

**FOURTH 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 6, 2010



ENVIRONMENTAL COMPLIANCE NORTHWEST

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December 6, 2010
ECN Project No. 05-106

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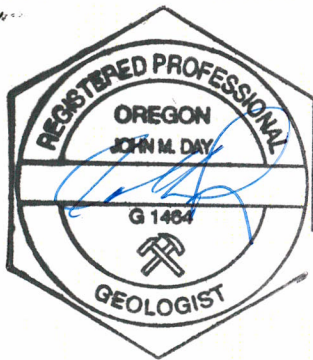
**SUBJECT: Fourth Quarter 2009
Groundwater Monitoring Report
Former Molalla Kwik Gas
305 West Main Street
Molalla, Oregon
DEQ LUST File No.: 03-05-461**

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 fourth 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 vicinity 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 fourth quarter 2009 groundwater monitoring and sampling were performed in accordance with DEQ guidelines. On December 26, 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 fourth 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 fourth 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 oil-range 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 fourth 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 December 26, 2009, ranged from 4.03 to 10.54 feet below the top of well casings. The groundwater flow direction was interpreted to be to the southwest with an average hydraulic gradient of approximately 0.10 feet per foot. Compared to the third quarter 2009 monitoring data, groundwater elevations in the monitoring wells increased between 4.57 and 10.06 feet.

The groundwater elevation and flow direction data for the fourth 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 (336 micrograms per liter [$\mu\text{g/L}$]), gasoline-range hydrocarbons (245 $\mu\text{g/L}$), IPB (1.26 $\mu\text{g/L}$), and dissolved lead (0.96 $\mu\text{g/L}$) were detected.

MW-4: Diesel-range hydrocarbons (2,730 $\mu\text{g/L}$); lube oil-range hydrocarbons (1,020 $\mu\text{g/L}$); gasoline-range hydrocarbons (21,100 $\mu\text{g/L}$); benzene (397 $\mu\text{g/L}$); toluene (4.84 $\mu\text{g/L}$); ethylbenzene (435 $\mu\text{g/L}$); total xylenes (361.2 $\mu\text{g/L}$); 1,2,4-TMB (451 $\mu\text{g/L}$); 1,3,5-TMB (25.3 $\mu\text{g/L}$); IPB (114 $\mu\text{g/L}$); MTBE (1.43 $\mu\text{g/L}$); NPB (245 $\mu\text{g/L}$); and naphthalene (509 $\mu\text{g/L}$) were detected. The following PAHs were also detected: acenaphthene (0.282 $\mu\text{g/L}$); acenaphthylene (0.126 $\mu\text{g/L}$); fluorine (0.366 $\mu\text{g/L}$); naphthalene (200 $\mu\text{g/L}$); and phenanthrene (0.209 $\mu\text{g/L}$).

The groundwater sampling results for the fourth 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 fourth 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 historic 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.

ECN, 2010f. Third Quarter 2009 Groundwater Monitoring Report, Former Molalla Kwik Gas, 305 West Main Street, Molalla, Oregon, DEQ File No. 03-05-461. December 5.

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



Well I.D.	Date of Sampling	Casing Elevation (Feet)	Depth to Water (Feet)	Groundwater Elevation (Feet)	Change in Elevation (Feet)	TPH-Dx [1]		TPH-G [2]	B [3]	T [3]	E [3]	X [3]	1,2,4-TMB [3]	EDB [3]	EDC [3]	1,3,5-TMB [3]	IPB [3]	MTBE [3]	NPB [3]	Naphthalene [3]	Dissolved Lead [4]	LAB
						Diesel	Lube Oil															
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
	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	---	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	---	---	---	---	---	---	---	---	---	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	---	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
	12/26/2009	94.77	10.54	84.23	9.59	ND<243	ND<487	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<0.500	ND<1.50	---	---	---	---	---	---	---	---	---	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	---	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<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<0.500	ND<1.50	---	---	---	---	---	---	---	---	---	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	---	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	---	---	---	---	---	---	---	---	---	SA
	12/26/2009	93.73	4.03	89.70	10.06	ND<275	ND<552	ND<100	ND<0.300	ND<0.500	ND<0.500	ND<1.50	---	---	---	---	---	---	---	---	---	SA
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	---	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
	12/26/2009	93.44	4.39	89.05	4.57	336	ND<513	245	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	0.96	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
	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	SA
	12/26/2009	94.10	4.36	89.74	8.39	2,730	1,020	21,100	397	4.84	435	361.2	451	ND<1.00	ND<1.00	25.5	114	1.43	245	509	ND<0.10	SA
Risk-Based Concentrations [5]						>S	NE	>S	14,000	>S	41,000	>S	>S	960	9,500	6,800	>S	1,000,000	NE	16,000	NV	
- Volatilization to Outdoor Air (Occupational)						>S	NE	>S	2,800	>S	7,400	>S	>S	690	3,800	41,000	>S	590,000	NE	10,000	NV	
- Vapor Intrusion Into Buildings (Occupational)						>S	NE	13,000	1,700	210,000	4,400	23,000	1,700	28	630	1,400	>S	62,000	NE	500	>S	
- Groundwater in an Excavation (Construction and Excavation Worker)																						

ABBREVIATIONS:
B: Benzene
T: Toluene
E: Ethylbenzene
X: Total Xylenes
MTBE: Methyl 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) Northwest Method NWTPH-Dx
(2) Northwest Method NWTPH-Gx
(3) EPA Method 8021B Or 8260B
(4) EPA Method 6011
(5) Oregon Department of Environmental Quality (DEQ) Generic Risk Based Concentrations (RBCs)
SA Specialty Analytical
BOLD Exceeds the RBC

TABLE 2
Groundwater Analytical Results (PAHs)
Former Molalla Kwik Gas
305 West Main Street
Molalla, Oregon
ECN Project No. 05-106

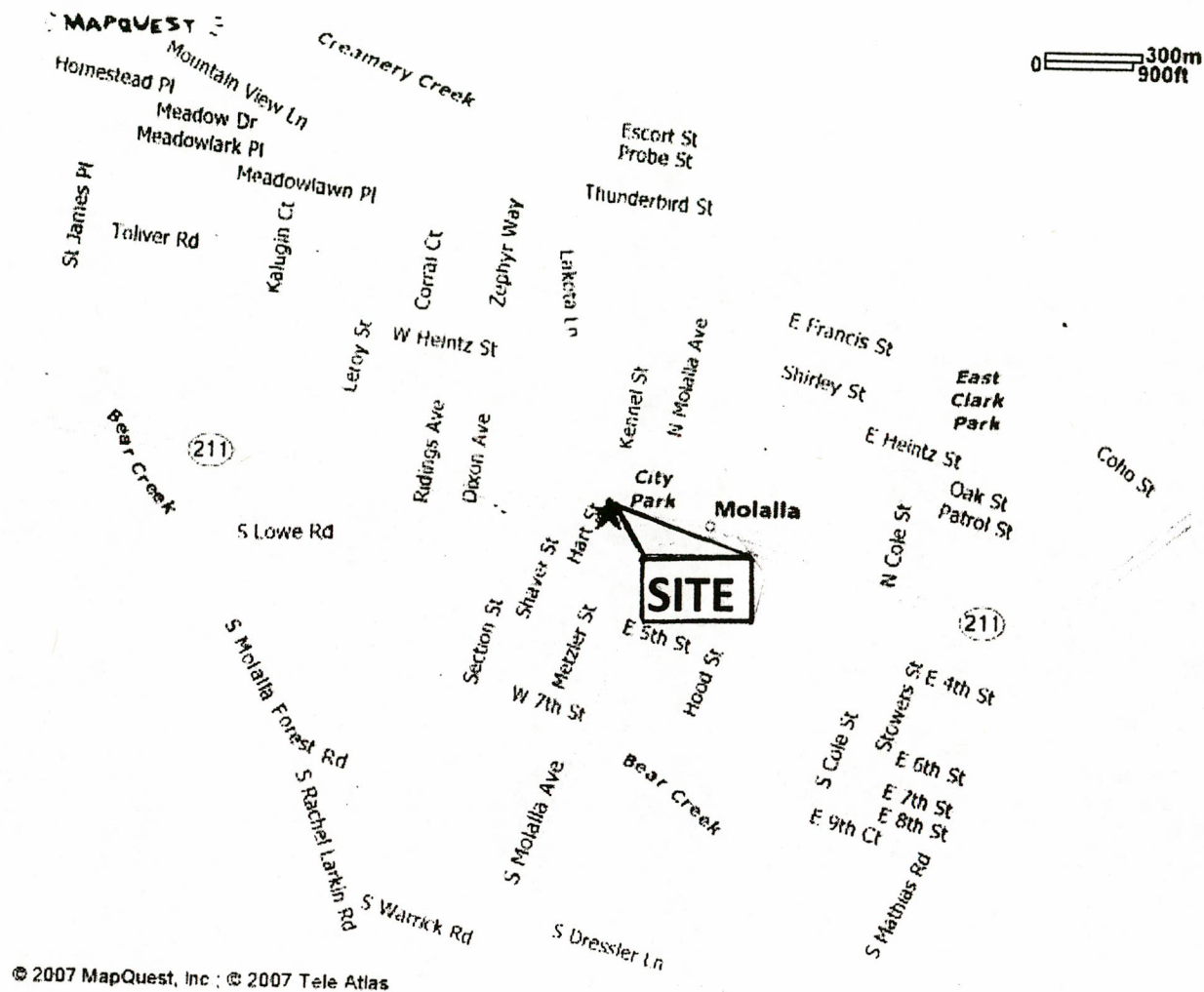


Polynuclear Aromatic Hydrocarbons (µg/L) [1]		Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoroanthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	LAB
Sample Identification	Sample Date																	
MW-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
	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
	12/26/2009	0.282	0.126	ND<0.0523	ND<0.0523	ND<0.0523	ND<0.0523	ND<0.0523	ND<0.0523	ND<0.0523	ND<0.0523	ND<0.0523	0.366	ND<0.0523	200	0.209	ND<0.0523	SA
Risk-Based Concentrations [2]		>S	NE	>S	NV	NV	NV	NE	NV	NV	NV	NV	>S	NV	16,000	NE	NV	
- Occ. Volatilization to Outdoor Air		>S	NE	>S	NV	NV	NV	NE	NV	NV	NV	NV	>S	NV	10,000	NE	NV	
- Occ. Vapor Intrusion Into buidlings		>S	NE	>S	9.1	0.53	>S	NE	>S	>S	0.21	>S	>S	>S	500	NE	>S	
- Groundwater in an Excavation																		
Construction and Excavation Worker																		

ND not detected at or above the indicated laboratory reporting limit
SA Specialty Analytical
µg/L Micrograms per Liter

[1] DEQ Method 8270SIM
[2] Oregon Department of Environmental Quality (DEQ) Generic Risk Based Concentrations (RBCs) (DEQ, 2009).
NE A Risk-Based Concentration has not been determined for this constituent
NV This chemical is considered "nonvolatile" for purposes of the exposure calculation
>S 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

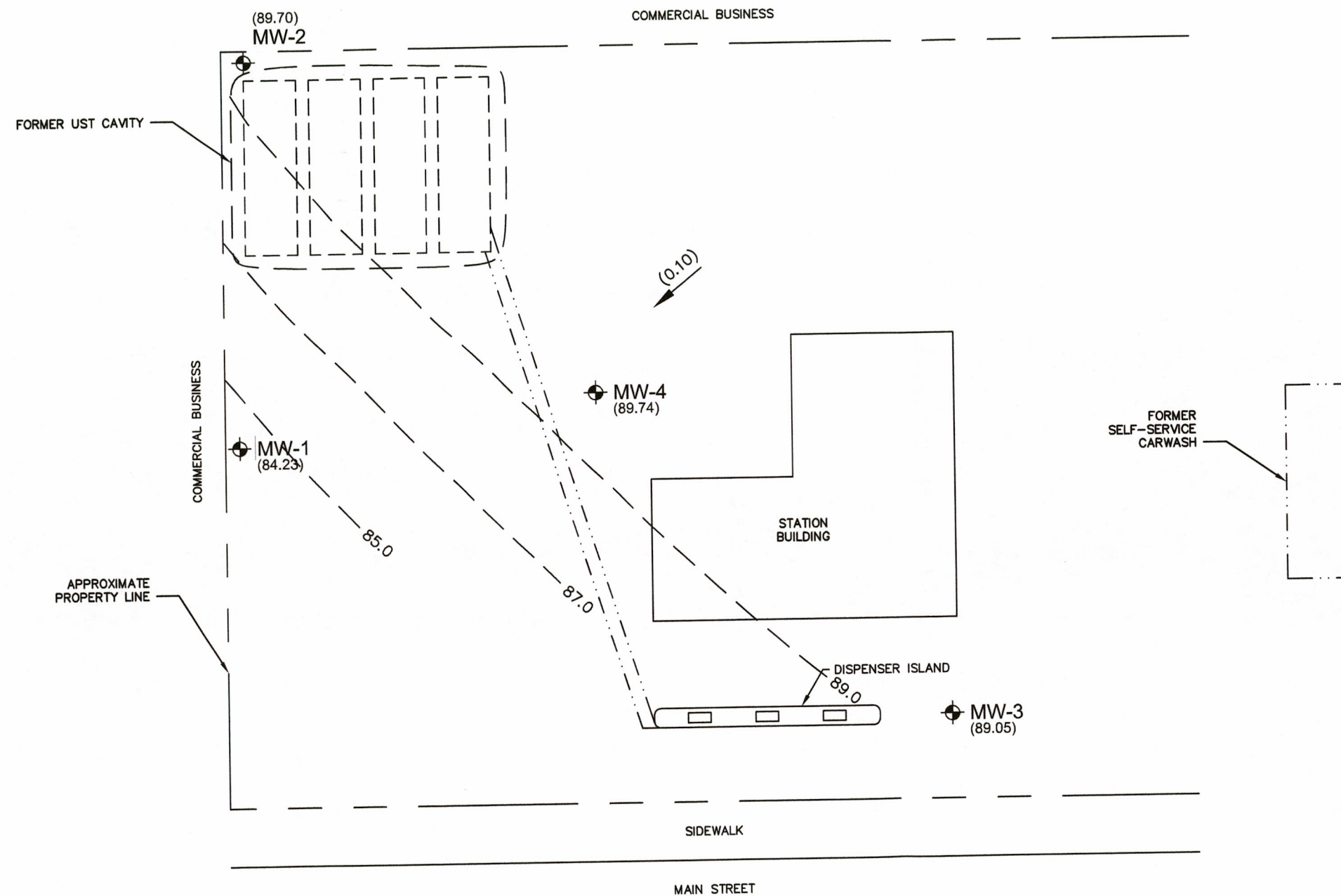


VICINITY MAP

MOLALLA KWIK GAS
305 WEST MAIN STREET
MOLALLA, OREGON

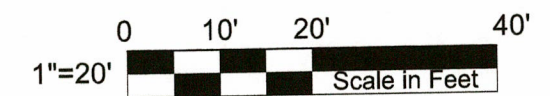
ECNW PROJ. No. 05-106

FIGURE 1



LEGEND

UST	Underground Storage Tank
[]	Former Underground Storage Tank
- - -	Former Underground Product Piping Trench
⊕	Monitoring Well
(89.74)	Groundwater Elevation (Relative to an arbitrary benchmark)
- - - 89.0	Groundwater Elevation Contour
← (0.10)	Approximate Groundwater Flow Direction and Gradient in Feet per Foot



ECN

ENVIRONMENTAL
COMPLIANCE
NORTHWEST, INC.
(503) 372-9760

GROUNDWATER CONTOUR MAP
4TH QUARTER 2009

FORMER KWIK GAS
305 WEST MAIN STREET
MOLALLA, OREGON

Project No. 05-106

FIGURE 2

MW-2	
D	= ND
O	= ND
Gx	= ND
B	= ND
T	= ND
E	= ND
X	= ND

MW-2

FORMER UST CAVITY

COMMERCIAL BUSINESS

APPROXIMATE PROPERTY LINE

MW-1

MW-1	
D	= ND
O	= ND
Gx	= ND
B	= ND
T	= ND
E	= ND
X	= ND

COMMERCIAL BUSINESS

MW-4	
D	= 2,730
O	= 1,020
Gx	= 21,100
B	= 397
T	= 4.84
E	= 435
X	= 361.2
1,2,4 TMB	= 451
EDB	= ND
EDC	= ND
1,3,5 TMB	= 25.5
IPB	= 114
MTBE	= 1.43
NPB	= 245
NAPH	= 509
LEAD	= ND
PAHs	SEE TABLE 2

MW-4

STATION BUILDING

FORMER SELF-SERVICE CARWASH

DISPENSER ISLAND

MW-3

SIDEWALK

MAIN STREET

MW-3	
D	= 336
O	= ND
Gx	= 245
B	= ND
T	= ND
E	= ND
X	= ND
1,2,4 TMB	= ND
EDB	= ND
EDC	= ND
1,3,5 TMB	= ND
IPB	= 1.26
MTBE	= ND
NPB	= 0.96
NAPH	= ND
LEAD	= ND

LEGEND

UST



Underground Storage Tank

Former Underground Storage Tank

Former Underground Product Piping Trench



Monitoring Well

Dx

Diesel-Range Hydrocarbons

D

Diesel

O

Lube Oil

Gx

Gasoline-Range Hydrocarbons

B

Benzene

T

Toulene

E

Ethylbenzene

X

Total Xylenes

TMB

Trimethylbenzene

EDB

Ethylene Dibromide

EDC

Ethylene Dichloride

IPB

Isopropylbenzene

MTBE

Methyl-Tertiary Butyl Ether

NPB

N-Propylbenzene

NAPH

Naphthalene

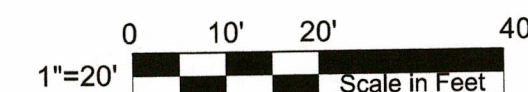
LEAD

Dissolved Lead

PAHs

Polynuclear Aromatic Hydrocarbons

Results are in micrograms per liter (µg/L)



ECN

ENVIRONMENTAL
COMPLIANCE
NORTHWEST, INC.
(503) 372-9760

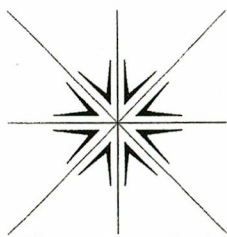
GROUNDWATER ANALYTICAL RESULTS
4TH QUARTER 2009

FORMER KWIK GAS
305 WEST MAIN STREET
MOLALLA, OREGON

Project No. 05-106

FIGURE 3

APPENDIX A



Specialty Analytical

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

January 12, 2010

John Day
Environmental Compliance Northwest, Inc.
P.O. Box 230163
Portland, OR 97281

TEL: (503) 372-9760

FAX: (503) 213-9980

RE: Powell-Molalla / 05-106

Dear John Day:

Order No.: 0912194

Specialty Analytical received 4 samples on 12/28/2009 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

Specialty Analytical

Date: 12-Jan-10

CLIENT: Environmental Compliance Northwest, Inc.**Client Sample ID:** MW-1**Lab Order:** 0912194**Collection Date:** 12/26/2009 4:30:00 PM**Project:** Powell-Molalla / 05-106**Lab ID:** 0912194-01**Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX				Analyst: kh
Diesel	ND	0.243		mg/L	1	12/29/2009
Lube Oil	ND	0.487		mg/L	1	12/29/2009
Surr: o-Terphenyl	94.6	50-150		%REC	1	12/29/2009
BTEX - RBC		SW8021B				Analyst: jrp
Benzene	ND	0.300		µg/L	1	12/29/2009
Toluene	ND	0.500		µg/L	1	12/29/2009
Ethylbenzene	ND	0.500		µg/L	1	12/29/2009
Xylenes, Total	ND	1.50		µg/L	1	12/29/2009
Surr: 4-Bromofluorobenzene	102	74.8-126		%REC	1	12/29/2009
NWTPH-GX		NWTPH-GX				Analyst: jrp
Gasoline	ND	100		µg/L	1	12/29/2009
Surr: 4-Bromofluorobenzene	91.8	50-150		%REC	1	12/29/2009

Specialty Analytical

Date: 12-Jan-10

CLIENT: Environmental Compliance Northwest, Inc.

Client Sample ID: MW-2

Lab Order: 0912194

Collection Date: 12/26/2009 5:30:00 PM

Project: Powell-Molalla / 05-106

Lab ID: 0912194-02

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX				Analyst: kh
Diesel	ND	0.276		mg/L	1	12/29/2009
Lube Oil	ND	0.552		mg/L	1	12/29/2009
Surr: o-Terphenyl	101	50-150		%REC	1	12/29/2009
BTEX - RBC		SW8021B				Analyst: jrp
Benzene	ND	0.300		µg/L	1	12/29/2009
Toluene	ND	0.500		µg/L	1	12/29/2009
Ethylbenzene	ND	0.500		µg/L	1	12/29/2009
Xylenes, Total	ND	1.50		µg/L	1	12/29/2009
Surr: 4-Bromofluorobenzene	104	74.8-126		%REC	1	12/29/2009
NWTPH-GX		NWTPH-GX				Analyst: jrp
Gasoline	ND	100		µg/L	1	12/29/2009
Surr: 4-Bromofluorobenzene	91.8	50-150		%REC	1	12/29/2009

Specialty Analytical

Date: 12-Jan-10

CLIENT: Environmental Compliance Northwest, Inc.
Lab Order: 0912194
Project: Powell-Molalla / 05-106
Lab ID: 0912194-03

Client Sample ID: MW-3
Collection Date: 12/26/2009 6:30:00 PM

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
NWTPH-DX						Analyst: kh
Diesel	0.336	0.256	L	mg/L	1	12/29/2009
Lube Oil	ND	0.513		mg/L	1	12/29/2009
Surr: o-Terphenyl	94.3	50-150		%REC	1	12/29/2009
NWTPH-GX						Analyst: jrp
Gasoline	245	100		µg/L	1	12/29/2009
Surr: 4-Bromofluorobenzene	96.4	50-150		%REC	1	12/29/2009
DISSOLVED METALS BY ICP/MS						Analyst: zau
SW6020						
Lead	0.96	0.10		ug/L	1	1/4/2010 5:55:00 PM
VOLATILE ORGANICS BY GC/MS						Analyst: bda
SW8260B						
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	1/4/2010 2:43:00 PM
1,2-Dibromoethane	ND	1.00		µg/L	1	1/4/2010 2:43:00 PM
1,2-Dichloroethane	ND	1.00		µg/L	1	1/4/2010 2:43:00 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	1/4/2010 2:43:00 PM
Benzene	ND	0.300		µg/L	1	1/4/2010 2:43:00 PM
Ethylbenzene	ND	1.00		µg/L	1	1/4/2010 2:43:00 PM
Isopropylbenzene	ND	1.00		µg/L	1	1/4/2010 2:43:00 PM
m,p-Xylene	ND	2.00		µg/L	1	1/4/2010 2:43:00 PM
Methyl tert-butyl ether	ND	1.00		µg/L	1	1/4/2010 2:43:00 PM
n-Propylbenzene	ND	1.00		µg/L	1	1/4/2010 2:43:00 PM
Naphthalene	ND	1.00		µg/L	1	1/4/2010 2:43:00 PM
o-Xylene	ND	1.00		µg/L	1	1/4/2010 2:43:00 PM
Toluene	ND	1.00		µg/L	1	1/4/2010 2:43:00 PM
Surr: 1,2-Dichloroethane-d4	96.6	72.2-129		%REC	1	1/4/2010 2:43:00 PM
Surr: 4-Bromofluorobenzene	99.5	73.5-125		%REC	1	1/4/2010 2:43:00 PM
Surr: Dibromofluoromethane	96.4	58.8-148		%REC	1	1/4/2010 2:43:00 PM
Surr: Toluene-d8	95.2	79.8-137		%REC	1	1/4/2010 2:43:00 PM

Specialty Analytical

Date: 12-Jan-10

CLIENT: Environmental Compliance Northwest, Inc. **Client Sample ID:** MW-4
Lab Order: 0912194 **Collection Date:** 12/26/2009 7:30:00 PM
Project: Powell-Molalla / 05-106
Lab ID: 0912194-04 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
NWTPH-DX						Analyst: kh
Diesel	2.73	0.278	L	mg/L	1	12/29/2009
Lube Oil	1.02	0.557		mg/L	1	12/29/2009
Surr: o-Terphenyl	91.9	50-150		%REC	1	12/29/2009
NWTPH-GX						Analyst: jrp
Gasoline	21100	1000		µg/L	10	12/29/2009
Surr: 4-Bromofluorobenzene	92.9	50-150		%REC	10	12/29/2009
DISSOLVED METALS BY ICP/MS						Analyst: zau
SW6020						
Lead	ND	0.10		ug/L	1	1/4/2010 6:16:00 PM
LOW LEVEL PAH BY GC/MS OARSIM (8270C)						Analyst: bda
8270SIM						
Acenaphthene	0.282	0.0523		µg/L	1	1/11/2010 10:11:00 AM
Acenaphthylene	0.126	0.0523		µg/L	1	1/11/2010 10:11:00 AM
Anthracene	ND	0.0523		µg/L	1	1/11/2010 10:11:00 AM
Benz(a)anthracene	ND	0.0523		µg/L	1	1/11/2010 10:11:00 AM
Benzo(a)pyrene	ND	0.0523		µg/L	1	1/11/2010 10:11:00 AM
Benzo(b)fluoranthene	ND	0.0523		µg/L	1	1/11/2010 10:11:00 AM
Benzo(g,h,i)perylene	ND	0.0523		µg/L	1	1/11/2010 10:11:00 AM
Benzo(k)fluoranthene	ND	0.0523		µg/L	1	1/11/2010 10:11:00 AM
Chrysene	ND	0.0523		µg/L	1	1/11/2010 10:11:00 AM
Dibenz(a,h)anthracene	ND	0.0523		µg/L	1	1/11/2010 10:11:00 AM
Fluoranthene	ND	0.0523		µg/L	1	1/11/2010 10:11:00 AM
Fluorene	0.366	0.0523		µg/L	1	1/11/2010 10:11:00 AM
Indeno(1,2,3-cd)pyrene	ND	0.0523		µg/L	1	1/11/2010 10:11:00 AM
Naphthalene	200	0.523		µg/L	10	1/11/2010 9:46:00 AM
Phenanthrene	0.209	0.0523		µg/L	1	1/11/2010 10:11:00 AM
Pyrene	ND	0.0523		µg/L	1	1/11/2010 10:11:00 AM
Surr: 2-Fluorobiphenyl	67.1	18.6-106		%REC	1	1/11/2010 10:11:00 AM
Surr: Nitrobenzene-d5	79.0	17-130		%REC	1	1/11/2010 10:11:00 AM
Surr: p-Terphenyl-d14	86.8	39.6-131		%REC	1	1/11/2010 10:11:00 AM
VOLATILE ORGANICS BY GC/MS						Analyst: bda
SW8260B						
1,2,4-Trimethylbenzene	451	10.0		µg/L	10	1/5/2010 6:49:00 AM
1,2-Dibromoethane	ND	1.00		µg/L	1	1/4/2010 5:00:00 PM
1,2-Dichloroethane	ND	1.00		µg/L	1	1/4/2010 5:00:00 PM
1,3,5-Trimethylbenzene	25.5	1.00		µg/L	1	1/4/2010 5:00:00 PM
Benzene	397	3.00		µg/L	10	1/5/2010 6:49:00 AM
Ethylbenzene	435	10.0		µg/L	10	1/5/2010 6:49:00 AM
Isopropylbenzene	114	1.00		µg/L	1	1/4/2010 5:00:00 PM
m,p-Xylene	301	20.0		µg/L	10	1/5/2010 6:49:00 AM
Methyl tert-butyl ether	1.43	1.00		µg/L	1	1/4/2010 5:00:00 PM
n-Propylbenzene	245	10.0		µg/L	10	1/5/2010 6:49:00 AM

Specialty Analytical

Date: 12-Jan-10

CLIENT: Environmental Compliance Northwest, Inc.

Client Sample ID: MW-4

Lab Order: 0912194

Collection Date: 12/26/2009 7:30:00 PM

Project: Powell-Molalla / 05-106

Lab ID: 0912194-04

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC/MS		SW8260B		Analyst: bda		
Naphthalene	509	10.0		µg/L	10	1/5/2010 6:49:00 AM
o-Xylene	60.2	1.00		µg/L	1	1/4/2010 5:00:00 PM
Toluene	4.84	1.00		µg/L	1	1/5/2010 9:07:00 AM
Surr: 1,2-Dichloroethane-d4	95.9	72.2-129		%REC	1	1/4/2010 5:00:00 PM
Surr: 4-Bromofluorobenzene	101	73.5-125		%REC	1	1/4/2010 5:00:00 PM
Surr: Dibromofluoromethane	92.4	58.8-148		%REC	1	1/4/2010 5:00:00 PM
Surr: Toluene-d8	98.4	79.8-137		%REC	1	1/4/2010 5:00:00 PM

Specialty Analytical

Date: 12-Jan-10

CLIENT: Environmental Compliance Northwest, Inc.
Work Order: 0912194
Project: Powell-Molalla / 05-106

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_WDISS

Sample ID: 0912082-01GMS	SampType: MS	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 1/4/2010	Run ID: ICPMS_100104A						
Client ID: ZZZZZ	Batch ID: 24709	TestNo: SW6020		Analysis Date: 1/4/2010	SeqNo: 650447						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	44.9	0.10	50	0	89.8	70	130	0	0		

Sample ID: 0912082-01GMSD	SampType: MSD	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 1/4/2010	Run ID: ICPMS_100104A						
Client ID: ZZZZZ	Batch ID: 24709	TestNo: SW6020		Analysis Date: 1/4/2010	SeqNo: 650448						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	46.7	0.10	50	0	93.4	70	130	44.9	3.93	20	

Sample ID: 0912082-01GDUP	SampType: DUP	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 1/4/2010	Run ID: ICPMS_100104A						
Client ID: ZZZZZ	Batch ID: 24709	TestNo: SW6020		Analysis Date: 1/4/2010	SeqNo: 650446						
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	20	

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100104A						
Client ID: ZZZZZ	Batch ID: 24709	TestNo: SW6020		Analysis Date: 1/4/2010	SeqNo: 650451						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	48.85	0.10	50	0	97.7	90	110	0	0		

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100104A						
Client ID: ZZZZZ	Batch ID: 24709	TestNo: SW6020		Analysis Date: 1/4/2010	SeqNo: 650462						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	47.06	0.10	50	0	94.1	90	110	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

CLIENT: Environmental Compliance Northwest, Inc.
Work Order: 0912194
Project: Powell-Molalla / 05-106

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_WDISS

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100104A						
Client ID: ZZZZZ	Batch ID: 24709	TestNo: SW6020	Analysis Date: 1/4/2010	SeqNo: 650469							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	48.38	0.10	50	0	96.8	90	110	0	0		

Sample ID: ICB-24709	SampType: ICB	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 1/4/2010	Run ID: ICPMS_100104A						
Client ID: ZZZZZ	Batch ID: 24709	TestNo: SW6020	Analysis Date: 1/4/2010	SeqNo: 650444							
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	SampType: ICV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100104A						
Client ID: ZZZZZ	Batch ID: 24709	TestNo: SW6020	Analysis Date: 1/4/2010	SeqNo: 650443							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	48.92	0.10	50	0	97.8	90	110	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

CLIENT: Environmental Compliance Northwest, Inc.
Work Order: 0912194
Project: Powell-Molalla / 05-106

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_W

Sample ID: MBLK-24710	SampType: MBLK	TestCode: 8260_W	Units: µg/L	Prep Date:	Run ID: 5975X_100104A						
Client ID: ZZZZZ	Batch ID: 24710	TestNo: SW8260B	Analysis Date: 1/4/2010	SeqNo: 650528							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trimethylbenzene	0.16	1.00									J
1,2-Dibromoethane	ND	1.00									
1,2-Dichloroethane	0.14	1.00									J
1,3,5-Trimethylbenzene	0.11	1.00									J
Benzene	ND	0.300									
Ethylbenzene	0.52	1.00									J
Isopropylbenzene	ND	1.00									
m,p-Xylene	0.72	2.00									J
Methyl tert-butyl ether	ND	1.00									
n-Propylbenzene	ND	1.00									
Naphthalene	ND	1.00									
o-Xylene	0.23	1.00									J
Toluene	1.44	1.00									
Surr: 1,2-Dichloroethane-d4	93.87	0	100	0	93.9	72.2	129	0	0		
Surr: 4-Bromofluorobenzene	101.1	0	100	0	101	73.5	125	0	0		
Surr: Dibromofluoromethane	93.28	0	100	0	93.3	58.8	148	0	0		
Surr: Toluene-d8	113.1	0	100	0	113	79.8	137	0	0		

Sample ID: LCS-24710	SampType: LCS	TestCode: 8260_W	Units: µg/L	Prep Date: 1/4/2010	Run ID: 5975X_100104A						
Client ID: ZZZZZ	Batch ID: 24710	TestNo: SW8260B		Analysis Date: 1/4/2010	SeqNo: 650527						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	43.27	0.300	40	0	108	77.9	125	0	0		
Toluene	44.22	1.00	40	1.44	107	74.6	119	0	0		B

Sample ID: 0912200-01AMS	SampType: MS	TestCode: 8260_W	Units: µg/L	Prep Date: 1/4/2010	Run ID: 5975X_100104A						
Client ID: ZZZZZ	Batch ID: 24710	TestNo: SW8260B		Analysis Date: 1/4/2010	SeqNo: 650543						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	44.42	0.300	40	0	111	71.5	118	0	0		
Toluene	44.42	1.00	40	0.73	109	79.6	121	0	0		B

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

CLIENT: Environmental Compliance Northwest, Inc.
Work Order: 0912194
Project: Powell-Molalla / 05-106

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_W

Sample ID: 0912200-01AMSD	SampType: MSD	TestCode: 8260_W	Units: µg/L	Prep Date: 1/4/2010	Run ID: 5975X_100104A						
Client ID: ZZZZZ	Batch ID: 24710	TestNo: SW8260B		Analysis Date: 1/4/2010	SeqNo: 650544						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	45.12	0.300	40	0	113	71.5	118	44.42	1.56	20	
Toluene	44.11	1.00	40	0.73	108	79.6	121	44.42	0.700	20	B

Sample ID: CCV-24710	SampType: CCV	TestCode: 8260_W	Units: µg/L	Prep Date:	Run ID: 5975X_100104A						
Client ID: ZZZZZ	Batch ID: 24710	TestNo: SW8260B		Analysis Date: 1/4/2010	SeqNo: 650526						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene	35.39	1.00	40	0	88.5	80	120	0	0		
Toluene	40.33	1.00	40	0	101	80	120	0	0		

Sample ID: CCV-24710	SampType: CCV	TestCode: 8260_W	Units: µg/L	Prep Date:	Run ID: 5975X_100104A						
Client ID: ZZZZZ	Batch ID: 24710	TestNo: SW8260B		Analysis Date: 1/4/2010	SeqNo: 650545						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene	41.05	1.00	40	0	103	80	120	0	0		
Toluene	45.1	1.00	40	0	113	80	120	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
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B - Analyte detected in the associated Method Blank

CLIENT: Environmental Compliance Northwest, Inc.
Work Order: 0912194
Project: Powell-Molalla / 05-106

ANALYTICAL QC SUMMARY REPORT

TestCode: BTEXRBC_W

Sample ID: MB-24685	SampType: MBLK	TestCode: BTEXRBC_W	Units: µg/L	Prep Date: 12/28/2009	Run ID: GC-S_091228B						
Client ID: ZZZZZ	Batch ID: 24685	TestNo: SW8021B		Analysis Date: 12/29/2009	SeqNo: 648986						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.16	0.300									J
Toluene	0.23	0.500									J
Ethylbenzene	0.32	0.500									J
Xylenes, Total	0.96	1.50									J
Surr: 4-Bromofluorobenzene	102.4	1.00	100	0	102	74.8	126	0	0		

Sample ID: LCS-24685	SampType: LCS	TestCode: BTEXRBC_W	Units: µg/L	Prep Date: 12/28/2009	Run ID: GC-S_091228B						
Client ID: ZZZZZ	Batch ID: 24685	TestNo: SW8021B		Analysis Date: 12/29/2009	SeqNo: 648985						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	50.79	0.300	50	0	102	75.8	113	0	0		
Toluene	50.89	0.500	50	0	102	77	116	0	0		
Ethylbenzene	51.38	0.500	50	0	103	76.6	118	0	0		
Xylenes, Total	155.9	1.50	150	0	104	76.7	118	0	0		

Sample ID: 0912064-01AMS	SampType: MS	TestCode: BTEXRBC_W	Units: µg/L	Prep Date: 12/28/2009	Run ID: GC-S_091228B						
Client ID: ZZZZZ	Batch ID: 24685	TestNo: SW8021B		Analysis Date: 12/29/2009	SeqNo: 648988						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	24.91	0.300	25	0.2	98.8	67.8	118	0	0		
Toluene	25.09	0.500	25	0.31	99.1	74.7	117	0	0		
Ethylbenzene	25.58	0.500	25	0.2	102	74.5	115	0	0		
Xylenes, Total	77.69	1.50	75	0.61	103	76.8	120	0	0		

Sample ID: 0912064-01AMSD	SampType: MSD	TestCode: BTEXRBC_W	Units: µg/L	Prep Date: 12/28/2009	Run ID: GC-S_091228B						
Client ID: ZZZZZ	Batch ID: 24685	TestNo: SW8021B		Analysis Date: 12/29/2009	SeqNo: 648989						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	24.48	0.300	25	0.2	97.1	67.8	118	24.91	1.74	20	
Toluene	24.87	0.500	25	0.31	98.2	74.7	117	25.09	0.881	20	
Ethylbenzene	25.59	0.500	25	0.2	102	74.5	115	25.58	0.0391	20	

Qualifiers: ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: Environmental Compliance Northwest, Inc.
Work Order: 0912194
Project: Powell-Molalla / 05-106

ANALYTICAL QC SUMMARY REPORT

TestCode: BTEXRBC_W

Sample ID: 0912064-01AMSD	SampType: MSD	TestCode: BTEXRBC_W	Units: µg/L	Prep Date: 12/28/2009	Run ID: GC-S_091228B						
Client ID: ZZZZZ	Batch ID: 24685	TestNo: SW8021B		Analysis Date: 12/29/2009	SeqNo: 648989						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Xylenes, Total	77.8	1.50	75	0.61	103	76.8	120	77.69	0.141	20	

Sample ID: CCV	SampType: CCV	TestCode: BTEXRBC_W	Units: µg/L	Prep Date:	Run ID: GC-S_091228B						
Client ID: ZZZZZ	Batch ID: 24685	TestNo: SW8021B		Analysis Date: 12/29/2009	SeqNo: 648984						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	50.79	0.300	50	0	102	85	115	0	0		
Toluene	50.89	0.500	50	0	102	85	115	0	0		
Ethylbenzene	51.38	0.500	50	0	103	85	115	0	0		
Xylenes, Total	155.9	1.50	150	0	104	85	115	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: Environmental Compliance Northwest, Inc.
Work Order: 0912194
Project: Powell-Molalla / 05-106

ANALYTICAL QC SUMMARY REPORT

TestCode: NWTPHGX_W

Sample ID: MB-24684	SampType: MBLK	TestCode: NWTPHGX_	Units: µg/L	Prep Date: 12/28/2009	Run ID: GC-S_091228A						
Client ID: ZZZZZ	Batch ID: 24684	TestNo: NWTPH-Gx		Analysis Date: 12/29/2009	SeqNo: 648971						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	30.6	100									J
Surr: 4-Bromofluorobenzene	93.29	0	100	0	93.3	50	150	0	0		

Sample ID: LCS-24684	SampType: LCS	TestCode: NWTPHGX_	Units: µg/L	Prep Date: 12/28/2009	Run ID: GC-S_091228A						
Client ID: ZZZZZ	Batch ID: 24684	TestNo: NWTPH-Gx		Analysis Date: 12/29/2009	SeqNo: 648970						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	1795	100	2000	0	89.7	74.4	128	0	0		

Sample ID: 0912201-06BDUP	SampType: DUP	TestCode: NWTPHGX_	Units: µg/L	Prep Date: 12/28/2009	Run ID: GC-S_091228A						
Client ID: ZZZZZ	Batch ID: 24684	TestNo: NWTPH-Gx		Analysis Date: 12/29/2009	SeqNo: 648977						
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	0	20	

Sample ID: CCV	SampType: CCV	TestCode: NWTPHGX_	Units: µg/L	Prep Date:	Run ID: GC-S_091228A						
Client ID: ZZZZZ	Batch ID: 24684	TestNo: NWTPH-Gx		Analysis Date: 12/29/2009	SeqNo: 648983						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	2713	100	3000	0	90.4	80	120	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
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B - Analyte detected in the associated Method Blank

CLIENT: Environmental Compliance Northwest, Inc.
Work Order: 0912194
Project: Powell-Molalla / 05-106

ANALYTICAL QC SUMMARY REPORT

TestCode: PAHLL_W

Sample ID: MB-24754	SampType: MBLK	TestCode: PAHLL_W	Units: µg/L	Prep Date: 1/8/2010	Run ID: 5975Q_100111A						
Client ID: ZZZZZ	Batch ID: 24754	TestNo: 8270SIM		Analysis Date: 1/11/2010	SeqNo: 651524						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	0.01	0.0500									J
Acenaphthylene	0.01	0.0500									J
Anthracene	0.02	0.0500									J
Benz(a)anthracene	0.03	0.0500									J
Benzo(a)pyrene	0.03	0.0500									J
Benzo(b)fluoranthene	0.03	0.0500									J
Benzo(g,h,i)perylene	0.03	0.0500									J
Benzo(k)fluoranthene	0.03	0.0500									J
Chrysene	0.03	0.0500									J
Dibenz(a,h)anthracene	0.03	0.0500									J
Fluoranthene	0.02	0.0500									J
Fluorene	0.02	0.0500									J
Indeno(1,2,3-cd)pyrene	0.03	0.0500									J
Naphthalene	0.02	0.0500									J
Phenanthrene	0.03	0.0500									J
Pyrene	0.02	0.0500									J
Surr: 2-Fluorobiphenyl	77.73	1.00	100	0	77.7	18.6	106	0	0		
Surr: Nitrobenzene-d5	95.13	1.00	100	0	95.1	17	130	0	0		
Surr: p-Terphenyl-d14	107.8	1.00	100	0	108	39.6	131	0	0		

Sample ID: LCS-24754	SampType: LCS	TestCode: PAHLL_W	Units: µg/L	Prep Date: 1/8/2010	Run ID: 5975Q_100111A						
Client ID: ZZZZZ	Batch ID: 24754	TestNo: 8270SIM		Analysis Date: 1/11/2010	SeqNo: 651525						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	4.29	0.0500	5	0.01	85.6	35.1	100	0	0		
Benzo(g,h,i)perylene	4.61	0.0500	5	0.03	91.6	20.8	120	0	0		
Chrysene	4.7	0.0500	5	0.03	93.4	39.1	119	0	0		
Naphthalene	3.98	0.0500	5	0.02	79.2	25.6	106	0	0		
Phenanthrene	4.37	0.0500	5	0.03	86.8	38.1	106	0	0		
Pyrene	4.84	0.0500	5	0.02	96.4	41.3	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

CLIENT: Environmental Compliance Northwest, Inc.
Work Order: 0912194
Project: Powell-Molalla / 05-106

ANALYTICAL QC SUMMARY REPORT

TestCode: PAHLL_W

Sample ID: LCSD-24754	SampType: LCSD	TestCode: PAHLL_W	Units: µg/L	Prep Date: 1/8/2010	Run ID: 5975Q_100111A
Client ID: ZZZZZ	Batch ID: 24754	TestNo: 8270SIM		Analysis Date: 1/11/2010	SeqNo: 651526

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	3.93	0.0500	5	0.01	78.4	35.1	100	4.29	8.76	20	
Benzo(g,h,i)perylene	4.79	0.0500	5	0.03	95.2	20.8	120	4.61	3.83	20	
Chrysene	4.84	0.0500	5	0.03	96.2	39.1	119	4.7	2.94	20	
Naphthalene	3.85	0.0500	5	0.02	76.6	25.6	106	3.98	3.32	20	
Phenanthrene	4.45	0.0500	5	0.03	88.4	38.1	106	4.37	1.81	20	
Pyrene	4.92	0.0500	5	0.02	98	41.3	118	4.84	1.64	20	

Sample ID: CCV-24754	SampType: CCV	TestCode: PAHLL_W	Units: µg/L	Prep Date:	Run ID: 5975Q_100111A
Client ID: ZZZZZ	Batch ID: 24754	TestNo: 8270SIM		Analysis Date: 1/11/2010	SeqNo: 651523

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	4.67	0.0500	5	0	93.4	70	130	0	0		
Acenaphthylene	4.49	0.0500	5	0	89.8	70	130	0	0		
Anthracene	4.79	0.0500	5	0	95.8	70	130	0	0		
Benz(a)anthracene	4.59	0.0500	5	0	91.8	70	130	0	0		
Benzo(a)pyrene	4.64	0.0500	5	0	92.8	70	130	0	0		
Benzo(b)fluoranthene	4.83	0.0500	5	0	96.6	70	130	0	0		
Benzo(g,h,i)perylene	4.58	0.0500	5	0	91.6	70	130	0	0		
Benzo(k)fluoranthene	4.97	0.0500	5	0	99.4	70	130	0	0		
Chrysene	4.7	0.0500	5	0	94	70	130	0	0		
Dibenz(a,h)anthracene	4.62	0.0500	5	0	92.4	70	130	0	0		
Fluoranthene	4.53	0.0500	5	0	90.6	70	130	0	0		
Fluorene	4.5	0.0500	5	0	90	70	130	0	0		
Indeno(1,2,3-cd)pyrene	4.61	0.0500	5	0	92.2	70	130	0	0		
Naphthalene	4.53	0.0500	5	0	90.6	70	130	0	0		
Phenanthrene	4.71	0.0500	5	0	94.2	70	130	0	0		
Pyrene	4.8	0.0500	5	0	96	70	130	0	0		

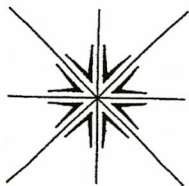
Qualifiers: ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

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 than the maximum contaminant level of the TCLP regulatory limit.

Page 1 of 1

11711 SE Capps Road
Clackamas, OR 97015
Phone: 503-607-1331
Fax: 503-607-1336

Collected By:

Signature.

Printed

Signature.

Printed

Turn Around Time

☒ Normal 5-7 Business Days

☐ Rush

Specify

Rush Analyses Must Be Scheduled With The Lab In Advance

Contact Person/Project Manager**Company****Address**

Phone. 377-9760

Fax 713-9470

Project No. 05176

Project Name Power of mold II

Project Site Location OR

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Invoice To

P.O. No.

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Copies: White-Original

Yellow-Project File

Pink-Customer Copy