Project Name: Storey Station

Project Manager: Gary Galloway

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270C	PAHs by 8270C	PCB's by 8082	Pesticides by 8081	Total RCRA Metals (8)	TCLP Metals	VPH	EPH	% Moisture
25	9/16-12@6	9/16/99	16:20	S	1	X		⊗											X
26	9/16-13@9.5		16:25	S	1		⊗	⊗											X
27	9/16-14@6		16:40	S	1														X
28	9/16-15@9.5		16:55	S	1														X
29	9/16-16@9.5		17:10	S	1														X
30	9/16-SP1		18:00	S	1			⊗											X
31	9/16-SP2		18:05	S	1			⊗											X
32	9/16-SP3		18:10	S	1														X
33	9/16-SP4		18:15	S	1														X
34	9/16-QA1	9/16/99		S	1			⊗											X
35	9/16-QA2	9/16/99		S	1		⊗												X
36	9/16-MW1	9/16/99	14:30	W	1														

RELINQUISHED BY	DATE	RECEIVED BY	DATE
Dylan Galloway	9/17/99	Dillard	9/17/99
FIRM: Galloway Envl Inc	TIME: 11:50	FIRM: OSE	TIME: 11:50
RELINQUISHED BY	DATE	RECEIVED BY	DATE
FIRM	TIME	FIRM	TIME
REVIEWED BY		DATE REVIEWED	

COMMENTS: follow up as appropriate

⊗ Added 9/27/99. DB.

Chromatographs with final report ☐

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APPENDIX E

PHOTOS

Photo 1 - Photo of the Site during Phase I Test Pits (view from the SE)

Photo 2 - Photo of the Site during Phase I Test Pits (vicinity of Younger Creek)

FIGURE — SITE PHOTOS
Storey Service Station Site, Cle Elum, Washington
Source: GEI field studies, December 1997, Project #19923

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Photo 3 - Photo of the MW-1 well Development & Sampling (January 1998)

Photo 4 - Photo of the MW-1 Water Sampling (June 1998)

FIGURE — SITE PHOTOS
Storey Service Station Site, Cle Elum, Washington
Source: GEI field studies, December 1997, Project #19923

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Photo 5 - Photo of Source Area 4 Removals & Containment Pad Preparation (November 1998)

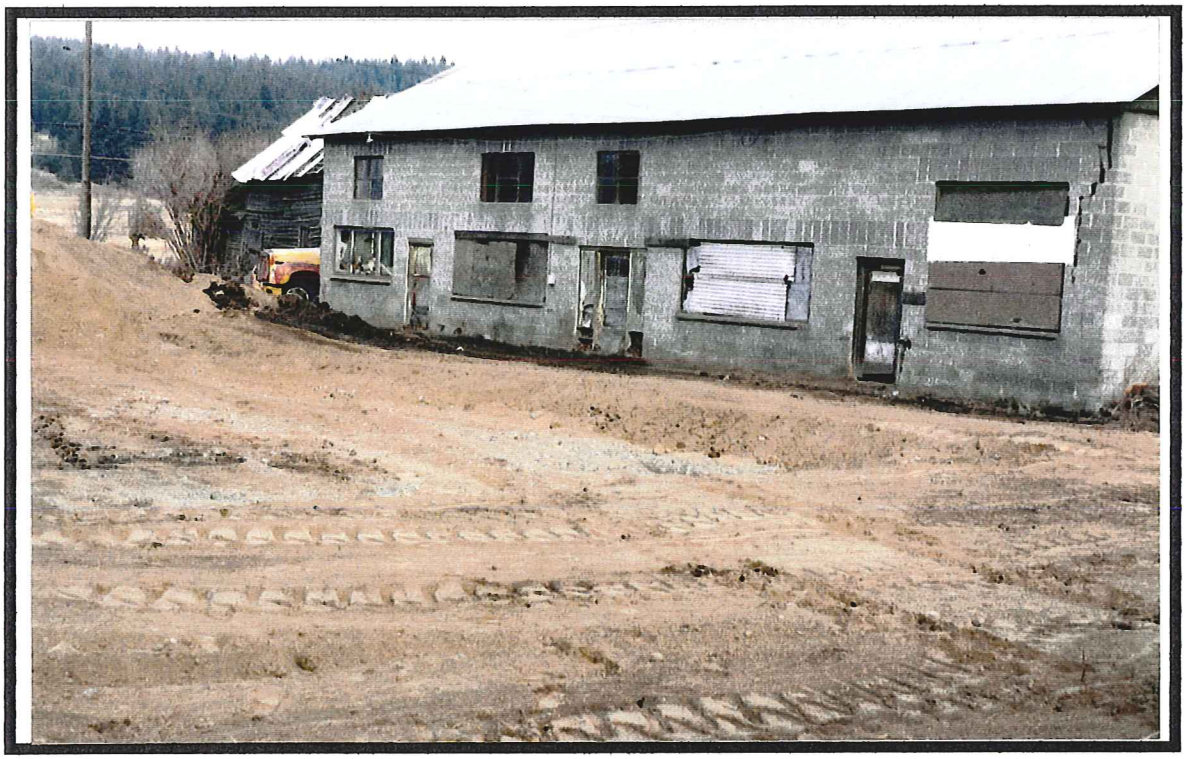

Photo 6 - Photo of the AST Containment Pad Preparation , November 1998 (view from the SW)

FIGURE — SITE PHOTOS

Storey Service Station Site, Cle Elum, Washington

Source: GEI field studies, December 1997, Project #19923

G

Photo 7 - Photo of Source Area 2 (USTs) Removals, September 7, 1999 (view from the NE)

Photo 8 - Photo of Source Area 2 (USTs) Removals, September 15, 1999 (view from the west)

FIGURE — SITE PHOTOS
Storey Service Station Site, Cle Elum, Washington
Source: GEI field studies, December 1997, Project #19923

G

Photo 9 - Photo of Source Area 3 (Pump Islands) Removals, September 7, 1999 (view from the SW)

Photo 10 - Photo of Source Area 3 (Pump Islands) Removals, September 16, 1999 (view from the west)

FIGURE — SITE PHOTOS

Storey Service Station Site, Cle Elum, Washington

Source: GEI field studies, December 1997, Project #19923

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Photo 11 - Photo of Station, March 18, 2000 (view from the west)

Photo 12 - Photo of Station, March 18, 2000 (view from the SE)

FIGURE — SITE PHOTOS
Storey Service Station Site, Cle Elum, Washington
Source: GEI field studies, December 1997, Project #19923

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