THIRD QUARTER 2009 GROUNDWATER MONITORING REPORT

FORMER MOLALLA KWIK GAS 305 WEST MAIN STREET MOLALLA, OREGON DEQ FILE No.: 03-05-461

ECN PROJECT No. 05-106



December 5, 2010

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NORTHWEST REGION



ENVIRONMENTAL COMPLIANCE NORTHWEST

PO BOX 230163 PORTLAND, OR 97281 (503) 372-9760 Phone (503) 213-9980 Fax

December 5, 2010 ECN Project No. 05-106

Mr. Jason Powell. Powell Distributing Company 9125 North Burrage Portland, Oregon 97217

SUBJECT: Third Quarter 2009

Groundwater Monitoring Report

Former Molalla Kwik Gas 305 West Main Street Molalla, Oregon

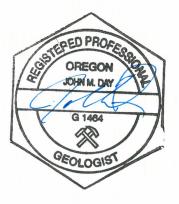
DEQ LUST File No.: 03-05-461

Dear Mr. Powell:

Environmental Compliance Northwest, Inc., (ECN) is pleased to submit this Groundwater Monitoring Report for the above referenced facility. We hope this report meets your needs at this time. If you should require additional information, please contact us at 503-372-9760.

Sincerely,

ENVIRONMENTAL COMPLIANCE NORTHWEST, INC.



John M. Day, RG Principal Geologist President

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1.0 INTRODUCTION

This report describes results of the third quarter 2009 groundwater monitoring and sampling activities conducted at the former Kwik Gas service station located at 305 West Main Street in Molalla, Oregon (Figure 1).

2.0 SITE DESCRIPTION

The site is located on the north side of West Main Street, approximately 100 feet west of Kennel Avenue near downtown Molalla and was formerly used as a fuel service station. The site is currently occupied by an automobile detail facility. A former service station building is located in the southeastern portion of the site. The UST cavity, formerly containing four 10,000-gallon tanks is located in the northwestern portion of the site and a former fuel dispenser island is located south of the station building. The site and surrounding area are relatively flat generally covered with gravel, with the exception of the former fuel dispenser island area, which is paved with asphalt. The locations of pertinent site features are shown on Figure 2.

3.0 BACKGROUND

The following background information was obtained from DEQ files, verbal discussions with Powell Distributing Company (Powell) personnel, and activities observed and conducted by ECN. The facility operated since at least 1977 until 2005 and consisted of a retail fueling and automotive repair facility. The former UST system consisted of three gasoline USTs and one diesel UST, located in the northwest corner of the site and one fuel dispenser island, located in the southern portion of the site (Figure 2). In April 2005, an apparent leak was detected in the underground product piping. A portion of the piping was uncovered and several small holes were observed in the piping.

In March 2005, ECN conducted initial site assessment activities consisting of drilling two hand auger borings adjacent to the fuel product piping. Subsurface soil sampling indicated the presence of petroleum hydrocarbon impact to soil in to the maximum explored depth of 8.5 feet below ground surface (bgs).

Also in March 2005, ECN conducted site assessment activities, including drilling a total of nine soil borings. Seven borings were completed adjacent and in the vanity of the underground product piping trench. Two of the borings were completed adjacent to the former fuel island. Petroleum hydrocarbons were detected in soil samples collected from each boring, with the exception of the boring completed located near the northwest corner of the former service station

building. Grab groundwater samples were collected from four of the borings. Petroleum hydrocarbons were detected in each grab groundwater sample collected.

Between September and October 2006, the UST system (consisting of four USTs and underground product piping) were decommissioned by removal. Two soil samples were collected from beneath each UST. In addition, one soil sample was collected from the south sidewall of the UST cavity and from beneath each of the three former fuel dispensers.

Petroleum hydrocarbons were not detected the soil samples collected from beneath the former USTs, with the exception of the southeastern portion of the former UST cavity, near the location where the product piping entered the cavity. Gasoline- and diesel-range hydrocarbons were detected in the soil samples collected from the former fuel dispensers (ECN, 2007).

A total of four monitoring wells (MW-1 through MW-4) were installed and two soil borings (B-101 and B-102) were completed in May 2007. The locations of the monitoring wells are shown on Figures 2 and 3. Borings B-101 and B-102 were drilled north and east of the existing building, respectively, to further define soil and groundwater impacts. Laboratory results indicated that the highest petroleum hydrocarbons were detected in the samples collected from MW-4, located adjacent to the former underground product piping. Lower petroleum hydrocarbon concentrations were detected in the other three monitoring wells, as well as in boring B-102 (ECN, 2010a).

Groundwater monitoring has been conducted at the site since the monitoring wells were installed.

4.0 FIELD ACTIVITIES

Field procedures for the third quarter 2009 groundwater monitoring and sampling were performed in accordance with DEQ guidelines. On September 29, 2009, depth to groundwater was measured and groundwater samples were collected monitoring wells MW-1 through MW-4. Prior to purging and sampling, the depth to water in the wells was measured from a permanent mark on top the well casing to the nearest 0.01-foot using an electronic water level indicator. The depth to water and top of casing elevation data were used to calculate the groundwater elevation in each well in reference to mean sea level (MSL). The survey data and historic groundwater elevation measurements collected through the third quarter 2009 monitoring event are presented in Table 1.

Prior to sample collection, monitoring wells were purged of at least three casing volumes. Groundwater samples were collected for laboratory analysis by lowering a bottom-fill, disposable bailer to just below the water level in the well. The collected water sample was then transferred from the bailer into laboratory-supplied containers.

5.0 ANALYTICAL TEST METHODS

Each groundwater sample collected during the third quarter 2009 monitoring event was analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX). Groundwater samples collected from wells MW-3 and MW-4 were analyzed for DEQ risk-based decision making (RBDM) volatile organic compounds (VOCs) by EPA Method 8260B. In addition to BTEX, the RBDM VOCs include:; 1,2,4-trimethylbenzene (1,2,4-TMB); ethylene dibromide (EDB); ethylene dichloride (EDC); 1,3,5-trimethylbenzene (1,3,5-TMB); isopropylbenzene (IPB) methyl-tertiary butyl ether (MTBE); n-propylbenzene (NPB); and naphthalene. Each sample was also analyzed for diesel-range hydrocarbons (diesel) and lube oilrange petroleum hydrocarbons (lube oil) by Northwest Method NWTPH-Dx, and gasoline-range hydrocarbons by Northwest Method NWTPH-Gx. Select groundwater samples were analyzed for dissolved lead by EPA Method 6010 and polynuclear aromatic hydrocarbons (PAHs) by DEQ Method 8270SIM.

6.0 FINDINGS

Following are the physical and chemical results for the third quarter 2009 groundwater monitoring and sampling activities at the site. Naphthalene results are reported on both Table 1 and 2. The differing results shown in groundwater samples are a result of separate extraction methods. The concentrations from the VOC analyses are reported on the analytical results map (Figure 3).

Physical Results

The depth to water in the monitoring wells, as measured on September 29, 2009, ranged from 8.96 to 20.13 feet below the top of well casings. The groundwater flow direction was interpreted to be to the west-southwest with an average hydraulic gradient of approximately 0.12 feet per foot. Compared to the second quarter 2009 monitoring data, groundwater elevations in the monitoring wells decreased between 2.17 and 5.70 feet.

The groundwater elevation and flow direction data for the third quarter 2009 monitoring event are shown on Figure 2.

Chemical Results

MW-1 and MW-2: Diesel-, lube oil-, and gasoline-range hydrocarbons; and BTEX constituents were not detected at or above the corresponding laboratory reporting limits.

MW-3: Diesel-range hydrocarbons (275 micrograms per liter $[\mu g/L]$), gasoline-range hydrocarbons (631 $\mu g/L$), IPB (1.26 $\mu g/L$, and dissolved lead (1.8 $\mu g/L$) were detected.

MW-4: Diesel-range hydrocarbons (2,760 μg/L); lube oil-range hydrocarbons (805 μg/L); gasoline-range hydrocarbons (13,300 μg/L); benzene (925 μg/L); toluene (7.07 μg/L); ethylbenzene (869 μg/L); total xylenes (30.00 μg/L); 1,2,4-TMB (30.4 μg/L); 1,3,5-TMB (34.3 μg/L); IPB (115 μg/L); MTBE (7.61 μg/L); NPB (7.16 μg/L); naphthalene (540 μg/L); and dissolved lead (1.5 μg/L) were detected. The following PAHs were also detected: acenaphthene (0.172 μg/L); acenaphthylene (0.0858 μg/L); fluorine (0.210 μg/L); naphthalene (145 μg/L); and phenanthrene (0.0953 μg/L).

The groundwater sampling results for the third quarter 2009 monitoring event are shown on Figure 3 and summarized in Tables 1 and 2.

7.0 RISK-BASED EVALUATION OVERVIEW

In 1999, the Oregon DEQ issued the *Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites* guidance document (DEQ, 1999). This guidance document listed Risk-Based Concentration (RBC) cleanup levels that are based on current and potential future land and water uses at a site. The RBC cleanup levels are periodically revised, the most recent being September 15, 2009.

A detailed assessment of potential exposure pathways has not yet been conducted for the site. Although a conceptual site model has not been completed, based on our current knowledge of site conditions, the potentially complete exposure pathways for groundwater include: 1) vapor intrusion into buildings (occupational); 2) volatilization to outdoor air (occupational); and 3) groundwater in an excavation for a construction or excavation worker. The potentially applicable RBCs are shown on Tables 1 and 2.

The groundwater sample collected from monitoring well MW-4 during the third quarter 2009 monitoring event exceeded the groundwater in an excavation exposure pathway RBCs for gasoline-range hydrocarbons and naphthalene.

8.0 SUMMARY AND CONCLUSIONS

The site was operated as a retail fueling facility until March 2005. An apparent petroleum hydrocarbon release from the underground product piping was reported to DEQ on March 15, 2005. The site is currently operated as automotive detailing facility and is an area of commercial development.

ECN conducted site assessment activities between March and April 2005, consisting of advancing hand soil borings, limited excavation of apparent impacted soil associated with the product piping release, and drilling a total nine soil borings. Soil and water samples collected during the site assessment activities indicated that both soil and the shallow water-bearing zone in the vicinity of the product piping were impacted by petroleum hydrocarbons.

The four USTs at the site were decommissioned by removal in October 2006. Petroleum hydrocarbon-impacted backfill material was encountered adjacent to the fill port of one the USTs. Analytical results of samples collected from beneath the former fuel dispensers indicated that residual diesel- and gasoline-range hydrocarbons were present in the southern portion of the site.

A total of four groundwater monitoring wells and two soil borings were completed at the site in May 2007. Analytical results from the groundwater samples collected indicated that petroleum hydrocarbons were present in each monitoring well, the highest levels reported were in MW-4

Based on initial and current groundwater elevation direction data, it appears that the generalized shallow water-bearing zone flow direction varies between west-southwest and southwest.

The only petroleum hydrocarbon concentrations (gasoline-range and naphthalene) exceeding the potentially complete exposure pathway RBCs were detected in MW-4. Based on current and historical analytical results, impacts to the shallow water-bearing zone exceeding RBCs appear to be isolated to the immediate vicinity of MW-4.

9.0 REFERENCES

ECN, 2007. Site Assessment and UST Decommissioning Report, Molalla Kwik Gas, 305 West Main Street, Molalla, Oregon, DEQ File No. 03-05-461. April 17.

ECN, 2010a. Additional Site Assessment and Monitoring Installation Report, Former Molalla Kwik Gas, 305 West Main Street, Molalla, Oregon, DEQ File No. 03-05-461. October 14.

ECN, 2010b. First Quarter 2008 Groundwater Monitoring Report, Former Molalla Kwik Gas, 305 West Main Street, Molalla, Oregon, DEQ File No. 03-05-461. December 1.

ECN, 2010c. Third Quarter 2008 Groundwater Monitoring Report, Former Molalla Kwik Gas, 305 West Main Street, Molalla, Oregon, DEQ File No. 03-05-461. December 2.

ECN, 2010d. First Quarter 2009 Groundwater Monitoring Report, Former Molalla Kwik Gas, 305 West Main Street, Molalla, Oregon, DEQ File No. 03-05-461. December 3.

ECN, 2010e. Second Quarter 2009 Groundwater Monitoring Report, Former Molalla Kwik Gas, 305 West Main Street, Molalla, Oregon, DEQ File No. 03-05-461. December 4.

Oregon Department of Environmental Quality, 1999 and 2003. Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites (OAR 340-122-0205 through 0360). September 29, 1999, updated September 22, 2003.

Oregon Department of Environmental Quality, 2000. UST Cleanup Manual, Cleanup Rules for Leaking Petroleum UST Systems, OAR 340-122-0205 through 340-122-0360, and Associated Documents. Oregon Department of Environmental Quality, Portland, Oregon, December.

Oregon Department of Environmental Quality, 2009. Risk-Based Concentrations for Individual Chemicals. September 15.

10.0 LIMITATIONS

Environmental Compliance Northwest, Inc., has performed the work described in this report in accordance with the generally accepted standard of care existing in the State of Oregon at the time of the assessment. Judgments leading to conclusions and recommendations are generally made with an incomplete knowledge of the subsurface and historical conditions applicable to the study area. More extensive studies may be used to supplement the information presented in this report. Environmental Compliance Northwest, Inc., should be notified for additional consultation if Powell Distributing Company wishes to reduce uncertainties beyond the level associated with this assessment. Our assessment of the property also may change, as new data becomes available during additional site exploration, remediation, or development.

Since site activities and regulations beyond our control could change at any time after the completion of this report, our observations, findings, and opinions can be considered valid only as of the date of the report.

No warranty, express or implied is made.

TABLES

TABLE 1 Groundwater Analytical Results - TPH-Dx, TPH-G, RBDM VOCs, and Dissolved Lead Former Kwik Gas Station 305 West Main Street Molalla, Oregon ECN Project No. 05-106



	Date of	Casing	Depth to	Groundwater	Change in	TPH	-Dx [1]	TPH-G	В	Т	Е	Х	1,2,4-TMB	EDB	EDC	1,3,5-TMB	IPB	MTBE	NPB	Naph- thalene	Dissolved Lead	LAB
Well I.D.	Sampling	Elevation (Feet)	Water (Feet)	Elevation (Feet)	Elevation (Feet)	Diesel	Lube Oil	[2]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[4]	
MW-1	6/5/2007	94.77	13.82	80.95		247	116	624	40.5	7.16	51.2	67.4	9.34	ND<1.00	ND<1.00	5.98	2.95	ND<1.00	5.04	ND<1.00		SA
10100	3/30/2008	94.77	8.06	86.71	5.76	ND<245	ND<491	ND<100	ND<0.300	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00		SA
	9/28/2008	94.77	17.41	77.36	-9.35	ND<243	ND<487	ND<100	ND<0.300	ND<0.500	ND<0.500	ND<1.50										SA
	3/26/2009	94.77	9.54	85.23	7.87	ND<238	ND<476	ND<100	ND<0.300	ND<0.500	ND<0.500	ND<1.50								ND :4 00		SA
	6/30/2009	94.77	14.43	80.34	-4.89	ND<86.3	ND<216		0.910	ND<1.00	ND<1.00	ND<3.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00		SA
	9/29/2009	94.77	20.13	74.64	-5.7	ND<249	ND<498	ND<100	ND<0.300	ND<0.500	ND<0.500	ND<1.50										SA
MW-2	6/5/2007	93.73	9.36	84.37		237	ND<100	ND<100	ND<0.300	ND<0.500		ND<1.50								ND 44 00		SA SA
	3/30/2008	93.73	3.35	90.38	6.01	ND<248	ND<495	ND<100	ND<0.300	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00		SA
	9/28/2008	93.73	11.10	82.63	-7.75	ND<242	ND<483	ND<100	ND<0.300	ND<0.500		ND<1.50										SA
	3/26/2009	93.73	3.50	90.23	7.6	ND<236	ND<473	ND<100	ND<0.300	ND<0.500		ND<1.50					110 -4 00	ND -4 00	ND 44 00	ND<1.00		SA
	6/30/2009	93.73	9.36	84.37	-5.86	ND<82.5	ND<206		ND<0.300	ND<1.00	ND<1.00	ND<3.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00		SA
	9/29/2009	93.73	14.09	79.64	-4.73	ND<485	ND<971	ND<100	ND<0.300	ND<0.500	ND<0.500	ND<1.50										34
MW-3	6/5/2007	93.44	6.65	86.79		ND<49.9	ND<49.9	363	ND<0.300	0.84	2.04	ND<1.50										SA
	3/30/2008	93.44	4.31	89.13	2.34	269	ND<485	589	ND<0.300	ND<1.00	ND<1.00	ND<3.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00		SA
	9/28/2008	93.44	6.46	86.98	-2.15	350	ND<541	787	ND<0.300	ND<1.00	ND<1.00	ND<3.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	1.00	ND<1.00	ND<1.00	ND<1.00	0.65	SA
	3/26/2009	93.44	4.62	88.82	1.84	277	ND<478	429	ND<0.300	ND<1.00	ND<1.00	ND<3.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	1.1	SA
	6/30/2009	93.44	6.79	86.65	-2.17	194	ND<203		ND<0.300	ND<1.00	ND<1.00	ND<3.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	1.21	ND<1.00	ND<1.00	ND<1.00	1.1	SA
	9/29/2009	93.44	8.96	84.48	-2.17	275	ND<482	631	ND<0.300	ND<1.00	ND<1.00	ND<3.00	ND<1.00	ND<1.00	ND<1.00	ND<1.00	1.26	ND<1.00	ND<1.00	ND<1.00	1.8	SA
MW-4	6/5/2007	94.10	7.16	86.94		2,060	3,500	7,370	326	5.97	216	336.2	239	ND<1.00	ND<1.00	55	34.4	6.92	66.2	55.6	14	SA
	3/30/2008	94.10	4.29	89.81	2.87	2,050	ND<489	15,900	985	8.93	397	343.0	386	ND<1.00	ND<1.00	43.4	92.2	11.3	261	150	2.5	SA
	9/28/2008	94.10	7.69	86.41	-3.4	2,070	665	14,000	979	9.74	743	167.8	332	ND<1.00	ND<1.00	88.3	125	ND<1.00	460	766	0.34	SA
	3/26/2009	94.10	4.54	89.56	3.15	1,700	893	8,010	480	4.49	356	91.4	125	ND<1.00	ND<1.00	23.7	87.6	1.80	185	119	0.82	SA
	6/30/2009	94.10	7.65	86.45	-3.11	1,460	310		682	7.28	769	248.2	594	ND<1.00	ND<1.00	76.7	133	2.62	438	347	1.4	SA SA
	9/29/2009	94.10	12.75	81.35	-5.1	2,760	805	13,300	925	7.07	889	30.00	30.4	ND<1.00	ND<1.00	34.3	115	7.16	395	540	1.5	3A
Risk-Based Concer									44,000		41,000	>\$	>S	960	9,500	6,800	>S	1.000.000	NE	16,000	NV	
 Volatilization to O (Occipational) 	Outdoor Air					>\$	NE	>S	14,000	>S	41,000	73	-0	900								
- Vapor Intrusion In	nto Buildings					>\$	NE	>\$	2,800	>S	7,400	>S	>\$	690	3,800	41,000	>\$	590,000	NE	10,000	NV	
(Occupational) - Groundwater in a	an Excavation					>\$	NE	13,000	1,700	210,000	4,400	23,000	1,700	28	630	1,400	>\$	62,000	NE	500	>S	
(Construction and E	Excavation Work	er)																				

ABBREVIATIONS:

B: Benzene

T: Toluene

E: Ethylbenzene X: Total Xylenes

MTBE: Metyl tertiary-butyl ether

ND: Not detected at or above the indicated laboratory reporting limit

NE: Not established by DEQ

>S: The groundwater RBC exceeds the solubility limit.

NV: This chemical is considered "nonvolatile" for purposes of the exposure calculations

- Results are in micrograms per liter (µg/L)
 (1) Nortwest Method NWTPH-Dx
 (2) Northwest Method NWTPH-Gx
- EPA Method 8021B 0r 8260B
- EPA Method 6011
- Oregon Department of Environmental Quality (DEQ) Generic Risk Based Concentrations (RBCs)
- Specialty Analytical
- (1) (2) (3) (4) (5) SA BOLD Exceeds the RBC





Polynuclear Aromatic [1]		Acenaphthene	Acenapthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	enzo(b)fluoranthene	Benzo(g,h,l)perylene	enzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoroanthene	Fluorene	ndeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	LAB
ample Identification	Sample Date				_		В	Ш	œ.		Ω			_=				
MVV-1	6/5/2007	ND<0.0503	ND<0.0503	ND<0.0503	ND<0.0503	ND<0.0503	ND<0.0503	ND<0.0503	ND<0.0503	ND<0.0503	ND<0.0503	ND<0.0503	ND<0.0503	ND<0.0503	2.81	ND<0.0503	ND<0.0503	SA
MW-2	6/5/2007	ND<0.0498	ND<0.0498	ND<0.0498	ND<0.0498	ND<0.0498	ND<0.0498	ND<0.0498	ND<0.0498	ND<0.0498	ND<0.0498	ND<0.0498	ND<0.0498	ND<0.0498	ND<0.0498	ND<0.0498	ND<0.0498	SA
,MW-3	6/5/2007	ND<0.0495	ND<0.0495	ND<0.0495	ND<0.0495	ND<0.0495	ND<0.0495	ND<0.0495	ND<0.0495	ND<0.0495	ND<0.0495	ND<0.0495	0.0792	ND<0.0495	0.287	ND<0.0495	ND<0.0495	SA
	3/26/2009	ND<0.0479	ND<0.0479	ND<0.0479	ND<0.0479	ND<0.0479	ND<0.0479	ND<0.0479	ND<0.0479	ND<0.0479	ND<0.0479	ND<0.0479	ND<0.0479	ND<0.0479	0.211	ND<0.0479	ND<0.0479	SA
	6/30/2009	0.0572	ND<0.0477	ND<0.0477	ND<0.0477	ND<0.0477	ND<0.0477	ND<0.0477	ND<0.0477	ND<0.0477	ND<0.0477	ND<0.0477	0.124	ND<0.0477	0.734	ND<0.0477	ND<0.0477	SA
MW-4	6/5/2007	0.115	ND<0.0525	ND<0.0525	ND<0.0525	ND<0.0525	ND<0.0525	ND<0.0525	ND<0.0525	ND<0.0525	ND<0.0525	ND<0.0525	0.136	ND<0.0525	83.4	0.0630	ND<0.0525	SA
	3/30/2008	0.231	ND<0.0482	ND<0.0482	ND<0.0482	ND<0.0482	ND<0.0482	ND<0.0482	ND<0.0482	ND<0.0482	ND<0.0482	0.0868	0.482	ND<0.0482	115	0.415	0.0868	SA
	9/28/2008	0.203	0.0676	ND< 0.0483	ND< 0.0483	ND< 0.0483	ND< 0.0483	ND< 0.0483	ND< 0.0483	ND< 0.0483	ND< 0.0483	0.126	0.261	ND< 0.0483	94.7	0.300	0.126	SA
	3/26/2009	0.138	ND<0.0429	ND<0.0429	ND<0.0429	ND<0.0429	ND<0.0429	ND<0.0429	ND<0.0429	ND<0.0429	ND<0.0429	0.138	ND<0.0429	ND<0.0429	56.9	0.0984	0.0591	SA
Ī	6/30/2009	0.191	0.0765	ND<0.0478	ND<0.0478	ND<0.0478	ND<0.0478	ND<0.0478	ND<0.0478	ND<0.0478	ND<0.0478	ND<0.0478	0.229	ND<0.0478	179	0.143	0.0478	SA
	9/29/2009	0.172	0.0858	ND<0.0477	ND<0.0477	ND<0.0477	ND<0.0477	ND<0.0477	ND<0.0477	ND<0.0477	ND<0.0477	ND<0.0477	0.210	ND<0.0477	145	0.0953	ND<0.0477	SA
k-Based Concentrati Occ. Volatilization to 0 Occ. Vapor Intrusion Groundwater in an Ex Construction and Exc	Outdoor Air Into buidlings ccavation	>S >S >S	NE NE NE	>S >S >S	NV NV 9.1	NV NV 0.53	NV NV >S	NE NE NE	NV NV >S	NV NV >S	NV NV 0.21	NV NV >S	>S >S >S	NV NV >S	16,000 10,000 500	NE NE NE	NV NV >S	

ND not detected at or above the indicated laboratory reporting limit SA Specialty Analytical $\mu g/L$ Micrograms per Liter

NE

NV

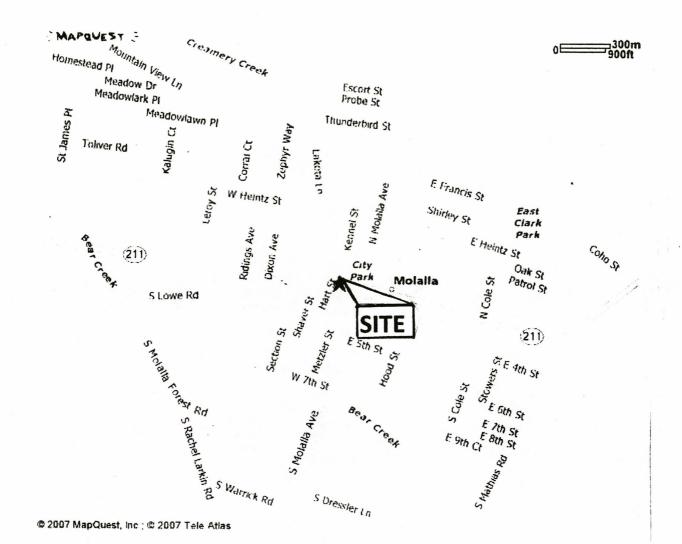
>S

A Risk-Based Concentration has not been determined for this constituent

This chemical is considered "nonvolatile" for purposes of the exposure calculation

This groundwater RBC exceeds the solubility limit. Groundwater concentrations in excess of S indicate that free product may be present. If solubility is not listed, data was not listed in Appendix D of the DEQ RBDM guidance document (DEQ, 2009).

FIGURES

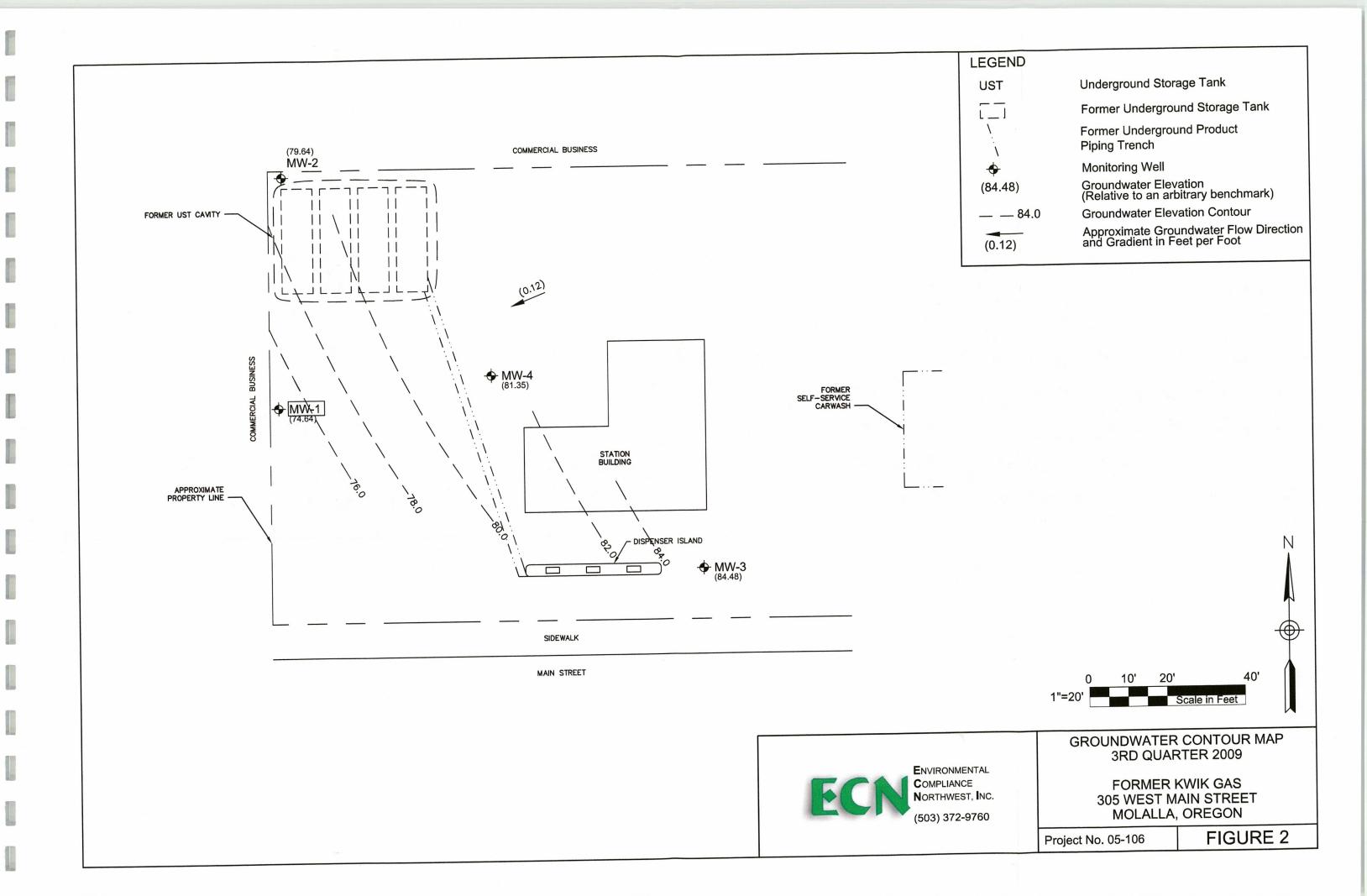


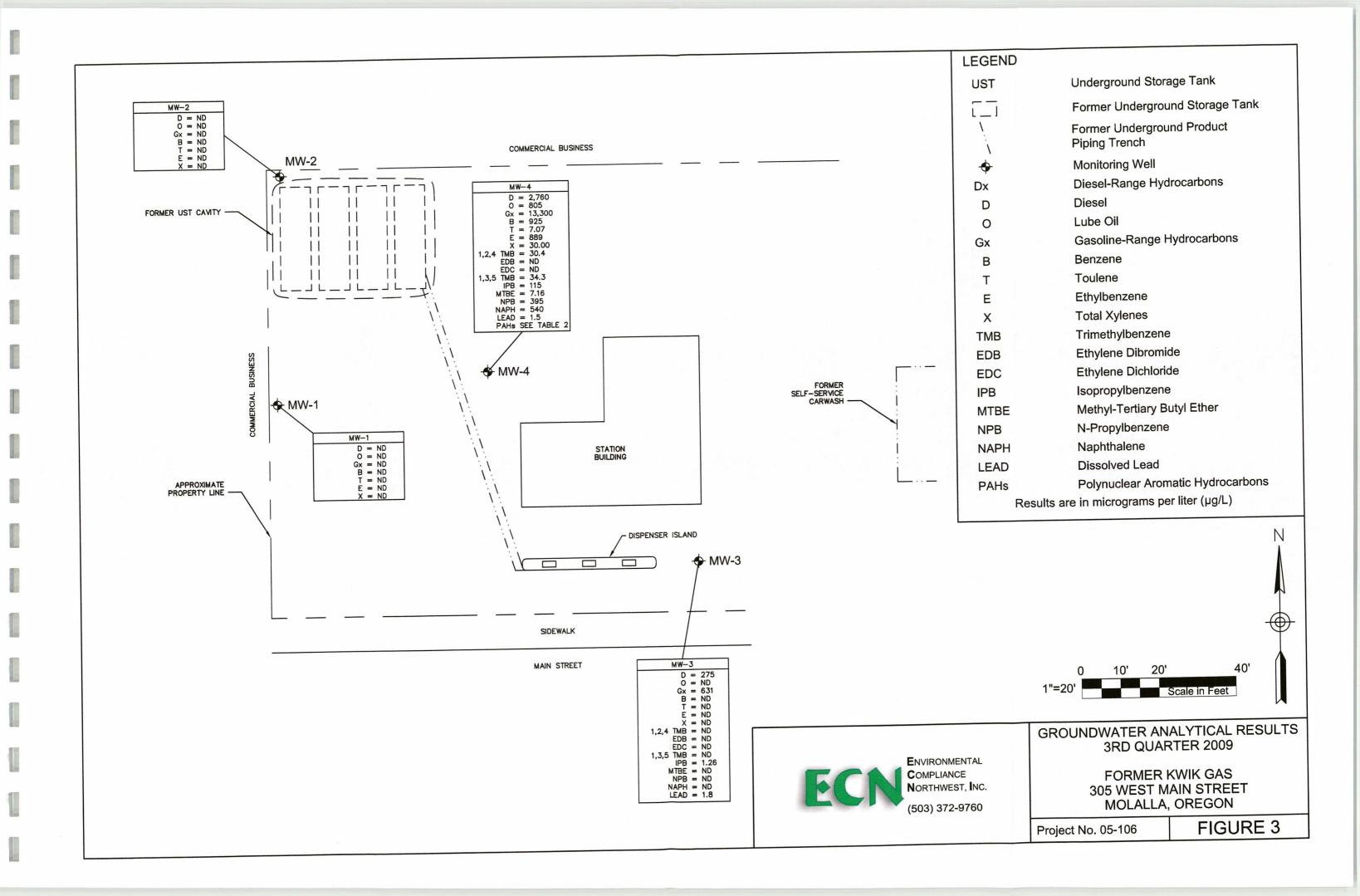
VICINITY MAP

MOLALLA KWIK GAS 305 WEST MAIN STREET MOLALLA, OREGON

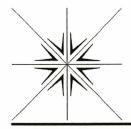
ECNW Proj. No. 05-106

FIGURE 1





APPENDIX A



11711 SE Capps Road Clackamas, OR 97015 (503) 607-1331 Fax (503) 607-1336

October 12, 2009

John Day

Environmental Compliance Northwest, Inc.

P.O. Box 230163

Portland, OR 97281

TEL: (503) 372-9760 FAX: (503) 213-9980

RE: Powell-Molalla

Dear John Day:

Order No.: 0910031

Specialty Analytical received 4 samples on 10/2/2009 for the analyses presented in the following report.

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,

Cindy Hillyard

Project Manager

Technical Review

Date: 12-Oct-09

CLIENT:

Environmental Compliance Northwest, Inc.

Lab Order:

0910031

Project:

Powell-Molalla

Lab ID:

0910031-01

Client Sample ID: MW-1

Collection Date: 9/29/2009

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX				Analyst: jrp
Diesel	ND	0.249		mg/L	1	10/6/2009
Lube Oil	ND	0.498		mg/L	1	10/6/2009
Surr: o-Terphenyl	95.2	50-150		%REC	1	10/6/2009
BTEX - RBC		SW8021B				Analyst: jrp
Benzene	ND	0.300		μg/L	1	10/7/2009
Toluene	ND	0.500		μg/L	1	10/6/2009
Ethylbenzene	ND	0.500		μg/L	1	10/6/2009
Xylenes, Total	ND	1.50		μg/L	1	10/6/2009
Surr: 4-Bromofluorobenzene	82.8	74.8-126		%REC	1	10/6/2009
NWTPH-GX		NWTPH-GX				Analyst: jrp
Gasoline	ND	100		μg/L	1	10/6/2009
Surr: 4-Bromofluorobenzene	78.7	50-150		%REC	_ 1	10/6/2009

CLIENT: Environmental Compliance Northwest, Inc.

Lab Order: 0910031

Project: Powell-Molalla

Lab ID: 0910031-02

Date: 12-Oct-09

Client Sample ID: MW-2 Collection Date: 9/29/2009

Analyses	Result	Limit (Qual Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX			Analyst: jrp
Diesel	ND	0.485	mg/L	1	10/6/2009
Lube Oil	ND	0.971	mg/L	- 1	10/6/2009
Surr: o-Terphenyl	95.1	50-150	%REC	1	10/6/2009
BTEX - RBC		SW8021B			Analyst: irp
Benzene	ND	0.300	μg/L	1	10/6/2009
Toluene	ND	0.500	μg/L	1	10/6/2009
Ethylbenzene	ND	0.500	μg/L	1	10/6/2009
Xylenes, Total	ND	1.50	μg/L	1	10/6/2009
Surr: 4-Bromofluorobenzene	80.9	74.8-126	%REC	1	10/6/2009
NWTPH-GX		NWTPH-GX			Analyst: jrp
Gasoline	ND	100	μg/L	1	10/6/2009
Surr: 4-Bromofluorobenzene	75.8	50-150	%REC	1	10/6/2009

CLIENT:

Environmental Compliance Northwest, Inc.

Lab Order:

0910031

Project:

Powell-Molalla

Lab ID:

0910031-03

Date: 12-Oct-09

Client Sample ID: MW-3

Collection Date: 9/29/2009

Analyses	Result	Limit Qua	l Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX			Analyst: jrp
Diesel	0.275	0.241	mg/L	1	10/6/2009
Lube Oil	ND	0.482	mg/L	1	10/6/2009
Surr: o-Terphenyl	92.8	50-150	%REC	1	10/6/2009
NWTPH-GX		NWTPH-GX			Analyst: jrp
Gasoline	631	100	μg/L	1	10/5/2009
Surr: 4-Bromofluorobenzene	92.8	50-150	%REC	1	10/5/2009
DISSOLVED METALS BY ICP/MS		SW6020			Analyst: zau
Lead	1.8	0.10	ug/L	1	10/5/2009 8:14:00 PM
VOLATILE ORGANICS BY GC/MS		SW8260B			Analyst: bda
1,2,4-Trimethylbenzene	ND	1.00	μg/L	1	10/6/2009 10:59:00 AM
1,2-Dibromoethane	ND	1.00	μg/L	. 1	10/6/2009 10:59:00 AM
1,2-Dichloroethane	ND	1.00	μg/L	1	10/6/2009 10:59:00 AM
1,3,5-Trimethylbenzene	ND	1.00	μg/L	1	10/6/2009 10:59:00 AM
Benzene	ND	0.300	μg/L	1	10/6/2009 10:59:00 AM
Ethylbenzene	ND	1.00	μg/L	1	10/6/2009 10:59:00 AM
Isopropylbenzene	1.26	1.00	μg/L	1	10/6/2009 10:59:00 AM
m,p-Xylene	ND	2.00	μg/L	1	10/6/2009 10:59:00 AM
Methyl tert-butyl ether	ND	1.00	μg/L	1	10/6/2009 10:59:00 AM
n-Propylbenzene	ND	1.00	μg/L	1	10/6/2009 10:59:00 AM
Naphthalene	ND	1.00	μg/L	1	10/6/2009 10:59:00 AM
o-Xylene	ND	1.00	μg/L	1	10/6/2009 10:59:00 AM
Toluene	ND	1.00	μg/L	1	10/6/2009 10:59:00 AM
Surr: 1,2-Dichloroethane-d4	99.4	72.2-129	%REC	1	10/6/2009 10:59:00 AM
Surr: 4-Bromofluorobenzene	96.4	73.5-125	%REC	1	10/6/2009 10:59:00 AM
Surr: Dibromofluoromethane	105	58.8-148	%REC	1	10/6/2009 10:59:00 AM
Surr: Toluene-d8	99.9	79.8-137	%REC	1	10/6/2009 10:59:00 AM

CLIENT: Environmental Compliance Northwest, Inc.

Lab Order: 0910031

Project:

Powell-Molalla

Lab ID:

0910031-04

Date: 12-Oct-09

Client Sample ID: MW-4

Collection Date: 9/29/2009

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX				Analyst: irp
Diesel	2.76	0.252	A1	mg/L	1	10/6/2009
Lube Oil	0.805	0.505		mg/L	1	10/6/2009
Surr: o-Terphenyl	103	50-150		%REC	1	10/6/2009
NWTPH-GX		NWTPH-GX				Analyst: jrp
Gasoline	13300	500		μg/L	5	10/5/2009
Surr: 4-Bromofluorobenzene	88.6	50-150		%REC	5	10/5/2009
DISSOLVED METALS BY ICP/MS		SW6020				Analyst:
Lead	1.5	0.10		ug/L	1	Analyst: zau 10/5/2009 8:21:00 PM
		0.10		ug/L		10/5/2009 6.21.00 PM
OW LEVEL PAH BY GC/MS OARSIM	(8270C)	8270SIM				Analyst: kmn
Acenaphthene	0.172	0.0477		μg/L	1	10/9/2009 1:53:00 PM
Acenaphthylene	0.0858	0.0477		μg/L	1	10/9/2009 1:53:00 PM
Anthracene	ND	0.0477		μg/L	1	10/9/2009 1:53:00 PM
Benz(a)anthracene	ND	0.0477		μg/L	1	10/9/2009 1:53:00 PM
Benzo(a)pyrene	ND	0.0477		μg/L	1	10/9/2009 1:53:00 PM
Benzo(b)fluoranthene	ND	0.0477		μg/L	1	10/9/2009 1:53:00 PM
Benzo(g,h,i)perylene	ND	0.0477		μg/L	1	10/9/2009 1:53:00 PM
Benzo(k)fluoranthene	ND	0.0477		μg/L	1	10/9/2009 1:53:00 PM
Chrysene	ND	0.0477		μg/L	1	10/9/2009 1:53:00 PM
Dibenz(a,h)anthracene	ND	0.0477		μg/L	1	10/9/2009 1:53:00 PM
Fluoranthene	ND	0.0477		μg/L	1	10/9/2009 1:53:00 PM
Fluorene	0.210	0.0477		μg/L	1	10/9/2009 1:53:00 PM
Indeno(1,2,3-cd)pyrene	ND	0.0477		μg/L	1	10/9/2009 1:53:00 PM
Naphthalene	145	1.19		μg/L	25	10/9/2009 3:36:00 PM
Phenanthrene	0.0953	0.0477		μg/L	1	10/9/2009 1:53:00 PM
Pyrene	ND	0.0477		μg/L	1	10/9/2009 1:53:00 PM
Surr: 2-Fluorobiphenyl	67.0	18.6-106		%REC	1	10/9/2009 1:53:00 PM
Surr: Nitrobenzene-d5	58.6	17-130		%REC	1	10/9/2009 1:53:00 PM
Surr: p-Terphenyl-d14	74.4	39.6-131		%REC	1	10/9/2009 1:53:00 PM
OLATILE ORGANICS BY GC/MS		SW8260B				Analyst: bda
1,2,4-Trimethylbenzene	30.4	1.00		μg/L	1	10/6/2009 2:29:00 PM
1,2-Dibromoethane	ND	1.00		μg/L	1	10/6/2009 2:29:00 PM
1,2-Dichloroethane	ND	1.00		μg/L μg/L	1	10/6/2009 2:29:00 PM
1,3,5-Trimethylbenzene	34.3	1.00		μg/L	1	10/6/2009 2:29:00 PM
Benzene	925	3.00		μg/L μg/L	10	10/6/2009 2:29:00 PM 10/6/2009 12:46:00 PM
Ethylbenzene	889	10.0		μg/L μg/L	10	
sopropylbenzene	115	1.00			10	10/6/2009 12:46:00 PM
n,p-Xylene	24.6	2.00		μg/L		10/6/2009 2:29:00 PM
Methyl tert-butyl ether	7.16			µg/L	1	10/6/2009 2:29:00 PM
n-Propylbenzene	395	1.00 10.0		µg/L µg/L	1 10	10/6/2009 2:29:00 PM 10/6/2009 12:46:00 PM

CLIENT: Environmental Compliance Northwest, Inc.

Lab Order: 0910031

Project:

Powell-Molalla

Lab ID:

0910031-04

Date: 12-Oct-09

Client Sample ID: MW-4

Collection Date: 9/29/2009

Analyses	Result	Limit	Qual Uni	ts DF	Date Analyzed
VOLATILE ORGANICS BY GC/MS		SW8260B			Analyst: bda
Naphthalene	540	10.0	μg/L	10	10/6/2009 12:46:00 PM
o-Xylene	5.40	1.00	μg/L	1	10/6/2009 2:29:00 PM
Toluene	7.07	1.00	μg/L	1	10/6/2009 2:29:00 PM
Surr: 1,2-Dichloroethane-d4	95.1	72.2-129	%RE	C 1	10/6/2009 2:29:00 PM
Surr: 4-Bromofluorobenzene	102	73.5-125	%RE	C 1	10/6/2009 2:29:00 PM
Surr: Dibromofluoromethane	96.4	58.8-148	%RE	C 1	10/6/2009 2:29:00 PM
Surr: Toluene-d8	103	79.8-137	%RE	C 1	10/6/2009 2:29:00 PM

CLIENT:

Environmental Compliance Northwest, Inc.

Work Order:

0910031

Project:

Powell-Molalla

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_WDISS

Date: 12-Oct-09

Sample ID:	0910030-03CMS	SampType:	MS	TestCod	le: 6020_WD I	ISS Units: ug/L	15	Prep Date	e: 10/5/20	09	Run ID: ICP	MS_091005	D
Client ID:	ZZZZZ	Batch ID:	24143	TestN	lo: SW6020			Analysis Date	e: 10/5/20	09	SeqNo: 631	767	
Analyte	1		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			51.14	0.10	50	0	102	70	130	0	0		
Sample ID:	0910030-03MSD	SampType:	MSD	TestCod	le: 6020_WDI	SS Units: ug/L		Prep Date	9 :		Run ID: ICP	MS 091005I	D
Client ID:	ZZZZZ	Batch ID:	24143	TestN	lo: SW6020			Analysis Date	e: 10/5/20	09	SeqNo: 631	- 768	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			49.9	0.10	50	0	99.8	70	130	51.14	2.45	20	
Sample ID:	0910030-03CDUP	SampType:	DUP	TestCod	e: 6020_WDI	SS Units: ug/L		Prep Date	: 10/5/20	09	Run ID: ICP	MS_091005)
Client ID:	ZZZZZ	Batch ID:	24143	TestN	lo: SW6020			Analysis Date	: 10/5/20	09	SeqNo: 631	766	
Analyte		9	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			ND	0.10	0	0	0	0	0	0	0	20	
Sample ID:	ccv	SampType:	ccv	TestCod	e: 6020_WDI	SS Units: ug/L		Prep Date):		Run ID: ICP	MS 091005)
Client ID:	ZZZZZ	Batch ID:	24143	TestN	o: SW6020			Analysis Date	: 10/5/20	09	SeqNo: 631		
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			52.89	0.10	50	0	106	90	110	0	0		
Sample ID:	ccv	SampType:	ccv	TestCod	e: 6020_WDI	SS Units: ug/L		Prep Date):		Run ID: ICP	MS_091005E)
Client ID:	ZZZZZ	Batch ID:	24143	TestN	o: SW6020			Analysis Date	: 10/5/20	09	SeqNo: 631	773	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			51.37	0.10	50	0	103	90	110	0	0		

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

Environmental Compliance Northwest, Inc.

Work Order:

0910031

Project:

Powell-Molalla

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_WDISS

Sample ID: ICB-24143 Client ID: ZZZZZ	SampType: ICB Batch ID: 24143	TestCode: 6020_WDISS Units: ug/L TestNo: SW6020	Prep Date: 10/5/2009 Analysis Date: 10/5/2009	Run ID: ICPMS_091005D SeqNo: 631764
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Lead	ND	0.10 0 0	0 0 0 0	0
Sample ID: ICV Client ID: ZZZZZ	SampType: ICV Batch ID: 24143	TestCode: 6020_WDISS Units: ug/L TestNo: SW6020	Prep Date: Analysis Date: 10/5/2009	Run ID: ICPMS_091005D SeqNo: 631762
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual

Environmental Compliance Northwest, Inc.

Work Order:

0910031

Project:

Powell-Molalla

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_W

Sample ID: MB-24147 Client ID: ZZZZZ	SampType: MBLK Batch ID: 24147		de: 8260_W No: SW8260B	Units: µg/L		Prep Date Analysis Date			Run ID: 597 SeqNo: 631	73J_091006 <i>E</i> 1858	A
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
1,2,4-Trimethylbenzene	ND	1.00							-		
1,2-Dibromoethane	ND	1.00									
1,2-Dichloroethane	ND	1.00									
1,3,5-Trimethylbenzene	ND	1.00									
Benzene	ND	0.300									
thylbenzene	0.14	1.00									
sopropylbenzene	ND	1.00									J
n,p-Xylene	0.14	2.00									1
Methyl tert-butyl ether	ND	1.00									J
n-Propylbenzene	0.1	1.00									
Naphthalene	0.87	1.00									J
-Xylene	ND	1.00									Ü
oluene	ND	1.00									
Surr: 1,2-Dichloroethane-d4	98.66	0	100	0	98.7	72.2	129	0	0		
Surr: 4-Bromofluorobenzene	96.53	0	100	0	96.5	73.5	125	0	0		
Surr: Dibromofluoromethane	103.8	0	100	0	104	58.8	148	0	0		
Surr: Toluene-d8	102.6	0	100	0	103	79.8	137	0	0		
Sample ID: LCS-24147	SampType: LCS	TestCod	e: 8260_W	Units: µg/L		Prep Date	: 10/6/20	09	Run ID: 597	3J_091006A	
Client ID: ZZZZZ	Batch ID: 24147	TestN	lo: SW8260B			Analysis Date:	10/6/20	09	SeqNo: 631		
nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	33.44	0.300	40	0	83.6	77.9	125	0	0		
oluene	34.59	1.00	40	0	86.5	74.6	119	0	0		
Sample ID: A0910042-01BMS	SampType: MS	TestCod	e: 8260_W	Units: µg/L		Prep Date:	: 10/6/200)9	Run ID: 597	3J 091006A	
Client ID: ZZZZZ	Batch ID: 24147	TestN	o: SW8260B			Analysis Date:)9	SeqNo: 631		
analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
enzene	41.73	0.300	40	1.84	99.7	71.5	118	0	0	7	
oluene	44.4	1.00	40	0.49	110	79.6	121	0	0		

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

Page 3 of 14

Environmental Compliance Northwest, Inc.

Work Order:

0910031

Project:

Powell-Molalla

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_W

Sample ID: A09 Client ID: ZZZ		SampType: Batch ID:			le: 8260_W	Units: µg/L		Prep Da			Run ID: 597	_	\
				10311	10. SW0200B			Analysis Da	te: 10/6/20	009	SeqNo: 631	1893	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene			41.22	0.300	40	1.84	98.5	71.5	118	41.73	1.23	20	
Toluene			43.42	1.00	40	0.49	107	79.6	121	44.4	2.23	20	
Sample ID: CCV	/-24147	SampType:	ccv	TestCod	le: 8260_W	Units: µg/L		Prep Dat	te:		Run ID: 597	3J 091006A	
Client ID: ZZZ	ZZ	Batch ID:	24147	TestN	lo: SW8260B			Analysis Dat	e: 10/6/2 0	009	SeqNo: 631		
Analyte	·		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene			38.22	1.00	40	0	95.6	80	120	0	0		
Toluene			38.06	1.00	40	0	95.2	80	120	0	0		
Sample ID: CCV	/-24147	SampType:	ccv	TestCod	e: 8260_W	Units: µg/L		Prep Dat	e:		Run ID: 597	3J 091006A	
Client ID: ZZZ	ZZ	Batch ID:	24147	TestN	o: SW8260B			Analysis Dat	e: 10/6/2 0	009	SeqNo: 631		
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene			43.49	1.00	40	0	109	80	120	0	0		
Toluene			42.05	1.00	40	0	105	80	120	0	0		
Sample ID: CCV	/-24147	SampType:	ccv	TestCod	e: 8260_W	Units: µg/L		Prep Date	e:		Run ID: 597	3J 091006A	
Client ID: ZZZ	ZZ	Batch ID:	24147	TestN	o: SW8260B			Analysis Date	e: 10/7/20	09	SeqNo: 632		
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene			43.65	1.00	40	0	109	80	120	0	0		
Toluene			41.88	1.00	40	0	105	80	120	0	0		
Sample ID: CCV	-24147	SampType:	ccv	TestCode	e: 8260_W	Units: µg/L		Prep Date	e:		Run ID: 597	3J_091006A	
Sample ID: CCV-		SampType: Batch ID:			e: 8260_W o: SW8260B	Units: µg/L		Prep Date Analysis Date		09	Run ID: 597 : SeqNo: 632 :		
Client ID: ZZZZ					o: SW8260B	Units: µg/L SPK Ref Val	%REC	Analysis Date	e: 10/8/20	09 RPD Ref Val	SeqNo: 632		Qual
The second secon			24147	TestN	o: SW8260B			Analysis Date	e: 10/8/20		SeqNo: 632	310	

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

Environmental Compliance Northwest, Inc.

Work Order:

0910031

Project:

Powell-Molalla

ANALYTICAL QC SUMMARY REPORT

TestCode: BTEXRBC_W

Sample ID: MB-24	4150	SampType:	MBLK	TestCo	de: BTEXRB	C_W Units: µg/L		Prep Da	ate: 10/6/2	009	Run ID: G	C-I_091006A	
Client ID: ZZZZ	Z	Batch ID:	24150	Test	No: SW8021E			Analysis Da	te: 10/6/2	009	SeqNo: 63	_	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene			0.06	0.300									
Toluene			0.22	0.500									J
Ethylbenzene			0.03	0.500									J
Xylenes, Total			ND	1.50									J
Surr: 4-Bromoflu	iorobenzene		92.12	1.00	100	0	92.1	74.8	126	0	0		
Sample ID: LCS-2	4150	SampType:	LCS	TestCod	de: BTEXRBO	_W Units: μg/L		Prep Da	te: 10/6/20	009	Run ID: Go	C-I_091006A	
Client ID: ZZZZ	z	Batch ID:	24150	TestN	lo: SW8021B			Analysis Da			SeqNo: 63		
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene			47.86	0.300	50	0	95.7	75.8	113	0	0	*	
Toluene			50.2	0.500	50	0	100	77	116	0	0		
Ethylbenzene			47.97	0.500	50	0	95.9	76.6	118	0	0		
Xylenes, Total			152.8	1.50	150	0	102	76.7	118	0	0		
Sample ID: 09100	27-01CMS	SampType:	MS	TestCoo	le: BTEXRBO	_W Units: μg/L		Prep Da	te: 10/6/20	09	Run ID: GO	C-I_091006A	
Client ID: ZZZZ	Z	Batch ID:	24150	TestN	lo: SW8021B			Analysis Dat	te: 10/6/20	09	SeqNo: 631937		
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene			21.77	0.300	25	0	87.1	67.8	118	0	0		
Toluene			22.26	0.500	25	0	89	74.7	117	0	0		
Ethylbenzene			22.36	0.500	25	0	89.4	74.5	115	0	0		
Xylenes, Total		·	69.49	1.50	75	0	92.7	76.8	120	0	0		
Sample ID: 091002	27-01CMSD	SampType:	MSD	TestCod	e: BTEXRBO	_W Units: µg/L		Prep Dat	e: 10/6/20	09	Run ID: GC	-I 091006A	
Client ID: ZZZZZ	Z	Batch ID:	24150	TestN	o: SW8021B			Analysis Dat	e: 10/6/20	09	SeqNo: 631		
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene			23.26	0.300	25	0	93	67.8	118	21.77	6.62	20	
Toluene			23.74	0.500	25	0	95	74.7	117	22.26	6.43	20	
Ethylbenzene			23.94	0.500	25	0	95.8	74.5	115	22.36	6.83	20	
Qualifiers:	ND - Not Detec	ted at the Report	ing Limit		S - Snik	e Recovery outside ac	cented recov	ery limite		R - Analyte detecte			

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

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Work Order:

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Project:

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ANALYTICAL QC SUMMARY REPORT

TestCode: BTEXRBC_W

Sample ID: 0910027-01CMSD Client ID: ZZZZZ	SampType: MSD Batch ID: 24150	TestCode: BTEXRBC_W Units: μg/L TestNo: SW8021B	Prep Date: 10/6/2009 Run ID: GC-I_091006A Analysis Date: 10/6/2009 SeqNo: 631938
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Xylenes, Total	75.18	1.50 75 0	100 76.8 120 69.49 7.87 20
Sample ID: CCV Client ID: ZZZZZ	SampType: CCV Batch ID: 24150	TestCode: BTEXRBC_W Units: μg/L TestNo: SW8021B	Prep Date: Run ID: GC-I_091006A Analysis Date: 10/6/2009 SeqNo: 631933
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene Toluene Ethylbenzene Xylenes, Total	47.86 50.2 47.97 152.8	0.300 50 0 0.500 50 0 0.500 50 0 1.50 150 0	95.7 85 115 0 0 100 85 115 0 0 95.9 85 115 0 0 102 85 115 0 0
Sample ID: CCV Client ID: ZZZZZ Analyte	SampType: CCV Batch ID: 24150 Result	TestCode: BTEXRBC_W Units: µg/L TestNo: SW8021B PQL SPK value SPK Ref Val	Prep Date: Run ID: GC-I_091006A Analysis Date: 10/7/2009 SeqNo: 632062 %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	43.77	0.300 50 0	87.5 85 115 0 0

Environmental Compliance Northwest, Inc.

Work Order:

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Project:

Powell-Molalla

ANALYTICAL QC SUMMARY REPORT

TestCode: NWTPHDX_W

Sample ID: MB-24138 Client ID: ZZZZZ	SampType: MBLK Batch ID: 24138	TestNo: NWTPHDX Units: mg/L TestNo: NWTPH-Dx	Prep Date: 10/5/2009 Analysis Date: 10/6/2009	Run ID: GC-M_091006C SeqNo: 631909
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Diesel	0.0979	0.250		J
Lube Oil	ND	0.500		
Surr: o-Terphenyl	0.5521	0 0.5 0	110 50 150 0	0
Sample ID: LCS-24138	SampType: LCS	TestCode: NWTPHDX_ Units: mg/L	Prep Date: 10/5/2009	Run ID: GC-M_091006C
Client ID: ZZZZZ	Batch ID: 24138	TestNo: NWTPH-Dx	Analysis Date: 10/6/2009	SeqNo: 631910
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Diesel	2.472	0.250 2.509 0	98.5 60.7 121 0	0
Lube Oil	2.78	0.500 2.524 0	110 64 126 0	0
Sample ID: LCSD-24138	SampType: LCSD	TestCode: NWTPHDX_ Units: mg/L	Prep Date: 10/5/2009	Run ID: GC-M_091006C
Client ID: ZZZZZ	Batch ID: 24138	TestNo: NWTPH-Dx	Analysis Date: 10/6/2009	SeqNo: 631911
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Diesel	2.414	0.250 2.505 0	96.4 60.7 121 2.472	2.36 20
Lube Oil	2.886	0.500 2.505 0	115 64 126 2.78	3.76 20
Sample ID: CCV	SampType: CCV	TestCode: NWTPHDX_ Units: mg/L	Prep Date:	Run ID: GC-M_091006C
Client ID: ZZZZZ	Batch ID: 24138	TestNo: NWTPH-Dx	Analysis Date: 10/6/2009	SeqNo: 631908
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Analyte	Result	PQL SPK value SPK Ref Val 0.250 15.02 0	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Diesel	16.66	0.250 15.02 0	111 85 115 0	0
Diesel Lube Oil	16.66 7.946	0.250 15.02 0 0.500 7.449 0	111 85 115 0 107 85 115 0	0
Diesel Lube Oil Sample ID: CCV	16.66 7.946 SampType: CCV	0.250 15.02 0 0.500 7.449 0 TestCode: NWTPHDX_ Units: mg/L	111 85 115 0 107 85 115 0 Prep Date:	0 0 Run ID: GC-M_091006C

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

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Environmental Compliance Northwest, Inc.

Work Order:

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Project:

Powell-Molalla

ANALYTICAL QC SUMMARY REPORT

TestCode: NWTPHDX_W

Sample ID: CCV Client ID: ZZZZZ	SampType: CCV Batch ID: 24138	TestCode: NWTPHDX_ Units: mg/L TestNo: NWTPH-Dx	Prep Date: Analysis Date: 10/6/2009	Run ID: GC-M_091006C SeqNo: 631926
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Lube Oil	10.13	0.500 9.932 0	102 85 115 0	0
Sample ID: CCV Client ID: ZZZZZ	SampType: CCV Batch ID: 24138	TestCode: NWTPHDX_ Units: mg/L TestNo: NWTPH-Dx	Prep Date: Analysis Date: 10/7/2009	Run ID: GC-M_091006C SeqNo: 632047
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Diesel Lube Oil	15.87 7.204	0.250 15.02 0 0.500 7.449 0	106 85 115 0 96.7 85 115 0	0
Sample ID: CCV Client ID: ZZZZZ	SampType: CCV Batch ID: 24138	TestCode: NWTPHDX _ Units: mg/L TestNo: NWTPH-Dx	Prep Date: Analysis Date: 10/7/2009	Run ID: GC-M_091006C SeqNo: 632051
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Diesel Lube Oil	20.28 9.364	0.250 20.03 0 0.500 9.932 0	101 85 115 0 94.3 85 115 0	0

Environmental Compliance Northwest, Inc.

Work Order:

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ANALYTICAL QC SUMMARY REPORT

TestCode: NWTPHGX_W

Sample ID: MB-24144 Client ID: ZZZZZ	SampType: MBLK Batch ID: 24144	TestCode: NWTPHGX Units: μg/L TestNo: NWTPH-G x	Prep Date: 10/5/2009 Analysis Date: 10/5/2009	Run ID: GC-S_091005A SeqNo: 631813
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Gasoline Surr: 4-Bromofluorobenzene	71.53 88.21	100 0 100 0	88.2 50 150 0	J O
Sample ID: MB-24151 Client ID: ZZZZZ	SampType: MBLK Batch ID: 24151	TestCode: NWTPHGX_ Units: μg/L TestNo: NWTPH-Gx	Prep Date: 10/6/2009 Analysis Date: 10/6/2009	Run ID: GC-I_091006B SeqNo: 631951
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Gasoline Surr: 4-Bromofluorobenzene	ND 71.03	100 0 100 0	71 50 150 0	0
Sample ID: LCS-24144 Client ID: ZZZZZ	SampType: LCS Batch ID: 24144	TestCode: NWTPHGX_ Units: µg/L TestNo: NWTPH-Gx	Prep Date: 10/5/2009 Analysis Date: 10/5/2009	Run ID: GC-S_091005A SeqNo: 631814
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Gasoline	1948	100 2000 0	97.4 74.4 128 0	0
Sample ID: LCS-24151 Client ID: ZZZZZ	SampType: LCS Batch ID: 24151	TestCode: NWTPHGX_ Units: µg/L TestNo: NWTPH-Gx	Prep Date: 10/6/2009 Analysis Date: 10/6/2009	Run ID: GC-I_091006B SeqNo: 631950
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Gasoline	2377	100 2500 0	95.1 74.4 128 0	0
Sample ID: 0910030-02BDUP Client ID: ZZZZZ	SampType: DUP Batch ID: 24144	TestCode: NWTPHGX_ Units: μg/L TestNo: NWTPH-Gx	Prep Date: 10/5/2009 Analysis Date: 10/5/2009	Run ID: GC-S_091005A SeqNo: 631816
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Gasoline	3589	100 0 0	0 0 0 2945	19.7 20

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ANALYTICAL QC SUMMARY REPORT

TestCode: NWTPHGX_W

1	: 0910012-07BDUP	SampType: DUP	TestCode: NWTPHGX_ Units: µg/L	Prep Date: 10/5/2009	Run ID: GC-S_091005A
Client ID:	ZZZZZ	Batch ID: 24144	TestNo: NWTPH-Gx	Analysis Date: 10/5/2009	SeqNo: 631822
Analyte		Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	
Gasoline		924	100 0 0		Quar
- L 15				0 0 0 1046	12.4 20
	: 0910027-01CDUP	SampType: DUP	TestCode: NWTPHGX_ Units: µg/L	Prep Date: 10/6/2009	Run ID: GC-I_091006B
Client ID:	ZZZZZ	Batch ID: 24151	TestNo: NWTPH-Gx	Analysis Date: 10/6/2009	SeqNo: 631953
Analyte	·	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Gasoline		ND	100 0 0	0 0 0	0 20
Sample ID:	0910043-01CDUP	SampType: DUP	TestCode: NWTPHGX_ Units: µg/L	Prep Date: 10/6/2009	Run ID: GC-I_091006B
Client ID:	ZZZZZ	Batch ID: 24151	TestNo: NWTPH-Gx	Analysis Date: 10/6/2009	SeqNo: 631955
Analyte		Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Gasoline		101.6	100 0 0	0 0 0 67.47	40.3 20 RF
Sample ID:	ccv	SampType: CCV	TestCode: NWTPHGX_ Units: µg/L	Prep Date:	Run ID: GC-S_091005A
Client ID:	ZZZZZ	Batch ID: 24144	TestNo: NWTPH-Gx	Analysis Date: 10/5/2009	SeqNo: 631812
Analyte		Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Gasoline		2547	100 2500 0	102 80 120 0	0
Sample ID:	ccv	SampType: CCV	TestCode: NWTPHGX_ Units: µg/L	Prep Date:	Run ID: GC-S_091005A
Client ID:	ZZZZZ	Batch ID: 24144	TestNo: NWTPH-Gx	Analysis Date: 10/5/2009	SeqNo: 631827
Analyte		Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Gasoline		3049	100 3000 0	102 80 120 0	0
Sample ID:	ccv	SampType: CCV	TestCode: NWTPHGX_ Units: µg/L	Prep Date:	Run ID: GC-S_091005A
Client ID:	ZZZZZ	Batch ID: R57788	TestNo: NWTPH-Gx	Analysis Date: 10/6/2009	SeqNo: 631828
Analyte	(Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Environmental Compliance Northwest, Inc.

Work Order:

0910031

Project:

Powell-Molalla

ANALYTICAL QC SUMMARY REPORT

TestCode: NWTPHGX_W

Sample ID: CCV Client ID: ZZZZZ	SampType: CCV Batch ID: R57788	TestCode: NWTPHGX_ Units: µg/L TestNo: NWTPH-Gx	Prep Date: Analysis Date: 10/6/2009	Run ID: GC-S_091005A SeqNo: 631828
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Gasoline	2313	100 2500 0	92.5 80 120 0	0
Sample ID: CCV Client ID: ZZZZZ	SampType: CCV Batch ID: 24144	TestCode: NWTPHGX_ Units: μg/L TestNo: NWTPH-Gx	Prep Date: Analysis Date: 10/6/2009	Run ID: GC-S_091005A SeqNo: 631832
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Gasoline	2584	100 3000 0	86.1 80 120 0	0
Sample ID: CCV Client ID: ZZZZZ	SampType: CCV Batch ID: 24151	TestCode: NWTPHGX_ Units: µg/L TestNo: NWTPH-Gx	Prep Date: Analysis Date: 10/6/2009	Run ID: GC-I_091006B SeqNo: 631966
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Gasoline	2640	100 3000 0	88 80 120 0	0

Environmental Compliance Northwest, Inc.

Work Order:

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ANALYTICAL QC SUMMARY REPORT

TestCode: PAHLL_W

Analyte Acenaphthene Acenaphthylene Anthracene Benz(a)anthracene Benzo(b)fluoranthene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene Surr: 2-Fluorobiphenyl Surr: Nitrobenzene-d5 Surr: p-Terphenyl-d14	Result ND ND 0.01 ND	PQL 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual J
Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene Surr: 2-Fluorobiphenyl Surr: Nitrobenzene-d5	ND 0.01 ND	0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500									J
Anthracene Benz(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene Surr: 2-Fluorobiphenyl Surr: Nitrobenzene-d5	0.01 ND	0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500									J
Benz(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene Surr: 2-Fluorobiphenyl Surr: Nitrobenzene-d5	ND N	0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500									J
Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene Surr: 2-Fluorobiphenyl Surr: Nitrobenzene-d5	ND ND ND ND ND O.02 ND ND	0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500									J
Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene Fluoranthene Fluoranthene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene Surr: 2-Fluorobiphenyl Surr: Nitrobenzene-d5	ND ND ND ND O.02 ND ND	0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500									J
Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene Surr: 2-Fluorobiphenyl Surr: Nitrobenzene-d5	ND ND ND O.02 ND ND	0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500									J
Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene Surr: 2-Fluorobiphenyl Surr: Nitrobenzene-d5	ND ND 0.02 ND ND ND	0.0500 0.0500 0.0500 0.0500 0.0500 0.0500									J
Chrysene Dibenz(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene Surr: 2-Fluorobiphenyl Surr: Nitrobenzene-d5	ND ND 0.02 ND ND ND	0.0500 0.0500 0.0500 0.0500 0.0500 0.0500									J
Dibenz(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene Surr: 2-Fluorobiphenyl Surr: Nitrobenzene-d5	ND ND 0.02 ND ND ND	0.0500 0.0500 0.0500 0.0500 0.0500									J
Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene Surr: 2-Fluorobiphenyl Surr: Nitrobenzene-d5	ND 0.02 ND ND ND	0.0500 0.0500 0.0500 0.0500									J
Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene Surr: 2-Fluorobiphenyl Surr: Nitrobenzene-d5	0.02 ND ND ND	0.0500 0.0500 0.0500									J
Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene Surr: 2-Fluorobiphenyl Surr: Nitrobenzene-d5	ND ND ND	0.0500 0.0500									J
Naphthalene Phenanthrene Pyrene Surr: 2-Fluorobiphenyl Surr: Nitrobenzene-d5	ND ND	0.0500									
Phenanthrene Pyrene Surr: 2-Fluorobiphenyl Surr: Nitrobenzene-d5	ND										
Pyrene Surr: 2-Fluorobiphenyl Surr: Nitrobenzene-d5		0.0500									
Surr: 2-Fluorobiphenyl Surr: Nitrobenzene-d5	0.03	0.0500									=
Surr: Nitrobenzene-d5	0.02	0.0500									J
	53.39	1.00	100	0	53.4	18.6	106	•			J
Surr: p-Terphenyl-d14	52.53	1.00	100	0	52.5	17	130	0	0		
	75.39	1.00	100	0	75.4	39.6	131	0	0		
Sample ID: LCS-24172 Sar	npType: LCS	TestCo	de: PAHLL_W	Units: µg/L		Prep Date	: 10/8/20	09	Run ID: 597	FO 004000A	
Client ID: ZZZZZ B	atch ID: 24172		No: 8270SIM			Analysis Date			SeqNo: 632		•
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
cenaphthene	3.41	0.0500	5	0	68.2	35.1	100	^			
Benzo(g,h,i)perylene	3.98	0.0500	5	0	79.6	20.8	120	0	0		
Chrysene	4.28	0.0500	5	0	85.6	39.1	119	0	0		
Naphthalene	3.24	0.0500	5	0	64.8	25.6		0	0		
Phenanthrene	3.56	0.0500	5	0.03	70.6		106	0	0		
Pyrene	4.22	0.0500	5	0.03	70.6 84	38.1 41.3	106 118	0	0		

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Environmental Compliance Northwest, Inc.

Work Order:

0910031

Project:

Powell-Molalla

ANALYTICAL QC SUMMARY REPORT

TestCode: PAHLL_W

Sample ID: LCSD-24172	SampType: LCSD	TestCod	de: PAHLL_W	Units: µg/L		Prep Da	te: 10/8/20	109	Run ID: 59	75Q_091008	A	
Client ID: ZZZZZ	Batch ID: 24172	Test	lo: 8270SIM			Analysis Da	te: 10/8/20	009	SeqNo: 63	2485		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Acenaphthene	2.71	0.0500	5	0	54.2	35.1	100	3.41	22.9	20	R,CN	
Benzo(g,h,i)perylene	3.4	0.0500	5	0	68	20.8	120	3.98	15.7	20	IX,OIV	
Chrysene	3.74	0.0500	5	0	74.8	39.1	119	4.28	13.5	20		
Naphthalene	2.59	0.0500	5	0	51.8	25.6	106	3.24	22.3	20	R.CN	
Phenanthrene	3.03	0.0500	5	0.03	60	38.1	106	3.56	16.1	20	IX,CIN	
Pyrene	3.77	0.0500	5	0.02	75	41.3	118	4.22	11.3	20		
Sample ID: CCV-24172	SampType: CCV	TestCod	le: PAHLL_W	Units: µg/L		Prep Dat	e:		Run ID: 5975Q_091008A			
Client ID: ZZZZZ	Batch ID: 24172	TestN	TestNo: 8270SIM			Analysis Dat		SeqNo: 632482				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Acenaphthene	4.33	0.0500	5	0	86.6	70	130	0	0	***************************************		
Acenaphthylene	4.23	0.0500	5	0	84.6	70	130	0	0			
Anthracene	4.38	0.0500	5	0	87.6	70	130	0	0			
Benz(a)anthracene	5.12	0.0500	5	0	102	70	130	0	0			
Benzo(a)pyrene	4.75	0.0500	5	0	95	70	130	0	0			
Benzo(b)fluoranthene	5.17	0.0500	5	0	103	70	130	0	0			
Benzo(g,h,i)perylene	4.79	0.0500	5	0	95.8	70	130	0	0			
Benzo(k)fluoranthene	4.81	0.0500	5	0	96.2	70	130	0	0			
Chrysene	5.08	0.0500	5	0	102	70	130	0	0			
Dibenz(a,h)anthracene	5.18	0.0500	5	0	104	70	130	0	0			
Fluoranthene	4.98	0.0500	5	0	99.6	70	130	0	0			
Fluorene	3.81	0.0500	5	0	76.2	70	130	0	0			
Indeno(1,2,3-cd)pyrene	4.97	0.0500	5	0	99.4	70	130	0	0			
Naphthalene	4.54	0.0500	5	0	90.8	70	130	0	0			
Phenanthrene	4.37	0.0500	5	0	87.4	70	130	0	0			
Pyrene	4.95	0.0500	5	0	99	70	130	0	0			

Environmental Compliance Northwest, Inc.

Work Order:

0910031

Project:

Powell-Molalla

ANALYTICAL QC SUMMARY REPORT

TestCode: PAHLL_W

Sample ID: CCV-24172 Client ID: ZZZZZ	SampType: CCV Batch ID: 24172		de: PAHLL_W No: 8270SIM		Prep Dat Analysis Dat		Run ID: 5975Q_091008A SeqNo: 632499				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	2.38	0.0500	2.5	0	95.2	70	130	0	0		
Acenaphthylene	2.37	0.0500	2.5	0	94.8	70	130	0	0		
Anthracene	2.32	0.0500	2.5	0	92.8	70	130	. 0	0		
Benz(a)anthracene	2.51	0.0500	2.5	0	100	70	130	0	0		
Benzo(a)pyrene	2.53	0.0500	2.5	0	101	70	130	0	0		
Benzo(b)fluoranthene	2.44	0.0500	2.5	0	97.6	70	130	0	0		
Benzo(g,h,i)perylene	2.43	0.0500	2.5	0	97.2	70	130	0	0		
Benzo(k)fluoranthene	2.59	0.0500	2.5	0	104	70	130	0	0		
Chrysene	2.65	0.0500	2.5	0	106	70	130	0	0		
Dibenz(a,h)anthracene	2.54	0.0500	2.5	0	102	70	130	0	0		
Fluoranthene	2.45	0.0500	2.5	0	98	70	130	0	0		
Fluorene	2.15	0.0500	2.5	0	86	70	130	0	0		
ndeno(1,2,3-cd)pyrene	2.57	0.0500	2.5	0	103	70	130	0	0		
Naphthalene	2.49	0.0500	2.5	0	99.6	70	130	0	0		
Phenanthrene	2.31	0.0500	2.5	0	92.4	70	130	0	0		
Pyrene	2.61	0.0500	2.5	0	104	70	130	0	0		

KEY TO FLAGS

- A This sample contains a Gasoline Range Organic not identified as a specific hydrocarbon product. The result was quantified against gasoline calibration standards.
- A1 This sample contains a Diesel Range Organic not identified as a specific hydrocarbon product. The result was quantified against diesel calibration standards.
- A2 This sample contains a Lube Oil Range Organic not identified as a specific hydrocarbon product. The result was quantified against a lube oil calibration standard.
- A3 The result was determined to be Non-Detect based on hydrocarbon pattern recognition. The product was carry-over from another hydrocarbon type.
- B The blank exhibited a positive result greater than the reporting limit for this compound.
- CN See Case Narrative.
- D Result is based from a dilution.
- E Result exceeds the calibration range for this compound. The result should be considered as estimate.
- F The positive result for this hydrocarbon is due to single component contamination. The product does not match any hydrocarbon in the fuels library.
- H Sample was analyzed outside recommended hold time.
- HT At clients request, sample was analyzed outside recommended hold time.
- J The result for this analyte is between the MDL and the PQL and should be considered as estimated concentration.
- K Diesel result is biased high due to amount of Oil contained in the sample.
- L Diesel result is biased high due to amount of Gasoline contained in the sample.
- M Oil result is biased high due to amount of Diesel contained in the sample.
- N Gasoline result is biased high due to amount of Diesel contained in the sample.
- MC Sample concentration is greater than 4x the spiked value, the spiked value is considered insignificant.
- MI Result is outside control limits due to matrix interference.
- MSA Value determined by Method of Standard Addition.
- O Laboratory Control Standard (LCS) exceeded laboratory control limits, but meets CCV criteria. Data meets EPA requirements.
- P Detection levels of Methylene Chloride may be laboratory contamination, due to previous analysis or background levels.
- Q Detection levels elevated due to sample matrix.
- R RPD control limits were exceeded.
- RF Duplicate failed due to result being at or near the method-reporting limit.
- RP Matrix spike values exceed established QC limits, post digestion spike is in control.
- S Recovery is outside control limits.
- SC Closing CCV or LCS exceeded high recovery control limits, but associated samples are non-detect. Data meets EPA requirements.
- * The result for this parameter was greater that the maximum contaminant level of the TCLP regulatory limit.

CHAIN OF CUSTODY RECORD

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Specialty Analytical

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