

**THIRD QUARTER 2008
GROUNDWATER MONITORING REPORT**

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

ECN PROJECT No. 05-106

ECN



December 2, 2010



ENVIRONMENTAL COMPLIANCE NORTHWEST

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December 2, 2010
ECN Project No. 05-106

Mr. Jason Powell.
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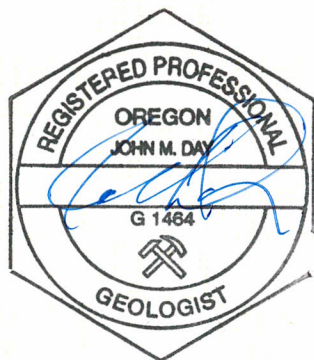
**SUBJECT: Third Quarter 2008
Groundwater Monitoring Report
Former Molalla Kwik Gas
305 West Main Street
Molalla, Oregon
DEQ LUST File No.: 03-05-461**

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 2008 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 third quarter 2008 groundwater monitoring and sampling were performed in accordance with DEQ guidelines. On September 28, 2008, 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 2008 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 2008 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 third quarter 2008 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 28, 2008, ranged from 6.46 to 17.41 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 0.16 feet per foot. Compared to the first quarter 2008 monitoring data, groundwater elevations in the monitoring wells decreased between 2.15 and 9.35 feet.

The groundwater elevation and flow direction data for the third quarter 2008 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 (350 micrograms per liter [$\mu\text{g/L}$]), gasoline-range hydrocarbons (787 $\mu\text{g/L}$), and dissolved lead (0.65 $\mu\text{g/L}$) were detected.

MW-4: Diesel-range hydrocarbons (2,070 $\mu\text{g/L}$); lube oil-range hydrocarbons (665 $\mu\text{g/L}$); gasoline-range hydrocarbons (14,000 $\mu\text{g/L}$); benzene (979 $\mu\text{g/L}$); toluene (9.74 $\mu\text{g/L}$); ethylbenzene (743 $\mu\text{g/L}$); total xylenes (167.8 $\mu\text{g/L}$); 1,2,4-TMB (332 $\mu\text{g/L}$); 1,3,5-TMB (88.3 $\mu\text{g/L}$); IPB (125 $\mu\text{g/L}$); NPB (460 $\mu\text{g/L}$); naphthalene (766 $\mu\text{g/L}$); and dissolved lead (0.34 $\mu\text{g/L}$) were detected. The following PAHs were also detected: acenaphthene (0.203 $\mu\text{g/L}$); acenaphthylene (0.0676 $\mu\text{g/L}$); fluoranthene (0.126 $\mu\text{g/L}$); fluorine (0.261 $\mu\text{g/L}$); naphthalene (97.4 $\mu\text{g/L}$); phenanthrene (0.300 $\mu\text{g/L}$); and pyrene (0.126 $\mu\text{g/L}$).

The groundwater sampling results for the third quarter 2008 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 2008 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.

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	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
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	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
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
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
Risk-Based Concentrations [5]																						
- Volatilization to Outdoor Air (Occupational)						>S	NE	>S	14,000	>S	41,000	>S	>S	960	9,500	6,800	>S	1,000,000	NE	16,000	NV	
- Vapor Intrusion Into Buildings (Occupational)						>S	NE	>S	2,800	>S	7,400	>S	>S	690	3,800	41,000	>S	590,000	NE	10,000	NV	
- Groundwater in an Excavation (Construction and Excavation Worker)						>S	NE	13,000	1,700	210,000	4,400	23,000	1,700	28	630	1,400	>S	62,000	NE	500	>S	

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) 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

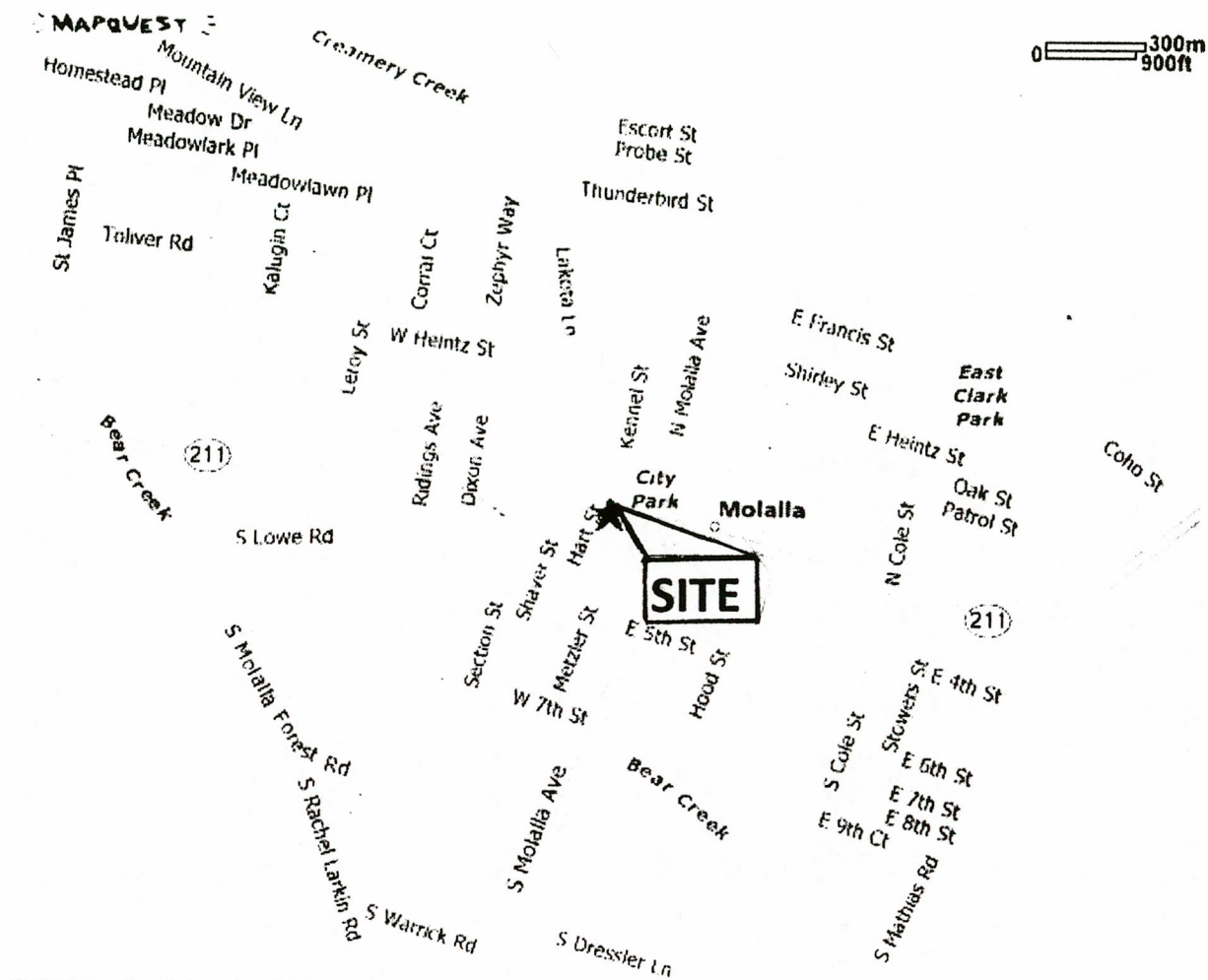


Polynuclear Aromatic Hydrocarbons (µg/L) [1]		Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoroanthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	LAB
Sample 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
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
Risk-Based Concentrations [2]																		
- Occ. Volatilization to Outdoor Air		>S	NE	>S	NV	NV	NV	NE	NV	NV	NV	NV	>S	NV	16,000	NE	NV	
- Occ. Vapor Intrusion Into buidlings		>S	NE	>S	NV	NV	NV	NE	NV	NV	NV	NV	>S	NV	10,000	NE	NV	
- Groundwater in an Excavation		>S	NE	>S	9.1	0.53	>S	NE	>S	>S	0.21	>S	>S	>S	500	NE	>S	
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



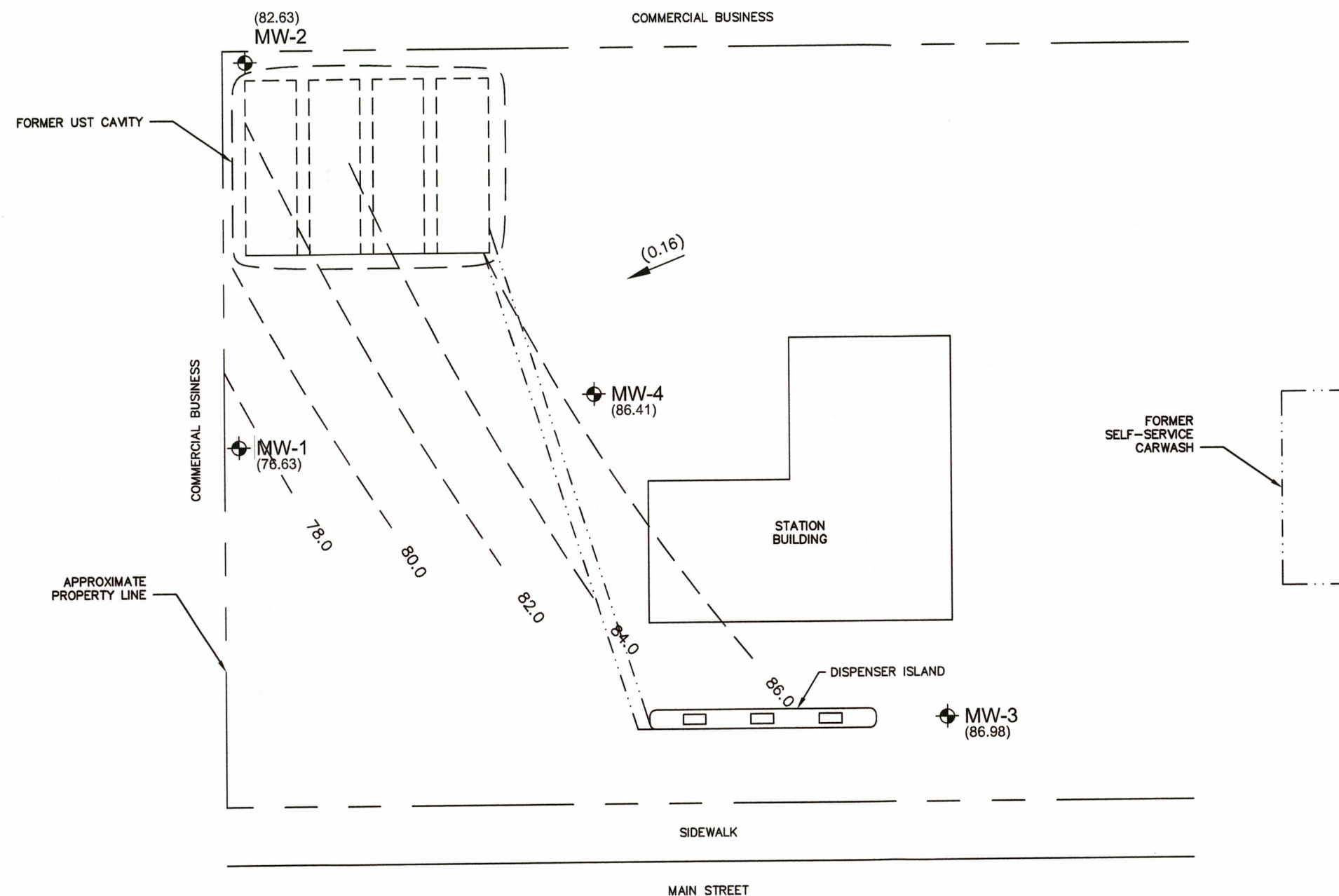
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VICINITY MAP

MOLALLA KWIK GAS
305 WEST MAIN STREET
MOLALLA, OREGON

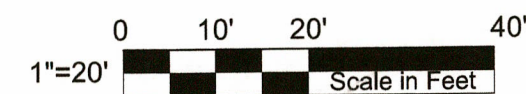
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FIGURE 1



LEGEND

- UST Underground Storage Tank
- [] Former Underground Storage Tank
- - - Former Underground Product Piping Trench
- ⊕ Monitoring Well
- (86.41) Groundwater Elevation (Relative to an arbitrary benchmark)
- - - 86.0 Groundwater Elevation Contour
- ← (0.16) Approximate Groundwater Flow Direction and Gradient in Feet per Foot



ECN ENVIRONMENTAL COMPLIANCE NORTHWEST, INC.
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GROUNDWATER CONTOUR MAP
3RD QUARTER 2008

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	= 2,070
O	= 665
Gx	= 14,000
B	= 979
T	= 9.74
E	= 743
X	= 167.8
1,2,4 TMB	= 332
EDB	= ND
EDC	= ND
1,3,5 TMB	= 88.3
IPB	= 125
MTBE	= ND
NPB	= 460
NAPH	= 766
LEAD	= 0.34
PAHs	SEE TABLE 2

MW-4

STATION
BUILDING

FORMER
SELF-SERVICE
CARWASH

DISPENSER ISLAND

MW-3

SIDEWALK

MAIN STREET

MW-3	
D	= 350
O	= ND
Gx	= 787
B	= ND
T	= ND
E	= ND
X	= ND
1,2,4 TMB	= ND
EDB	= ND
EDC	= ND
1,3,5 TMB	= ND
IPB	= 1.00
MTBE	= ND
NPB	= ND
NAPH	= ND
LEAD	= .65

LEGEND

UST

Underground Storage Tank

Former UST

Former Underground Storage Tank

Former UST Piping

Former Underground Product Piping Trench

Monitoring Well

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)

0 10' 20' 40'
1"=20' Scale in Feet



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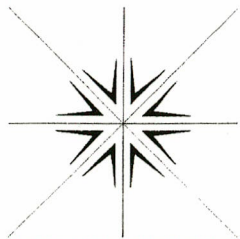
GROUNDWATER ANALYTICAL RESULTS
3RD QUARTER 2008

FORMER KWIK GAS
305 WEST MAIN STREET
MOLALLA, OREGON

Project No. 05-106

FIGURE 3

APPENDIX A



Specialty Analytical

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October 14, 2008

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.: 0809136

Specialty Analytical received 4 samples on 9/30/2008 for the analyses presented in the following report.

REVISED REPORT VERSION **1** . Please see case narrative for information on revision.

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.


Cindy Hillyard

Project Manager


Technical Review

Specialty Analytical**Date:** 14-Oct-08

CLIENT: Environmental Compliance Northwest, Inc.
Project: Powell-Molalla / 05-106
Lab Order: 0809136

CASE NARRATIVE

Report Revision 1

PAH was added to Specialty Analytical sample 0809136-04 (MW-4) per clients request.

Specialty Analytical

Date: 14-Oct-08

CLIENT: Environmental Compliance Northwest, Inc.
Lab Order: 0809136
Project: Powell-Molalla / 05-106
Lab ID: 0809136-01

Client Sample ID: MW-1
Collection Date: 9/28/2008 3:40:00 PM

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX				Analyst: jrp
Diesel	ND	0.243		mg/L	1	10/2/2008
Lube Oil	ND	0.487		mg/L	1	10/2/2008
Surr: o-Terphenyl	65.1	50-150		%REC	1	10/2/2008
BTEX - RBC		SW8021B				Analyst: jrp
Benzene	ND	0.300		µg/L	1	10/1/2008
Toluene	ND	0.500		µg/L	1	10/1/2008
Ethylbenzene	ND	0.500		µg/L	1	10/1/2008
Xylenes, Total	ND	1.50		µg/L	1	10/1/2008
Surr: 4-Bromofluorobenzene	106	74.8-126		%REC	1	10/1/2008
NWTPH-GX		NWTPH-GX				Analyst: jrp
Gasoline	ND	100		µg/L	1	10/1/2008
Surr: 4-Bromofluorobenzene	104	50-150		%REC	1	10/1/2008

Specialty Analytical

Date: 14-Oct-08

CLIENT: Environmental Compliance Northwest, Inc.
Lab Order: 0809136
Project: Powell-Molalla / 05-106
Lab ID: 0809136-02

Client Sample ID: MW-2
Collection Date: 9/28/2008 4:10:00 PM
Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX				Analyst: jrp
Diesel	ND	0.242		mg/L	1	10/2/2008
Lube Oil	ND	0.483		mg/L	1	10/2/2008
Surr: o-Terphenyl	55.9	50-150		%REC	1	10/2/2008
BTEX - RBC		SW8021B				Analyst: jrp
Benzene	ND	0.300		µg/L	1	10/1/2008
Toluene	ND	0.500		µg/L	1	10/1/2008
Ethylbenzene	ND	0.500		µg/L	1	10/1/2008
Xylenes, Total	ND	1.50		µg/L	1	10/1/2008
Surr: 4-Bromofluorobenzene	106	74.8-126		%REC	1	10/1/2008
NWTPH-GX		NWTPH-GX				Analyst: jrp
Gasoline	ND	100		µg/L	1	10/1/2008
Surr: 4-Bromofluorobenzene	101	50-150		%REC	1	10/1/2008

Specialty Analytical

Date: 14-Oct-08

CLIENT: Environmental Compliance Northwest, Inc.
Lab Order: 0809136
Project: Powell-Molalla / 05-106
Lab ID: 0809136-03

Client Sample ID: MW-3
Collection Date: 9/28/2008 4:40:00 PM

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
NWTPH-DX						
Diesel	0.350	0.270	A1	mg/L	1	10/2/2008
Lube Oil	ND	0.541		mg/L	1	10/2/2008
Surr: o-Terphenyl	83.4	50-150		%REC	1	10/2/2008
NWTPH-GX						
Gasoline	787	100		µg/L	1	10/1/2008
Surr: 4-Bromofluorobenzene	99.9	50-150		%REC	1	10/1/2008
DISSOLVED METALS BY ICP/MS						
Lead	1.1	0.10		ug/L	1	10/2/2008 12:58:00 PM
VOLATILE ORGANICS BY GC/MS						
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	10/1/2008 11:00:00 AM
1,2-Dibromoethane	ND	1.00		µg/L	1	10/1/2008 11:00:00 AM
1,2-Dichloroethane	ND	1.00		µg/L	1	10/1/2008 11:00:00 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	10/1/2008 11:00:00 AM
Benzene	ND	0.300		µg/L	1	10/1/2008 11:00:00 AM
Ethylbenzene	ND	1.00		µg/L	1	10/1/2008 11:00:00 AM
Isopropylbenzene	1.00	1.00		µg/L	1	10/1/2008 11:00:00 AM
m,p-Xylene	ND	2.00		µg/L	1	10/1/2008 11:00:00 AM
Methyl tert-butyl ether	ND	1.00		µg/L	1	10/1/2008 11:00:00 AM
n-Propylbenzene	ND	1.00		µg/L	1	10/1/2008 11:00:00 AM
Naphthalene	ND	1.00		µg/L	1	10/1/2008 11:00:00 AM
o-Xylene	ND	1.00		µg/L	1	10/1/2008 11:00:00 AM
Toluene	ND	1.00		µg/L	1	10/1/2008 11:00:00 AM
Surr: 1,2-Dichloroethane-d4	94.4	72.2-129		%REC	1	10/1/2008 11:00:00 AM
Surr: 4-Bromofluorobenzene	104	73.5-125		%REC	1	10/1/2008 11:00:00 AM
Surr: Dibromofluoromethane	112	58.8-148		%REC	1	10/1/2008 11:00:00 AM
Surr: Toluene-d8	88.8	79.8-137		%REC	1	10/1/2008 11:00:00 AM

Specialty Analytical

Date: 14-Oct-08

CLIENT: Environmental Compliance Northwest, Inc.
Lab Order: 0809136
Project: Powell-Molalla / 05-106
Lab ID: 0809136-04

Client Sample ID: MW-4
Collection Date: 9/28/2008 5:10:00 PM
Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
NWTPH-DX						
Diesel	2.07	0.245	A1	mg/L	1	Analyst: jrp 10/2/2008
Lube Oil	0.665	0.490		mg/L	1	10/2/2008
Surr: o-Terphenyl	54.6	50-150		%REC	1	10/2/2008
NWTPH-GX						
Gasoline	14000	500		µg/L	5	Analyst: jrp 10/1/2008
Surr: 4-Bromofluorobenzene	112	50-150		%REC	5	10/1/2008
DISSOLVED METALS BY ICP/MS						
Lead	0.34	0.10		ug/L	1	Analyst: zau 10/2/2008 1:05:00 PM
LOW LEVEL PAH BY GC/MS OARSIM (8270C)						
						Analyst: bda
Acenaphthene	0.203	0.0483		µg/L	1	10/13/2008 11:01:00 PM
Acenaphthylene	0.0676	0.0483		µg/L	1	10/13/2008 11:01:00 PM
Anthracene	ND	0.0483		µg/L	1	10/13/2008 11:01:00 PM
Benz(a)anthracene	ND	0.0483		µg/L	1	10/13/2008 11:01:00 PM
Benzo(a)pyrene	ND	0.0483		µg/L	1	10/13/2008 11:01:00 PM
Benzo(b)fluoranthene	ND	0.0483		µg/L	1	10/13/2008 11:01:00 PM
Benzo(g,h,i)perylene	ND	0.0483		µg/L	1	10/13/2008 11:01:00 PM
Benzo(k)fluoranthene	ND	0.0483		µg/L	1	10/13/2008 11:01:00 PM
Chrysene	ND	0.0483		µg/L	1	10/13/2008 11:01:00 PM
Dibenz(a,h)anthracene	ND	0.0483		µg/L	1	10/13/2008 11:01:00 PM
Fluoranthene	0.126	0.0483		µg/L	1	10/13/2008 11:01:00 PM
Fluorene	0.261	0.0483		µg/L	1	10/13/2008 11:01:00 PM
Indeno(1,2,3-cd)pyrene	ND	0.0483		µg/L	1	10/13/2008 11:01:00 PM
Naphthalene	94.7	0.483		µg/L	10	10/13/2008 10:32:00 PM
Phenanthrene	0.300	0.0483		µg/L	1	10/13/2008 11:01:00 PM
Pyrene	0.126	0.0483		µg/L	1	10/13/2008 11:01:00 PM
Surr: 2-Fluorobiphenyl	64.6	18.6-106		%REC	1	10/13/2008 11:01:00 PM
Surr: Nitrobenzene-d5	79.4	17-130		%REC	1	10/13/2008 11:01:00 PM
Surr: p-Terphenyl-d14	82.3	39.6-131		%REC	1	10/13/2008 11:01:00 PM
VOLATILE ORGANICS BY GC/MS						
						Analyst: bda
1,2,4-Trimethylbenzene	332	5.00		µg/L	5	10/1/2008 5:36:00 PM
1,2-Dibromoethane	ND	1.00		µg/L	1	10/1/2008 1:24:00 PM
1,2-Dichloroethane	ND	1.00		µg/L	1	10/1/2008 1:24:00 PM
1,3,5-Trimethylbenzene	88.3	1.00		µg/L	1	10/1/2008 1:24:00 PM
Benzene	979	6.00		µg/L	20	10/1/2008 5:00:00 PM
Ethylbenzene	743	20.0		µg/L	20	10/1/2008 5:00:00 PM
Isopropylbenzene	125	1.00		µg/L	1	10/1/2008 1:24:00 PM
m,p-Xylene	148	2.00		µg/L	1	10/1/2008 1:24:00 PM
Methyl tert-butyl ether	ND	1.00		µg/L	1	10/1/2008 1:24:00 PM
n-Propylbenzene	460	5.00		µg/L	5	10/1/2008 5:36:00 PM

Specialty Analytical

Date: 14-Oct-08

CLIENT: Environmental Compliance Northwest, Inc.
Lab Order: 0809136
Project: Powell-Molalla / 05-106
Lab ID: 0809136-04

Client Sample ID: MW-4
Collection Date: 9/28/2008 5:10:00 PM
Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC/MS		SW8260B		Analyst: bda		
Naphthalene	766	5.00		µg/L	5	10/1/2008 5:36:00 PM
o-Xylene	19.8	1.00		µg/L	1	10/1/2008 1:24:00 PM
Toluene	9.74	1.00		µg/L	1	10/1/2008 1:24:00 PM
Surr: 1,2-Dichloroethane-d4	84.1	72.2-129		%REC	1	10/1/2008 1:24:00 PM
Surr: 4-Bromofluorobenzene	88.0	73.5-125		%REC	1	10/1/2008 1:24:00 PM
Surr: Dibromofluoromethane	94.6	58.8-148		%REC	1	10/1/2008 1:24:00 PM
Surr: Toluene-d8	84.1	79.8-137		%REC	1	10/1/2008 1:24:00 PM

Specialty Analytical

Date: 14-Oct-08

CLIENT: Environmental Compliance Northwest, Inc.
 WorkOrder: 0809136
 Project: Powell-Molalla/05-106

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_WDISS

Sample ID	0809137-04CMS	SampType:	MS	TestCode:	6020_WDISS	Units:	ug/L	Prep Date:	10/1/2008	Run ID:	ICPMS_081002A
Client ID:	ZZZZZ	Batch ID:	21909	TestNo:	SW6020			Analysis Date:	10/2/2008	SeqNo:	560433
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	50.45	0.10	50	0	101	70	130	0	0		
Chromium	48.17	1.0	50	0	96.3	70	130	0	0		
Lead	49.72	0.10	50	1.211	97	70	130	0	0		

Sample ID	0809137-04CMSD	SampType:	MSD	TestCode:	6020_WDISS	Units:	ug/L	Prep Date:	10/1/2008	Run ID:	ICPMS_081002A
Client ID:	ZZZZZ	Batch ID:	21909	TestNo:	SW6020			Analysis Date:	10/2/2008	SeqNo:	560434
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	49.92	0.10	50	0	99.8	70	130	50.45	1.06	20	
Chromium	48.87	1.0	50	0	97.7	70	130	48.17	1.44	20	
Lead	49.44	0.10	50	1.211	96.5	70	130	49.72	0.565	20	

Sample ID	0809137-04CDUP	SampType:	DUP	TestCode:	6020_WDISS	Units:	ug/L	Prep Date:	10/1/2008	Run ID:	ICPMS_081002A
Client ID:	ZZZZZ	Batch ID:	21909	TestNo:	SW6020			Analysis Date:	10/2/2008	SeqNo:	560432
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	ND	0.10	0	0	0	0	0	0	0	20	
Chromium	ND	1.0	0	0	0	0	0	0	0	20	
Lead	1.198	0.10	0	0	0	0	0	1.211	1.08	20	

Sample ID	CCV	SampType:	CCV	TestCode:	6020_WDISS	Units:	ug/L	Prep Date:		Run ID:	ICPMS_081002A
Client ID:	ZZZZZ	Batch ID:	21909	TestNo:	SW6020			Analysis Date:	10/2/2008	SeqNo:	560438
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	50.43	0.10	50	0	101	90	110	0	0		
Chromium	51.45	1.0	50	0	103	90	110	0	0		
Lead	48.27	0.10	50	0	96.5	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.
WorkOrder: 0809136
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_081002A			
Client ID:	ZZZZZ	Batch ID:	21909	TestNo:	SW6020			Analysis Date:	10/2/2008	SeqNo:	560442			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		51.49		0.10	50	0		103	90	110	0	0		

Sample ID	ICB-21909	SampType:	ICB	TestCode:	6020_WDISS	Units:	ug/L	Prep Date:	10/1/2008	Run ID:	ICPMS_081002A			
Client ID:	ZZZZZ	Batch ID:	21909	TestNo:	SW6020			Analysis Date:	10/2/2008	SeqNo:	560430			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium		ND		0.10	0	0		0	0	0	0	0		
Chromium		ND		1.0	0	0		0	0	0	0	0		
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_081002A			
Client ID:	ZZZZZ	Batch ID:	21909	TestNo:	SW6020			Analysis Date:	10/2/2008	SeqNo:	560429			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium		50.74		0.10	50	0		101	90	110	0	0		
Chromium		50.54		1.0	50	0		101	90	110	0	0		
Lead		48.02		0.10	50	0		96	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.

WorkOrder: 0809136

Project: Powell-Molalla/05-106

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_W

Sample ID	MB-21901	SampType:	MBLK	TestCode:	8260_W	Units:	µg/L	Prep Date:	10/1/2008	Run ID:	5973J_081001B
Client ID:	ZZZZZ	Batch ID:	21901	TestNo:	SW8260B			Analysis Date:	10/1/2008	SeqNo:	560285
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	1.00									
1,1,1-Trichloroethane	ND	1.00									
1,1,2,2-Tetrachloroethane	ND	1.00									
1,1,2-Trichloroethane	ND	1.00									
1,1-Dichloroethane	ND	1.00									
1,1-Dichloroethene	ND	1.00									
1,1-Dichloropropene	ND	1.00									
1,2,3-Trichlorobenzene	ND	1.00									
1,2,3-Trichloropropane	ND	1.00									
1,2,4-Trichlorobenzene	ND	1.00									
1,2,4-Trimethylbenzene	ND	1.00									
1,2-Dibromo-3-chloropropane	ND	1.00									
1,2-Dibromoethane	ND	1.00									
1,2-Dichlorobenzene	ND	1.00									
1,2-Dichloroethane	ND	1.00									
1,2-Dichloropropane	ND	1.00									
1,3,5-Trimethylbenzene	ND	1.00									
1,3-Dichlorobenzene	ND	1.00									
1,3-Dichloropropane	ND	1.00									
1,4-Dichlorobenzene	ND	1.00									
2,2-Dichloropropane	ND	1.00									
2-Butanone	ND	10.0									
2-Chlorotoluene	ND	1.00									
2-Hexanone	ND	10.0									
4-Chlorotoluene	ND	1.00									
4-Isopropyltoluene	ND	1.00									
4-Methyl-2-pentanone	ND	20.0									
Acetone	ND	50.0									
Acrylonitrile	ND	5.00									
Benzene	ND	0.300									
Bromobenzene	ND	1.00									

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: 0809136
Project: Powell-Molalla/05-106

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_W

Sample ID	MB-21901	SampType:	MBLK	TestCode:	8260_W	Units:	µg/L	Prep Date:	10/1/2008	Run ID:	5973J_081001B
Client ID:	ZZZZZ	Batch ID:	21901	TestNo:	SW8260B			Analysis Date:	10/1/2008	SeqNo:	560285
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromochloromethane	ND	1.00									
Bromodichloromethane	ND	1.00									
Bromoform	ND	1.00									
Bromomethane	ND	1.00									
Carbon disulfide	ND	2.00									
Carbon tetrachloride	ND	1.00									
Chlorobenzene	ND	1.00									
Chloroethane	ND	1.00									
Chloroform	ND	1.00									
Chloromethane	ND	1.00									
cis-1,2-Dichloroethene	ND	1.00									
cis-1,3-Dichloropropene	ND	1.00									
Dibromochloromethane	ND	1.00									
Dibromomethane	ND	1.00									
Dichlorodifluoromethane	ND	1.00									
Ethylbenzene	0.16	1.00									J
Hexachlorobutadiene	ND	1.00									
Isopropylbenzene	ND	1.00									
m,p-Xylene	ND	2.00									
Methyl tert-butyl ether	ND	1.00									
Methylene chloride	2.13	20.0									J
n-Butylbenzene	ND	1.00									
n-Propylbenzene	ND	1.00									
Naphthalene	0.54	1.00									J
o-Xylene	ND	1.00									
sec-Butylbenzene	ND	1.00									
Styrene	ND	1.00									
tert-Butylbenzene	ND	1.00									
Tetrachloroethene	ND	1.00									
Toluene	ND	1.00									
trans-1,2-Dichloroethene	ND	1.00									

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: 0809136

Project: Powell-Molalla/05-106

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_W

Sample ID	MB-21901	SampType:	MBLK	TestCode:	8260_W	Units:	µg/L	Prep Date:	10/1/2008	Run ID:	5973J_081001B
Client ID:	ZZZZZ	Batch ID:	21901	TestNo:	SW8260B			Analysis Date:	10/1/2008	SeqNo:	560285
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

trans-1,3-Dichloropropene	ND	1.00									
Trichloroethene	ND	1.00									
Trichlorofluoromethane	ND	1.00									
Vinyl chloride	ND	1.00									
Surr:1,2-Dichloroethane-d4	101.1	0	100	0	101	72.2	129	0	0		
Surr:4-Bromofluorobenzene	104.3	0	100	0	104	73.5	125	0	0		
Surr:Dibromofluoromethane	115	0	100	0	115	58.8	148	0	0		
Surr:Toluene-d8	95.42	0	100	0	95.4	79.8	137	0	0		

Sample ID	LCS-21901	SampType:	LCS	TestCode:	8260_W	Units:	µg/L	Prep Date:	10/1/2008	Run ID:	5973J_081001B
Client ID:	ZZZZZ	Batch ID:	21901	TestNo:	SW8260B			Analysis Date:	10/1/2008	SeqNo:	560284
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1-Dichloroethene	39.77	1.00	40	0	99.4	69.9	130	0	0		
Benzene	40.69	0.300	40	0	102	77.9	125	0	0		
Chlorobenzene	39.47	1.00	40	0	98.7	82.5	114	0	0		
Toluene	36.96	1.00	40	0	92.4	74.6	119	0	0		
Trichloroethene	47.08	1.00	40	0	118	74.7	125	0	0		

Sample ID	A0810008-01AMS	SampType:	MS	TestCode:	8260_W	Units:	µg/L	Prep Date:	10/1/2008	Run ID:	5973J_081001B
Client ID:	ZZZZZ	Batch ID:	21901	TestNo:	SW8260B			Analysis Date:	10/2/2008	SeqNo:	560304
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1-Dichloroethene	973.5	25.0	1000	0	97.4	51.4	176	0	0		
Benzene	1167	7.50	1000	0	117	71.5	118	0	0		
Chlorobenzene	1131	25.0	1000	0	113	79.8	114	0	0		
Toluene	1041	25.0	1000	3.75	104	79.6	121	0	0		
Trichloroethene	1347	25.0	1000	38.75	131	73.6	120	0	0		S

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: 0809136
Project: Powell-Molalla/05-106

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_W

Sample ID	A0810008-01AMSD	SampType:	MSD	TestCode:	8260_W	Units:	µg/L	Prep Date:	10/1/2008	Run ID:	5973J_081001B
Client ID:	ZZZZZ	Batch ID:	21901	TestNo:	SW8260B			Analysis Date:	10/2/2008	SeqNo:	560305
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	875.8	25.0	1000	0	87.6	51.4	176	973.5	10.6	20	
Benzene	1160	7.50	1000	0	116	71.5	118	1167	0.645	20	
Chlorobenzene	1087	25.0	1000	0	109	79.8	114	1131	4.01	20	
Toluene	1004	25.0	1000	3.75	100	79.6	121	1041	3.62	20	
Trichloroethene	1386	25.0	1000	38.75	135	73.6	120	1347	2.84	20	S

Sample ID	CCV-21901	SampType:	CCV	TestCode:	8260_W	Units:	µg/L	Prep Date:		Run ID:	5973J_081001B
Client ID:	ZZZZZ	Batch ID:	21901	TestNo:	SW8260B			Analysis Date:	10/1/2008	SeqNo:	560283
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	38.53	1.00	40	0	96.3	80	120	0	0		
1,2-Dichloropropane	40.29	1.00	40	0	101	80	120	0	0		
Chloroform	43.71	1.00	40	0	109	80	120	0	0		
Ethylbenzene	40.31	1.00	40	0	101	80	120	0	0		
Toluene	37.44	1.00	40	0	93.6	80	120	0	0		
Vinyl chloride	39.29	1.00	40	0	98.2	80	120	0	0		

Sample ID	CCV-21901	SampType:	CCV	TestCode:	8260_W	Units:	µg/L	Prep Date:		Run ID:	5973J_081001B
Client ID:	ZZZZZ	Batch ID:	21901	TestNo:	SW8260B			Analysis Date:	10/1/2008	SeqNo:	560297
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	35.58	1.00	40	0	89	80	120	0	0		
1,2-Dichloropropane	40.3	1.00	40	0	101	80	120	0	0		
Chloroform	38.7	1.00	40	0	96.8	80	120	0	0		
Ethylbenzene	39	1.00	40	0	97.5	80	120	0	0		
Toluene	36.08	1.00	40	0	90.2	80	120	0	0		
Vinyl chloride	32.44	1.00	40	0	81.1	80	120	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: 0809136
Project: Powell-Molalla/05-106

ANALYTICAL QC SUMMARY REPORT

TestCode: BTEXRBC_W

Sample ID	MB-21904	SampType:	MBLK	TestCode:	BTEXRBC_W	Units:	µg/L	Prep Date:	10/1/2008	Run ID:	GC-I_081001A			
Client ID:	ZZZZZ	Batch ID:	21904	TestNo:	SW8021B			Analysis Date:	10/1/2008	SeqNo:	560321			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	ND	0.300												
Toluene	ND	0.500												
Ethylbenzene	ND	0.500												
Xylenes, Total	ND	1.50												
Surr:4-Bromofluorobenzene	104	1.00		100	0	104	74.8	126	0	0				

Sample ID	LCS-21904	SampType:	LCS	TestCode:	BTEXRBC_W	Units:	µg/L	Prep Date:	10/1/2008	Run ID:	GC-I_081001A			
Client ID:	ZZZZZ	Batch ID:	21904	TestNo:	SW8021B			Analysis Date:	10/1/2008	SeqNo:	560322			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	26.02	0.300		25	0	104	75.8	113	0	0				
Toluene	25.23	0.500		25	0	101	77	116	0	0				
Ethylbenzene	25.8	0.500		25	0	103	76.6	118	0	0				
Xylenes, Total	79.22	1.50		75	0	106	76.7	118	0	0				

Sample ID	0809136-01BMS	SampType:	MS	TestCode:	BTEXRBC_W	Units:	µg/L	Prep Date:	10/1/2008	Run ID:	GC-I_081001A		
Client ID:	MW-1	Batch ID:	21904	TestNo:	SW8021B			Analysis Date:	10/1/2008	SeqNo:	560324		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	26.43	0.300		25	0	106	67.8	118	0	0				
Toluene	24.85	0.500		25	0	99.4	74.7	117	0	0				
Ethylbenzene	25.42	0.500		25	0	102	74.5	115	0	0				
Xylenes, Total	77.14	1.50		75	0	103	76.8	120	0	0				

Sample ID	0809136-01BMSD	SampType:	MSD	TestCode:	BTEXRBC_W	Units:	µg/L	Prep Date:	10/1/2008	Run ID:	GC-I_081001A			
Client ID:	MW-1	Batch ID:	21904	TestNo:	SW8021B			Analysis Date:	10/1/2008	SeqNo:	560325			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	28.43	0.300		25	0	114	67.8	118	26.43	7.29	20			
Toluene	26.28	0.500		25	0	105	74.7	117	24.85	5.59	20			
Ethylbenzene	27.13	0.500		25	0	109	74.5	115	25.42	6.51	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: 0809136

Project: Powell-Molalla/05-106

ANALYTICAL QC SUMMARY REPORT

TestCode: BTEXRBC_W

Sample ID	0809136-01BMSD	SampType: MSD	TestCode: BTEXRBC_W	Units: µg/L	Prep Date: 10/1/2008	Run ID: GC-I_081001A					
Client ID: MW-1	Batch ID: 21904	TestNo: SW8021B	Analysis Date: 10/1/2008	SeqNo: 560325							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Xylenes, Total	82.26	1.50	75	0	110	76.8	120	77.14	6.42	20	

Sample ID	CCV	SampType:	CCV	TestCode:	BTEXRBC_W	Units:	µg/L	Prep Date:		Run ID:	GC-I_081001A			
Client ID:	ZZZZZ	Batch ID:	21904	TestNo:	SW8021B			Analysis Date:	10/1/2008	SeqNo:	560323			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		51.16		0.300	50	0		102	85	115	0	0		
Toluene		50		0.500	50	0		100	85	115	0	0		
Ethylbenzene		49.51		0.500	50	0		99	85	115	0	0		
Xylenes, Total		152.2		1.50	150	0		101	85	115	0	0		

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B - Analyte detected in the associated Method Blank

CLIENT: Environmental Compliance Northwest, Inc.
WorkOrder: 0809136
Project: Powell-Molalla/05-106

ANALYTICAL QC SUMMARY REPORT

TestCode: NWTPHDX_W

Sample ID	MB-21919	SampType:	MBLK	TestCode:	NWTPHDX_	Units:	mg/L	Prep Date:	10/2/2008	Run ID:	GC-M_081002A	
Client ID:	ZZZZZ	Batch ID:	21919	TestNo:	NWTPH-Dx			AnalysisDate:	10/2/2008	SeqNo:	560599	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel		0.1424	0.250									J
Lube Oil		0.3666	0.500									J
Surr: o-Terphenyl		0.4416	0	0.5	0	88.3	50	150	0	0		

Sample ID	LCS-21919	SampType:	LCS	TestCode:	NWTPHDX_	Units:	mg/L	Prep Date:	10/2/2008	Run ID:	GC-M_081002A	
Client ID:	ZZZZZ	Batch ID:	21919	TestNo:	NWTPH-Dx			AnalysisDate:	10/2/2008	SeqNo:	560600	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel		2.387	0.250	2.509	0.1424	89.5	60.7	121	0	0		
Lube Oil		2.34	0.500	2.524	0.3666	78.2	64	126	0	0		

Sample ID	LCSD-21919	SampType:	LCSD	TestCode:	NWTPHDX_	Units:	mg/L	Prep Date:	10/2/2008	Run ID:	GC-M_081002A	
Client ID:	ZZZZZ	Batch ID:	21919	TestNo:	NWTPH-Dx			AnalysisDate:	10/2/2008	SeqNo:	560601	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel		2.368	0.250	2.505	0.1424	88.8	60.7	121	2.387	0.808	20	
Lube Oil		2.405	0.500	2.505	0.3666	81.4	64	126	2.34	2.72	20	

Sample ID	CCV	SampType:	CCV	TestCode:	NWTPHDX_	Units:	mg/L	Prep Date:		Run ID:	GC-M_081002A	
Client ID:	ZZZZZ	Batch ID:	21919	TestNo:	NWTPH-Dx			AnalysisDate:	10/2/2008	SeqNo:	560602	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel		14.4	0.250	15	0	96	85	115	0	0		
Lube Oil		7.641	0.500	7.5	0	102	85	115	0	0		

Sample ID	CCV	SampType:	CCV	TestCode:	NWTPHDX_	Units:	mg/L	Prep Date:		Run ID:	GC-M_081002A	
Client ID:	ZZZZZ	Batch ID:	21919	TestNo:	NWTPH-Dx			AnalysisDate:	10/2/2008	SeqNo:	560612	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel		19.46	0.250	20	0	97.3	85	115	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: 0809136
Project: Powell-Molalla/05-106

ANALYTICAL QC SUMMARY REPORT

TestCode: NWTPHDX_W

Sample ID	CCV	SampType:	CCV	TestCode:	NWTPHDX_	Units:	mg/L	Prep Date:		Run ID:	GC-M_081002A	
Client ID:	ZZZZZ	Batch ID:	21919	TestNo:	NWTPH-Dx			AnalysisDate:	10/2/2008	SeqNo:	560612	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lube Oil	9.463	0.500	10	0	94.6	85	115	0	0
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Sample ID	CCV	SampType:	CCV	TestCode:	NWTPHDX_	Units:	mg/L	Prep Date:		Run ID:	GC-M_081002A		
Client ID:	ZZZZZ	Batch ID:	21919	TestNo:	NWTPH-Dx			AnalysisDate:	10/3/2008	SeqNo:	560665		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Diesel	14.89	0.250	15	0	99.3	85	115	0	0
Lube Oil	7.364	0.500	7.5	0	98.2	85	115	0	0

Sample ID	CCV	SampType:	CCV	TestCode:	NWTPHDX_	Units:	mg/L	Prep Date:		Run ID:	GC-M_081002A		
Client ID:	ZZZZZ	Batch ID:	21919	TestNo:	NWTPH-Dx			AnalysisDate:	10/3/2008	SeqNo:	560668		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Diesel	19.67	0.250	20	0	98.3	85	115	0	0
Lube Oil	9.666	0.500	10	0	96.7	85	115	0	0

Sample ID	CCV	SampType:	CCV	TestCode:	NWTPHDX_	Units:	mg/L	Prep Date:		Run ID:	GC-M_081002A		
Client ID:	ZZZZZ	Batch ID:	21919	TestNo:	NWTPH-Dx			AnalysisDate:	10/3/2008	SeqNo:	560875		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Diesel	19.67	0.250	20	0	98.3	85	115	0	0
Lube Oil	9.666	0.500	10	0	96.7	85	115	0	0

Sample ID	CCV	SampType:	CCV	TestCode:	NWTPHDX_	Units:	mg/L	Prep Date:		Run ID:	GC-M_081002A		
Client ID:	ZZZZZ	Batch ID:	21919	TestNo:	NWTPH-Dx			Analysis Date:	10/3/2008	SeqNo:	560879		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Diesel	14.98	0.250	15	0	99.9	85	115	0	0
Lube Oil	6.966	0.500	7.5	0	92.9	85	115	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: 0809136
Project: Powell-Molalla/05-106

ANALYTICAL QC SUMMARY REPORT

TestCode: NWTPHGX_W

Sample ID	MB-21905	SampType:	MBLK	TestCode:	NWTPHGX_	Units:	µg/L	Prep Date:	10/1/2008	Run ID:	GC-I_081001B			
Client ID:	ZZZZZ	Batch ID:	21905	TestNo:	NWTPH-Gx			Analysis Date:	10/1/2008	SeqNo:	560335			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline		ND		100										
Surr:4-Bromofluorobenzene		94.01		0	100	0		94	50	150	0	0		

Sample ID	LCS-21905	SampType:	LCS	TestCode:	NWTPHGX_	Units:	µg/L	Prep Date:	10/1/2008	Run ID:	GC-I_081001B			
Client ID:	ZZZZZ	Batch ID:	21905	TestNo:	NWTPH-Gx			Analysis Date:	10/1/2008	SeqNo:	560336			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline		1974		100	2000	0		98.7	74.4	128	0	0		

Sample ID	0809136-02BDUP	SampType:	DUP	TestCode:	NWTPHGX_	Units:	µg/L	Prep Date:	10/1/2008	Run ID:	GC-I_081001B			
Client ID:	MW-2	Batch ID:	21905	TestNo:	NWTPH-Gx			Analysis Date:	10/1/2008	SeqNo:	560340			
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-I_081001B			
Client ID:	ZZZZZ	Batch ID:	21905	TestNo:	NWTPH-Gx			Analysis Date:	10/1/2008	SeqNo:	560337			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline		2490		100	2500	0		99.6	80	120	0	0		

Sample ID	CCV	SampType:	CCV	TestCode:	NWTPHGX_	Units:	µg/L	Prep Date:		Run ID:	GC-I_081001B			
Client ID:	ZZZZZ	Batch ID:	21905	TestNo:	NWTPH-Gx			Analysis Date:	10/1/2008	SeqNo:	560346			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline		3264		100	3000	0		109	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.

WorkOrder: 0809136

Project: Powell-Molalla/05-106

ANALYTICAL QC SUMMARY REPORT

TestCode: NWTPHGX_W

Sample ID	CCV	SampType:	CCV	TestCode:	NWTPHGX_	Units:	µg/L	Prep Date:		Run ID:	GC-I_081001B			
Client ID:	ZZZZZ	Batch ID:	21905	TestNo:	NWTPH-Gx			Analysis Date:	10/2/2008	SeqNo:	560516			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline		2509		100	2500	0		100	80	120	0		0	
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Sample ID	CCV	SampType:	CCV	TestCode:	NWTPHGX_	Units:	µg/L	Prep Date:		Run ID:	GC-I_081001B			
Client ID:	ZZZZZ	Batch ID:	21905	TestNo:	NWTPH-Gx			Analysis Date:	10/2/2008	SeqNo:	560519			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline		3299		100	3000	0		110	80	120	0		0	
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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.

WorkOrder: 0809136

Project: Powell-Molalla/05-106

ANALYTICAL QC SUMMARY REPORT

TestCode: PAHLL_W

Sample ID	MB-21947	SampType:	MBLK	TestCode:	PAHLL_W	Units:	µg/L	Prep Date:	10/7/2008	Run ID:	5975Q_081013A
Client ID:	ZZZZZ	Batch ID:	21947	TestNo:	8270SIM			Analysis Date:	10/13/2008	SeqNo:	562510
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	0.02	0.0500									J
Acenaphthylene	ND	0.0500									
Anthracene	0.01	0.0500									J
Benz(a)anthracene	0.03	0.0500									J
Benzo(a)pyrene	0.01	0.0500									J
Benzo(b)fluoranthene	0.03	0.0500									J
Benzo(g,h,i)perylene	0.02	0.0500									J
Benzo(k)fluoranthene	0.03	0.0500									J
Chrysene	0.03	0.0500									J
Dibenz(a,h)anthracene	0.02	0.0500									J
Fluoranthene	0.03	0.0500									J
Fluorene	0.02	0.0500									J
Indeno(1,2,3-cd)pyrene	0.03	0.0500									J
Naphthalene	0.04	0.0500									J
Phenanthrene	0.04	0.0500									J
Pyrene	0.03	0.0500									J
Surr: 2-Fluorobiphenyl	90.84	1.00	100	0	90.8	18.6	106	0	0		
Surr: Nitrobenzene-d5	107.3	1.00	100	0	107	17	130	0	0		
Surr: p-Terphenyl-d14	117.1	1.00	100	0	117	39.6	131	0	0		

Sample ID	LCS-21947	SampType:	LCS	TestCode:	PAHLL_W	Units:	µg/L	Prep Date:	10/7/2008	Run ID:	5975Q_081013A
Client ID:	ZZZZZ	Batch ID:	21947	TestNo:	8270SIM			Analysis Date:	10/13/2008	SeqNo:	562511
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	3.64	0.0500	5	0.02	72.4	35.1	100	0	0		
Benzo(g,h,i)perylene	3.82	0.0500	5	0.02	76	20.8	120	0	0		
Chrysene	4.02	0.0500	5	0.03	79.8	39.1	119	0	0		
Naphthalene	3.35	0.0500	5	0.04	66.2	25.6	106	0	0		
Phenanthrene	4.14	0.0500	5	0.04	82	38.1	106	0	0		
Pyrene	3.87	0.0500	5	0.03	76.8	41.3	118	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: 0809136
Project: Powell-Molalla/05-106

ANALYTICAL QC SUMMARY REPORT

TestCode: PAHLL_W

Sample ID	LCSD-21947	SampType:	LCSD	TestCode:	PAHLL_W	Units:	µg/L	Prep Date:	10/7/2008	Run ID:	5975Q_081013A
Client ID:	ZZZZZ	Batch ID:	21947	TestNo:	8270SIM			Analysis Date:	10/13/2008	SeqNo:	562512
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	3.74	0.0500	5	0.02	74.4	35.1	100	3.64	2.71	20	
Benzo(g,h,i)perylene	4.06	0.0500	5	0.02	80.8	20.8	120	3.82	6.09	20	
Chrysene	4.57	0.0500	5	0.03	90.8	39.1	119	4.02	12.8	20	
Naphthalene	3.64	0.0500	5	0.04	72	25.6	106	3.35	8.30	20	
Phenanthrene	4.4	0.0500	5	0.04	87.2	38.1	106	4.14	6.09	20	
Pyrene	4.83	0.0500	5	0.03	96	41.3	118	3.87	22.1	20	R

Sample ID	CCV-21947	SampType:	CCV	TestCode:	PAHLL_W	Units:	µg/L	Prep Date:		Run ID:	5975Q_081013A
Client ID:	ZZZZZ	Batch ID:	21947	TestNo:	8270SIM			Analysis Date:	10/13/2008	SeqNo:	562509
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	4.62	0.0500	5	0	92.4	70	130	0	0		
Acenaphthylene	5.18	0.0500	5	0	104	70	130	0	0		
Anthracene	5.36	0.0500	5	0	107	70	130	0	0		
Benz(a)anthracene	4.86	0.0500	5	0	97.2	70	130	0	0		
Benzo(a)pyrene	4.74	0.0500	5	0	94.8	70	130	0	0		
Benzo(b)fluoranthene	4.72	0.0500	5	0	94.4	70	130	0	0		
Benzo(g,h,i)perylene	4.42	0.0500	5	0	88.4	70	130	0	0		
Benzo(k)fluoranthene	4.63	0.0500	5	0	92.6	70	130	0	0		
Chrysene	4.87	0.0500	5	0	97.4	70	130	0	0		
Dibenz(a,h)anthracene	4.73	0.0500	5	0	94.6	70	130	0	0		
Fluoranthene	5.37	0.0500	5	0	107	70	130	0	0		
Fluorene	4.97	0.0500	5	0	99.4	70	130	0	0		
Indeno(1,2,3-cd)pyrene	4.54	0.0500	5	0	90.8	70	130	0	0		
Naphthalene	4.59	0.0500	5	0	91.8	70	130	0	0		
Phenanthrene	4.79	0.0500	5	0	95.8	70	130	0	0		
Pyrene	4.84	0.0500	5	0	96.8	70	130	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.

WorkOrder: 0809136

Project: Powell-Molalla/05-106

ANALYTICAL QC SUMMARY REPORT

TestCode: PAHLL_W

Sample ID	CCV-21947	SampType:	CCV	TestCode:	PAHLL_W	Units:	µg/L	Prep Date:		Run ID:	5975Q_081013A
Client ID:	ZZZZZ	Batch ID:	21947	TestNo:	8270SIM			Analysis Date:	10/14/2008	SeqNo:	562528
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	4.91	0.0500	5	0	98.2	70	130	0	0		
Acenaphthylene	5.2	0.0500	5	0	104	70	130	0	0		
Anthracene	4.69	0.0500	5	0	93.8	70	130	0	0		
Benz(a)anthracene	5.28	0.0500	5	0	106	70	130	0	0		
Benzo(a)pyrene	4.86	0.0500	5	0	97.2	70	130	0	0		
Benzo(b)fluoranthene	5.16	0.0500	5	0	103	70	130	0	0		
Benzo(g,h,i)perylene	4.58	0.0500	5	0	91.6	70	130	0	0		
Benzo(k)fluoranthene	4.66	0.0500	5	0	93.2	70	130	0	0		
Chrysene	5.08	0.0500	5	0	102	70	130	0	0		
Dibenz(a,h)anthracene	4.62	0.0500	5	0	92.4	70	130	0	0		
Fluoranthene	5.27	0.0500	5	0	105	70	130	0	0		
Fluorene	4.99	0.0500	5	0	99.8	70	130	0	0		
Indeno(1,2,3-cd)pyrene	4.72	0.0500	5	0	94.4	70	130	0	0		
Naphthalene	4.77	0.0500	5	0	95.4	70	130	0	0		
Phenanthrene	4.75	0.0500	5	0	95	70	130	0	0		
Pyrene	5.17	0.0500	5	0	103	70	130	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

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.

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Company ECN
Address PO Box 230, 63
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Phone 372 9760 Fax 215 9980
Project No. 05-106 Project Name powell-motalla
Project Site Location OR X WA _____ Other _____
Invoice To _____ P.O. No. _____

Signature.

Printed

Signature_____

Printed.

Turn Around Time

☒ Normal 5-7 Business Days

☐ Rush

Specify

Rush Analyses Must Be Scheduled With The Lab In Advance

[illegible]

Copies: White-Original

Yellow-Project File

Pink-Customer Copy