Remediation Documentation Report

Wishram, Washington

BNSF Railway Company

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Kennedy/Jenks Consultants

REMEDIATION DOCUMENTATION REPORT
WISHRAM, WASHINGTON

Prepared for

BNSF RAILWAY COMPANY

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1.0 INTRODUCTION

Kennedy/Jenks Consultants prepared this report on behalf of BNSF Railway Company (BNSF) to describe remediation activities conducted in 2005 at the Wishram Railyard (site) located in Wishram, Washington (project). The project included excavating and disposing of petroleum-containing soil, an underground storage tank (UST), and abandoned piping. NRC Environmental Services (NRC) of Portland, Oregon, completed the project between 24 October and 11 November 2005 in conformance with *Remediation Work Plan, Wishram Washington* (Work Plan) prepared by Kennedy/Jenks Consultants and dated June 2005. The Work Plan was provided to the Washington State Department of Ecology (Ecology) and the Klickitat County Health Department prior to conducting the remediation project.

This report also summarizes analytical data for groundwater monitoring conducted prior to remediation in 2003 and 2004 and approximately one year after excavation in November 2006.

2.0 BACKGROUND

2.1 SITE LOCATION AND DESCRIPTION

The town of Wishram is located in Klickitat County, Washington, approximately 13 miles northeast of The Dalles, Oregon, and 0.75 mile south of Washington State Route 14 (see Figure 1). The site extends for approximately 1 mile along the southern boundary of Wishram, along the northern shoreline of the Columbia River. The site, near the western end of the railyard, lies primarily within the southwestern quarter of the southwestern quarter of Section 17, Township 2 North, Range 15, east of the Willamette Meridian (W.M.), extending between 40 and 100 feet into the southeastern quarter of Section 18, Township 2 North, Range 15, east of the W.M.

The site is slightly less than 3 acres and is bounded by Wishram to the north, railyard right-of-way to the east and west, and the Columbia River to the south and southwest (see Figure 2). Apart from a berm along the river shoreline, the ground surface is relatively flat and lies at an elevation of approximately 175 feet above mean sea level (msl). Surface water bodies near the site include the adjacent Columbia River and a stormwater drainage ditch located approximately 1,000 feet to the west.

Soil at the site is composed of 15 to 40 feet of dune deposits and loose sandy fill overlying basalt bedrock, the upper surface of which descends toward the Columbia River at depths ranging from approximately 15 to 40 feet below ground surface (bgs). In the northern half of the site, where bedrock has been encountered at approximately 15 feet bgs, groundwater occurs seasonally in localized perched zones between 10 and 15 feet bgs. Nearer to the river, groundwater has been encountered year round at approximately 10 to 15 feet bgs and appears to flow south-southwest with a gradient of approximately 0.006 feet per foot (ft/ft).

3.0 PROJECT ACTIVITIES

3.1 PERMITTING

Permitting for the remediation project was required because of the volume of soil proposed for removal and because of the project area's close proximity to the Columbia River. A Joint Aquatic Resources Permit Application (JARPA), a State Environmental Policy Act (SEPA) checklist, a work plan, and an application fee were submitted to the Klickitat County Planning Department on 5 July 2005. Klickitat County and Ecology approved the project permit on 17 October 2005.

3.2 EXCAVATION AND DISPOSAL

Areas excavated in 2005 are shown on Figure 2. These included the location of a former pump house, the area around a former fueling island and lubricating oil UST, and the former location of a boiler house.

A total of 3,656 tons of petroleum-containing soil, other petroleum-containing debris, and concrete were removed and transported via truck to the Regional Disposal Company Landfill in Roosevelt, Washington (Roosevelt Landfill). Approximately 10 tons of clean, abandoned piping and other metals encountered during excavation were transported for recycling to Schnitzer Steel Industries (Schnitzer) in Portland, Oregon. Approximately 1,800 gallons of fuel and oils removed from abandoned piping and an UST were transported by NRC to Oil Re-refining Company (ORRCO), a recycling facility in Portland, Oregon. Approximately 500 to 1,000 cubic yards of clean overburden removed from excavation areas were replaced as backfill.

Excavated areas were backfilled as soon as possible after confirmation sampling to minimize the potential for collapse of the surrounding sandy soil. NRC obtained clean pit-run for backfilling the excavations and basalt gravel for top course from Pacific

Northwest Aggregates (PNA) located approximately 1 mile west of Wishram on State Route 14. Soil was placed into excavations in 1 foot thick lifts and compacted using the excavator bucket and/or a large front-end loader. Density testing performed by Tenneson Engineers of The Dalles, Oregon, indicated 90 percent compaction or better in all test locations. After compaction and testing, the ground surface was graded to approximate surrounding conditions, and a 3-inch-thick layer of top course gravel was spread over all backfilled areas.

3.2.1 Pump House Foundation at Maintenance Building

Site characterization data gathered in 2003 and 2004 indicated the presence of diesel- and gasoline-range hydrocarbons in soil and groundwater southeast of the former pump house foundation and west of the maintenance building (see Figure 2). Remediation in 2005 included removing the pump house foundation and approximately 50 feet of associated piping, then excavating soil exhibiting odors or stains, to the extent practicable, within the area bounded by the roadway to the north, the maintenance building to the east, and the mainline railroad track to the south. An approximately 15,000-gallon, sand-filled, abandoned septic tank located a few feet west of the maintenance building also limited the extent of excavation. A total of approximately 900 tons of soil was excavated from the area, to depths ranging from 5 to 15 feet bgs, and disposed of at the Roosevelt Landfill.

During excavation, a 12-inch-diameter east/west trending sewer pipe was encountered, extending from the maintenance building to a point near boring location WSB-04-6 (Figure 2). The western terminus of the pipe was open and, when tested, discharged drain water from the maintenance building bathroom. BNSF personnel indicated that it was an abandoned branch of a sewer pipe that should be capped. NRC capped the pipe with a rubber boot and ring clamp.

After collection of confirmation soil samples (described in Section 3.2), NRC tilled 200 pounds of oxygen release compound (ORC) into saturated soil exposed in the bottom of the excavation. The area was then backfilled, graded, and covered with

gravel. Analytical results for confirmation samples collected from the bottom of the excavation, from areas where ORC was applied, contained gasoline-range hydrocarbons at concentrations ranging from 225 to 233 milligrams per kilogram (mg/kg) and diesel-range hydrocarbon concentrations ranging from 89.9 to 2,690 mg/kg. Only trace concentrations of ethylbenzene and xylenes were detected in the samples, suggesting that residual petroleum hydrocarbons in the vadose and saturated zones are relatively weathered.

3.2.2 Former Fueling Island and Lubricating Oil UST

3.2.2.1 Fueling Island

Soil removal near the center of the site was initiated by removing the 300 cubic yard concrete fueling island pad and excavating soil beneath the pad to approximately 8 feet bgs. Although 2004 site characterization results suggested the presence of petroleum-containing soil between 5 and 10 feet bgs at boring location WSB-04-9, no staining or odors were encountered during excavation (Figure 2). Based on the earlier site characterization results, approximately 10 cubic yards of soil from the location of boring WSB-04-9 were stockpiled for disposal. The remaining soil from beneath the pad and approximately 100 cubic yards of broken concrete were stockpiled separately for use as backfill. Approximately 200 cubic yards of the concrete were disposed of at the Roosevelt landfill. Rebar removed from the pad was transported, along with other metals, to Schnitzer.

Two confirmation samples were collected from the fueling island excavation in the locations of pipes that protruded from the island surface. One of the samples, FI-EAST-6, contained diesel-range hydrocarbons at a concentration of 152 mg/kg, which is below the MTCA Method A cleanup level of 2,000 mg/kg. This was the only detection in the two fueling island confirmation samples.

3.2.2.2 Lube Oil UST Area

Approximately 5 feet west of the fueling island, stained soil was encountered at 3 feet bgs around a buried valve and joint in a 6-inch diameter, abandoned fuel pipe. Soil was removed southward and westward from the pipe joint to depths ranging between 8 and 15 feet bgs. Where practicable, soil was removed until field observations and/or photoionization detector (PID) measurements indicated the presence of "clean" soil in the excavation sidewall or bottom. The northern boundary of the excavation was limited to an alignment approximately 20 feet south of and parallel to the mainline tracks to minimize the potential for undermining the tracks. Approximately 1,500 tons of petroleum-containing soil were removed from the area and transported to the Roosevelt Landfill.

The fuel pipe encountered west of the fueling island appeared to extend from the northeast from the former pump house and under the mainline tracks. The valve at the joint was removed, and approximately 300 gallons of diesel fuel and water were vacuumed from the pipeline for offsite disposal. After cleaning, the pipe section extending from the north, under the tracks, was capped with a rubber boot and ring clamp. Other pipes encountered in the excavation included two 6-inch diameter cast-iron fuel pipes, a 3-inch diameter steel pipe (empty), and a steam line that, together, formed a large oval originating and ending at pipe stubs in the former location of the boiler house (described below). Residual bunker C oil in the piping was either pumped out using a vacuum truck or, if spilled while removing the pipe, scraped up along with surrounding soils and stockpiled for disposal. Approximately 200 gallons of bunker C oil were recovered from the pipe and transported to ORRCO in Portland, Oregon. The 6-inch oil pipe was disposed of along with other debris and petroleum-containing soil at the Roosevelt landfill.

Several pieces of insulation-wrapped pipe (a total of 30 feet) were encountered at 10 feet bgs near the western end of the excavation. The pipes and insulation were sprayed with water, wrapped in asbestos containment bags, and disposed of at the Roosevelt Landfill as potential asbestos-containing materials.

A 5,000-gallon, single-walled steel UST was encountered at 6 feet bgs approximately 40 feet southwest of the western end of the former fueling island. The UST contained approximately 1,500 gallons of unused lubricating oil, which was vacuumed out and transported to ORRCO in Portland, Oregon. NRC staff, registered to decommission USTs, inerted the tank using 100 pounds of dry ice, pressure washed the interior, and then lifted the tank to the ground surface. The cleaned tank was cut into pieces and stockpiled with other metal for recycling. Kennedy/Jenks Consultants personnel notified Ecology of the UST removal via telephone. However, Ecology staff indicated that the UST was not registered and, therefore, could be removed without filing a formal notification.

In portions of the excavated area where groundwater or moist soil was encountered (>10 feet bgs), ORC was tilled into the excavation bottom prior to backfilling (a total of 150 pounds). One confirmation sample collected from saturated soil at 12 feet bgs contained gasoline-range hydrocarbons at a concentration of 10.4 mg/kg, diesel-range hydrocarbons at a concentration of 908 mg/kg, and oil-range hydrocarbons at a concentration of 1,920 mg/kg. Benzene, toluene, ethylbenzene, and total xylenes (BTEX) compounds were not detected in the sample at concentrations greater than laboratory reporting limits. ORC was tilled into the saturated soil to increase oxygen levels, thus, potentially enhancing biodegredation of the weathered petroleum compounds.

3.2.3 Former Boiler House

In 2004, analytical results for samples collected from soil boring WSB-5 and monitoring well MW-2 (see Figure 2) suggested the presence of petroleum in soil and groundwater beneath the remnants of the former boiler house foundation. Field observations during excavation indicated that a large part of what was originally thought to be a foundation was a concrete lid on top of a subterranean, soil-filled, concrete bunker measuring 40 feet long by 12 feet wide by 15 feet deep. After removing approximately 250 tons of petroleum-containing soil from the bunker, the interior walls were pressure washed and the concrete-lined void was backfilled with clean soil.

Additional excavation around the outside of the bunker revealed that monitoring well MW-2 and soil boring WSB-5 had been advanced within a few inches of the outside of the concrete walls and that a portion of the well screen of well MW-2 was positioned within a small mass of oily timbers near the bunker's base (15 feet bgs). In addition to the timbers, relatively localized petroleum-containing soil was encountered, extending from approximately 12 to 18 feet bgs. The MW-2 well casing and as much of the affected soil as possible was removed within the boundaries shown on Figure 2, but collapse of the sidewalls during excavation made it necessary to leave some of the petroleum-containing soil in place. The collapse also precluded collection of confirmation samples other than PH-1-10 and PH-2-17 (described below).

A total of approximately 700 tons of soil was removed from this area and disposed of at the Roosevelt Landfill. Sixty pounds of ORC were mixed into the base of the excavation (including both stained soil and soil that collapsed from the sidewalls), and the excavated area was backfilled and compacted. Confirmation samples collected from the excavation, prior to its collapse, did not contain petroleum hydrocarbons or BTEX. However, visual observation of the excavation indicated slight to moderate staining of some soil left in place. ORC tilled into the excavation appears to have been placed in contact with the localized, stained soil.

3.3 CONFIRMATION SAMPLING AND ANALYSIS

Confirmation soil samples were collected from sidewalls and bottoms of excavations (see Figure 2) by scraping a small quantity of soil onto the teeth of the excavator bucket and transferring the soil into laboratory provided containers. Samples were submitted under chain-of-custody to North Creek Analytical Laboratory (NCA) in Bothell, Washington, for one or more of the following analyses:

- Diesel-range hydrocarbons using the NWTPH-Dx Method with silica gel cleanup
- Gasoline-range hydrocarbons using the NWTPH-G Method

- BTEX using EPA Method 8021B
- Volatile organic compounds (VOCs) using EPA Method 8260B (collected using EPA Method 5035)
- Total lead using EPA 6000/7000 Series Methods
- Polychlorinated biphenyls (PCBs) using EPA Method 8082.

Analytical results for compounds detected in confirmation samples are summarized in Table 1 and discussed below. Laboratory reports are provided in Appendix A.

3.3.1 Former Pump House Confirmation Sample Results

Thirteen confirmation soil samples were collected from the sidewalls and bottom of the excavation advanced near the former pump house. Analytical results for the samples, identified with the prefix "M," are summarized in Table 1.

Gasoline-range hydrocarbons were detected in two samples collected from saturated soil at approximately 14 feet bgs (M-9-14 and M-10-14), at concentrations of 225 and 233 mg/kg. These concentrations exceed the Ecology Model Toxics Control Act Method A cleanup level for Industrial Properties (MTCA Method A cleanup level) of 100 mg/kg. The same samples contained trace concentrations of ethylbenzene and xylenes below MTCA Method A cleanup levels. Benzene and toluene were not detected.

In nine of the 13 samples from the former pump house excavation, diesel-range hydrocarbons were detected at concentrations ranging from 53.4 to 324 mg/kg, below the MTCA Method A cleanup level of 2,000 mg/kg. Sample M-9-14, from saturated soil at 14 feet bgs, contained a diesel-range hydrocarbon concentration of 2,690 mg/kg.

Results of confirmation sampling in the former pump house area indicate elevated diesel- and gasoline-range hydrocarbon concentrations remain in the saturated zone

approximately 30 feet northwest of monitoring well MW-7 (see Figure 2). Other samples from the same depth (M-1-14, M-2-14, and M-7-14) contained diesel-range hydrocarbons at concentrations below MTCA Method A cleanup levels suggesting that the elevated concentrations are relatively localized. Based on previous site investigation results, the saturated zone in this area is perched on bedrock and appears to be less than approximately 5 feet thick.

3.3.2 Fueling Island/UST Area Confirmation Sample Results

As described above, no stains or odors were observed in soil directly beneath the former fueling island, including a location for which previous site investigation results suggested the presence of diesel-range hydrocarbons. Two confirmation samples collected from locations directly beneath the former fueling island (FI-MID-10 and FI-EAST-6) were analyzed for diesel- and oil-range hydrocarbons. Diesel-range hydrocarbons were detected in sample FI-EAST-6, from 6 feet bgs, at a concentration of 152 mg/kg. Petroleum compounds were not detected in sample FI-MID-10 collected from 10 feet bgs.

Nine confirmation samples collected from the excavation, advanced west and southwest of the former fueling island, are identified in Table 1 and on Figure 1 with the prefix "FIEXC." Petroleum hydrocarbon compounds were not detected at concentrations greater than laboratory reporting limits in six of the samples. One sample (FIEXC-E-8) contained diesel-range hydrocarbons at a concentration of 56.1 mg/kg and oil-range hydrocarbons at a concentration of 37.2 mg/kg, both below MTCA Method A cleanup levels.

Two of the samples (FIEX-B-1-12 and FIEX-N-8E) were collected from locations where olfactory observations indicated petroleum soil was still present in the excavation sidewall. At these two locations, the excavation had to be terminated because of adjacent structures. FIEXC-N-8, collected west of the fueling island and a short distance south of a mainline track, contained a diesel-range hydrocarbon concentration of 853 mg/kg and an oil-range hydrocarbon concentration of 3,390 mg/kg. Although the

oil-range concentration exceeded the MTCA Method A cleanup level of 2,000 mg/kg, soil was not excavated north of this sample location to minimize the potential for undermining the nearby mainline track. FIEXC-B-1-12 was collected from a localized mass of soil left in place around the base of a large concrete vault that extends to a depth of approximately 15 feet bgs (see Figure 2). Detections in this sample included diesel-range hydrocarbons at a concentration of 908 mg/kg, oil-range hydrocarbons at a concentration of 1,920 mg/kg, and gasoline-range hydrocarbons at a concentration of 10.4 mg/kg. Detected concentrations in FIEXC-B-1-12 were below MTCA Method A cleanup levels.

3.3.3 Former Boiler House Confirmation Sample Results

Only two confirmation samples were collected from the former boiler house excavation because: 1) the majority of petroleum-containing soil encountered in this location was within a sub-grade concrete vault, and 2) the walls of the excavation outside of the vault collapsed continually during removal, thus precluding "safe" collection of additional samples. Analytical results for the two samples that were collected (PH-1-10 and PH-2-17) do not indicate detections of gasoline-, diesel-, or oil-range hydrocarbons. Lead was detected in sample PH-1-10 at a concentration of 10 mg/kg.

As described above, visual observations during excavation indicated that a localized mass of stained soil was left in place around the base of the sub-grade concrete vault at a depth of approximately 18 feet bgs. Sample PH-2-17, collected from 17 feet bgs approximately 10 feet west of the stained soil mass, did not contain petroleum hydrocarbons at concentrations greater than laboratory reporting limits. Sample PH-1-10 was collected from a depth of 10 feet bgs, approximately 25 feet south of the stained soil, between the concrete vault and the river (Figure 2).

3.4 GROUNDWATER MONITORING

Monitoring wells were installed at the site in 2003 and 2004, prior to soil excavation. Analytical results for samples collected from the wells before and after excavation are summarized in Table 2 and discussed below.

In 2003, monitoring wells MW-1 and MW-4 were constructed along and as close as practicable to the river shoreline, downgradient of former fueling areas. With the exception of a slightly elevated diesel-range hydrocarbon concentration detected in a September 2003 sample from monitoring well MW-1, pre-excavation samples collected from these downgradient wells did not contain petroleum-hydrocarbons at concentrations exceeding MTCA Method A cleanup levels for groundwater (MTCA Method A cleanup levels). The most recent groundwater sample collected from well MW-1, in November 2006, did not contain petroleum hydrocarbon or BTEX compounds at concentrations greater than laboratory reporting limits. Observations during the November 2006 monitoring round indicate well MW-4 was recently destroyed during railyard grading operations.

Well MW-2 was installed in the former location of the boiler house but was removed because, as discovered during excavation, its screen had been constructed within a mass of oily timbers. Diesel- and oil-range hydrocarbons and benzene were detected in samples collected from this well prior to excavation at concentrations exceeding MTCA Method A cleanup levels. However, the analytical results were biased by the surrounding timbers and not representative of groundwater conditions in this area.

Well MW-3 was installed downgradient of the former fueling island, approximately midway between the island and monitoring well MW-1. A groundwater sample collected from this well in September 2003 contained diesel-range hydrocarbons at a concentration of 253 micrograms per liter (µg/L). In November 2006, diesel-range hydrocarbons were detected at a concentration of 659 µg/L, which exceeds the MTCA Method A cleanup level of 500 µg/L. Gasoline-range hydrocarbons were also detected in November 2006, but at a concentration below MTCA Method A cleanup levels.

Monitoring well MW-5 was installed approximately 200 feet east of the former fueling island in 2004 to aid in monitoring the groundwater flow direction and to evaluate the potential for easterly migration of petroleum hydrocarbons in the event of fluctuations in the groundwater flow direction. Petroleum hydrocarbons and BTEX compounds have not been detected in samples collected from well MW-5.

Well MW-6 was installed in 2004 to monitor groundwater downgradient of the fueling island (the UST location was unknown in 2004). A groundwater sample collected from well MW-6 in 2004 did not contain petroleum hydrocarbons or BTEX at concentrations exceeding MTCA Method A cleanup levels. This well had to be removed during excavation to access and remove the lubricating oil UST.

Well MW-7 was installed west of the maintenance building to evaluate groundwater conditions downgradient of the former pump house. Prior to excavation (in 2004), a groundwater sample collected from well MW-7 contained gasoline- and diesel-range hydrocarbons at concentrations greater than MTCA Method A cleanup levels (see Table 2). During monitoring in November 2006, one year after excavation, approximately 0.1 foot of light non-aqueous phase liquid (LNAPL) was encountered in the well. The LNAPL was removed using a disposable bailer, and no sample was collected for analysis. The well was observed again and additional LNAPL was removed in December 2006 and March 2007.

4.0 SUMMARY AND RECOMMENDATIONS

Remediation activities conducted at the site in 2005 resulted in the removal and offsite disposal of approximately 3,600 tons of petroleum-containing soil and debris, removal and recycling of approximately 1,800 gallons of petroleum from an UST and piping, and removal and recycling of 10 tons of metals. Results of confirmation soil sampling suggest that the majority of the petroleum hydrocarbon mass in soil at the site was removed. With the exception of detections in two confirmation samples collected from the former pump house area (M-9-14 and M-10-14) and one sample collected west of the former fueling island (FIEXC-N-8), no compounds were detected at concentrations exceeding Ecology Model Toxics Control Act (MTCA) Method A Soil Cleanup Levels for Industrial Properties.

Post-excavation groundwater monitoring results from November 2006 suggest the presence of localized, elevated petroleum hydrocarbon concentrations in groundwater near well locations MW-7 and MW-3. A small amount of LNAPL has also been encountered in well MW-7. However, based on observations of the excavation advanced around well MW-7 in 2005, this LNAPL appears to be limited to soil left in place around the well casing. Neither pre- nor post-excavation monitoring results for wells MW-1 and MW-4 indicate sustained concentrations of petroleum hydrocarbons greater than MTCA Method A cleanup levels downgradient of the former fueling area. Petroleum hydrocarbons and/or BTEX were not detected in a sample collected from well MW-1 in November 2006.

Because a significant mass of the subsurface soil source of petroleum hydrocarbons was removed by excavation, it is anticipated that localized residual concentrations in saturated zone soil will attenuate naturally over time. Additional remedial measures to enhance natural attenuation such as ORC or ozone injection could be implemented. However, because downgradient groundwater monitoring results do not indicate migration toward the Columbia River and because the land will remain a railyard for the foreseeable future, additional remedial measures would not further reduce an already low risk posed by the residual concentrations and would not be a cost-effective

alternative to natural attenuation. Semiannual groundwater monitoring is recommended for approximately 2 to 3 years to evaluate the progress of natural attenuation and the concentration of petroleum hydrocarbons in downgradient wells.

Tables

TABLE 1

CONFIRMATION SOIL SAMPLE ANALYTICAL RESULTS FOR DETECTED COMPOUNDS
BNSF Wishram Railyard

Former Pump House

Analyte[a]	M-1-14	M-2-8	M-2-14	M-3-8	M-4-10	M-5-8	M-6-10	M-7-8	M-7-14	M-8-6	M-8-14	M-9-14	M-10-14
TPH (mg/kg)													
Gasoline-range	NA[b]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**233**	**225**
Diesel-range	**121**	**89.9**	**182**	**183**	**164**	**53.4**	**107**	<11.0[c]	**324**	<11.2	**78.6**	**2,690**	NA
Oil-range	<27.8	<27.3	<27.7	<27.1	<27.5	<27.4	<27.4	<27.5	<27.9	<28.1	<27.3	<285	NA
BTEX (mg/kg)													
Ethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.125**	**0.124**
Xylenes (total)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.209**	**0.222**
Lead (mg/kg)	NA	NA	NA	NA	NA	NA	**4.10**	NA	NA	NA	NA	**3.64**	NA

Former Fueling Island and Boiler House

Analyte	FIEXC-B-1-12	FIEXC-B-3-15	FIEXC-B-5-10	FIEXC-B-6-10	FIEXC-B-7-10	FIEXC-E-8	FIEXC-W-10	FIEXC-N-8	FIEXC-S-10	FI-EAST-6	FI-MID-10	PH-1-10	PH-2-17
TPH (mg/kg)													
Gasoline-range	**10.4**	NA	NA	NA	NA	NA	<6.77	<6.16	<6.13	NA	NA	<6.27	<7.29
Diesel-range	**908**	<10.9	<10.4	<11.1	<10.5	**56.1**	<10.5	**853**	**52.5**	**152**	<10.9	<10.4	<10.6
Oil-range	**1,920**	<27.2	<26.1	<27.7	<26.2	**37.2**	<26.3	**3,390**	**493**	<26.8	<27.4	<26.0	<26.5
BTEX (mg/kg)													
Ethylbenzene	<0.0670	NA	NA	NA	NA	NA	<0.0677	<0.0616	<0.0613	NA	NA	<0.0627	<0.0729
Xylenes (total)	<0.134	NA	NA	NA	NA	NA	<0.135	<0.123	<0.123	NA	NA	<0.125	<0.146
Lead (mg/kg)	**4.37**	NA	NA	NA	NA	NA	**2.74**	NA	NA	NA	NA	**10.0**	NA

Notes:

(a) Analyses:
- Diesel- and oil-range hydrocarbons by the Northwest Total Petroleum Hydrocarbons Diesel Extended (NWTPH-Dx) Method with
- Gasoline-range hydrocarbons by the Northwest Total Petroleum Hydrocarbons Gasoline Extended Method (NWTPH-Gx).
- BTEX analyzed by either EPA Method 8021B or EPA Method 8260B.
- Lead analyzed using EPA Method 6020.

(b) "NA" indicates not analyzed.

(c) "<" indicates analyte was not detected at a concentration greater than the specified laboratory reporting limit.

Only detected compounds are summarized in the table

Analytes detected at concentrations greater than the laboratory reporting limit are shown in bold.

TABLE 2

GROUNDWATER ANALYTICAL RESULTS
Wishram Railyard

Sample ID	WMW-1			WMW-2		WMW-3			WMW-4		WMW-5		WMW-6	WMW-7	MTCA Method A[a]
Date	9/17/2003	4/15/2004	11/9/2006	9/18/2003	4/15/2004	9/17/2003	4/16/2004	11/9/2006	9/18/2003	4/15/2004	4/16/2004	11/9/2006	4/16/2004	4/16/2004	
Petroleum Hydrocarbons (µg/L)[b]															
Gasoline-Range Hydrocarbons	NA[c]	329	<250	NA	750	NA	NA	209	NA	<80.0[d]	<80.0	<50[<50.0]	212	**1,790**	800
Diesel-Range Hydrocarbons	**593 [605][e]**	426	<236	**4,170**	**844**	253	<250	**659**	409	<250	<250 [<250]	<250	454	**1,220**	500
Oil-Range Hydrocarbons	<500 [<500]	<500	<472	**2,450**	<500	<500	<500	<500	<500	<500	<500 [<500]	<500	<500	<500	500
BTEX (µg/L)[f]															
Benzene	<0.500 [0.500]	<0.500	<2.50	**5.71**	**17.4**	<0.500	NA	<0.500	<0.500	<0.500	<0.500 [<0.500]	<0.500 [<0.500]	<0.500	<5.00[g]	5
Toluene	<0.500 [0.500]	<0.500	<2.50	23.5	3.66	<0.500	NA	<0.500	<0.500	<0.500	<0.500 [<0.500]	<0.500 [<0.500]	<0.500	<5.00[g]	1,000
Ethylbenzene	<0.500 [0.500]	<0.500	<2.50	5.84	17.4	<0.500	NA	<0.500	<0.500	<0.500	<0.500 [<0.500]	<0.500 [<0.500]	<0.500	<5.00[g]	700
Total Xylenes	<1.00 [1.02]	2.33	<5.00	11.8	37.2	<1.00	NA	<1.00	<1.00	<1.50	<1.50 [<1.50]	<1.00 [<1.00]	<1.50	<15.0[g]	1,000
VOCs (µg/L)[h]															
n-Propylbenzene	NA	1.63	NA	NA	NA	NA	NA	NA	NA	NA	<1.00 (<1.00]	NA	NA	<1.00	--[i]
1,2,4-Trimethylbenzene	NA	15.0	NA	NA	NA	NA	NA	NA	NA	NA	<1.00 [<1.00]	NA	NA	11.2	--
sec-Butylbenzene	NA	<1.00	NA	NA	NA	NA	NA	NA	NA	NA	<1.00 [<1.00]	NA	NA	3.47	--
PAHs/cPAHs (µg/L)[j]															
Acenaphthene	NA	NA	NA	NA	<10.0	NA	NA	NA	NA	NA	<0.100 [<0.100]	NA	<0.400	1.65	--
Fluorene	NA	NA	NA	NA	<10.0	NA	NA	NA	NA	NA	<0.100 [<0.100]	NA	<0.400	0.839	--
Benzo(a)anthracene	<0.100 [<0.100]	NA	NA	0.304	<10.0	<0.100	NA	NA	<0.100	NA	<0.100 [<0.100]	NA	<0.400	<0.400	0.1[k]
Benzo(a)pyrene	<0.100 [<0.100]	NA	NA	<0.200	<10.0	<0.100	NA	NA	<0.100	NA	<0.100 [<0.100]	NA	<0.400	<0.400	
Benzo(b)fluoranthene	<0.100 [<0.100]	NA	NA	<0.200	<10.0	<0.100	NA	NA	<0.100	NA	<0.100 [<0.100]	NA	<0.400	<0.400	
Benzo(k)fluoranthene	<0.100 [<0.100]	NA	NA	<0.200	<10.0	<0.100	NA	NA	<0.100	NA	<0.100 [<0.100]	NA	<0.400	<0.400	
Chrysene	<0.100 [<0.100]	NA	NA	0.516	<10.0	<0.100	NA	NA	<0.100	NA	<0.100 [<0.100]	NA	<0.400	<0.400	
Dibenz(a,h)anthracene	<0.200 [<0.200]	NA	NA	<0.400	<20.0	<0.200	NA	NA	<0.200	NA	<0.200 [<0.200]	NA	<0.800	<0.800	
Indeno(1,2,3-cd)pyrene	<0.100 [<0.100]	NA	NA	<0.200	<10.0	<0.100	NA	NA	<0.100	NA	<0.100 [<0.100]	NA	<0.400	<0.400	
Total cPAHs[k]				**0.25**											
Metals (µg/L)[l]															
Arsenic	NA	NA	NA	NA	**18.4**	NA	**8.54**	NA	NA	NA	**7.03 (7.05)**	NA	4.30	NA	5
Barium	NA	NA	NA	NA	16.4	NA	55.9	NA	NA	NA	58.0 [58.0]	NA	122	NA	--
Cadmium	NA	NA	NA	NA	<1.0	NA	<1.0	NA	NA	NA	<1.0 [<1.0]	NA	<1.0	NA	5
Chromium (total)	NA	NA	NA	NA	4.39	NA	<1.0	NA	NA	NA	<1.0 [<1.0]	NA	<1.0	NA	50
Lead	NA	NA	NA	NA	<1.0	NA	<1.0	NA	NA	NA	<1.0 [<1.0]	NA	<1.0	NA	15
Mercury	NA	NA	NA	NA	<0.20	NA	<0.20	NA	NA	NA	<0.20 [<0.20]	NA	<0.20	NA	2
Selenium	NA	NA	NA	NA	4.28	NA	<1.0	NA	NA	NA	<1.0 [<1.0]	NA	1.51	NA	--
Silver	NA	NA	NA	NA	<1.0	NA	<1.0	NA	NA	NA	<1.0 [<1.0]	NA	<1.0	NA	--
Water Quality Parameters															
Groundwater Elevation (feet)[m]	78.47	83.89	84.75	NM[n]	84.15	78.5	84.55	84.67	78.51	83.92	84.32	83.44	84.46	85.52	--
Temperature (°C)	19.8	17.2	19.3	14.9	NM	20.0	17.4	18.8	18.3	15.9	15.9	17.3	17.5	16.4	--
pH (standard units)	6.8	7.4	7.1	7.5	NM	7.4	7.5	7.2	7.5	7.7	7.7	7.95	7.1	7.2	--
Specific Conductance (mS/cm)	1,561	1,375	1,078	3,018	NM	980	1,106	1,100	969	920	416	547	1,009	1,397	--
Dissolved Oxygen (mg/L)	0.37	0.35	0.22	0.78	NM	0.56	0.62	0.12	0.42	0.36	0.79	0.08	0.97	1.41	--
Eh (millivolts)	330	117	-147	200	NM	310	222	-77	320	200	261	-82	211	236	--

Notes:

(a) Values are from The Washington State Department of Ecology Model Toxics Control Act (MTCA) Method A Cleanup Level for Groundwater (12 February 2001) unless otherwise stated.

(b) Analyses:
- Diesel- and oil-range hydrocarbons by the Northwest Total Petroleum Hydrocarbons Diesel Extended (NWTPH-Dx) Method with silica gel cleanup.
- Gasoline-range hydrocarbons by the Northwest Total Petroleum Hydrocarbons Gasoline Extended Method (NWTPH-Gx).

(c) "NA" indicates not analyzed.

(d) "<" Indicates analyte was not detected at a concentration greater than the specified reporting limit.

(e) "[ ]" indicates result for field blind duplicate analysis.

(f) BTEX analyzed by EPA Method 8021B.

(g) Reporting limit raised because of dilution necessary for analysis.

(h) VOCs analyzed by EPA Method 8260B.

(i) "--" indicates that a MTCA Method A cleanup level is not available for the analyte or field measured parameter.

(j) PAHs and cPAHs analyzed by EPA Method 8270M-SIM.

(k) Total cPAH value is equal to the sum of individual analyte concentrations multiplied by toxicity equivalency factors (TEFs) as described in WAC 173-340-708(8).
Where analytes were not detected, but there is potential for their presence based on PAH results, a concentration equal to 0.5 the reporting limit was multiplied by the TEF.
The total value was compared to the MTCA Method B cleanup level for benzo(a)pyrene of 0.1 µg/L.

(l) Metals analyzed by EPA 6000/7000 series methods.

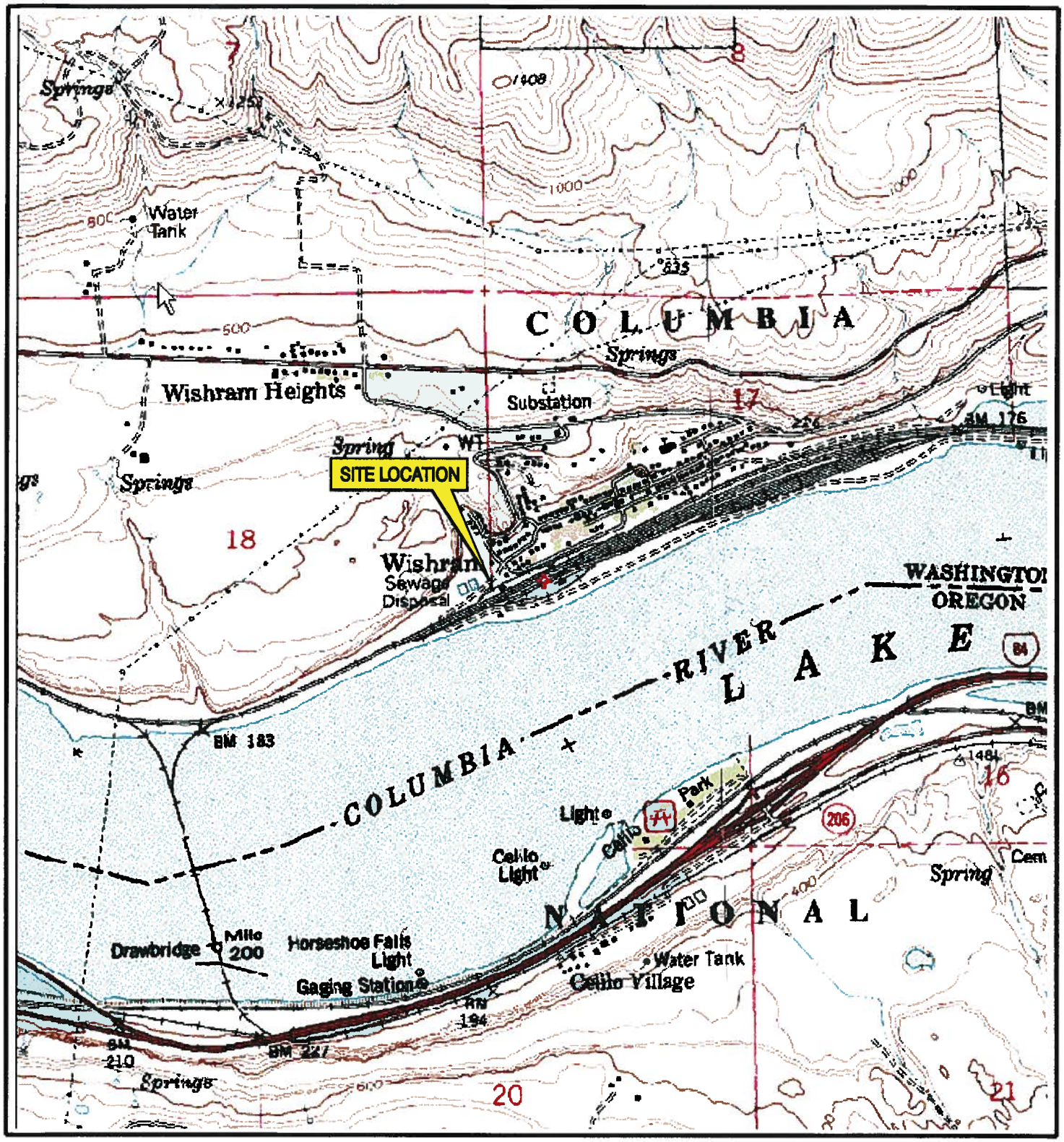
(m) Monitoring well casings were surveyed relative to a benchmark established at the railyard for the site assessment. The benchmark was assigned an arbitrary elevation of 100 feet.

(n) "NM" indicates not measured.

Bold value exceeds the MTCA Method A groundwater cleanup level.

Table includes only those analytes that were detected in one or more samples.

Figures



Kennedy/Jenks Consultants

THE BURLINGTON NORTHERN AND SANTA FE RAILWAY CO.
WISHRAM, WA

SITE LOCATION MAP

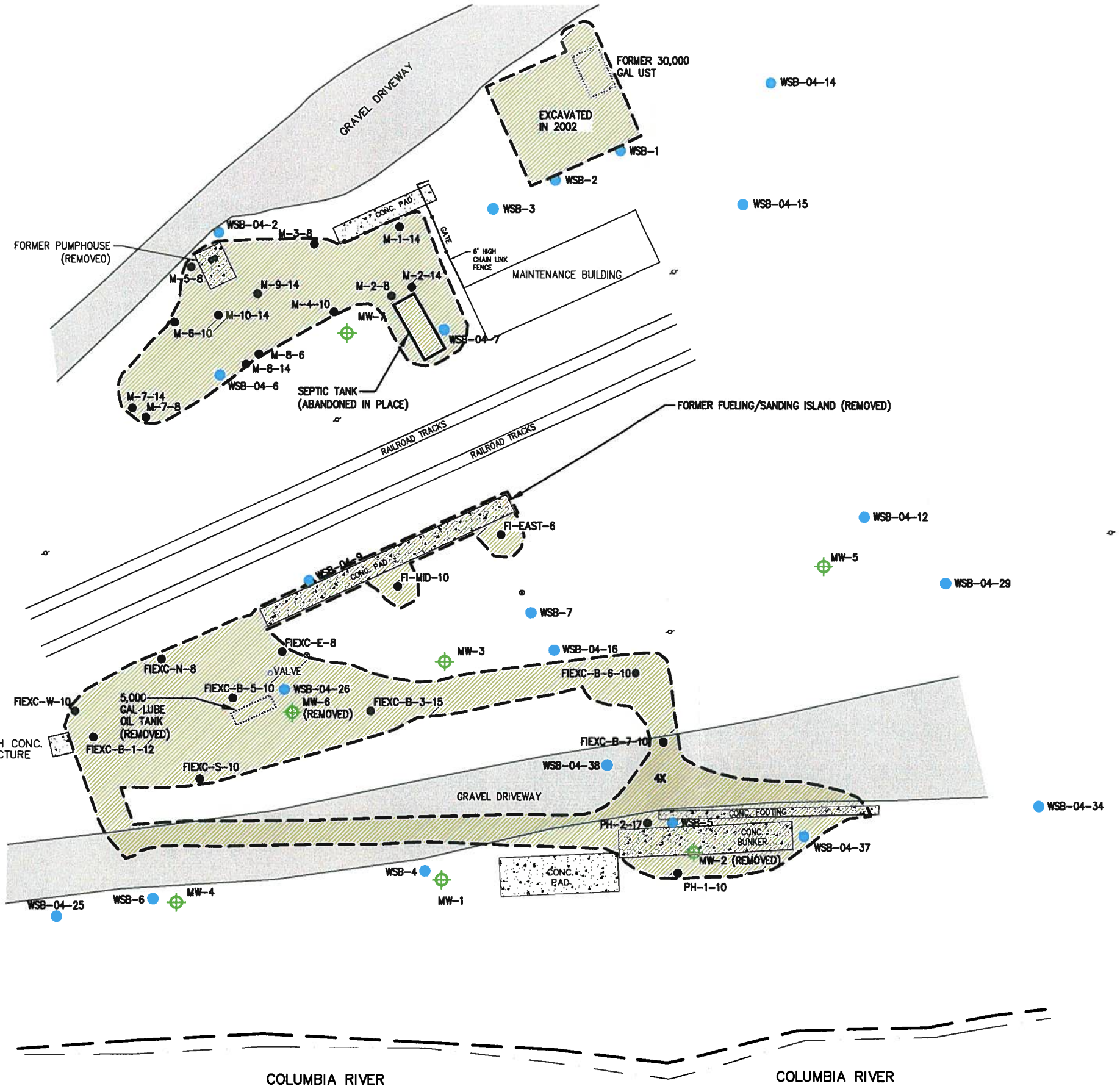
N

0 2000 4000

APPROXIMATE SCALE IN FEET

036026.00/FIG_1.CDR

FIGURE 1



LEGEND

- POWER POLE
- MW-4 MONITORING WELL
- WSB-7 SOIL BORING LOCATION
- M-9-14 EXCAVATION CONFIRMATION SAMPLE
- EXCAVATION BOUNDARY

N

0 25 50

APPROX

Kennedy/Jenks Consultants

BNSF RAILWAY COMPANY
WISHRAM, WA

REMEDIATION AREA

036026.02-Wishram\FIG-02

FIGURE 2

Appendix A

Laboratory Analytical Results

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CASE NARRATIVE for B5K0301

Client: Kennedy/Jenks Consultants
Project Manager: Galen Davis
Project Name: BNSF – Wishram
Project Number: 036026.02

1.0 DESCRIPTION OF CASE

Thirteen soil samples and one trip blank were submitted for analysis of:

- Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B
- Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up
- Total Metals by EPA 6000/7000 Series Methods

2.0 COMMENTS ON SAMPLE RECEIPT

The samples were received November 11th, 2005 by North Creek Analytical Bothell. The temperature of the samples at the time of receipt was 4.7 degrees Celsius. For sample M10-14, one VOA vial with methanol and one unpreserved VOA vial were received for the sample. The sample aliquot for dry weight correction was taken from the unpreserved VOA vial per Galen Davis' approval.

3.0 PREPARATIONS AND ANALYSIS

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B

No additional anomalies, discrepancies, or issues were associated with sample preparation, analysis and quality control other than those already qualified in the data and described in the Notes and Definitions page at the end of this report.

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up

No additional anomalies, discrepancies, or issues were associated with sample preparation, analysis and quality control other than those already qualified in the data and described in the Notes and Definitions page at the end of this report.

Total Metals by EPA 6000/7000 Series Methods

No anomalies were associated with the sample preparation and analysis. All criteria for acceptable QC measurements were met.

Kate Haney
Project Manager
North Creek Analytical

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05 December 2005

Galen Davis
Kennedy/Jenks Consultants
32001 32nd Ave S Ste 100
Federal Way, WA/USA 98001

RE: BNSF-Wishram, WA

Enclosed are the results of analyses for samples received by the laboratory on 11/11/05 09:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kate Haney
Project Manager

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:17

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
M-2-14	B5K0301-01	Soil	11/08/05 15:10	11/11/05 09:30
M-4-10	B5K0301-02	Soil	11/09/05 13:10	11/11/05 09:30
M-2-8	B5K0301-03	Soil	11/08/05 15:15	11/11/05 09:30
M-6-10	B5K0301-04	Soil	11/10/05 08:00	11/11/05 09:30
M-3-8	B5K0301-05	Soil	11/08/05 15:00	11/11/05 09:30
M-10-14	B5K0301-06	Soil	11/10/05 10:00	11/11/05 09:30
M-9-14	B5K0301-07	Soil	11/10/05 09:00	11/11/05 09:30
M-1-14	B5K0301-08	Soil	11/08/05 15:00	11/11/05 09:30
M-5-8	B5K0301-09	Soil	11/09/05 13:00	11/11/05 09:30
M-8-6	B5K0301-10	Soil	11/10/05 11:05	11/11/05 09:30
M-7-8	B5K0301-11	Soil	11/10/05 12:00	11/11/05 09:30
M-8-14	B5K0301-12	Soil	11/10/05 11:00	11/11/05 09:30
M-7-14	B5K0301-13	Soil	11/10/05 12:05	11/11/05 09:30
TRIP BLANK	B5K0301-14	Soil	11/10/05 12:05	11/11/05 09:30

North Creek Analytical - Bothell

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:17

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
M-10-14 (B5K0301-06) Soil Sampled: 11/10/05 10:00 Received: 11/11/05 09:30									
Benzene	ND	0.0271	mg/kg dry	1	5K15033	11/15/05	11/16/05	NWTPH-Gx/8021B	
Toluene	ND	0.0678	"	"	"	"	"	"	
Ethylbenzene	**0.124**	0.0678	"	"	"	"	"	"	
Xylenes (total)	**0.222**	0.136	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*83.0 %*	*50-150*			"	"	"	"	
Surrogate: 4-BFB (PID)	*114 %*	*53-142*			"	"	"	"	
M-10-14 (B5K0301-06RE1) Soil Sampled: 11/10/05 10:00 Received: 11/11/05 09:30									
Gasoline Range Hydrocarbons	**225**	33.9	mg/kg dry	5	5K16028	11/16/05	11/16/05	NWTPH-Gx/8021B	G-01
Surrogate: 4-BFB (FID)	*113 %*	*50-150*			"	"	"	"	
M-9-14 (B5K0301-07) Soil Sampled: 11/10/05 09:00 Received: 11/11/05 09:30									
Benzene	ND	0.0328	mg/kg dry	1	5K15033	11/15/05	11/16/05	NWTPH-Gx/8021B	
Toluene	ND	0.0819	"	"	"	"	"	"	
Ethylbenzene	**0.125**	0.0819	"	"	"	"	"	"	
Xylenes (total)	**0.209**	0.164	"	"	"	"	"	"	
Surrogate: 4-BFB (PID)	*123 %*	*53-142*			"	"	"	"	
M-9-14 (B5K0301-07RE1) Soil Sampled: 11/10/05 09:00 Received: 11/11/05 09:30									
Gasoline Range Hydrocarbons	**233**	41.0	mg/kg dry	5	5K16028	11/16/05	11/16/05	NWTPH-Gx/8021B	G-01
Surrogate: 4-BFB (FID)	*110 %*	*50-150*			"	"	"	"	
TRIP BLANK (B5K0301-14) Soil Sampled: 11/10/05 12:05 Received: 11/11/05 09:30									
Gasoline Range Hydrocarbons	ND	5.00	mg/kg wet	1	5K15033	11/15/05	11/16/05	NWTPH-Gx/8021B	
Benzene	ND	0.0200	"	"	"	"	"	"	
Toluene	ND	0.0500	"	"	"	"	"	"	
Ethylbenzene	ND	0.0500	"	"	"	"	"	"	
Xylenes (total)	ND	0.100	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*77.3 %*	*50-150*			"	"	"	"	
Surrogate: 4-BFB (PID)	*96.3 %*	*53-142*			"	"	"	"	

North Creek Analytical - Bothell

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Kate Haney, Project Manager

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:17

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
M-2-14 (B5K0301-01) Soil	**Sampled: 11/08/05 15:10**	**Received: 11/11/05 09:30**							
Diesel Range Hydrocarbons	**182**	11.1	mg/kg dry	1	5K19002	11/19/05	11/20/05	NWTPH-Dx	D-06
Lube Oil Range Hydrocarbons	ND	27.7	"	"	"	"	"	"	
Surrogate: 2-FBP	*93.3 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*96.7 %*	*50-150*			"	"	"	"	
M-4-10 (B5K0301-02) Soil	**Sampled: 11/09/05 13:10**	**Received: 11/11/05 09:30**							
Diesel Range Hydrocarbons	**164**	11.0	mg/kg dry	1	5K19002	11/19/05	11/20/05	NWTPH-Dx	D-06
Lube Oil Range Hydrocarbons	ND	27.5	"	"	"	"	"	"	
Surrogate: 2-FBP	*99.0 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*103 %*	*50-150*			"	"	"	"	
M-2-8 (B5K0301-03) Soil	**Sampled: 11/08/05 15:15**	**Received: 11/11/05 09:30**							
Diesel Range Hydrocarbons	**89.9**	10.9	mg/kg dry	1	5K19002	11/19/05	11/20/05	NWTPH-Dx	D-06
Lube Oil Range Hydrocarbons	ND	27.3	"	"	"	"	"	"	
Surrogate: 2-FBP	*101 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*98.5 %*	*50-150*			"	"	"	"	
M-6-10 (B5K0301-04) Soil	**Sampled: 11/10/05 08:00**	**Received: 11/11/05 09:30**							
Diesel Range Hydrocarbons	**107**	11.0	mg/kg dry	1	5K19002	11/19/05	11/21/05	NWTPH-Dx	D-06
Lube Oil Range Hydrocarbons	ND	27.4	"	"	"	"	"	"	
Surrogate: 2-FBP	*97.9 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*97.4 %*	*50-150*			"	"	"	"	
M-3-8 (B5K0301-05) Soil	**Sampled: 11/08/05 15:00**	**Received: 11/11/05 09:30**							
Diesel Range Hydrocarbons	**183**	10.8	mg/kg dry	1	5K19002	11/19/05	11/21/05	NWTPH-Dx	D-06
Lube Oil Range Hydrocarbons	ND	27.1	"	"	"	"	"	"	
Surrogate: 2-FBP	*92.9 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*100 %*	*50-150*			"	"	"	"	

North Creek Analytical - Bothell

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:17

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
M-9-14 (B5K0301-07) Soil Sampled: 11/10/05 09:00 Received: 11/11/05 09:30									
Diesel Range Hydrocarbons	**2690**	114	mg/kg dry	10	5K19002	11/19/05	11/21/05	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	285	"	"	"	"	"	"	
Surrogate: 2-FBP	*131 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*92.3 %*	*50-150*			"	"	"	"	
M-1-14 (B5K0301-08) Soil Sampled: 11/08/05 15:00 Received: 11/11/05 09:30									
Diesel Range Hydrocarbons	**121**	11.1	mg/kg dry	1	5K19002	11/19/05	11/21/05	NWTPH-Dx	D-06
Lube Oil Range Hydrocarbons	ND	27.8	"	"	"	"	"	"	
Surrogate: 2-FBP	*89.4 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*91.3 %*	*50-150*			"	"	"	"	
M-5-8 (B5K0301-09) Soil Sampled: 11/09/05 13:00 Received: 11/11/05 09:30									
Diesel Range Hydrocarbons	**53.4**	11.0	mg/kg dry	1	5K19002	11/19/05	11/21/05	NWTPH-Dx	D-06
Lube Oil Range Hydrocarbons	ND	27.4	"	"	"	"	"	"	
Surrogate: 2-FBP	*102 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*102 %*	*50-150*			"	"	"	"	
M-8-6 (B5K0301-10) Soil Sampled: 11/10/05 11:05 Received: 11/11/05 09:30									
Diesel Range Hydrocarbons	ND	11.2	mg/kg dry	1	5K19002	11/19/05	11/21/05	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	28.1	"	"	"	"	"	"	
Surrogate: 2-FBP	*105 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*104 %*	*50-150*			"	"	"	"	
M-7-8 (B5K0301-11) Soil Sampled: 11/10/05 12:00 Received: 11/11/05 09:30									
Diesel Range Hydrocarbons	ND	11.0	mg/kg dry	1	5K19002	11/19/05	11/21/05	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	27.5	"	"	"	"	"	"	
Surrogate: 2-FBP	*97.1 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*97.3 %*	*50-150*			"	"	"	"	

North Creek Analytical - Bothell

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:17

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
M-8-14 (B5K0301-12) Soil Sampled: 11/10/05 11:00 Received: 11/11/05 09:30									
Diesel Range Hydrocarbons	**78.6**	10.9	mg/kg dry	1	5K19002	11/19/05	11/21/05	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	27.3	"	"	"	"	"	"	
Surrogate: 2-FBP	*89.8 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*96.0 %*	*50-150*			"	"	"	"	
M-7-14 (B5K0301-13) Soil Sampled: 11/10/05 12:05 Received: 11/11/05 09:30									
Diesel Range Hydrocarbons	**324**	11.1	mg/kg dry	1	5K19002	11/19/05	11/21/05	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	27.9	"	"	"	"	"	"	
Surrogate: 2-FBP	*89.1 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*95.8 %*	*50-150*			"	"	"	"	

North Creek Analytical - Bothell

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:17

Total Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
M-6-10 (B5K0301-04) Soil Sampled: 11/10/05 08:00 Received: 11/11/05 09:30									
Lead	**4.10**	0.544	mg/kg dry	1	5K16035	11/16/05	11/19/05	EPA 6020	
M-9-14 (B5K0301-07) Soil Sampled: 11/10/05 09:00 Received: 11/11/05 09:30									
Lead	**3.64**	0.597	mg/kg dry	1	5K16035	11/16/05	11/19/05	EPA 6020	

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:17

Physical Parameters by APHA/ASTM/EPA Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
M-2-14 (B5K0301-01) Soil Sampled: 11/08/05 15:10 Received: 11/11/05 09:30									
Dry Weight	**90.4**	1.00	%	1	5K22039	11/22/05	11/23/05	BSOPSPL003R08	
M-4-10 (B5K0301-02) Soil Sampled: 11/09/05 13:10 Received: 11/11/05 09:30									
Dry Weight	**91.2**	1.00	%	1	5K22039	11/22/05	11/23/05	BSOPSPL003R08	
M-2-8 (B5K0301-03) Soil Sampled: 11/08/05 15:15 Received: 11/11/05 09:30									
Dry Weight	**90.6**	1.00	%	1	5K22039	11/22/05	11/23/05	BSOPSPL003R08	
M-6-10 (B5K0301-04) Soil Sampled: 11/10/05 08:00 Received: 11/11/05 09:30									
Dry Weight	**91.0**	1.00	%	1	5K22039	11/22/05	11/23/05	BSOPSPL003R08	
M-3-8 (B5K0301-05) Soil Sampled: 11/08/05 15:00 Received: 11/11/05 09:30									
Dry Weight	**90.9**	1.00	%	1	5K22039	11/22/05	11/23/05	BSOPSPL003R08	
M-10-14 (B5K0301-06) Soil Sampled: 11/10/05 10:00 Received: 11/11/05 09:30									
Dry Weight	**85.5**	1.00	%	1	5K14052	11/14/05	11/15/05	BSOPSPL003R08	
M-9-14 (B5K0301-07) Soil Sampled: 11/10/05 09:00 Received: 11/11/05 09:30									
Dry Weight	**87.2**	1.00	%	1	5K22039	11/22/05	11/23/05	BSOPSPL003R08	
M-1-14 (B5K0301-08) Soil Sampled: 11/08/05 15:00 Received: 11/11/05 09:30									
Dry Weight	**89.9**	1.00	%	1	5K22039	11/22/05	11/23/05	BSOPSPL003R08	
M-5-8 (B5K0301-09) Soil Sampled: 11/09/05 13:00 Received: 11/11/05 09:30									
Dry Weight	**91.4**	1.00	%	1	5K22039	11/22/05	11/23/05	BSOPSPL003R08	

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:17

Physical Parameters by APHA/ASTM/EPA Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
M-8-6 (B5K0301-10) Soil Sampled: 11/10/05 11:05 Received: 11/11/05 09:30									
Dry Weight	**90.6**	1.00	%	1	5K22039	11/22/05	11/23/05	BSOPSPL003R08	
M-7-8 (B5K0301-11) Soil Sampled: 11/10/05 12:00 Received: 11/11/05 09:30									
Dry Weight	**91.0**	1.00	%	1	5K22039	11/22/05	11/23/05	BSOPSPL003R08	
M-8-14 (B5K0301-12) Soil Sampled: 11/10/05 11:00 Received: 11/11/05 09:30									
Dry Weight	**90.8**	1.00	%	1	5K22039	11/22/05	11/23/05	BSOPSPL003R08	
M-7-14 (B5K0301-13) Soil Sampled: 11/10/05 12:05 Received: 11/11/05 09:30									
Dry Weight	**88.8**	1.00	%	1	5K22039	11/22/05	11/23/05	BSOPSPL003R08	

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:17

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K15033: Prepared 11/15/05 Using EPA 5030B (MeOH)										
Blank (5K15033-BLK1)										
Gasoline Range Hydrocarbons	ND	5.00	mg/kg							
Benzene	ND	0.0200	"							
Toluene	ND	0.0500	"							
Ethylbenzene	ND	0.0500	"							
Xylenes (total)	ND	0.100	"							
Surrogate: 4-BFB (FID)	*2.41*		"	*3.00*		*80.3*	*50-150*			
Surrogate: 4-BFB (PID)	*2.70*		"	*3.00*		*90.0*	*53-142*			
LCS (5K15033-BS1)										
Gasoline Range Hydrocarbons	49.4	5.00	mg/kg	50.0		98.8	75-125			
Benzene	0.660	0.0200	"	0.565		117	75-125			
Toluene	4.09	0.0500	"	4.22		96.9	75-125			
Ethylbenzene	0.888	0.0500	"	0.845		105	75-125			
Xylenes (total)	4.84	0.100	"	4.92		98.4	75-125			
Surrogate: 4-BFB (FID)	*2.17*		"	*3.00*		*72.3*	*50-150*			
Surrogate: 4-BFB (PID)	*2.70*		"	*3.00*		*90.0*	*53-142*			
LCS Dup (5K15033-BSD1)										
Gasoline Range Hydrocarbons	52.1	5.00	mg/kg	50.0		104	75-125	5.32	25	
Benzene	0.531	0.0200	"	0.565		94.0	75-125	21.7	25	
Toluene	3.30	0.0500	"	4.22		78.2	75-125	21.4	25	
Ethylbenzene	0.713	0.0500	"	0.845		84.4	75-125	21.9	25	
Xylenes (total)	3.89	0.100	"	4.92		79.1	75-125	21.8	25	
Surrogate: 4-BFB (FID)	*2.93*		"	*3.00*		*97.7*	*50-150*			
Surrogate: 4-BFB (PID)	*2.75*		"	*3.00*		*91.7*	*53-142*			
Matrix Spike (5K15033-MS1)					**Source: B5K0310-01**					
Gasoline Range Hydrocarbons	55.6	5.11	mg/kg dry	51.1	1.31	106	42-125			
Benzene	0.595	0.0205	"	0.578	ND	103	45-125			
Toluene	3.64	0.0511	"	4.32	0.0149	83.9	55-125			
Ethylbenzene	0.788	0.0511	"	0.864	0.00736	90.4	53-132			
Xylenes (total)	4.28	0.102	"	5.03	0.0284	84.5	59-125			

North Creek Analytical - Bothell

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32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:17

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K15033: Prepared 11/15/05 Using EPA 5030B (MeOH)										
Matrix Spike (5K15033-MS1)					Source: B5K0310-01					
Surrogate: 4-BFB (FID)	*2.79*		*mg/kg dry*	*3.07*		*90.9*	*50-150*			
Surrogate: 4-BFB (PID)	*2.77*		"	*3.07*		*90.2*	*53-142*			
Matrix Spike Dup (5K15033-MSD1)					Source: B5K0310-01					
Gasoline Range Hydrocarbons	61.8	5.11	mg/kg dry	51.1	1.31	118	42-125	10.6	40	
Benzene	0.590	0.0205	"	0.578	ND	102	45-125	0.844	40	
Toluene	3.63	0.0511	"	4.32	0.0149	83.7	55-125	0.275	40	
Ethylbenzene	0.795	0.0511	"	0.864	0.00736	91.2	53-132	0.884	40	
Xylenes (total)	4.31	0.102	"	5.03	0.0284	85.1	59-125	0.698	40	
Surrogate: 4-BFB (FID)	*3.04*		"	*3.07*		*99.0*	*50-150*			
Surrogate: 4-BFB (PID)	*2.76*		"	*3.07*		*89.9*	*53-142*			
Batch 5K16028: Prepared 11/16/05 Using EPA 5030B (P/T)										
Blank (5K16028-BLK1)										
Gasoline Range Hydrocarbons	ND	5.00	mg/kg							
Benzene	ND	0.0200	"							
Toluene	ND	0.0500	"							
Ethylbenzene	ND	0.0500	"							
Xylenes (total)	ND	0.100	"							
Surrogate: 4-BFB (FID)	*2.54*		"	*3.00*		*84.7*	*50-150*			
Surrogate: 4-BFB (PID)	*2.99*		"	*3.00*		*99.7*	*53-142*			
LCS (5K16028-BS1)										
Gasoline Range Hydrocarbons	54.4	5.00	mg/kg	50.0		109	75-125			
Benzene	0.627	0.0200	"	0.565		111	75-125			
Toluene	3.85	0.0500	"	4.22		91.2	75-125			
Ethylbenzene	0.833	0.0500	"	0.848		98.2	75-125			
Xylenes (total)	4.42	0.100	"	4.92		89.8	75-125			
Surrogate: 4-BFB (FID)	*3.13*		"	*3.00*		*104*	*50-150*			
Surrogate: 4-BFB (PID)	*2.80*		"	*3.00*		*93.3*	*53-142*			

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Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:17

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K16028: Prepared 11/16/05 Using EPA 5030B (P/T)										
LCS Dup (5K16028-BSD1)										
Gasoline Range Hydrocarbons	51.4	5.00	mg/kg	50.0		103	75-125	5.67	25	
Benzene	0.608	0.0200	"	0.565		108	75-125	3.08	25	
Toluene	3.78	0.0500	"	4.22		89.6	75-125	1.83	25	
Ethylbenzene	0.812	0.0500	"	0.848		95.8	75-125	2.55	25	
Xylenes (total)	4.32	0.100	"	4.92		87.8	75-125	2.29	25	
Surrogate: 4-BFB (FID)	*3.17*		"	*3.00*		*106*	*50-150*			
Surrogate: 4-BFB (PID)	*2.88*		"	*3.00*		*96.0*	*53-142*			
Matrix Spike (5K16028-MS1)					**Source: B5K0134-17**					
Gasoline Range Hydrocarbons	52.0	5.15	mg/kg dry	51.5	0.969	99.1	42-125			
Benzene	0.608	0.0206	"	0.582	ND	104	45-125			
Toluene	3.76	0.0515	"	4.35	0.0222	85.9	55-125			
Ethylbenzene	0.806	0.0515	"	0.873	0.00989	91.2	53-132			
Xylenes (total)	4.32	0.103	"	5.07	0.0384	84.4	59-125			
Surrogate: 4-BFB (FID)	*3.29*		"	*3.09*		*106*	*50-150*			
Surrogate: 4-BFB (PID)	*2.97*		"	*3.09*		*96.1*	*53-142*			
Matrix Spike Dup (5K16028-MSD1)					**Source: B5K0134-17**					
Gasoline Range Hydrocarbons	53.6	5.15	mg/kg dry	51.5	0.969	102	42-125	3.03	40	
Benzene	0.616	0.0206	"	0.582	ND	106	45-125	1.31	40	
Toluene	3.80	0.0515	"	4.35	0.0222	86.8	55-125	1.06	40	
Ethylbenzene	0.820	0.0515	"	0.873	0.00989	92.8	53-132	1.72	40	
Xylenes (total)	4.39	0.103	"	5.07	0.0384	85.8	59-125	1.61	40	
Surrogate: 4-BFB (FID)	*3.31*		"	*3.09*		*107*	*50-150*			
Surrogate: 4-BFB (PID)	*2.99*		"	*3.09*		*96.8*	*53-142*			

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32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
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Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K19002: Prepared 11/19/05 Using EPA 3550B										
Blank (5K19002-BLK1)										
Diesel Range Hydrocarbons	ND	10.0	mg/kg							
Lube Oil Range Hydrocarbons	ND	25.0	"							
Surrogate: 2-FBP	*7.85*		"	*8.33*		*94.2*	*50-150*			
Surrogate: Octacosane	*8.39*		"	*8.33*		*101*	*50-150*			
LCS (5K19002-BS1)										
Diesel Range Hydrocarbons	68.1	10.0	mg/kg	66.7		102	61-120			
Surrogate: 2-FBP	*7.78*		"	*8.33*		*93.4*	*50-150*			
LCS Dup (5K19002-BSD1)										
Diesel Range Hydrocarbons	73.1	10.0	mg/kg	66.7		110	61-120	7.08	40	
Surrogate: 2-FBP	*8.14*		"	*8.33*		*97.7*	*50-150*			
Duplicate (5K19002-DUP1)					**Source: B5K0404-01**					
Diesel Range Hydrocarbons	1050	120	mg/kg dry		452			79.6	50	Q-07
Lube Oil Range Hydrocarbons	57.7	299	"		26.9				50	
Surrogate: 2-FBP	*9.13*		"	*9.96*		*91.7*	*50-150*			
Surrogate: Octacosane	*9.23*		"	*9.96*		*92.7*	*50-150*			

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:17

Total Metals by EPA 6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K16035: Prepared 11/16/05 Using EPA 3050B										
Blank (5K16035-BLK1)										
Lead	ND	0.500	mg/kg							
LCS (5K16035-BS1)										
Lead	37.4	0.500	mg/kg	40.0		93.5	80-120			
LCS Dup (5K16035-BSD1)										
Lead	38.5	0.495	mg/kg	39.6		97.2	80-120	2.90	20	
Matrix Spike (5K16035-MS1)					**Source: B5K0301-04**					
Lead	42.3	0.555	mg/kg dry	44.4	4.10	86.0	29-166			
Matrix Spike Dup (5K16035-MSD1)					**Source: B5K0301-04**					
Lead	46.1	0.544	mg/kg dry	43.5	4.10	96.6	29-166	8.60	40	
Post Spike (5K16035-PS1)					**Source: B5K0301-04**					
Lead	0.103		ug/ml	0.100	0.00754	95.5	75-125			

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:17

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K14052: Prepared 11/14/05 Using Dry Weight										
Blank (5K14052-BLK1)										
Dry Weight	100	1.00	%							
Batch 5K22039: Prepared 11/22/05 Using Dry Weight										
Blank (5K22039-BLK1)										
Dry Weight	100	1.00	%							

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:17

Notes and Definitions

D-06	The sample chromatographic pattern does not resemble the fuel standard used for quantitation.
G-01	Results reported for the gas range are primarily due to overlap from diesel range hydrocarbons.
Q-07	The RPD value for this QC sample is above the established control limit. Review of associated QC indicates the high RPD does not represent an out-of-control condition for the batch.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

North Creek Analytical - Bothell

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Kate Haney, Project Manager

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CHAIN OF CUSTODY REPORT

Work Order #: 05K0301

NCA CLIENT: BNSF Kennedy Jenks

REPORT TO: Galen Davis Kennedy Jenks Consultants

ADDRESS: 32001 32nd Ave South Suite 100 Federal Way, WA 98001

PHONE: (253) 874-0555 FAX:

INVOICE TO: BNSF - BRUCE sheppard

P.O. NUMBER: see Work order

PROJECT NAME: BNSF - Wishram

PROJECT NUMBER: 036026.02

SAMPLED BY: Galen C. Davis

TURNAROUND REQUEST in Business Days *

Organic & Inorganic Analyses: ☒ $770. | 7 | 5 | 4 | 3 | 2 | 1 | <1

Petroleum Hydrocarbon Analyses: 5 $770. | 4 | 3 | 2 | 1 | <1

OTHER Specify:

* Turnaround Requests less than standard may incur Rush Charges.

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	PRESERVATIVE: HCl	REQUESTED ANALYSES: NWTPH-D w/ silica clean up	NWTPH-G BTEX	EPA 6010 Lead	MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	NCA WO ID
1	M-2-14	11/8/05 1510		X			S	1		01
2	M-4-10	11/9/05 1310		X			S	1		02
3	M-2-8	11/8/05 1515		X			S	1		03
4	M-6-10	11/10/05 0800		X		X	S	1		04
5	M-3-8	11/8/05 1500		X			S	1		05
6	M-10-14	11/10/05 1000			X		S	2		06
7	M-9-14	11/10/05 0900		X	X	X	S	3		07
8	M-1-14	11/8/05 1500		X			S	1		08
9	M-5-8	11/9/05 1300		X			S	1		09
10	M-8-6	11/10/05 1105		X			S	1		10

RELEASED BY: Galen C. Davis DATE: 11/10/05

PRINT NAME: Galen Davis FIRM: KJ TIME: 1500

RECEIVED BY: Tom Blankinship DATE: 11/11/05

PRINT NAME: Blankinship FIRM: NCA TIME: 0930

RELEASED BY: DATE:

PRINT NAME: FIRM: TIME:

RECEIVED BY: DATE:

PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS:

w/o cs

TEMP: 4.7

COC REV 09/04

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CHAIN OF CUSTODY REPORT

Work Order #:

NCA CLIENT: BNSF KJ

REPORT TO: Galen Davis Kennedy Jenks Consultants

ADDRESS:

PHONE: FAX:

INVOICE TO: BNSF - Bruce Sheppard

P.O. NUMBER: See Work ORDER

PROJECT NAME: BNSF - Wishram

PROJECT NUMBER: 036026.02

SAMPLED BY: Galen Davis

TURNAROUND REQUEST
In Business Days *
Organic & Inorganic Analyses: 10 (STD) | 7 | 5 | 4 | 3 | 2 | 1 | <1
Petroleum Hydrocarbon Analyses: 5 (STD) | 4 | 3 | 2 | 1 | <1
OTHER Specify:
* Turnaround Requests less than standard may incur Rush Charges.

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	PRESERVATIVE: No	REQUESTED ANALYSES: NWTPH-D w/ silica gel cleanup	NWTPH-G BTEX										MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	NCA WO ID
1	M-7-8	11/10/05 1200	X												S	1		11
2	M-8-14	11/10/05 1100	X												S	1		12
3	M-7-14	11/10/05 1205	X												S	1		13
4	TRIP Blank	—		X											Methanol	1		14
5																		
6																		
7																		
8																		
9																		
10																		

RELEASED BY: Galen C. Davis DATE: 11/10/05
PRINT NAME: Galen Davis FIRM: KJC TIME: 1500

RECEIVED BY: Tom Blankinship DATE: 11/11/05
PRINT NAME: Blankinship FIRM: NCA TIME: 0930

RELEASED BY: DATE:
PRINT NAME: FIRM: TIME:

RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS:

w/COC

TEMP: 4.7

COC REV 09/04

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CASE NARRATIVE for B5J0645

Client: Kennedy/Jenks Consultants
Project Manager: Galen Davis
Project Name: BNSF – Wishram
Project Number: 036026.02

1.0 DESCRIPTION OF CASE

Five soil samples and one trip blank were submitted for analysis of:

- Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B
- Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up
- Total Metals by EPA 6000/7000 Series Methods
- Polychlorinated Biphenyls by EPA Method 8082
- Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

2.0 COMMENTS ON SAMPLE RECEIPT

The samples were received October 29th, 2005 by North Creek Analytical Bothell. The temperature of the samples at the time of receipt was 4.7 degrees Celsius. There was no date/time on the label or COC for the trip blank. The sample was logged in with a sampled date/time of 10/26/05 1200. For the trip blank, NWTPH-G/BTEX analysis was requested, however the sample was received in a 5035 prepared VOA vial and the sample was analyzed for VOCs.

3.0 PREPARATIONS AND ANALYSIS

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B
No anomalies were associated with the sample preparation and analysis. All criteria for acceptable QC measurements were met.

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up
No additional anomalies, discrepancies, or issues were associated with sample preparation, analysis and quality control other than those already qualified in the data and described in the Notes and Definitions page at the end of this report.

Total Metals by EPA 6000/7000 Series Methods
No anomalies were associated with the sample preparation and analysis. All criteria for acceptable QC measurements were met.

Polychlorinated Biphenyls by EPA Method 8082
No anomalies were associated with the sample preparation and analysis. All criteria for acceptable QC measurements were met.

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Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)
No additional anomalies, discrepancies, or issues were associated with sample preparation, analysis and quality control other than those already qualified in the data and described in the Notes and Definitions page at the end of this report.

Kate Haney
Project Manager
North Creek Analytical

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05 December 2005

Galen Davis
Kennedy/Jenks Consultants
32001 32nd Ave S Ste 100
Federal Way, WA/USA 98001
RE: BNSF-Wishram, WA

Enclosed are the results of analyses for samples received by the laboratory on 10/29/05 08:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kate Haney
Project Manager

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 17:58

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FIEXC-W-10	B5J0645-01	Soil	10/27/05 08:00	10/29/05 08:50
FIEXC-S-10	B5J0645-02	Soil	10/27/05 09:00	10/29/05 08:50
FIEXC-N-8	B5J0645-03	Soil	10/27/05 08:30	10/29/05 08:50
FI-EAST-6	B5J0645-04	Soil	10/26/05 16:20	10/29/05 08:50
FI-MID-10	B5J0645-05	Soil	10/26/05 16:00	10/29/05 08:50
TRIP BLANK	B5J0645-06	Soil	10/26/05 12:00	10/29/05 08:50

North Creek Analytical - Bothell

Kate Haney

Kate Haney, Project Manager

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 17:58

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
FIEXC-W-10 (B5J0645-01) Soil Sampled: 10/27/05 08:00 Received: 10/29/05 08:50									
Gasoline Range Hydrocarbons	ND	6.77	mg/kg dry	1	5K02031	11/02/05	11/02/05	NWTPH-Gx/8021B	
Benzene	ND	0.0271	"	"	"	"	"	"	
Toluene	ND	0.0677	"	"	"	"	"	"	
Ethylbenzene	ND	0.0677	"	"	"	"	"	"	
Xylenes (total)	ND	0.135	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*88.7 %*	*50-150*			"	"	"	"	
Surrogate: 4-BFB (PID)	*101 %*	*53-142*			"	"	"	"	
FIEXC-S-10 (B5J0645-02) Soil Sampled: 10/27/05 09:00 Received: 10/29/05 08:50									
Gasoline Range Hydrocarbons	ND	6.13	mg/kg dry	1	5K02031	11/02/05	11/02/05	NWTPH-Gx/8021B	
Benzene	ND	0.0245	"	"	"	"	"	"	
Toluene	ND	0.0613	"	"	"	"	"	"	
Ethylbenzene	ND	0.0613	"	"	"	"	"	"	
Xylenes (total)	ND	0.123	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*89.1 %*	*50-150*			"	"	"	"	
Surrogate: 4-BFB (PID)	*104 %*	*53-142*			"	"	"	"	
FIEXC-N-8 (B5J0645-03) Soil Sampled: 10/27/05 08:30 Received: 10/29/05 08:50									
Gasoline Range Hydrocarbons	ND	6.16	mg/kg dry	1	5K02031	11/02/05	11/02/05	NWTPH-Gx/8021B	
Benzene	ND	0.0246	"	"	"	"	"	"	
Toluene	ND	0.0616	"	"	"	"	"	"	
Ethylbenzene	ND	0.0616	"	"	"	"	"	"	
Xylenes (total)	ND	0.123	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*88.6 %*	*50-150*			"	"	"	"	
Surrogate: 4-BFB (PID)	*105 %*	*53-142*			"	"	"	"	

North Creek Analytical - Bothell

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 17:58

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
FIEXC-W-10 (B5J0645-01) Soil Sampled: 10/27/05 08:00 Received: 10/29/05 08:50									
Diesel Range Hydrocarbons	ND	10.5	mg/kg dry	1	5J31090	11/01/05	11/03/05	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	26.3	"	"	"	"	"	"	
Surrogate: 2-FBP	*95.3 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*109 %*	*50-150*			"	"	"	"	
FIEXC-S-10 (B5J0645-02) Soil Sampled: 10/27/05 09:00 Received: 10/29/05 08:50									
Diesel Range Hydrocarbons	**52.5**	21.9	mg/kg dry	2	5J31090	11/01/05	11/03/05	NWTPH-Dx	D-06
Lube Oil Range Hydrocarbons	**493**	54.7	"	"	"	"	"	"	
Surrogate: 2-FBP	*94.5 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*96.1 %*	*50-150*			"	"	"	"	
FIEXC-N-8 (B5J0645-03) Soil Sampled: 10/27/05 08:30 Received: 10/29/05 08:50									
Diesel Range Hydrocarbons	**853**	108	mg/kg dry	10	5J31090	11/01/05	11/03/05	NWTPH-Dx	D-15
Lube Oil Range Hydrocarbons	**3390**	269	"	"	"	"	"	"	D-15
Surrogate: 2-FBP	*ND*	*50-150*			"	"	"	"	*S-01*
Surrogate: Octacosane	*ND*	*50-150*			"	"	"	"	*S-01*
FI-EAST-6 (B5J0645-04) Soil Sampled: 10/26/05 16:20 Received: 10/29/05 08:50									
Diesel Range Hydrocarbons	**152**	10.7	mg/kg dry	1	5J31090	11/01/05	11/03/05	NWTPH-Dx	D-06
Lube Oil Range Hydrocarbons	ND	26.8	"	"	"	"	"	"	
Surrogate: 2-FBP	*91.6 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*113 %*	*50-150*			"	"	"	"	
FI-MID-10 (B5J0645-05) Soil Sampled: 10/26/05 16:00 Received: 10/29/05 08:50									
Diesel Range Hydrocarbons	ND	10.9	mg/kg dry	1	5J31090	11/01/05	11/03/05	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	27.4	"	"	"	"	"	"	
Surrogate: 2-FBP	*102 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*114 %*	*50-150*			"	"	"	"	

North Creek Analytical - Bothell

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Kate Haney, Project Manager

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 17:58

Total Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
FIEXC-W-10 (B5J0645-01) Soil Sampled: 10/27/05 08:00 Received: 10/29/05 08:50									
Lead	**2.74**	0.518	mg/kg dry	1	5K04071	11/04/05	11/07/05	EPA 6020	

North Creek Analytical - Bothell

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 17:58

Polychlorinated Biphenyls by EPA Method 8082

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
FIEXC-N-8 (B5J0645-03) Soil Sampled: 10/27/05 08:30 Received: 10/29/05 08:50									
Aroclor 1016	ND	27.3	ug/kg dry	1	5K04050	11/04/05	11/07/05	EPA 8082	
Aroclor 1221	ND	54.6	"	"	"	"	"	"	
Aroclor 1232	ND	27.3	"	"	"	"	"	"	
Aroclor 1242	ND	27.3	"	"	"	"	"	"	
Aroclor 1248	ND	27.3	"	"	"	"	"	"	
Aroclor 1254	ND	27.3	"	"	"	"	"	"	
Aroclor 1260	ND	27.3	"	"	"	"	"	"	
Aroclor 1262	ND	27.3	"	"	"	"	"	"	
Aroclor 1268	ND	27.3	"	"	"	"	"	"	
Surrogate: TCX	*73.1 %*	*39-139*			"	"	"	"	
Surrogate: Decachlorobiphenyl	*69.2 %*	*33-163*			"	"	"	"	

North Creek Analytical - Bothell

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Kate Haney, Project Manager

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 17:58

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
FIEXC-S-10 (B5J0645-02) Soil Sampled: 10/27/05 09:00 Received: 10/29/05 08:50									**A-02**
Acetone	ND	30.6	ug/kg dry	1	5K09038	11/09/05	11/09/05	EPA 8260B	
Benzene	ND	1.53	"	"	"	"	"	"	
Bromobenzene	ND	5.10	"	"	"	"	"	"	
Bromochloromethane	ND	5.10	"	"	"	"	"	"	
Bromodichloromethane	ND	5.10	"	"	"	"	"	"	
Bromoform	ND	5.10	"	"	"	"	"	"	
Bromomethane	ND	10.2	"	"	"	"	"	"	
2-Butanone	ND	15.3	"	"	"	"	"	"	
n-Butylbenzene	ND	5.10	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.10	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.10	"	"	"	"	"	"	
Carbon disulfide	ND	3.06	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.10	"	"	"	"	"	"	
Chlorobenzene	ND	2.04	"	"	"	"	"	"	
Chloroethane	ND	5.10	"	"	"	"	"	"	
Chloroform	ND	2.55	"	"	"	"	"	"	
Chloromethane	ND	10.2	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.10	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.10	"	"	"	"	"	"	
Dibromochloromethane	ND	5.10	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	10.2	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.10	"	"	"	"	"	"	
Dibromomethane	ND	5.10	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.10	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.10	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.10	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.10	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.04	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.28	"	"	"	"	"	"	
1,1-Dichloroethene	ND	3.06	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	3.06	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.55	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.10	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.10	"	"	"	"	"	"	
2,2-Dichloropropane	ND	10.2	"	"	"	"	"	"	

North Creek Analytical - Bothell

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Kate Haney, Project Manager

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 17:58

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
FIEXC-S-10 (B5J0645-02) Soil Sampled: 10/27/05 09:00 Received: 10/29/05 08:50									**A-02**
1,1-Dichloropropene	ND	5.10	ug/kg dry	1	5K09038	11/09/05	11/09/05	"	
cis-1,3-Dichloropropene	ND	5.10	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.28	"	"	"	"	"	"	
Ethylbenzene	ND	4.08	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.10	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.02	"	"	"	"	"	"	A-01
2-Hexanone	ND	20.4	"	"	"	"	"	"	
Isopropylbenzene	ND	5.10	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.10	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	20.4	"	"	"	"	"	"	
Methylene chloride	ND	3.57	"	"	"	"	"	"	
Naphthalene	ND	5.10	"	"	"	"	"	"	
n-Propylbenzene	ND	5.10	"	"	"	"	"	"	
Styrene	ND	1.02	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.10	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.10	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.10	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.10	"	"	"	"	"	"	
Tetrachloroethene	ND	2.04	"	"	"	"	"	"	
Toluene	ND	1.53	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.55	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.28	"	"	"	"	"	"	
Trichloroethene	ND	2.55	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.10	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.10	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.10	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.10	"	"	"	"	"	"	
Vinyl chloride	ND	2.55	"	"	"	"	"	"	
Total Xylenes	ND	10.2	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*92.2 %*	*60-140*			"	"	"	"	
Surrogate: Toluene-d8	*107 %*	*60-140*			"	"	"	"	
Surrogate: 4-BFB	*103 %*	*60-140*			"	"	"	"	

North Creek Analytical - Bothell

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 17:58

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
FIEXC-N-8 (B5J0645-03) Soil Sampled: 10/27/05 08:30 Received: 10/29/05 08:50									
Acetone	ND	32.1	ug/kg dry	1	5K02048	11/01/05	11/01/05	EPA 8260B	
Benzene	ND	1.61	"	"	"	"	"	"	
Bromobenzene	ND	5.36	"	"	"	"	"	"	
Bromochloromethane	ND	5.36	"	"	"	"	"	"	
Bromodichloromethane	ND	5.36	"	"	"	"	"	"	
Bromoform	ND	5.36	"	"	"	"	"	"	
Bromomethane	ND	10.7	"	"	"	"	"	"	
2-Butanone	ND	16.1	"	"	"	"	"	"	
n-Butylbenzene	ND	5.36	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.36	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.36	"	"	"	"	"	"	
Carbon disulfide	ND	3.21	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.36	"	"	"	"	"	"	
Chlorobenzene	ND	2.14	"	"	"	"	"	"	
Chloroethane	ND	5.36	"	"	"	"	"	"	
Chloroform	ND	2.68	"	"	"	"	"	"	
Chloromethane	ND	10.7	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.36	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.36	"	"	"	"	"	"	
Dibromochloromethane	ND	5.36	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	10.7	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.36	"	"	"	"	"	"	
Dibromomethane	ND	5.36	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.36	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.36	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.36	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.36	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.14	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.34	"	"	"	"	"	"	
1,1-Dichloroethene	ND	3.21	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	3.21	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.68	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.36	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.36	"	"	"	"	"	"	
2,2-Dichloropropane	ND	10.7	"	"	"	"	"	"	

North Creek Analytical - Bothell

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Kennedy/Jenks Consultants
32001 32nd Ave S Ste 100
Federal Way, WA/USA 98001

Project: BNSF-Wishram, WA
Project Number: 036026.02
Project Manager: Galen Davis

Reported:
12/05/05 17:58

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
FIEXC-N-8 (B5J0645-03) Soil Sampled: 10/27/05 08:30 Received: 10/29/05 08:50									
1,1-Dichloropropene	ND	5.36	ug/kg dry	1	5K02048	11/01/05	11/01/05	"	
cis-1,3-Dichloropropene	ND	5.36	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.34	"	"	"	"	"	"	
Ethylbenzene	ND	4.28	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.36	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.07	"	"	"	"	"	"	
2-Hexanone	ND	21.4	"	"	"	"	"	"	
Isopropylbenzene	ND	5.36	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.36	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	21.4	"	"	"	"	"	"	
Methylene chloride	ND	3.75	"	"	"	"	"	"	
Naphthalene	ND	5.36	"	"	"	"	"	"	
n-Propylbenzene	ND	5.36	"	"	"	"	"	"	
Styrene	ND	1.07	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.36	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.36	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.36	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.36	"	"	"	"	"	"	
Tetrachloroethene	ND	2.14	"	"	"	"	"	"	
Toluene	ND	1.61	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.68	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.34	"	"	"	"	"	"	
Trichloroethene	ND	2.68	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.36	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.36	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.36	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.36	"	"	"	"	"	"	
Vinyl chloride	ND	2.68	"	"	"	"	"	"	
Total Xylenes	ND	10.7	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*127 %*	*60-140*			"	"	"	"	
Surrogate: Toluene-d8	*128 %*	*60-140*			"	"	"	"	
Surrogate: 4-BFB	*138 %*	*60-140*			"	"	"	"	

North Creek Analytical - Bothell

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 17:58

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TRIP BLANK (B5J0645-06) Soil Sampled: 10/26/05 12:00 Received: 10/29/05 08:50									**A-01a**
Acetone	ND	30.0	ug/kg wet	1	5K02060	11/02/05	11/02/05	EPA 8260B	
Benzene	ND	1.50	"	"	"	"	"	"	
Bromobenzene	ND	5.00	"	"	"	"	"	"	
Bromochloromethane	ND	5.00	"	"	"	"	"	"	
Bromodichloromethane	ND	5.00	"	"	"	"	"	"	
Bromoform	ND	5.00	"	"	"	"	"	"	
Bromomethane	ND	10.0	"	"	"	"	"	"	
2-Butanone	ND	15.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.00	"	"	"	"	"	"	
Carbon disulfide	ND	3.00	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.00	"	"	"	"	"	"	
Chlorobenzene	ND	2.00	"	"	"	"	"	"	
Chloroethane	ND	5.00	"	"	"	"	"	"	
Chloroform	ND	2.50	"	"	"	"	"	"	
Chloromethane	ND	10.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
Dibromochloromethane	ND	5.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	10.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.00	"	"	"	"	"	"	
Dibromomethane	ND	5.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.25	"	"	"	"	"	"	
1,1-Dichloroethene	ND	3.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	3.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.50	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	10.0	"	"	"	"	"	"	

North Creek Analytical - Bothell

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 17:58

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TRIP BLANK (B5J0645-06) Soil Sampled: 10/26/05 12:00 Received: 10/29/05 08:50									**A-01a**
1,1-Dichloropropene	ND	5.00	ug/kg wet	1	5K02060	11/02/05	11/02/05	"	
cis-1,3-Dichloropropene	ND	5.00	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.25	"	"	"	"	"	"	
Ethylbenzene	ND	4.00	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.00	"	"	"	"	"	"	
2-Hexanone	ND	20.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.00	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.00	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	20.0	"	"	"	"	"	"	
Methylene chloride	ND	3.50	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
n-Propylbenzene	ND	5.00	"	"	"	"	"	"	
Styrene	ND	1.00	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.00	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.00	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.00	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.00	"	"	"	"	"	"	
Tetrachloroethene	ND	2.00	"	"	"	"	"	"	
Toluene	ND	1.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.25	"	"	"	"	"	"	
Trichloroethene	ND	2.50	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.00	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.00	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.00	"	"	"	"	"	"	
Vinyl chloride	ND	2.50	"	"	"	"	"	"	
Total Xylenes	ND	10.0	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*136 %*	*60-140*			"	"	"	"	
Surrogate: Toluene-d8	*137 %*	*60-140*			"	"	"	"	
Surrogate: 4-BFB	*136 %*	*60-140*			"	"	"	"	

North Creek Analytical - Bothell

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 17:58

Physical Parameters by APHA/ASTM/EPA Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
FIEXC-W-10 (B5J0645-01) Soil Sampled: 10/27/05 08:00 Received: 10/29/05 08:50									
Dry Weight	**95.5**	1.00	%	1	5K03079	11/03/05	11/07/05	BSOPSPL003R08	
FIEXC-S-10 (B5J0645-02) Soil Sampled: 10/27/05 09:00 Received: 10/29/05 08:50									
Dry Weight	**91.4**	1.00	%	1	5K03079	11/03/05	11/07/05	BSOPSPL003R08	
FIEXC-N-8 (B5J0645-03) Soil Sampled: 10/27/05 08:30 Received: 10/29/05 08:50									
Dry Weight	**92.8**	1.00	%	1	5K03079	11/03/05	11/07/05	BSOPSPL003R08	
FI-EAST-6 (B5J0645-04) Soil Sampled: 10/26/05 16:20 Received: 10/29/05 08:50									
Dry Weight	**93.0**	1.00	%	1	5K03079	11/03/05	11/07/05	BSOPSPL003R08	
FI-MID-10 (B5J0645-05) Soil Sampled: 10/26/05 16:00 Received: 10/29/05 08:50									
Dry Weight	**92.3**	1.00	%	1	5K03079	11/03/05	11/07/05	BSOPSPL003R08	

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 17:58

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K02031: Prepared 11/02/05 Using EPA 5030B (P/T)										
Blank (5K02031-BLK1)										
Gasoline Range Hydrocarbons	ND	10.0	mg/kg							
Benzene	ND	0.0400	"							
Toluene	ND	0.100	"							
Ethylbenzene	ND	0.100	"							
Xylenes (total)	ND	0.200	"							
Surrogate: 4-BFB (FID)	*5.24*		"	*6.00*		*87.3*	*50-150*			
Surrogate: 4-BFB (PID)	*6.18*		"	*6.00*		*103*	*53-142*			
LCS (5K02031-BS1)										
Gasoline Range Hydrocarbons	101	10.0	mg/kg	100		101	75-125			
Benzene	1.29	0.0400	"	1.13		114	75-125			
Toluene	8.18	0.100	"	8.45		96.8	75-125			
Ethylbenzene	1.75	0.100	"	1.70		103	75-125			
Xylenes (total)	9.55	0.200	"	9.85		97.0	75-125			
Surrogate: 4-BFB (FID)	*5.87*		"	*6.00*		*97.8*	*50-150*			
Surrogate: 4-BFB (PID)	*5.80*		"	*6.00*		*96.7*	*53-142*			
LCS Dup (5K02031-BSD1)										
Gasoline Range Hydrocarbons	92.2	10.0	mg/kg	100		92.2	75-125	9.11	25	
Benzene	1.18	0.0400	"	1.13		104	75-125	8.91	25	
Toluene	7.54	0.100	"	8.45		89.2	75-125	8.14	25	
Ethylbenzene	1.60	0.100	"	1.70		94.1	75-125	8.96	25	
Xylenes (total)	8.77	0.200	"	9.85		89.0	75-125	8.52	25	
Surrogate: 4-BFB (FID)	*6.23*		"	*6.00*		*104*	*50-150*			
Surrogate: 4-BFB (PID)	*5.99*		"	*6.00*		*99.8*	*53-142*			
Matrix Spike (5K02031-MS1)					**Source: B5J0624-01**					
Gasoline Range Hydrocarbons	102	10.8	mg/kg dry	108	1.75	92.8	42-125			
Benzene	1.27	0.0431	"	1.22	ND	104	45-125			
Toluene	8.06	0.108	"	9.10	0.0234	88.3	55-125			
Ethylbenzene	1.71	0.108	"	1.82	0.00829	93.5	53-132			
Xylenes (total)	9.38	0.215	"	10.6	0.0449	88.1	59-125			

North Creek Analytical - Bothell

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 17:58

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K02031: Prepared 11/02/05 Using EPA 5030B (P/T)										
Matrix Spike (5K02031-MS1)					**Source: B5J0624-01**					
Surrogate: 4-BFB (FID)	*6.60*		*mg/kg dry*	*6.46*		*102*	*50-150*			
Surrogate: 4-BFB (PID)	*6.25*		*"*	*6.46*		*96.7*	*53-142*			
Matrix Spike Dup (5K02031-MSD1)					**Source: B5J0624-01**					
Gasoline Range Hydrocarbons	98.6	10.8	mg/kg dry	108	1.75	89.7	42-125	3.39	40	
Benzene	1.25	0.0431	"	1.22	ND	102	45-125	1.59	40	
Toluene	8.00	0.108	"	9.10	0.0234	87.7	55-125	0.747	40	
Ethylbenzene	1.71	0.108	"	1.82	0.00829	93.5	53-132	0.00	40	
Xylenes (total)	9.31	0.215	"	10.6	0.0449	87.4	59-125	0.749	40	
Surrogate: 4-BFB (FID)	*6.62*		*"*	*6.46*		*102*	*50-150*			
Surrogate: 4-BFB (PID)	*6.44*		*"*	*6.46*		*99.7*	*53-142*			

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 17:58

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5J31090: Prepared 11/01/05 Using EPA 3550B										
Blank (5J31090-BLK1)										
Diesel Range Hydrocarbons	ND	10.0	mg/kg							
Lube Oil Range Hydrocarbons	ND	25.0	"							
Surrogate: 2-FBP	*8.78*		"	*8.33*		*105*	*50-150*			
Surrogate: Octacosane	*9.55*		"	*8.33*		*115*	*50-150*			
LCS (5J31090-BS1)										
Diesel Range Hydrocarbons	71.6	10.0	mg/kg	66.7		107	61-120			
Surrogate: 2-FBP	*7.58*		"	*8.33*		*91.0*	*50-150*			
LCS Dup (5J31090-BSD1)										
Diesel Range Hydrocarbons	70.6	10.0	mg/kg	66.7		106	61-120	1.41	40	
Surrogate: 2-FBP	*7.62*		"	*8.33*		*91.5*	*50-150*			
Duplicate (5J31090-DUP1)					**Source: B5J0645-01**					
Diesel Range Hydrocarbons	ND	10.4	mg/kg dry		ND			NA	50	
Lube Oil Range Hydrocarbons	ND	26.1	"		ND			NA	50	
Surrogate: 2-FBP	*8.41*		"	*8.70*		*96.7*	*50-150*			
Surrogate: Octacosane	*9.48*		"	*8.70*		*109*	*50-150*			

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 17:58

Total Metals by EPA 6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K04071: Prepared 11/04/05 Using EPA 3050B										
Blank (5K04071-BLK1)										
Lead	ND	0.500	mg/kg							
LCS (5K04071-BS1)										
Lead	39.1	0.495	mg/kg	39.6		98.7	80-120			
LCS Dup (5K04071-BSD1)										
Lead	39.2	0.495	mg/kg	39.6		99.0	80-120	0.255	20	
Matrix Spike (5K04071-MS1)					**Source: B5J0645-01**					
Lead	43.6	0.524	mg/kg dry	41.9	2.74	97.5	29-162			
Matrix Spike Dup (5K04071-MSD1)					**Source: B5J0645-01**					
Lead	43.9	0.524	mg/kg dry	41.9	2.74	98.2	29-162	0.686	30	
Post Spike (5K04071-PS1)					**Source: B5J0645-01**					
Lead	0.100		ug/ml	0.100	0.00528	94.7	75-125			

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 17:58

Polychlorinated Biphenyls by EPA Method 8082 - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K04050: Prepared 11/04/05 Using EPA 3550B										
Blank (5K04050-BLK1)										
Aroclor 1016	ND	25.0	ug/kg							
Aroclor 1221	ND	50.0	"							
Aroclor 1232	ND	25.0	"							
Aroclor 1242	ND	25.0	"							
Aroclor 1248	ND	25.0	"							
Aroclor 1254	ND	25.0	"							
Aroclor 1260	ND	25.0	"							
Aroclor 1262	ND	25.0	"							
Aroclor 1268	ND	25.0	"							
Surrogate: TCX	*5.83*		"	*6.67*		*87.4*	*39-139*			
Surrogate: Decachlorobiphenyl	*6.66*		"	*6.67*		*99.9*	*33-163*			
LCS (5K04050-BS1)										
Aroclor 1016	77.2	25.0	ug/kg	83.3		92.7	54-125			
Aroclor 1260	84.3	25.0	"	83.3		101	58-128			
Surrogate: TCX	*5.65*		"	*6.67*		*84.7*	*39-139*			
Surrogate: Decachlorobiphenyl	*6.90*		"	*6.67*		*103*	*33-163*			
LCS Dup (5K04050-BSD1)										
Aroclor 1016	76.1	25.0	ug/kg	83.3		91.4	54-125	1.44	30	
Aroclor 1260	84.8	25.0	"	83.3		102	58-128	0.591	30	
Surrogate: TCX	*5.46*		"	*6.67*		*81.9*	*39-139*			
Surrogate: Decachlorobiphenyl	*6.78*		"	*6.67*		*102*	*33-163*			
Matrix Spike (5K04050-MS1)					**Source: B5J0583-18**					
Aroclor 1016	90.0	29.2	ug/kg dry	97.4	ND	92.4	47-134			
Aroclor 1260	96.4	29.2	"	97.4	ND	99.0	22-171			
Surrogate: TCX	*6.66*		"	*7.79*		*85.5*	*39-139*			
Surrogate: Decachlorobiphenyl	*7.89*		"	*7.79*		*101*	*33-163*			

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 17:58

Polychlorinated Biphenyls by EPA Method 8082 - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K04050: Prepared 11/04/05 Using EPA 3550B										
Matrix Spike Dup (5K04050-MSD1)					**Source: B5J0583-18**					
Aroclor 1016	83.8	28.3	ug/kg dry	94.2	ND	89.0	47-134	7.13	35	
Aroclor 1260	90.2	28.3	"	94.2	ND	95.8	22-171	6.65	35	
Surrogate: TCX	*6.69*		"	*7.54*		*88.7*	*39-139*			
Surrogate: Decachlorobiphenyl	*7.55*		"	*7.54*		*100*	*33-163*			

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 17:58

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K02048: Prepared 11/01/05 Using EPA 5035										
Blank (5K02048-BLK1)										
Acetone	ND	30.0	ug/kg							
Benzene	ND	1.50	"							
Bromobenzene	ND	5.00	"							
Bromochloromethane	ND	5.00	"							
Bromodichloromethane	ND	5.00	"							
Bromoform	ND	5.00	"							
Bromomethane	ND	10.0	"							
2-Butanone	ND	15.0	"							
n-Butylbenzene	ND	5.00	"							
sec-Butylbenzene	ND	5.00	"							
tert-Butylbenzene	ND	5.00	"							
Carbon disulfide	ND	3.00	"							
Carbon tetrachloride	ND	5.00	"							
Chlorobenzene	ND	2.00	"							
Chloroethane	ND	5.00	"							
Chloroform	ND	2.50	"							
Chloromethane	ND	10.0	"							
2-Chlorotoluene	ND	5.00	"							
4-Chlorotoluene	ND	5.00	"							
Dibromochloromethane	ND	5.00	"							
1,2-Dibromo-3-chloropropane	ND	10.0	"							
1,2-Dibromoethane (EDB)	ND	5.00	"							
Dibromomethane	ND	5.00	"							
1,2-Dichlorobenzene	ND	5.00	"							
1,3-Dichlorobenzene	ND	5.00	"							
1,4-Dichlorobenzene	ND	5.00	"							
Dichlorodifluoromethane	ND	5.00	"							
1,1-Dichloroethane	ND	2.00	"							
1,2-Dichloroethane	ND	1.25	"							
1,1-Dichloroethene	ND	3.00	"							
cis-1,2-Dichloroethene	ND	3.00	"							
trans-1,2-Dichloroethene	ND	2.50	"							
1,2-Dichloropropane	ND	5.00	"							
1,3-Dichloropropane	ND	5.00	"							

North Creek Analytical - Bothell

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Kate Haney, Project Manager

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 17:58

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K02048: Prepared 11/01/05 Using EPA 5035										
Blank (5K02048-BLK1)										
2,2-Dichloropropane	ND	10.0	ug/kg							
1,1-Dichloropropene	ND	5.00	"							
cis-1,3-Dichloropropene	ND	5.00	"							
trans-1,3-Dichloropropene	ND	1.25	"							
Ethylbenzene	ND	4.00	"							
Hexachlorobutadiene	ND	5.00	"							
Methyl tert-butyl ether	ND	1.00	"							
2-Hexanone	ND	20.0	"							
Isopropylbenzene	ND	5.00	"							
p-Isopropyltoluene	ND	5.00	"							
4-Methyl-2-pentanone	ND	20.0	"							
Methylene chloride	ND	3.50	"							
Naphthalene	ND	5.00	"							
n-Propylbenzene	ND	5.00	"							
Styrene	ND	1.00	"							
1,2,3-Trichlorobenzene	ND	5.00	"							
1,2,4-Trichlorobenzene	ND	5.00	"							
1,1,1,2-Tetrachloroethane	ND	5.00	"							
1,1,2,2-Tetrachloroethane	ND	5.00	"							
Tetrachloroethene	ND	2.00	"							
Toluene	ND	1.50	"							
1,1,1-Trichloroethane	ND	2.50	"							
1,1,2-Trichloroethane	ND	1.25	"							
Trichloroethene	ND	2.50	"							
Trichlorofluoromethane	ND	5.00	"							
1,2,3-Trichloropropane	ND	5.00	"							
1,2,4-Trimethylbenzene	ND	5.00	"							
1,3,5-Trimethylbenzene	ND	5.00	"							
Vinyl chloride	ND	2.50	"							
Total Xylenes	ND	10.0	"							
Surrogate: 1,2-DCA-d4	*44.6*		"	*40.0*		*112*	*60-140*			
Surrogate: Toluene-d8	*47.6*		"	*40.0*		*119*	*60-140*			
Surrogate: 4-BFB	*45.2*		"	*40.0*		*113*	*60-140*			

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 17:58

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K02048: Prepared 11/01/05 Using EPA 5035										
LCS (5K02048-BS1)										
Acetone	108	30.0	ug/kg	100		108	70-130			
Benzene	10.5	1.50	"	10.0		105	70-130			
2-Butanone	114	15.0	"	100		114	70-130			
Carbon disulfide	11.5	3.00	"	10.0		115	70-130			
Chlorobenzene	10.2	2.00	"	10.0		102	70-130			
1,1-Dichloroethane	10.8	2.00	"	10.0		108	70-130			
1,1-Dichloroethene	10.9	3.00	"	10.0		109	70-130			
cis-1,2-Dichloroethene	10.6	3.00	"	10.0		106	70-130			
Ethylbenzene	10.5	4.00	"	10.0		105	70-130			
Hexachlorobutadiene	9.79	5.00	"	10.0		97.9	70-130			
Methyl tert-butyl ether	11.3	1.00	"	10.0		113	70-130			
4-Methyl-2-pentanone	113	20.0	"	100		113	70-130			
Tetrachloroethene	10.7	2.00	"	10.0		107	70-130			
Toluene	10.4	1.50	"	10.0		104	70-130			
1,1,1-Trichloroethane	11.1	2.50	"	10.0		111	70-130			
Trichloroethene	10.2	2.50	"	10.0		102	70-130			
Surrogate: 1,2-DCA-d4	*43.8*		"	*40.0*		*110*	*60-140*			
Surrogate: Toluene-d8	*43.9*		"	*40.0*		*110*	*60-140*			
Surrogate: 4-BFB	*44.0*		"	*40.0*		*110*	*60-140*			
LCS Dup (5K02048-BSD1)										
Acetone	101	30.0	ug/kg	100		101	70-130	6.70	30	
Benzene	10.7	1.50	"	10.0		107	70-130	1.89	30	
2-Butanone	108	15.0	"	100		108	70-130	5.41	30	
Carbon disulfide	11.0	3.00	"	10.0		110	70-130	4.44	30	
Chlorobenzene	10.6	2.00	"	10.0		106	70-130	3.85	30	
1,1-Dichloroethane	10.5	2.00	"	10.0		105	70-130	2.82	30	
1,1-Dichloroethene	10.7	3.00	"	10.0		107	70-130	1.85	30	
cis-1,2-Dichloroethene	10.7	3.00	"	10.0		107	70-130	0.939	30	
Ethylbenzene	10.4	4.00	"	10.0		104	70-130	0.957	30	
Hexachlorobutadiene	9.21	5.00	"	10.0		92.1	70-130	6.11	30	
Methyl tert-butyl ether	11.2	1.00	"	10.0		112	70-130	0.889	30	
4-Methyl-2-pentanone	108	20.0	"	100		108	70-130	4.52	30	
Tetrachloroethene	9.80	2.00	"	10.0		98.0	70-130	8.78	30	

North Creek Analytical - Bothell

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 17:58

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K02048: Prepared 11/01/05 Using EPA 5035										
LCS Dup (5K02048-BSD1)										
Toluene	10.4	1.50	ug/kg	10.0		104	70-130	0.00	30	
1,1,1-Trichloroethane	10.6	2.50	"	10.0		106	70-130	4.61	30	
Trichloroethene	10.1	2.50	"	10.0		101	70-130	0.985	30	
Surrogate: 1,2-DCA-d4	*41.0*		"	*40.0*		*102*	*60-140*			
Surrogate: Toluene-d8	*37.7*		"	*40.0*		*94.2*	*60-140*			
Surrogate: 4-BFB	*36.8*		"	*40.0*		*92.0*	*60-140*			
Matrix Spike (5K02048-MS1)					**Source: B5J0463-01**					
Acetone	132	35.5	ug/kg dry	118	7.04	106	60-140			
Benzene	9.66	1.77	"	11.8	ND	81.9	60-140			
2-Butanone	103	17.7	"	118	ND	87.3	60-140			
Carbon disulfide	5.71	3.55	"	11.8	ND	48.4	60-140			Q-01
Chlorobenzene	7.95	2.37	"	11.8	ND	67.4	60-140			
1,1-Dichloroethane	12.5	2.37	"	11.8	ND	106	60-140			
1,1-Dichloroethene	11.1	3.55	"	11.8	ND	94.1	60-140			
cis-1,2-Dichloroethene	11.6	3.55	"	11.8	ND	98.3	60-140			
Ethylbenzene	3.10	4.73	"	11.8	ND	26.3	60-140			Q-01
Hexachlorobutadiene	3.88	5.91	"	11.8	ND	32.9	60-140			Q-01
Methyl tert-butyl ether	13.2	1.18	"	11.8	ND	112	60-140			
4-Methyl-2-pentanone	103	23.7	"	118	ND	87.3	60-140			
Tetrachloroethene	8.41	2.37	"	11.8	ND	71.3	60-140			
Toluene	7.56	1.77	"	11.8	ND	64.1	60-140			
1,1,1-Trichloroethane	12.3	2.96	"	11.8	ND	104	60-140			
Trichloroethene	18.2	2.96	"	11.8	ND	154	60-140			Q-01
Surrogate: 1,2-DCA-d4	*54.3*		"	*47.3*		*115*	*60-140*			
Surrogate: Toluene-d8	*35.5*		"	*47.3*		*75.1*	*60-140*			
Surrogate: 4-BFB	*43.1*		"	*47.3*		*91.1*	*60-140*			

North Creek Analytical - Bothell

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 17:58

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K02060: Prepared 11/02/05 Using EPA 5035										
Blank (5K02060-BLK1)										
Acetone	ND	30.0	ug/kg							
Benzene	ND	1.50	"							
Bromobenzene	ND	5.00	"							
Bromochloromethane	ND	5.00	"							
Bromodichloromethane	ND	5.00	"							
Bromoform	ND	5.00	"							
Bromomethane	ND	10.0	"							
2-Butanone	ND	15.0	"							
n-Butylbenzene	ND	5.00	"							
sec-Butylbenzene	ND	5.00	"							
tert-Butylbenzene	ND	5.00	"							
Carbon disulfide	ND	3.00	"							
Carbon tetrachloride	ND	5.00	"							
Chlorobenzene	ND	2.00	"							
Chloroethane	ND	5.00	"							
Chloroform	ND	2.50	"							
Chloromethane	ND	10.0	"							
2-Chlorotoluene	ND	5.00	"							
4-Chlorotoluene	ND	5.00	"							
Dibromochloromethane	ND	5.00	"							
1,2-Dibromo-3-chloropropane	ND	10.0	"							
1,2-Dibromoethane (EDB)	ND	5.00	"							
Dibromomethane	ND	5.00	"							
1,2-Dichlorobenzene	ND	5.00	"							
1,3-Dichlorobenzene	ND	5.00	"							
1,4-Dichlorobenzene	ND	5.00	"							
Dichlorodifluoromethane	ND	5.00	"							
1,1-Dichloroethane	ND	2.00	"							
1,2-Dichloroethane	ND	1.25	"							
1,1-Dichloroethene	ND	3.00	"							
cis-1,2-Dichloroethene	ND	3.00	"							
trans-1,2-Dichloroethene	ND	2.50	"							
1,2-Dichloropropane	ND	5.00	"							
1,3-Dichloropropane	ND	5.00	"							

North Creek Analytical - Bothell

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 17:58

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K02060: Prepared 11/02/05 Using EPA 5035										
Blank (5K02060-BLK1)										
2,2-Dichloropropane	ND	10.0	ug/kg							
1,1-Dichloropropene	ND	5.00	"							
cis-1,3-Dichloropropene	ND	5.00	"							
trans-1,3-Dichloropropene	ND	1.25	"							
Ethylbenzene	ND	4.00	"							
Hexachlorobutadiene	ND	5.00	"							
Methyl tert-butyl ether	ND	1.00	"							
2-Hexanone	ND	20.0	"							
Isopropylbenzene	ND	5.00	"							
p-Isopropyltoluene	ND	5.00	"							
4-Methyl-2-pentanone	ND	20.0	"							
Methylene chloride	ND	3.50	"							
Naphthalene	ND	5.00	"							
n-Propylbenzene	ND	5.00	"							
Styrene	ND	1.00	"							
1,2,3-Trichlorobenzene	ND	5.00	"							
1,2,4-Trichlorobenzene	ND	5.00	"							
1,1,1,2-Tetrachloroethane	ND	5.00	"							
1,1,2,2-Tetrachloroethane	ND	5.00	"							
Tetrachloroethene	ND	2.00	"							
Toluene	ND	1.50	"							
1,1,1-Trichloroethane	ND	2.50	"							
1,1,2-Trichloroethane	ND	1.25	"							
Trichloroethene	ND	2.50	"							
Trichlorofluoromethane	ND	5.00	"							
1,2,3-Trichloropropane	ND	5.00	"							
1,2,4-Trimethylbenzene	ND	5.00	"							
1,3,5-Trimethylbenzene	ND	5.00	"							
Vinyl chloride	ND	2.50	"							
Total Xylenes	ND	10.0	"							
Surrogate: 1,2-DCA-d4	*53.3*		"	*40.0*		*133*	*60-140*			
Surrogate: Toluene-d8	*52.1*		"	*40.0*		*130*	*60-140*			
Surrogate: 4-BFB	*50.0*		"	*40.0*		*125*	*60-140*			

North Creek Analytical - Bothell

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 17:58

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K02060: Prepared 11/02/05 Using EPA 5035										
LCS (5K02060-BS1)										
Acetone	93.5	30.0	ug/kg	100		93.5	70-130			
Benzene	10.4	1.50	"	10.0		104	70-130			
2-Butanone	77.1	15.0	"	100		77.1	70-130			
Carbon disulfide	10.7	3.00	"	10.0		107	70-130			
Chlorobenzene	10.6	2.00	"	10.0		106	70-130			
1,1-Dichloroethane	10.3	2.00	"	10.0		103	70-130			
1,1-Dichloroethene	10.7	3.00	"	10.0		107	70-130			
cis-1,2-Dichloroethene	10.7	3.00	"	10.0		107	70-130			
Ethylbenzene	11.1	4.00	"	10.0		111	70-130			
Hexachlorobutadiene	12.5	5.00	"	10.0		125	70-130			
4-Methyl-2-pentanone	81.2	20.0	"	100		81.2	70-130			
Tetrachloroethene	11.3	2.00	"	10.0		113	70-130			
Toluene	10.3	1.50	"	10.0		103	70-130			
1,1,1-Trichloroethane	10.8	2.50	"	10.0		108	70-130			
Trichloroethene	11.5	2.50	"	10.0		115	70-130			
Surrogate: 1,2-DCA-d4	*41.0*		"	*40.0*		*102*	*60-140*			
Surrogate: Toluene-d8	*51.8*		"	*40.0*		*130*	*60-140*			
Surrogate: 4-BFB	*49.2*		"	*40.0*		*123*	*60-140*			
LCS Dup (5K02060-BSD1)										
Acetone	104	30.0	ug/kg	100		104	70-130	10.6	30	
Benzene	10.3	1.50	"	10.0		103	70-130	0.966	30	
2-Butanone	86.2	15.0	"	100		86.2	70-130	11.1	30	
Carbon disulfide	10.9	3.00	"	10.0		109	70-130	1.85	30	
Chlorobenzene	11.3	2.00	"	10.0		113	70-130	6.39	30	
1,1-Dichloroethane	10.7	2.00	"	10.0		107	70-130	3.81	30	
1,1-Dichloroethene	10.6	3.00	"	10.0		106	70-130	0.939	30	
cis-1,2-Dichloroethene	10.4	3.00	"	10.0		104	70-130	2.84	30	
Ethylbenzene	11.1	4.00	"	10.0		111	70-130	0.00	30	
Hexachlorobutadiene	12.0	5.00	"	10.0		120	70-130	4.08	30	
4-Methyl-2-pentanone	91.0	20.0	"	100		91.0	70-130	11.4	30	
Tetrachloroethene	11.1	2.00	"	10.0		111	70-130	1.79	30	
Toluene	10.4	1.50	"	10.0		104	70-130	0.966	30	
1,1,1-Trichloroethane	11.0	2.50	"	10.0		110	70-130	1.83	30	

North Creek Analytical - Bothell

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 17:58

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K02060: Prepared 11/02/05 Using EPA 5035										
LCS Dup (5K02060-BSD1)										
Trichloroethene	11.0	2.50	ug/kg	10.0		110	70-130	4.44	30	
Surrogate: 1,2-DCA-d4	*37.7*		"	*40.0*		*94.2*	*60-140*			
Surrogate: Toluene-d8	*41.8*		"	*40.0*		*104*	*60-140*			
Surrogate: 4-BFB	*41.4*		"	*40.0*		*104*	*60-140*			
Batch 5K09038: Prepared 11/09/05 Using EPA 5035										
Blank (5K09038-BLK1)										
Acetone	ND	30.0	ug/kg							
Benzene	ND	1.50	"							
Bromobenzene	ND	5.00	"							
Bromochloromethane	ND	5.00	"							
Bromodichloromethane	ND	5.00	"							
Bromoform	ND	5.00	"							
Bromomethane	ND	10.0	"							
2-Butanone	ND	15.0	"							
n-Butylbenzene	ND	5.00	"							
sec-Butylbenzene	ND	5.00	"							
tert-Butylbenzene	ND	5.00	"							
Carbon disulfide	ND	3.00	"							
Carbon tetrachloride	ND	5.00	"							
Chlorobenzene	ND	2.00	"							
Chloroethane	ND	5.00	"							
Chloroform	ND	2.50	"							
Chloromethane	ND	10.0	"							
2-Chlorotoluene	ND	5.00	"							
4-Chlorotoluene	ND	5.00	"							
Dibromochloromethane	ND	5.00	"							
1,2-Dibromo-3-chloropropane	ND	10.0	"							
1,2-Dibromoethane (EDB)	ND	5.00	"							
Dibromomethane	ND	5.00	"							
1,2-Dichlorobenzene	ND	5.00	"							
1,3-Dichlorobenzene	ND	5.00	"							
1,4-Dichlorobenzene	ND	5.00	"							

North Creek Analytical - Bothell

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 17:58

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K09038: Prepared 11/09/05 Using EPA 5035										
Blank (5K09038-BLK1)										
Dichlorodifluoromethane	ND	5.00	ug/kg							
1,1-Dichloroethane	ND	2.00	"							
1,2-Dichloroethane	ND	1.25	"							
1,1-Dichloroethene	ND	3.00	"							
cis-1,2-Dichloroethene	ND	3.00	"							
trans-1,2-Dichloroethene	ND	2.50	"							
1,2-Dichloropropane	ND	5.00	"							
1,3-Dichloropropane	ND	5.00	"							
2,2-Dichloropropane	ND	10.0	"							
1,1-Dichloropropene	ND	5.00	"							
cis-1,3-Dichloropropene	ND	5.00	"							
trans-1,3-Dichloropropene	ND	1.25	"							
Ethylbenzene	ND	4.00	"							
Hexachlorobutadiene	ND	5.00	"							
Methyl tert-butyl ether	ND	1.00	"							
2-Hexanone	ND	20.0	"							
Isopropylbenzene	ND	5.00	"							
p-Isopropyltoluene	ND	5.00	"							
4-Methyl-2-pentanone	ND	20.0	"							
Methylene chloride	ND	3.50	"							
Naphthalene	ND	5.00	"							
n-Propylbenzene	ND	5.00	"							
Styrene	ND	1.00	"							
1,2,3-Trichlorobenzene	ND	5.00	"							
1,2,4-Trichlorobenzene	ND	5.00	"							
1,1,1,2-Tetrachloroethane	ND	5.00	"							
1,1,2,2-Tetrachloroethane	ND	5.00	"							
Tetrachloroethene	ND	2.00	"							
Toluene	ND	1.50	"							
1,1,1-Trichloroethane	ND	2.50	"							
1,1,2-Trichloroethane	ND	1.25	"							
Trichloroethene	ND	2.50	"							
Trichlorofluoromethane	ND	5.00	"							
1,2,3-Trichloropropane	ND	5.00	"							

North Creek Analytical - Bothell

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 17:58

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K09038: Prepared 11/09/05 Using EPA 5035										
Blank (5K09038-BLK1)										
1,2,4-Trimethylbenzene	ND	5.00	ug/kg							
1,3,5-Trimethylbenzene	ND	5.00	"							
Vinyl chloride	ND	2.50	"							
Total Xylenes	ND	10.0	"							
Surrogate: 1,2-DCA-d4	*40.7*		"	*40.0*		*102*	*60-140*			
Surrogate: Toluene-d8	*41.3*		"	*40.0*		*103*	*60-140*			
Surrogate: 4-BFB	*42.8*		"	*40.0*		*107*	*60-140*			
LCS (5K09038-BS1)										
Acetone	352	30.0	ug/kg	400		88.0	70-130			
Benzene	39.0	1.50	"	40.0		97.5	70-130			
2-Butanone	369	15.0	"	400		92.2	70-130			
Carbon disulfide	39.7	3.00	"	40.0		99.2	70-130			
Chlorobenzene	42.9	2.00	"	40.0		107	70-130			
1,1-Dichloroethane	39.0	2.00	"	40.0		97.5	70-130			
1,1-Dichloroethene	39.1	3.00	"	40.0		97.8	70-130			
cis-1,2-Dichloroethene	39.0	3.00	"	40.0		97.5	70-130			
Ethylbenzene	43.9	4.00	"	40.0		110	70-130			
Hexachlorobutadiene	41.4	5.00	"	40.0		104	70-130			
4-Methyl-2-pentanone	353	20.0	"	400		88.2	70-130			
Tetrachloroethene	43.8	2.00	"	40.0		110	70-130			
Toluene	41.5	1.50	"	40.0		104	70-130			
1,1,1-Trichloroethane	39.6	2.50	"	40.0		99.0	70-130			
Trichloroethene	38.2	2.50	"	40.0		95.5	70-130			
Surrogate: 1,2-DCA-d4	*29.9*		"	*40.0*		*74.8*	*60-140*			
Surrogate: Toluene-d8	*29.1*		"	*40.0*		*72.8*	*60-140*			
Surrogate: 4-BFB	*32.6*		"	*40.0*		*81.5*	*60-140*			

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 17:58

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K09038: Prepared 11/09/05 Using EPA 5035										
LCS Dup (5K09038-BSD1)										
Acetone	308	30.0	ug/kg	400		77.0	70-130	13.3	30	
Benzene	43.2	1.50	"	40.0		108	70-130	10.2	30	
2-Butanone	323	15.0	"	400		80.8	70-130	13.3	30	
Carbon disulfide	41.9	3.00	"	40.0		105	70-130	5.39	30	
Chlorobenzene	46.0	2.00	"	40.0		115	70-130	6.97	30	
1,1-Dichloroethane	41.6	2.00	"	40.0		104	70-130	6.45	30	
1,1-Dichloroethene	41.5	3.00	"	40.0		104	70-130	5.96	30	
cis-1,2-Dichloroethene	41.4	3.00	"	40.0		104	70-130	5.97	30	
Ethylbenzene	47.4	4.00	"	40.0		118	70-130	7.67	30	
Hexachlorobutadiene	52.6	5.00	"	40.0		132	70-130	23.8	30	A-01
4-Methyl-2-pentanone	320	20.0	"	400		80.0	70-130	9.81	30	
Tetrachloroethene	47.9	2.00	"	40.0		120	70-130	8.94	30	
Toluene	45.0	1.50	"	40.0		112	70-130	8.09	30	
1,1,1-Trichloroethane	42.8	2.50	"	40.0		107	70-130	7.77	30	
Trichloroethene	42.1	2.50	"	40.0		105	70-130	9.71	30	
Surrogate: 1,2-DCA-d4	*31.9*		"	*40.0*		*79.8*	*60-140*			
Surrogate: Toluene-d8	*35.2*		"	*40.0*		*88.0*	*60-140*			
Surrogate: 4-BFB	*37.0*		"	*40.0*		*92.5*	*60-140*			

North Creek Analytical - Bothell

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 17:58

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K03079: Prepared 11/03/05 Using Dry Weight										
Blank (5K03079-BLK1)										
Dry Weight	100	1.00	%							

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 17:58

Notes and Definitions

A-01	The blank spike duplicate recovery of this analyte fell outside of acceptance criteria and was bised high. Sample was ND, therefore results are not negatively impacted.
A-01a	This sample was analyzed outside of the acceptable 12 hour QC window. No additional sample is available for re-analysis.
A-02	The sample aliquot for analysis was taken from the 4oz. jar.
D-06	The sample chromatographic pattern does not resemble the fuel standard used for quantitation.
D-15	Hydrocarbon pattern most closely resembles a heavy fuel oil product.
Q-01	The spike recovery for this QC sample is outside of established control limits. Review of associated batch QC indicates the recovery for this analyte does not represent an out-of-control condition for the batch.
S-01	The surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or matrix interferences.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

North Creek Analytical - Bothell

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Kate Haney, Project Manager

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Revised Chain of Custody

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CHAIN OF CUSTODY REPORT

Work Order #: BSJ0645

NCA CLIENT: BNSF / KJ

REPORT TO: Galen Davis Kennedy Jenks

ADDRESS: 32001 32nd Ave South Suite 100 Federal Way, WA 98001

PHONE: 253 942-3421 FAX: 253

INVOICE TO: BRUCE SHEPARD - BNSF

P.O. NUMBER: See WORK ORDER

PROJECT NAME: BNSF Wishram

PROJECT NUMBER: 036026.02

SAMPLED BY: Galen Davis

TURNAROUND REQUEST in Business Days *

Organic & Inorganic Analyses: [X] STD. [7] [5] [4] [3] [2] [1] [<1]

Petroleum Hydrocarbon Analyses: [5] STD. [4] [3] [2] [1] [<1]

[OTHER] Specify:

* Turnaround Requests less than standard may incur Rush Charges.

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	PRESERVATIVE	REQUESTED ANALYSES: NWTPH-D w/ Si gel Clnup	NWTPH-G/BTEX	VOCs 8260	PCBs 8082	Lead 6010	MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	NCA WO ID
1 FIEXC-W-10	10/27/05 0800		X	X			X	S	4		-01
2 FIEXC-S-10	10/27/05 0900		X	X	X			S	5		-02
3 FIEXC-N-8	10/27/05 0830		X	X	X	X		S	6		-03
4 FI-EAST-6	10/26/05 1620		X					S	1		-04
5 FI-MID-10	10/26/05 1600		X					S	1		-05
6 TRIP BLANK	10/26/05 (PM) 1200			X				empty	1		-06
7											
8											
9											
10											

RELEASED BY: Galen Davis DATE: 10/28/05

PRINT NAME: Galen Davis FIRM: KJC TIME: 1600

RECEIVED BY: Colette Weaver DATE: 10.29.05

PRINT NAME: Colette Weaver FIRM: NCA TIME: 0850

RELEASED BY: DATE:

PRINT NAME: FIRM: TIME:

RECEIVED BY: DATE:

PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS: FOR VOCs Check MTBE + EDB

Measure Temp using Temp Blank

TEMP: 4.7c w/o

COC REV 09/04

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2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

CHAIN OF CUSTODY REPORT

Work Order #: B5J0645

NCA CLIENT: BNSF / KJ

INVOICE TO: BRUCE SHEPPARD - BNSF

REPORT TO: Galen Davis, Kennedy Jenks
ADDRESS: 32001 32nd Ave South Suite 100
Federal Way, WA 98001
PHONE: 253 942-3421 FAX: 253

P.O. NUMBER: See WORK ORDER

PROJECT NAME: BNSF Wisham
PROJECT NUMBER: 036026.02
SAMPLED BY: Galen Davis

TURNAROUND REQUEST
in Business Days *
Organic & Inorganic Analyses: X STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1
Petroleum Hydrocarbon Analyses: 5 STD. | 4 | 3 | 2 | 1 | <1
OTHER Specify:
* Turnaround Requests less than standard may incur Rush Charges.

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	PRESERVATIVE: Unpres	REQUESTED ANALYSES: NWTPH-D w/ silica gel cleanup	NWTPH-G BTEX	VOCs 8260	PCBs 8082	Lead 6010	MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	NCA WO ID
1	FIEXC-W-10	10/27/05 0800		X	X			X	S	4		-01
2	FIEXC-S-10	10/27/05 0900		X	X	X			S	5		-02
3	FIEXC-N-8	10/27/05 0830		X	X	X	X		S	6		-03
4	FI-EAST-6	10/26/05 1620		X					S	1		-04
5	FI-MID-10	10/26/05 1600		X					S	1		-05
6	TRIP BLANK				X				empty	1		-06
7												
8												
9												
10												

RELEASED BY: Galen Davis DATE: 10/28/05
PRINT NAME: Galen Davis FIRM: KJC TIME: 1600

RECEIVED BY: Colette Weaver DATE: 10.29.05
PRINT NAME: Colette Weaver FIRM: NCA TIME: 0850

RELEASED BY: DATE:
PRINT NAME: FIRM: TIME:

RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS: FOR VOCs Check MTBE & EDB
Measure Temp using Temp Blank

TEMP: 4.7c w/o

COC REV 09/04

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CASE NARRATIVE for B5K0127

Client: Kennedy/Jenks Consultants
Project Manager: Galen Davis
Project Name: BNSF – Wishram
Project Number: 036026.02

1.0 DESCRIPTION OF CASE

Eight soil samples and one trip blank were submitted for analysis of:

- Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B
- Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up
- Total Metals by EPA 6000/7000 Series Methods
- Polychlorinated Biphenyls by EPA Method 8082
- Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

2.0 COMMENTS ON SAMPLE RECEIPT

The samples were received November 5th, 2005 by North Creek Analytical Bothell. The temperature of the samples at the time of receipt was 5.4 degrees Celsius. There was no date/time on the label or COC for the trip blank. The sample was logged in with a sampled date/time of 11/02/05 1200.

3.0 PREPARATIONS AND ANALYSIS

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B
No additional anomalies, discrepancies, or issues were associated with sample preparation, analysis and quality control other than those already qualified in the data and described in the Notes and Definitions page at the end of this report.

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up
No anomalies were associated with the sample preparation and analysis. All criteria for acceptable QC measurements were met.

Total Metals by EPA 6000/7000 Series Methods
No anomalies were associated with the sample preparation and analysis. All criteria for acceptable QC measurements were met.

Polychlorinated Biphenyls by EPA Method 8082
No additional anomalies, discrepancies, or issues were associated with sample preparation, analysis and quality control other than those already qualified in the data and described in the Notes and Definitions page at the end of this report.

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Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)
No additional anomalies, discrepancies, or issues were associated with sample preparation, analysis and quality control other than those already qualified in the data and described in the Notes and Definitions page at the end of this report.

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North Creek Analytical

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05 December 2005

Galen Davis
Kennedy/Jenks Consultants
32001 32nd Ave S Ste 100
Federal Way, WA/USA 98001

RE: BNSF-Wishram, WA

Enclosed are the results of analyses for samples received by the laboratory on 11/05/05 10:05. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kate Haney
Project Manager

www.ncalabs.com

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:15

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FIEXC-B-7-10	B5K0127-01	Soil	11/02/05 13:00	11/05/05 10:05
FIEXC-B-1-12	B5K0127-02	Soil	11/03/05 08:00	11/05/05 10:05
PH-1-10	B5K0127-03	Soil	11/02/05 14:00	11/05/05 10:05
FIEXC-E-8	B5K0127-04	Soil	11/02/05 09:00	11/05/05 10:05
FIEXC-B-6-10	B5K0127-05	Soil	11/01/05 16:00	11/05/05 10:05
FIEXC-B-5-10	B5K0127-06	Soil	11/01/05 11:00	11/05/05 10:05
FIEXC-B-3-15	B5K0127-07	Soil	11/02/05 15:00	11/05/05 10:05
PH-2-17	B5K0127-08	Soil	11/04/05 08:00	11/05/05 10:05
TRIP BLANK	B5K0127-09	Soil	11/02/05 12:00	11/05/05 10:05

North Creek Analytical - Bothell

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:15

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
FIEXC-B-1-12 (B5K0127-02) Soil Sampled: 11/03/05 08:00 Received: 11/05/05 10:05									
Gasoline Range Hydrocarbons	**10.4**	6.70	mg/kg dry	1	5K07025	11/07/05	11/07/05	NWTPH-Gx/8021B	G-01
Benzene	ND	0.0268	"	"	"	"	"	"	
Toluene	ND	0.0670	"	"	"	"	"	"	
Ethylbenzene	ND	0.0670	"	"	"	"	"	"	
Xylenes (total)	ND	0.134	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*81.6 %*	*50-150*			"	"	"	"	
Surrogate: 4-BFB (PID)	*98.0 %*	*53-142*			"	"	"	"	
PH-1-10 (B5K0127-03) Soil Sampled: 11/02/05 14:00 Received: 11/05/05 10:05									
Gasoline Range Hydrocarbons	ND	6.27	mg/kg dry	1	5K07025	11/07/05	11/07/05	NWTPH-Gx/8021B	
Benzene	ND	0.0251	"	"	"	"	"	"	
Toluene	ND	0.0627	"	"	"	"	"	"	
Ethylbenzene	ND	0.0627	"	"	"	"	"	"	
Xylenes (total)	ND	0.125	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*83.0 %*	*50-150*			"	"	"	"	
Surrogate: 4-BFB (PID)	*97.1 %*	*53-142*			"	"	"	"	
PH-2-17 (B5K0127-08) Soil Sampled: 11/04/05 08:00 Received: 11/05/05 10:05									
Gasoline Range Hydrocarbons	ND	7.29	mg/kg dry	1	5K07025	11/07/05	11/07/05	NWTPH-Gx/8021B	
Benzene	ND	0.0292	"	"	"	"	"	"	
Toluene	ND	0.0729	"	"	"	"	"	"	
Ethylbenzene	ND	0.0729	"	"	"	"	"	"	
Xylenes (total)	ND	0.146	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*76.2 %*	*50-150*			"	"	"	"	
Surrogate: 4-BFB (PID)	*97.5 %*	*53-142*			"	"	"	"	

North Creek Analytical - Bothell

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:15

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TRIP BLANK (B5K0127-09) Soil Sampled: 11/02/05 12:00 Received: 11/05/05 10:05									
Gasoline Range Hydrocarbons	ND	5.00	mg/kg wet	1	5K07025	11/07/05	11/07/05	NWTPH-Gx/8021B	
Benzene	ND	0.0200	"	"	"	"	"	"	
Toluene	ND	0.0500	"	"	"	"	"	"	
Ethylbenzene	ND	0.0500	"	"	"	"	"	"	
Xylenes (total)	ND	0.100	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*79.7 %*	*50-150*			"	"	"	"	
Surrogate: 4-BFB (PID)	*94.3 %*	*53-142*			"	"	"	"	

North Creek Analytical - Bothell

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:15

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
FIEXC-B-7-10 (B5K0127-01) Soil Sampled: 11/02/05 13:00 Received: 11/05/05 10:05									
Diesel Range Hydrocarbons	ND	10.5	mg/kg dry	1	5K09044	11/09/05	11/10/05	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	26.2	"	"	"	"	"	"	
Surrogate: 2-FBP	*75.2 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*94.7 %*	*50-150*			"	"	"	"	
FIEXC-B-1-12 (B5K0127-02) Soil Sampled: 11/03/05 08:00 Received: 11/05/05 10:05									
Diesel Range Hydrocarbons	**908**	110	mg/kg dry	10	5K09044	11/09/05	11/10/05	NWTPH-Dx	
Lube Oil Range Hydrocarbons	**1920**	274	"	"	"	"	"	"	
Surrogate: 2-FBP	*54.3 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*98.2 %*	*50-150*			"	"	"	"	
PH-1-10 (B5K0127-03) Soil Sampled: 11/02/05 14:00 Received: 11/05/05 10:05									
Diesel Range Hydrocarbons	ND	10.4	mg/kg dry	1	5K09044	11/09/05	11/10/05	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	26.0	"	"	"	"	"	"	
Surrogate: 2-FBP	*75.8 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*93.3 %*	*50-150*			"	"	"	"	
FIEXC-E-8 (B5K0127-04) Soil Sampled: 11/02/05 09:00 Received: 11/05/05 10:05									
Diesel Range Hydrocarbons	**56.1**	10.7	mg/kg dry	1	5K09044	11/09/05	11/10/05	NWTPH-Dx	
Lube Oil Range Hydrocarbons	**37.2**	26.6	"	"	"	"	"	"	
Surrogate: 2-FBP	*71.7 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*88.6 %*	*50-150*			"	"	"	"	
FIEXC-B-6-10 (B5K0127-05) Soil Sampled: 11/01/05 16:00 Received: 11/05/05 10:05									
Diesel Range Hydrocarbons	ND	11.1	mg/kg dry	1	5K09044	11/09/05	11/10/05	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	27.7	"	"	"	"	"	"	
Surrogate: 2-FBP	*73.8 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*97.5 %*	*50-150*			"	"	"	"	

North Creek Analytical - Bothell

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Kate Haney, Project Manager

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:15

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
FIEXC-B-5-10 (B5K0127-06) Soil Sampled: 11/01/05 11:00 Received: 11/05/05 10:05									
Diesel Range Hydrocarbons	ND	10.4	mg/kg dry	1	5K09044	11/09/05	11/10/05	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	26.1	"	"	"	"	"	"	
Surrogate: 2-FBP	*66.7 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*92.6 %*	*50-150*			"	"	"	"	
FIEXC-B-3-15 (B5K0127-07) Soil Sampled: 11/02/05 15:00 Received: 11/05/05 10:05									
Diesel Range Hydrocarbons	ND	10.9	mg/kg dry	1	5K09044	11/09/05	11/10/05	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	27.2	"	"	"	"	"	"	
Surrogate: 2-FBP	*74.8 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*96.7 %*	*50-150*			"	"	"	"	
PH-2-17 (B5K0127-08) Soil Sampled: 11/04/05 08:00 Received: 11/05/05 10:05									
Diesel Range Hydrocarbons	ND	10.6	mg/kg dry	1	5K09044	11/09/05	11/10/05	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	26.5	"	"	"	"	"	"	
Surrogate: 2-FBP	*81.9 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*95.9 %*	*50-150*			"	"	"	"	

North Creek Analytical - Bothell

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:15

Total Metals by EPA 6000/7000 Series Methods

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
FIEXC-B-1-12 (B5K0127-02) Soil Sampled: 11/03/05 08:00 Received: 11/05/05 10:05									
Lead	**4.37**	0.504	mg/kg dry	1	5K14037	11/14/05	11/19/05	EPA 6020	
PH-1-10 (B5K0127-03) Soil Sampled: 11/02/05 14:00 Received: 11/05/05 10:05									
Lead	**10.0**	0.481	mg/kg dry	1	5K14037	11/14/05	11/19/05	EPA 6020	

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:15

Polychlorinated Biphenyls by EPA Method 8082
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
PH-1-10 (B5K0127-03) Soil Sampled: 11/02/05 14:00 Received: 11/05/05 10:05									
Aroclor 1016	ND	25.6	ug/kg dry	1	5K09047	11/09/05	11/10/05	EPA 8082	
Aroclor 1221	ND	51.3	"	"	"	"	"	"	
Aroclor 1232	ND	25.6	"	"	"	"	"	"	
Aroclor 1242	ND	25.6	"	"	"	"	"	"	
Aroclor 1248	ND	25.6	"	"	"	"	"	"	
Aroclor 1254	ND	25.6	"	"	"	"	"	"	
Aroclor 1260	ND	25.6	"	"	"	"	"	"	
Aroclor 1262	ND	25.6	"	"	"	"	"	"	
Aroclor 1268	ND	25.6	"	"	"	"	"	"	
Surrogate: TCX	*82.0 %*	*39-139*			"	"	"	"	
Surrogate: Decachlorobiphenyl	*76.0 %*	*33-163*			"	"	"	"	

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:15

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
PH-1-10 (B5K0127-03) Soil Sampled: 11/02/05 14:00 Received: 11/05/05 10:05									
Acetone	ND	36.1	ug/kg dry	1	5K08064	11/08/05	11/08/05	EPA 8260B	
Benzene	ND	1.80	"	"	"	"	"	"	
Bromobenzene	ND	6.02	"	"	"	"	"	"	
Bromochloromethane	ND	6.02	"	"	"	"	"	"	
Bromodichloromethane	ND	6.02	"	"	"	"	"	"	
Bromoform	ND	6.02	"	"	"	"	"	"	
Bromomethane	ND	12.0	"	"	"	"	"	"	
2-Butanone	ND	18.0	"	"	"	"	"	"	
n-Butylbenzene	ND	6.02	"	"	"	"	"	"	
sec-Butylbenzene	ND	6.02	"	"	"	"	"	"	
tert-Butylbenzene	ND	6.02	"	"	"	"	"	"	
Carbon disulfide	ND	3.61	"	"	"	"	"	"	
Carbon tetrachloride	ND	6.02	"	"	"	"	"	"	
Chlorobenzene	ND	2.41	"	"	"	"	"	"	
Chloroethane	ND	6.02	"	"	"	"	"	"	
Chloroform	ND	3.01	"	"	"	"	"	"	
Chloromethane	ND	12.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	6.02	"	"	"	"	"	"	
4-Chlorotoluene	ND	6.02	"	"	"	"	"	"	
Dibromochloromethane	ND	6.02	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	12.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	6.02	"	"	"	"	"	"	
Dibromomethane	ND	6.02	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	6.02	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	6.02	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	6.02	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	6.02	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.41	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	3.61	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	3.61	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	3.01	"	"	"	"	"	"	
1,2-Dichloropropane	ND	6.02	"	"	"	"	"	"	
1,3-Dichloropropane	ND	6.02	"	"	"	"	"	"	
2,2-Dichloropropane	ND	12.0	"	"	"	"	"	"	

North Creek Analytical - Bothell

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:15

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
PH-1-10 (B5K0127-03) Soil Sampled: 11/02/05 14:00 Received: 11/05/05 10:05									
1,1-Dichloropropene	ND	6.02	ug/kg dry	1	5K08064	11/08/05	11/08/05	"	
cis-1,3-Dichloropropene	ND	6.02	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.50	"	"	"	"	"	"	
Ethylbenzene	ND	4.81	"	"	"	"	"	"	
Hexachlorobutadiene	ND	6.02	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.20	"	"	"	"	"	"	
2-Hexanone	ND	24.1	"	"	"	"	"	"	
Isopropylbenzene	ND	6.02	"	"	"	"	"	"	
p-Isopropyltoluene	ND	6.02	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	24.1	"	"	"	"	"	"	
Methylene chloride	ND	4.21	"	"	"	"	"	"	
Naphthalene	ND	6.02	"	"	"	"	"	"	
n-Propylbenzene	ND	6.02	"	"	"	"	"	"	
Styrene	ND	1.20	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	6.02	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	6.02	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	6.02	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	6.02	"	"	"	"	"	"	
Tetrachloroethene	ND	2.41	"	"	"	"	"	"	
Toluene	ND	1.80	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	3.01	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.50	"	"	"	"	"	"	
Trichloroethene	ND	3.01	"	"	"	"	"	"	
Trichlorofluoromethane	ND	6.02	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	6.02	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	6.02	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	6.02	"	"	"	"	"	"	
Vinyl chloride	ND	3.01	"	"	"	"	"	"	
Total Xylenes	ND	12.0	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*104 %*	*60-140*			"	"	"	"	
Surrogate: Toluene-d8	*110 %*	*60-140*			"	"	"	"	
Surrogate: 4-BFB	*113 %*	*60-140*			"	"	"	"	

North Creek Analytical - Bothell

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:15

Physical Parameters by APHA/ASTM/EPA Methods

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
FIEXC-B-7-10 (B5K0127-01) Soil Sampled: 11/02/05 13:00 Received: 11/05/05 10:05									
Dry Weight	**95.3**	1.00	%	1	5K10044	11/10/05	11/11/05	BSOPSPL003R08	
FIEXC-B-1-12 (B5K0127-02) Soil Sampled: 11/03/05 08:00 Received: 11/05/05 10:05									
Dry Weight	**91.0**	1.00	%	1	5K10044	11/10/05	11/11/05	BSOPSPL003R08	
PH-1-10 (B5K0127-03) Soil Sampled: 11/02/05 14:00 Received: 11/05/05 10:05									
Dry Weight	**96.2**	1.00	%	1	5K10044	11/10/05	11/11/05	BSOPSPL003R08	
FIEXC-E-8 (B5K0127-04) Soil Sampled: 11/02/05 09:00 Received: 11/05/05 10:05									
Dry Weight	**92.6**	1.00	%	1	5K10044	11/10/05	11/11/05	BSOPSPL003R08	
FIEXC-B-6-10 (B5K0127-05) Soil Sampled: 11/01/05 16:00 Received: 11/05/05 10:05									
Dry Weight	**90.8**	1.00	%	1	5K10044	11/10/05	11/11/05	BSOPSPL003R08	
FIEXC-B-5-10 (B5K0127-06) Soil Sampled: 11/01/05 11:00 Received: 11/05/05 10:05									
Dry Weight	**95.3**	1.00	%	1	5K10044	11/10/05	11/11/05	BSOPSPL003R08	
FIEXC-B-3-15 (B5K0127-07) Soil Sampled: 11/02/05 15:00 Received: 11/05/05 10:05									
Dry Weight	**91.1**	1.00	%	1	5K10044	11/10/05	11/11/05	BSOPSPL003R08	
PH-2-17 (B5K0127-08) Soil Sampled: 11/04/05 08:00 Received: 11/05/05 10:05									
Dry Weight	**94.5**	1.00	%	1	5K10044	11/10/05	11/11/05	BSOPSPL003R08	

North Creek Analytical - Bothell

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:15

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K07025: Prepared 11/07/05 Using EPA 5030B (P/T)										
Blank (5K07025-BLK1)										
Gasoline Range Hydrocarbons	ND	5.00	mg/kg							
Benzene	ND	0.0200	"							
Toluene	ND	0.0500	"							
Ethylbenzene	ND	0.0500	"							
Xylenes (total)	ND	0.100	"							
Surrogate: 4-BFB (FID)	*2.39*		"	*3.00*		*79.7*	*50-150*			
Surrogate: 4-BFB (PID)	*2.79*		"	*3.00*		*93.0*	*53-142*			
LCS (5K07025-BS1)										
Gasoline Range Hydrocarbons	54.2	5.00	mg/kg	50.0		108	75-125			
Benzene	0.545	0.0200	"	0.565		96.5	75-125			
Toluene	3.42	0.0500	"	4.22		81.0	75-125			
Ethylbenzene	0.722	0.0500	"	0.845		85.4	75-125			
Xylenes (total)	4.05	0.100	"	4.92		82.3	75-125			
Surrogate: 4-BFB (FID)	*3.01*		"	*3.00*		*100*	*50-150*			
Surrogate: 4-BFB (PID)	*2.81*		"	*3.00*		*93.7*	*53-142*			
LCS Dup (5K07025-BSD1)										
Gasoline Range Hydrocarbons	50.1	5.00	mg/kg	50.0		100	75-125	7.86	25	
Benzene	0.585	0.0200	"	0.565		104	75-125	7.08	25	
Toluene	3.68	0.0500	"	4.22		87.2	75-125	7.32	25	
Ethylbenzene	0.773	0.0500	"	0.845		91.5	75-125	6.82	25	
Xylenes (total)	4.32	0.100	"	4.92		87.8	75-125	6.45	25	
Surrogate: 4-BFB (FID)	*2.62*		"	*3.00*		*87.3*	*50-150*			
Surrogate: 4-BFB (PID)	*2.80*		"	*3.00*		*93.3*	*53-142*			
Matrix Spike (5K07025-MS1)					**Source: B5K0127-02**					
Gasoline Range Hydrocarbons	86.5	6.70	mg/kg dry	67.0	10.4	114	42-125			
Benzene	0.766	0.0268	"	0.757	ND	101	45-125			
Toluene	4.83	0.0670	"	5.66	0.00503	85.2	55-125			
Ethylbenzene	1.01	0.0670	"	1.13	ND	89.4	53-132			
Xylenes (total)	5.64	0.134	"	6.59	0.0192	85.3	59-125			

North Creek Analytical - Bothell

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:15

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K07025: Prepared 11/07/05 Using EPA 5030B (P/T)										
Matrix Spike (5K07025-MS1)					**Source: B5K0127-02**					
Surrogate: 4-BFB (FID)	*3.98*		*mg/kg dry*	*4.02*		*99.0*	*50-150*			
Surrogate: 4-BFB (PID)	*3.75*		*"*	*4.02*		*93.3*	*53-142*			
Matrix Spike Dup (5K07025-MSD1)					**Source: B5K0127-02**					
Gasoline Range Hydrocarbons	92.2	6.70	mg/kg dry	67.0	10.4	122	42-125	6.38	40	
Benzene	0.785	0.0268	"	0.757	ND	104	45-125	2.45	40	
Toluene	4.92	0.0670	"	5.66	0.00503	86.8	55-125	1.85	40	
Ethylbenzene	1.04	0.0670	"	1.13	ND	92.0	53-132	2.93	40	
Xylenes (total)	5.80	0.134	"	6.59	0.0192	87.7	59-125	2.80	40	
Surrogate: 4-BFB (FID)	*4.11*		*"*	*4.02*		*102*	*50-150*			
Surrogate: 4-BFB (PID)	*3.78*		*"*	*4.02*		*94.0*	*53-142*			

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:15

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K09044: Prepared 11/09/05 Using EPA 3550B										
Blank (5K09044-BLK1)										
Diesel Range Hydrocarbons	ND	10.0	mg/kg							
Lube Oil Range Hydrocarbons	ND	25.0	"							
Surrogate: 2-FBP	*7.33*		"	*8.33*		*88.0*	*50-150*			
Surrogate: Octacosane	*8.48*		"	*8.33*		*102*	*50-150*			
LCS (5K09044-BS1)										
Diesel Range Hydrocarbons	74.9	10.0	mg/kg	66.7		112	61-120			
Surrogate: 2-FBP	*7.45*		"	*8.33*		*89.4*	*50-150*			
LCS Dup (5K09044-BSD1)										
Diesel Range Hydrocarbons	72.8	10.0	mg/kg	66.7		109	61-120	2.84	40	
Surrogate: 2-FBP	*7.23*		"	*8.33*		*86.8*	*50-150*			
Duplicate (5K09044-DUP1)					**Source: B5K0166-03**					
Diesel Range Hydrocarbons	ND	12.1	mg/kg dry		ND			NA	50	
Lube Oil Range Hydrocarbons	ND	30.2	"		ND			NA	50	
Surrogate: 2-FBP	*7.55*		"	*10.1*		*74.8*	*50-150*			
Surrogate: Octacosane	*9.08*		"	*10.1*		*89.9*	*50-150*			

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:15

Total Metals by EPA 6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K14037: Prepared 11/14/05 Using EPA 3050B										
Blank (5K14037-BLK1)										
Lead	ND	0.500	mg/kg							
LCS (5K14037-BS1)										
Lead	40.4	0.500	mg/kg	40.0		101	80-120			
LCS Dup (5K14037-BSD1)										
Lead	40.1	0.500	mg/kg	40.0		100	80-120	0.745	20	
Matrix Spike (5K14037-MS1)					**Source: B5K0055-03**					
Lead	56.2	0.521	mg/kg dry	41.7	13.1	103	29-166			
Matrix Spike Dup (5K14037-MSD1)					**Source: B5K0055-03**					
Lead	63.8	0.516	mg/kg dry	41.3	13.1	123	29-166	12.7	40	
Post Spike (5K14037-PS1)					**Source: B5K0055-03**					
Lead	0.129		ug/ml	0.100	0.0249	104	75-125			

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:15

Polychlorinated Biphenyls by EPA Method 8082 - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K09047: Prepared 11/09/05 Using EPA 3550B										
Blank (5K09047-BLK1)										
Aroclor 1016	ND	12.5	ug/kg							
Aroclor 1221	ND	25.0	"							
Aroclor 1232	ND	12.5	"							
Aroclor 1242	ND	12.5	"							
Aroclor 1248	ND	12.5	"							
Aroclor 1254	ND	12.5	"							
Aroclor 1260	ND	12.5	"							
Aroclor 1262	ND	12.5	"							
Aroclor 1268	ND	12.5	"							
Surrogate: TCX	*2.99*		"	*3.33*		*89.8*	*39-139*			
Surrogate: Decachlorobiphenyl	*3.50*		"	*3.33*		*105*	*33-163*			
LCS (5K09047-BS1)										
Aroclor 1016	35.9	12.5	ug/kg	41.7		86.1	54-125			
Aroclor 1260	39.1	12.5	"	41.7		93.8	58-128			
Surrogate: TCX	*3.04*		"	*3.33*		*91.3*	*39-139*			
Surrogate: Decachlorobiphenyl	*3.33*		"	*3.33*		*100*	*33-163*			
LCS Dup (5K09047-BSD1)										
Aroclor 1016	35.5	12.5	ug/kg	41.7		85.1	54-125	1.12	30	
Aroclor 1260	41.3	12.5	"	41.7		99.0	58-128	5.47	30	
Surrogate: TCX	*2.99*		"	*3.33*		*89.8*	*39-139*			
Surrogate: Decachlorobiphenyl	*3.53*		"	*3.33*		*106*	*33-163*			
Matrix Spike (5K09047-MS1)					**Source: B5K0194-02**					**C-02**
Aroclor 1016	55.2	17.9	ug/kg dry	59.6	ND	92.6	47-134			
Aroclor 1260	57.5	17.9	"	59.6	ND	96.5	22-171			
Surrogate: TCX	*4.37*		"	*4.77*		*91.6*	*39-139*			
Surrogate: Decachlorobiphenyl	*4.83*		"	*4.77*		*101*	*33-163*			

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:15

Polychlorinated Biphenyls by EPA Method 8082 - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K09047: Prepared 11/09/05 Using EPA 3550B										
Matrix Spike Dup (5K09047-MSD1)					**Source: B5K0194-02**					**C-02**
Aroclor 1016	50.8	17.7	ug/kg dry	59.0	ND	86.1	47-134	8.30	35	
Aroclor 1260	56.1	17.7	"	59.0	ND	95.1	22-171	2.46	35	
Surrogate: TCX	*4.04*		"	*4.72*		*85.6*	*39-139*			
Surrogate: Decachlorobiphenyl	*4.73*		"	*4.72*		*100*	*33-163*			

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32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:15

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K08064: Prepared 11/08/05 Using EPA 5035										
Blank (5K08064-BLK1)										
Acetone	ND	30.0	ug/kg							
Benzene	ND	1.50	"							
Bromobenzene	ND	5.00	"							
Bromochloromethane	ND	5.00	"							
Bromodichloromethane	ND	5.00	"							
Bromoform	ND	5.00	"							
Bromomethane	ND	10.0	"							
2-Butanone	ND	15.0	"							
n-Butylbenzene	ND	5.00	"							
sec-Butylbenzene	ND	5.00	"							
tert-Butylbenzene	ND	5.00	"							
Carbon disulfide	ND	3.00	"							
Carbon tetrachloride	ND	5.00	"							
Chlorobenzene	ND	2.00	"							
Chloroethane	ND	5.00	"							
Chloroform	ND	2.50	"							
Chloromethane	ND	10.0	"							
2-Chlorotoluene	ND	5.00	"							
4-Chlorotoluene	ND	5.00	"							
Dibromochloromethane	ND	5.00	"							
1,2-Dibromo-3-chloropropane	ND	10.0	"							
1,2-Dibromoethane (EDB)	ND	5.00	"							
Dibromomethane	ND	5.00	"							
1,2-Dichlorobenzene	ND	5.00	"							
1,3-Dichlorobenzene	ND	5.00	"							
1,4-Dichlorobenzene	ND	5.00	"							
Dichlorodifluoromethane	ND	5.00	"							
1,1-Dichloroethane	ND	2.00	"							
1,2-Dichloroethane	ND	1.25	"							
1,1-Dichloroethene	ND	3.00	"							
cis-1,2-Dichloroethene	ND	3.00	"							
trans-1,2-Dichloroethene	ND	2.50	"							
1,2-Dichloropropane	ND	5.00	"							
1,3-Dichloropropane	ND	5.00	"							

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Kate Haney, Project Manager

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907.563.9200 fax 907.563.9210

Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:15

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K08064: Prepared 11/08/05 Using EPA 5035										
Blank (5K08064-BLK1)										
2,2-Dichloropropane	ND	10.0	ug/kg							
1,1-Dichloropropene	ND	5.00	"							
cis-1,3-Dichloropropene	ND	5.00	"							
trans-1,3-Dichloropropene	ND	1.25	"							
Ethylbenzene	ND	4.00	"							
Hexachlorobutadiene	ND	5.00	"							
Methyl tert-butyl ether	ND	1.00	"							
2-Hexanone	ND	20.0	"							
Isopropylbenzene	ND	5.00	"							
p-Isopropyltoluene	ND	5.00	"							
4-Methyl-2-pentanone	ND	20.0	"							
Methylene chloride	ND	3.50	"							
Naphthalene	ND	5.00	"							
n-Propylbenzene	ND	5.00	"							
Styrene	ND	1.00	"							
1,2,3-Trichlorobenzene	ND	5.00	"							
1,2,4-Trichlorobenzene	ND	5.00	"							
1,1,1,2-Tetrachloroethane	ND	5.00	"							
1,1,2,2-Tetrachloroethane	ND	5.00	"							
Tetrachloroethene	ND	2.00	"							
Toluene	ND	1.50	"							
1,1,1-Trichloroethane	ND	2.50	"							
1,1,2-Trichloroethane	ND	1.25	"							
Trichloroethene	ND	2.50	"							
Trichlorofluoromethane	ND	5.00	"							
1,2,3-Trichloropropane	ND	5.00	"							
1,2,4-Trimethylbenzene	ND	5.00	"							
1,3,5-Trimethylbenzene	ND	5.00	"							
Vinyl chloride	ND	2.50	"							
Total Xylenes	ND	10.0	"							
Surrogate: 1,2-DCA-d4	*42.5*		"	*40.0*		*106*	*60-140*			
Surrogate: Toluene-d8	*43.9*		"	*40.0*		*110*	*60-140*			
Surrogate: 4-BFB	*41.3*		"	*40.0*		*103*	*60-140*			

North Creek Analytical - Bothell

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Kennedy/Jenks Consultants
32001 32nd Ave S Ste 100
Federal Way, WA/USA 98001

Project: BNSF-Wishram, WA
Project Number: 036026.02
Project Manager: Galen Davis

Reported:
12/05/05 18:15

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K08064: Prepared 11/08/05 Using EPA 5035										
LCS (5K08064-BS1)										
Acetone	396	30.0	ug/kg	400		99.0	70-130			
Benzene	40.8	1.50	"	40.0		102	70-130			
2-Butanone	424	15.0	"	400		106	70-130			
Carbon disulfide	40.1	3.00	"	40.0		100	70-130			
Chlorobenzene	39.9	2.00	"	40.0		99.8	70-130			
1,1-Dichloroethane	40.3	2.00	"	40.0		101	70-130			
1,1-Dichloroethene	40.0	3.00	"	40.0		100	70-130			
cis-1,2-Dichloroethene	41.6	3.00	"	40.0		104	70-130			
Ethylbenzene	41.2	4.00	"	40.0		103	70-130			
Hexachlorobutadiene	39.4	5.00	"	40.0		98.5	70-130			
4-Methyl-2-pentanone	392	20.0	"	400		98.0	70-130			
Tetrachloroethene	40.9	2.00	"	40.0		102	70-130			
Toluene	39.7	1.50	"	40.0		99.2	70-130			
1,1,1-Trichloroethane	39.2	2.50	"	40.0		98.0	70-130			
Trichloroethene	42.2	2.50	"	40.0		106	70-130			
Surrogate: 1,2-DCA-d4	*39.6*		"	*40.0*		*99.0*	*60-140*			
Surrogate: Toluene-d8	*38.4*		"	*40.0*		*96.0*	*60-140*			
Surrogate: 4-BFB	*37.9*		"	*40.0*		*94.8*	*60-140*			
LCS Dup (5K08064-BSD1)										
Acetone	430	30.0	ug/kg	400		108	70-130	8.23	30	
Benzene	42.1	1.50	"	40.0		105	70-130	3.14	30	
2-Butanone	457	15.0	"	400		114	70-130	7.49	30	
Carbon disulfide	42.9	3.00	"	40.0		107	70-130	6.75	30	
Chlorobenzene	41.9	2.00	"	40.0		105	70-130	4.89	30	
1,1-Dichloroethane	43.2	2.00	"	40.0		108	70-130	6.95	30	
1,1-Dichloroethene	42.5	3.00	"	40.0		106	70-130	6.06	30	
cis-1,2-Dichloroethene	42.7	3.00	"	40.0		107	70-130	2.61	30	
Ethylbenzene	42.1	4.00	"	40.0		105	70-130	2.16	30	
Hexachlorobutadiene	31.7	5.00	"	40.0		79.2	70-130	21.7	30	
4-Methyl-2-pentanone	418	20.0	"	400		104	70-130	6.42	30	
Tetrachloroethene	39.2	2.00	"	40.0		98.0	70-130	4.24	30	
Toluene	41.9	1.50	"	40.0		105	70-130	5.39	30	
1,1,1-Trichloroethane	42.2	2.50	"	40.0		106	70-130	7.37	30	

North Creek Analytical - Bothell

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Kate Haney, Project Manager

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:15

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K08064: Prepared 11/08/05 Using EPA 5035										
LCS Dup (5K08064-BSD1)										
Trichloroethene	42.4	2.50	ug/kg	40.0		106	70-130	0.473	30	
Surrogate: 1,2-DCA-d4	*39.0*		"	*40.0*		*97.5*	*60-140*			
Surrogate: Toluene-d8	*37.8*		"	*40.0*		*94.5*	*60-140*			
Surrogate: 4-BFB	*37.4*		"	*40.0*		*93.5*	*60-140*			

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907.563.9200 fax 907.563.9210

Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:15

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K10044: Prepared 11/10/05 Using Dry Weight										
Blank (5K10044-BLK1)										
Dry Weight	99.8	1.00	%							

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Kennedy/Jenks Consultants	Project: BNSF-Wishram, WA	
32001 32nd Ave S Ste 100	Project Number: 036026.02	**Reported:**
Federal Way, WA/USA 98001	Project Manager: Galen Davis	12/05/05 18:15

Notes and Definitions

C-02	To reduce matrix interference, the sample extract has undergone copper clean-up, method 3660, which is specific to sulfur contamination.
G-01	Results reported for the gas range are primarily due to overlap from diesel range hydrocarbons.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

North Creek Analytical - Bothell

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Kate Haney, Project Manager

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2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210 [ ]

CHAIN OF CUSTODY REPORT

Work Order #: B5K0127

NCA CLIENT: KJ/BNSF

INVOICE TO: Bruce Sheppard BNSF

REPORT TO: Galen Davis Kennedy Jenks
ADDRESS: 32001 32ND Ave S Suite 100
Federal WAY, WA 98001

PHONE: 253 574 0555 FAX:

P.O. NUMBER: See Work ORDER

PROJECT NAME: BNSF Wishram

PROJECT NUMBER: 036026.02

SAMPLED BY: Galen Davis

TURNAROUND REQUEST in Business Days *
Organic & Inorganic Analyses: [X] Std. | 7 | 5 | 4 | 3 | 2 | 1 | <1
Petroleum Hydrocarbon Analyses: 5 Std. | 4 | 3 | 2 | 1 | <1
OTHER Specify:
* Turnaround Requests less than standard may incur Rush Charges.

PRESERVATIVE: NO | HCl | HCl | NO | | No

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	WTPH-D w/ Si. gel Cleanup	VOC 8260	GAS/BTEX w/ PID-C	PCBs 8082	Metals 6010	Lead 6010	MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	NCA WO ID
1 FIEXC-B-7-10	11/2/05 1300	X						S	1		01
2 FIEXC-B-1-12	11/3/05 0800	X		X			X	S	4		02
3 PH-1-10	11/2/05 1400	X	X	X	X		X	S	7		03
4 FIEXC-E-8	11/2/05 0900	X						S	1		04
5 FIEXC-B-6-10	11/1/05 1600	X						S	1		05
6 FIEXC-B-5-10	11/1/05 1100	X						S	1		06
7 FIEXC-B-3-15	11/2/05 1500	X						S	1		07
8 PH-2-17	11/4/05 0900	X		X				S	3		08
9 TRIP Blank	— —			X					1		09
10											

RELEASED BY: Galen C. Davis DATE: 11/4/05
PRINT NAME: Galen Davis FIRM: KJC TIME: 1500

RECEIVED BY: Cathy Gamble DATE: 11/5/05
PRINT NAME: Cathy Gamble FIRM: NCA TIME: 10:05

RELEASED BY: DATE:
PRINT NAME: FIRM: TIME:

RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS: Measure Temp w/ Temp blank
COC REV 09/04 FOR VOCs check MTBE, EDB, EDC

w/ice TEMP: 2.6° 5.4° cg 11/5

PAGE 1 OF 1

TestAmerica
THE LEADER IN ENVIRONMENTAL

SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
BOTHELL, WA 98011-8244
PH: (425) 420.9200 FAX: (425) 420.9210

November 30, 2006

Galen Davis
Kennedy/Jenks Consultants
32001 32nd Ave S Ste 100
Federal Way, WA/USA 98001

RE: BNSF-Wishram, WA

Enclosed are the results of analyses for samples received by the laboratory on 11/13/06 17:45. The following list is a summary of the Work Orders contained in this report, generated on 11/30/06 17:47.

If you have any questions concerning this report, please feel free to contact me.

Work Order	Project	ProjectNumber
BPK0390	BNSF-Wishram, WA	[none]

TestAmerica - Seattle, WA

Kate Haney, Project Manager

TestAmerica
ANALYTICAL TESTING CORPORATION

SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
BOTHELL, WA 98011-8244
PH: (425) 420.9200 FAX: (425) 420.9210

Kennedy/Jenks Consultants	Project Name:	**BNSF-Wishram, WA**	
32001 32nd Ave S Ste 100	Project Number:	[none]	Report Created:
Federal Way, WA/USA 98001	Project Manager:	Galen Davis	11/30/06 17:47

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	BPK0390-01	Water	11/09/06 11:00	11/13/06 17:45
MW-3	BPK0390-02	Water	11/09/06 11:50	11/13/06 17:45
MW-5	BPK0390-03	Water	11/09/06 12:40	11/13/06 17:45
MW-100	BPK0390-04	Water	11/09/06 12:45	11/13/06 17:45

TestAmerica - Seattle, WA

Kate Haney, Project Manager

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ANALYTICAL TESTING CORPORATION

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BOTHELL, WA 98011-8244
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Kennedy/Jenks Consultants	Project Name:	**BNSF-Wishram, WA**	
32001 32nd Ave S Ste 100	Project Number:	[none]	Report Created:
Federal Way, WA/USA 98001	Project Manager:	Galen Davis	11/30/06 17:47

Analytical Case Narrative
TestAmerica - Seattle, WA

BPK0390

SAMPLE RECEIPT

Samples were received November 11th, 2006 by TestAmerica - Seattle. The temperature of the samples at the time of receipt was 4.2 degrees Celsius.

PREPARATIONS AND ANALYSIS

No additional anomalies, discrepancies, or issues were associated with sample preparation, analysis and quality control other than those already qualified in the data and described in the Notes and Definitions page at the end of the report.

TestAmerica - Seattle, WA

Kate Haney, Project Manager

TestAmerica
ANALYTICAL TESTING CORPORATION

SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
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PH: (425) 420.9200 FAX: (425) 420.9210

Kennedy/Jenks Consultants	Project Name:	**BNSF-Wishram, WA**	
32001 32nd Ave S Ste 100	Project Number:	[none]	Report Created:
Federal Way, WA/USA 98001	Project Manager:	Galen Davis	11/30/06 17:47

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B

TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BPK0390-01 (MW-1)		**Water**			**Sampled: 11/09/06 11:00**					**D-14**
Gasoline Range Hydrocarbons	NWTPH-Gx/802 1B	ND	----	250	ug/l	5x	6K21020	11/21/06 11:15	11/22/06 02:06	
Benzene	"	ND	----	2.50	"	"	"	"	"	
Toluene	"	ND	----	2.50	"	"	"	"	"	
Ethylbenzene	"	ND	----	2.50	"	"	"	"	"	
Xylenes (total)	"	ND	----	5.00	"	"	"	"	"	
Surrogate(s): 4-BFB (FID)			*91.7%*		*58 - 144 %*	*1x*			"	
4-BFB (PID)			*97.0%*		*68 - 140 %*	"			"	
BPK0390-02 (MW-3)		**Water**			**Sampled: 11/09/06 11:50**					
Gasoline Range Hydrocarbons	NWTPH-Gx/802 1B	**209**	----	50.0	ug/l	1x	6K21020	11/21/06 11:15	11/22/06 04:11	
Benzene	"	ND	----	0.500	"	"	"	"	"	
Toluene	"	ND	----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	
Surrogate(s): 4-BFB (FID)			*93.3%*		*58 - 144 %*	"			"	
4-BFB (PID)			*100%*		*68 - 140 %*	"			"	
BPK0390-03 (MW-5)		**Water**			**Sampled: 11/09/06 12:40**					
Gasoline Range Hydrocarbons	NWTPH-Gx/802 1B	ND	----	50.0	ug/l	1x	6K21020	11/21/06 11:15	11/22/06 04:42	
Benzene	"	ND	----	0.500	"	"	"	"	"	
Toluene	"	ND	----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	
Surrogate(s): 4-BFB (FID)			*88.3%*		*58 - 144 %*	"			"	
4-BFB (PID)			*96.5%*		*68 - 140 %*	"			"	
BPK0390-04 (MW-100)		**Water**			**Sampled: 11/09/06 12:45**					
Gasoline Range Hydrocarbons	NWTPH-Gx/802 1B	ND	----	50.0	ug/l	1x	6K21020	11/21/06 11:15	11/22/06 05:13	
Benzene	"	ND	----	0.500	"	"	"	"	"	
Toluene	"	ND	----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	
Surrogate(s): 4-BFB (FID)			*88.7%*		*58 - 144 %*	"			"	
4-BFB (PID)			*97.3%*		*68 - 140 %*	"			"	

TestAmerica - Seattle, WA

Kate Haney, Project Manager

TestAmerica
ANALYTICAL TESTING CORPORATION

SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
BOTHELL, WA 98011-8244
PH: (425) 420.9200 FAX: (425) 420.9210

Kennedy/Jenks Consultants	Project Name:	**BNSF-Wishram, WA**	
32001 32nd Ave S Ste 100	Project Number:	[none]	Report Created:
Federal Way, WA/USA 98001	Project Manager:	Galen Davis	11/30/06 17:47

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up

TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BPK0390-01 (MW-1)		**Water**			**Sampled: 11/09/06 11:00**					
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	0.236	mg/l	1x	6K16025	11/16/06 10:48	11/17/06 22:02	
Lube Oil Range Hydrocarbons	"	ND	----	0.472	"	"	"	"	"	
Surrogate(s): 2-FBP			*109%*		*53 - 125 %*	"			"	
Octacosane			*94.9%*		*68 - 125 %*	"			"	
BPK0390-02 (MW-3)		**Water**			**Sampled: 11/09/06 11:50**					
Diesel Range Hydrocarbons	NWTPH-Dx	**0.659**	----	0.250	mg/l	1x	6K16025	11/16/06 10:48	11/17/06 22:28	
Lube Oil Range Hydrocarbons	"	ND	----	0.500	"	"	"	"	"	
Surrogate(s): 2-FBP			*112%*		*53 - 125 %*	"			"	
Octacosane			*98.8%*		*68 - 125 %*	"			"	
BPK0390-03 (MW-5)		**Water**			**Sampled: 11/09/06 12:40**					
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	0.250	mg/l	1x	6K16025	11/16/06 10:48	11/17/06 22:54	
Lube Oil Range Hydrocarbons	"	ND	----	0.500	"	"	"	"	"	
Surrogate(s): 2-FBP			*95.6%*		*53 - 125 %*	"			"	
Octacosane			*93.2%*		*68 - 125 %*	"			"	
BPK0390-04 (MW-100)		**Water**			**Sampled: 11/09/06 12:45**					
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	0.248	mg/l	1x	6K16025	11/16/06 10:48	11/17/06 23:21	
Lube Oil Range Hydrocarbons	"	ND	----	0.495	"	"	"	"	"	
Surrogate(s): 2-FBP			*99.2%*		*53 - 125 %*	"			"	
Octacosane			*91.9%*		*68 - 125 %*	"			"	

TestAmerica - Seattle, WA

Kate Haney, Project Manager

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SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
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Kennedy/Jenks Consultants	Project Name:	**BNSF-Wishram, WA**
32001 32nd Ave S Ste 100	Project Number:	[none]
Federal Way, WA/USA 98001	Project Manager:	Galen Davis
		Report Created: 11/30/06 17:47

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Laboratory Quality Control Results

TestAmerica - Seattle, WA

QC Batch: 6K21020 **Water Preparation Method: EPA 5030B (P/T)**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (6K21020-BLK1)								Extracted: 11/21/06 11:15						
Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	ND	---	50.0	ug/l	1x	--	--	--	--	--	--	11/21/06 12:56	
Benzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (FID)		*Recovery: 88.5%*			*Limits: 58-144%*	"							*11/21/06 12:56*	
4-BFB (PID)		*99.5%*			*68-140%*	"							"	
LCS (6K21020-BS1)								Extracted: 11/21/06 11:15						
Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	896	---	50.0	ug/l	1x	--	1000	89.6%	(80-120)	--	--	11/21/06 13:31	
Surrogate(s): 4-BFB (FID)		*Recovery: 93.2%*			*Limits: 58-144%*	"							*11/21/06 13:31*	
LCS (6K21020-BS2)								Extracted: 11/21/06 11:15						
Benzene	NWTPH-Gx/ 8021B	25.4	---	0.500	ug/l	1x	--	30.0	84.7%	(80-120)	--	--	11/21/06 14:26	
Toluene	"	25.5	---	0.500	"	"	--	"	85.0%	"	--	--	"	
Ethylbenzene	"	24.9	---	0.500	"	"	--	"	83.0%	"	--	--	"	
Xylenes (total)	"	74.2	---	1.00	"	"	--	90.0	82.4%	"	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 97.0%*			*Limits: 68-140%*	"							*11/21/06 14:26*	
Duplicate (6K21020-DUP1)						QC Source: BPK0355-02		Extracted: 11/21/06 11:15						
Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	2140	---	250	ug/l	5x	2240	--	--	--	4.57%	(25)	11/21/06 18:07	
Benzene	"	ND	---	2.50	"	"	ND	--	--	--	9.52%	"	"	
Toluene	"	ND	---	2.50	"	"	ND	--	--	--	4.26%	"	"	
Ethylbenzene	"	ND	---	2.50	"	"	18.3	--	--	--	160%	"	"	RP-4
Xylenes (total)	"	57.8	---	5.00	"	"	62.4	--	--	--	7.65%	"	"	
Surrogate(s): 4-BFB (FID)		*Recovery: 93.8%*			*Limits: 58-144%*	*1x*							*11/21/06 18:07*	
4-BFB (PID)		*102%*			*68-140%*	"							"	
Duplicate (6K21020-DUP2)						QC Source: BPK0390-04		Extracted: 11/21/06 11:15						
Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	ND	---	50.0	ug/l	1x	ND	--	--	--	NR	(25)	11/22/06 05:44	
Benzene	"	ND	---	0.500	"	"	ND	--	--	--	NR	"	"	
Toluene	"	ND	---	0.500	"	"	ND	--	--	--	NR	"	"	
Ethylbenzene	"	ND	---	0.500	"	"	ND	--	--	--	NR	"	"	
Xylenes (total)	"	ND	---	1.00	"	"	ND	--	--	--	NR	"	"	
Surrogate(s): 4-BFB (FID)		*Recovery: 89.8%*			*Limits: 58-144%*	"							*11/22/06 05:44*	
4-BFB (PID)		*97.0%*			*68-140%*	"							"	

TestAmerica - Seattle, WA

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Kennedy/Jenks Consultants	Project Name:	**BNSF-Wishram, WA**	
32001 32nd Ave S Ste 100	Project Number:	[none]	Report Created:
Federal Way, WA/USA 98001	Project Manager:	Galen Davis	11/30/06 17:47

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Laboratory Quality Control Results

TestAmerica - Seattle, WA

QC Batch: 6K21020 **Water Preparation Method: EPA 5030B (P/T)**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Matrix Spike (6K21020-MS1)							**QC Source: BPK0355-02**						**Extracted: 11/21/06 11:15**	
Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	6910	---	250	ug/l	5x	2240	5000	93.4%	(75-131)	--	--	11/21/06 18:39	
Surrogate(s): 4-BFB (FID)		*Recovery: 95.2%*			*Limits: 58-144%*	*1x*							*11/21/06 18:39*	
Matrix Spike (6K21020-MS2)							**QC Source: BPK0355-02**						**Extracted: 11/21/06 11:15**	
Benzene	NWTPH-Gx/ 8021B	159	---	2.50	ug/l	5x	1.54	150	105%	(46-130)	--	--	11/21/06 19:13	
Toluene	"	154	---	2.50	"	"	1.20	"	102%	(60-124)	--	--	"	
Ethylbenzene	"	173	---	2.50	"	"	18.3	"	103%	(56-141)	--	--	"	
Xylenes (total)	"	513	---	5.00	"	"	62.4	450	100%	(66-132)	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 101%*			*Limits: 68-140%*	*1x*							*11/21/06 19:13*	

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Kennedy/Jenks Consultants	Project Name:	**BNSF-Wishram, WA**	
32001 32nd Ave S Ste 100	Project Number:	[none]	Report Created:
Federal Way, WA/USA 98001	Project Manager:	Galen Davis	11/30/06 17:47

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up - Laboratory Quality Control Results

TestAmerica - Seattle, WA

QC Batch: 6K16025 **Water Preparation Method: EPA 3520C**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (6K16025-BLK1)								Extracted: 11/16/06 10:48						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	0.250	mg/l	1x	--	--	--	--	--	--	11/17/06 20:18	
Lube Oil Range Hydrocarbons	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Surrogate(s): 2-FBP		*Recovery: 100%*			*Limits: 53-125%*	"							*11/17/06 20:18*	
Octacosane		*98.0%*			*68-125%*	"							"	
LCS (6K16025-BS1)								Extracted: 11/16/06 10:48						
Diesel Range Hydrocarbons	NWTPH-Dx	1.86	---	0.250	mg/l	1x	--	2.00	93.0%	(61-132)	--	--	11/17/06 20:44	
Surrogate(s): 2-FBP		*Recovery: 106%*			*Limits: 53-125%*	"							*11/17/06 20:44*	
Octacosane		*94.8%*			*68-125%*	"							"	
Matrix Spike (6K16025-MS1)					QC Source: BPK0393-10			Extracted: 11/16/06 10:48						
Diesel Range Hydrocarbons	NWTPH-Dx	1.77	---	0.243	mg/l	1x	ND	1.94	91.2%	(32-143)	--	--	11/17/06 21:10	
Surrogate(s): 2-FBP		*Recovery: 104%*			*Limits: 53-125%*	"							*11/17/06 21:10*	
Octacosane		*86.8%*			*68-125%*	"							"	
Matrix Spike Dup (6K16025-MSD1)					QC Source: BPK0393-10			Extracted: 11/16/06 10:48						
Diesel Range Hydrocarbons	NWTPH-Dx	1.81	---	0.243	mg/l	1x	ND	1.94	93.3%	(32-143)	2.23%	(50)	11/17/06 21:36	
Surrogate(s): 2-FBP		*Recovery: 105%*			*Limits: 53-125%*	"							*11/17/06 21:36*	
Octacosane		*93.4%*			*68-125%*	"							"	

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Kennedy/Jenks Consultants	Project Name:	**BNSF-Wishram, WA**	
32001 32nd Ave S Ste 100	Project Number:	[none]	Report Created:
Federal Way, WA/USA 98001	Project Manager:	Galen Davis	11/30/06 17:47

Notes and Definitions

Report Specific Notes:

D-14 - Diluted due to matrix effect.

RP-4 - Due to the low levels of analyte in the sample, the duplicate RPD calculation does not provide useful information.

Laboratory Reporting Conventions:

DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.

ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).

NR/NA - Not Reported / Not Available

dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.

wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.

RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).

MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.

MDL* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.

Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.

Reporting Limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.

Electronic Signature - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy.* Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica - Seattle, WA

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2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

CHAIN OF CUSTODY REPORT

Work Order #: BPK 0390

CLIENT: BNSF Railroad

INVOICE TO: BNSF
Work Order# ~~with deposit~~ TT9157-F01
File#NWES-07-0001
K/J to review invoice draft

REPORT TO: Galen Davis, Kennedy/Jenks
ADDRESS: 32001 32nd Ave S, Ste-100
Federal Way, WA 98001
PHONE: 253-874-0555 FAX: 253-952-3435

P.O. NUMBER:

PROJECT NAME: BNSF Wishram

PROJECT NUMBER:

SAMPLED BY:

TURNAROUND REQUEST
In Business Days *
Organic & Inorganic Analyses: [X] STD [7] [5] [4] [3] [2] [1] [<1]
Petroleum Hydrocarbon Analyses: [X] STD [4] [3] [2] [1] [<1]
OTHER Specify:
* *Turnaround Requests less than standard may incur Rush Charges.*

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	PRESERVATIVE: Cool	NWTPH(Dx) w/Silica Gel	NWTPH (Gx)	BTEX	MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	TA WO ID
1 MW-1	11/9/06 1100		X	X	X	W	5		01
2 MW-3	1150		X	X	X				02
3 MW-5	1240		X	X	X				03
4 MW-100	1245		X	X	X				04
Trip Blank						W	3		05
6									
7									
8									
9									
10									

RELEASED BY: Linda Norton DATE: 11/13/06
PRINT NAME: Linda Norton FIRM: K/J TIME: 1333

RECEIVED BY: DATE: 11/13/06
PRINT NAME: Francisco Luna, Jr. FIRM: TA-S TIME: 1333

RELEASED BY: DATE:
PRINT NAME: FIRM: TIME:

RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS: Low (MTCA) Reporting Limits for BTEX @Lab 1745

TEMP: 4.2°C PAGE 1 OF 1

COC REV 05/2006

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and for any additional analyses performed on this project.

Payment for services is due within 30 days from the date of invoice unless otherwise contracted. Sample(s) will be disposed of after 30 days unless otherwise contracted.