

**FIRST 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

ECN



December 3, 2010



ENVIRONMENTAL COMPLIANCE NORTHWEST

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December 3, 2010
ECN Project No. 05-106

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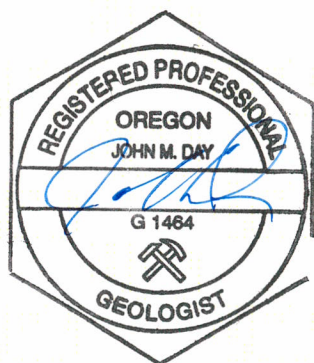
**SUBJECT: First Quarter 2009
Groundwater Monitoring Report
Former Molalla Kwik Gas
305 West Main Street
Molalla, Oregon
DEQ LUST File No.: 03-05-461**

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 first 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 first quarter 2009 groundwater monitoring and sampling were performed in accordance with DEQ guidelines. On March 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 first 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 first 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 first 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 March 26, 2009, ranged from 3.50 to 9.54 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 0.08 feet per foot. Compared to the third quarter 2008 monitoring data, groundwater elevations in the monitoring wells increased between 1.84 and 7.87 feet.

The groundwater elevation and flow direction data for the first 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 (277 micrograms per liter [$\mu\text{g/L}$]), gasoline-range hydrocarbons (429 $\mu\text{g/L}$), and dissolved lead (1.1 $\mu\text{g/L}$) were detected.

MW-4: Diesel-range hydrocarbons (1,700 $\mu\text{g/L}$); lube oil-range hydrocarbons (893 $\mu\text{g/L}$); gasoline-range hydrocarbons (8,010 $\mu\text{g/L}$); benzene (480 $\mu\text{g/L}$); toluene (4.49 $\mu\text{g/L}$); ethylbenzene (356 $\mu\text{g/L}$); total xylenes (91.4 $\mu\text{g/L}$); 1,2,4-TMB (125 $\mu\text{g/L}$); 1,3,5-TMB (23.7 $\mu\text{g/L}$); IPB (87.6 $\mu\text{g/L}$); MTBE (1.80 $\mu\text{g/L}$); NPB (185 $\mu\text{g/L}$); naphthalene (119 $\mu\text{g/L}$); and dissolved lead (0.82 $\mu\text{g/L}$) were detected. The following PAHs were also detected: acenaphthene (0.138 $\mu\text{g/L}$); fluoranthene (0.138 $\mu\text{g/L}$); naphthalene (56.9 $\mu\text{g/L}$); phenanthrene (0.0984 $\mu\text{g/L}$); and pyrene (0.0591 $\mu\text{g/L}$).

The groundwater sampling results for the first 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.

None of the groundwater samples collected during the first quarter 2009 monitoring event exceeded RBCs for the potentially complete groundwater exposure pathways.

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 flow direction data, it appears that the generalized shallow water-bearing zone flow direction varies between west-southwest and southwest.

Based on analytical results, none of groundwater samples during the first quarter 2009 sampling event exceed the potentially complete exposure pathways at the site.

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.

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	
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	
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
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
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: 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

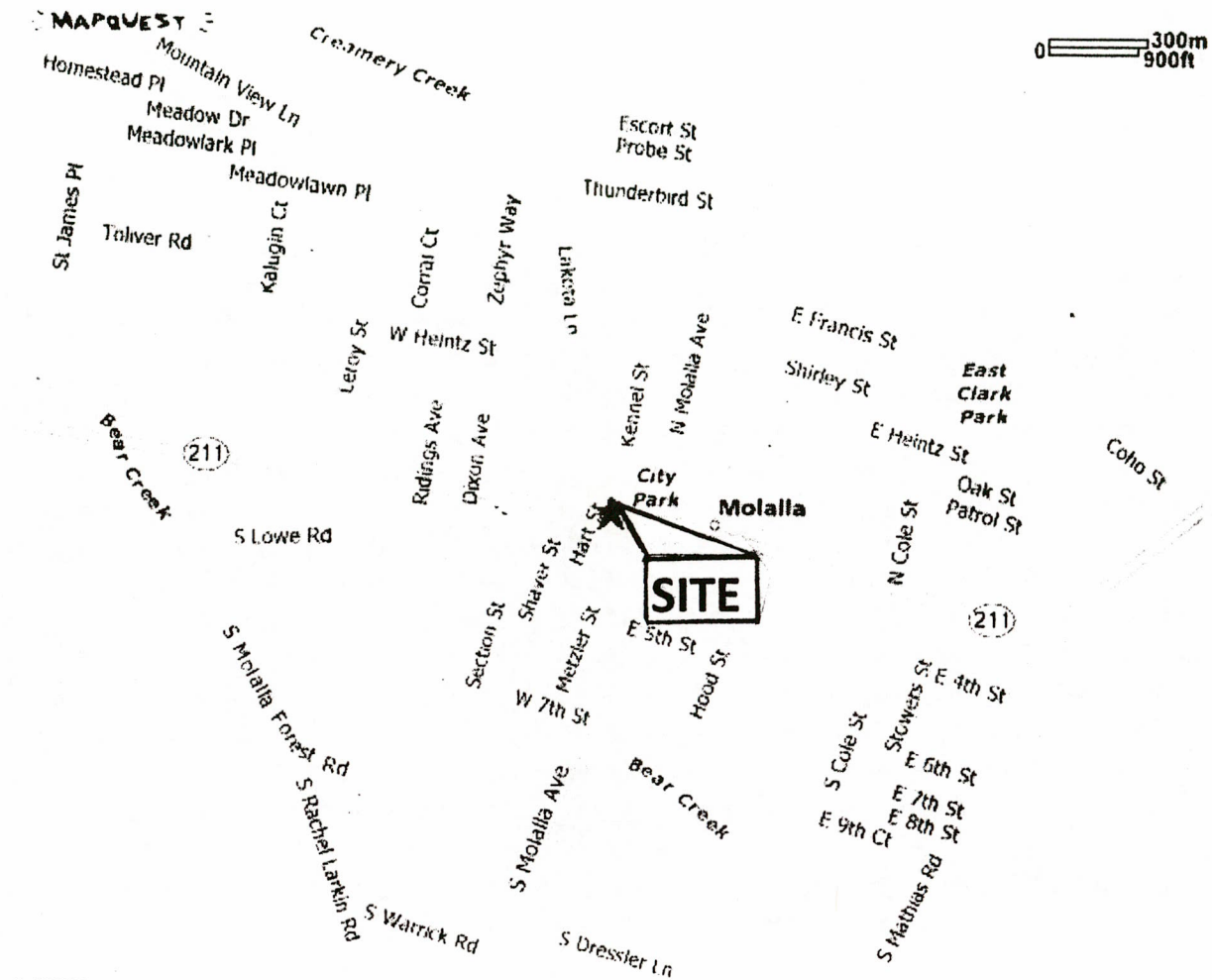


Polynuclear Aromatic Hydrocarbons (µg/L) [1]		Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoroanthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	LAB
Sample 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
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
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

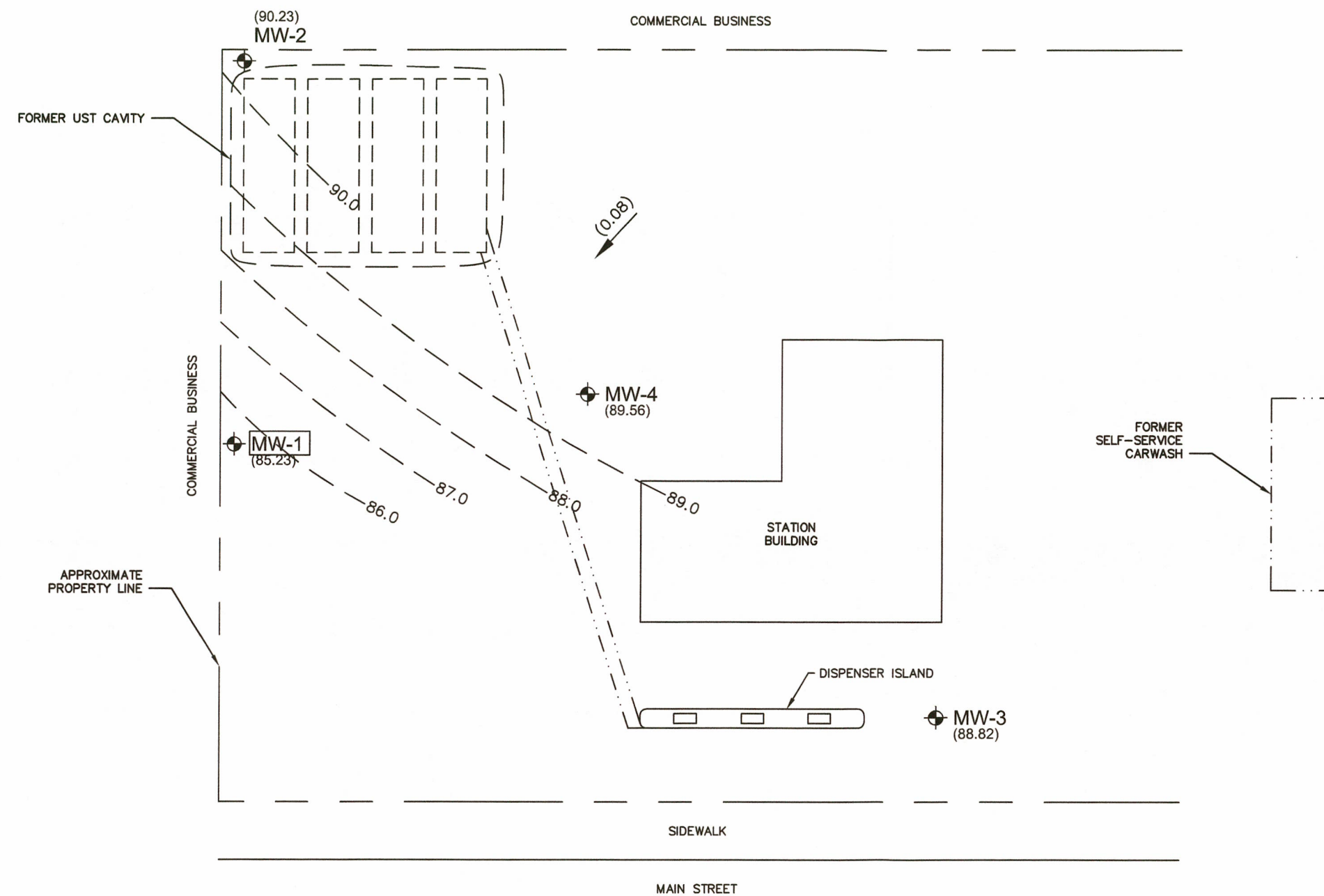


VICINITY MAP

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

(89.56)

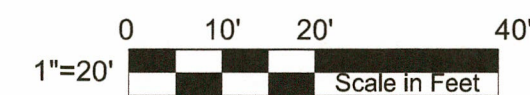
Groundwater Elevation (Relative to an arbitrary benchmark)

— 89.0

Groundwater Elevation Contour



Approximate Groundwater Flow Direction and Gradient in Feet per Foot



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(503) 372-9760

GROUNDWATER CONTOUR MAP
1ST 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	= 1,700
O	= 893
Gx	= 8,010
B	= 480
T	= 4.49
E	= 356
X	= 91.4
1,2,4 TMB	= 125
EDB	= ND
EDC	= ND
1,3,5 TMB	= 23.7
IPB	= 87.6
MTBE	= 1.80
NPB	= 185
NAPH	= 119
LEAD	= 0.82
PAHs	SEE TABLE 2

MW-4

STATION
BUILDING

FORMER
SELF-SERVICE
CARWASH

DISPENSER ISLAND

MW-3

SIDEWALK

MAIN STREET

MW-3	
D	= 277
O	= ND
Gx	= 429
B	= ND
T	= ND
E	= ND
X	= ND
1,2,4 TMB	= ND
EDB	= ND
EDC	= ND
1,3,5 TMB	= ND
IPB	= ND
MTBE	= ND
NPB	= ND
NAPH	= ND
LEAD	= 1.1

LEGEND

UST

Underground Storage Tank

Form UST

Former Underground Storage Tank

Form UST

Former Underground Product
Piping Trench

MW

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

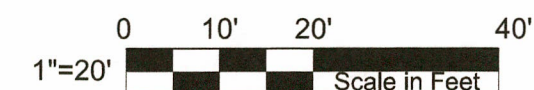
LEAD

Dissolved Lead

PAHs

Polynuclear Aromatic Hydrocarbons

Results are in micrograms per liter (µg/L)



ECN

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

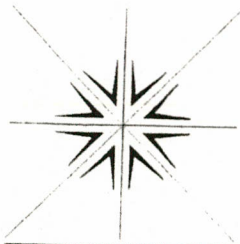
GROUNDWATER ANALYTICAL RESULTS
1ST QUARTER 2009

FORMER KWIK GAS
305 WEST MAIN STREET
MOLALLA, OREGON

Project No. 05-106

FIGURE 3

FIGURES



Specialty Analytical

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

April 20, 2009

John Day
Environmental Compliance Northwest, Inc.
P.O. Box 230163
Portland, OR 97281
TEL: (503) 372-9760
FAX (503) 213-9980

RE: Powell-Molalla

Dear John Day:

Order No.: 0903144

Specialty Analytical received 4 samples on 3/27/2009 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: 20-Apr-09

CLIENT: Environmental Compliance Northwest, Inc.
Lab Order: 0903144
Project: Powell-Molalla
Lab ID: 0903144-01

Client Sample ID: MW-1
Collection Date: 3/26/2009 3:10:00 PM

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX				Analyst: jrp
Diesel	ND	0.238		mg/L	1	3/31/2009
Lube Oil	ND	0.476		mg/L	1	3/31/2009
Surr: o-Terphenyl	62.9	50-150		%REC	1	3/31/2009
BTEX - RBC		SW8021B				Analyst: jrp
Benzene	ND	0.300		µg/L	1	4/1/2009
Toluene	ND	0.500		µg/L	1	4/1/2009
Ethylbenzene	ND	0.500		µg/L	1	4/1/2009
Xylenes, Total	ND	1.50		µg/L	1	4/1/2009
Surr: 4-Bromofluorobenzene	105	74.8-126		%REC	1	4/1/2009
NWTPH-GX		NWTPH-GX				Analyst: jrp
Gasoline	ND	100		µg/L	1	4/1/2009
Surr: 4-Bromofluorobenzene	97.1	50-150		%REC	1	4/1/2009

Specialty Analytical

Date: 20-Apr-09

CLIENT: Environmental Compliance Northwest, Inc.
Lab Order: 0903144
Project: Powell-Molalla
Lab ID: 0903144-02

Client Sample ID: MW-2
Collection Date: 3/26/2009 2:40:00 PM

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX				Analyst: jrp
Diesel	ND	0.236		mg/L	1	3/31/2009
Lube Oil	ND	0.473		mg/L	1	3/31/2009
Surr: o-Terphenyl	63.4	50-150		%REC	1	3/31/2009
BTEX - RBC		SW8021B				Analyst: jrp
Benzene	ND	0.300		µg/L	1	4/1/2009
Toluene	ND	0.500		µg/L	1	4/1/2009
Ethylbenzene	ND	0.500		µg/L	1	4/1/2009
Xylenes, Total	ND	1.50		µg/L	1	4/1/2009
Surr: 4-Bromofluorobenzene	109	74.8-126		%REC	1	4/1/2009
NWTPH-GX		NWTPH-GX				Analyst: jrp
Gasoline	ND	100		µg/L	1	4/1/2009
Surr: 4-Bromofluorobenzene	93.8	50-150		%REC	1	4/1/2009

Specialty Analytical

Date: 20-Apr-09

CLIENT: Environmental Compliance Northwest, Inc.
Lab Order: 0903144
Project: Powell-Molalla
Lab ID: 0903144-03

Client Sample ID: MW-3
Collection Date: 3/26/2009 3:40:00 PM

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX				Analyst: jrp
Diesel	0.277	0.239		mg/L	1	3/31/2009
Lube Oil	ND	0.478		mg/L	1	3/31/2009
Surr: o-Terphenyl	75.5	50-150		%REC	1	3/31/2009
NWTPH-GX		NWTPH-GX				Analyst: jrp
Gasoline	429	100		µg/L	1	4/1/2009
Surr: 4-Bromofluorobenzene	104	50-150		%REC	1	4/1/2009
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Lead	0.65	0.10		ug/L	1	4/1/2009 5:55:00 PM
LOW LEVEL PAH BY GC/MS OARSIM (8270C)		8270SIM				Analyst: kmn
Acenaphthene	ND	0.0479		µg/L	1	4/10/2009 10:01:00 PM
Acenaphthylene	ND	0.0479		µg/L	1	4/10/2009 10:01:00 PM
Anthracene	ND	0.0479		µg/L	1	4/10/2009 10:01:00 PM
Benz(a)anthracene	ND	0.0479		µg/L	1	4/10/2009 10:01:00 PM
Benzo(a)pyrene	ND	0.0479		µg/L	1	4/10/2009 10:01:00 PM
Benzo(b)fluoranthene	ND	0.0479		µg/L	1	4/10/2009 10:01:00 PM
Benzo(g,h,i)perylene	ND	0.0479		µg/L	1	4/10/2009 10:01:00 PM
Benzo(k)fluoranthene	ND	0.0479		µg/L	1	4/10/2009 10:01:00 PM
Chrysene	ND	0.0479		µg/L	1	4/10/2009 10:01:00 PM
Dibenz(a,h)anthracene	ND	0.0479		µg/L	1	4/10/2009 10:01:00 PM
Fluoranthene	ND	0.0479		µg/L	1	4/10/2009 10:01:00 PM
Fluorene	ND	0.0479		µg/L	1	4/10/2009 10:01:00 PM
Indeno(1,2,3-cd)pyrene	ND	0.0479		µg/L	1	4/10/2009 10:01:00 PM
Naphthalene	0.211	0.0479		µg/L	1	4/10/2009 10:01:00 PM
Phenanthrene	ND	0.0479		µg/L	1	4/10/2009 10:01:00 PM
Pyrene	ND	0.0479		µg/L	1	4/10/2009 10:01:00 PM
Surr: 2-Fluorobiphenyl	81.1	18.6-106		%REC	1	4/10/2009 10:01:00 PM
Surr: Nitrobenzene-d5	92.9	17-130		%REC	1	4/10/2009 10:01:00 PM
Surr: p-Terphenyl-d14	107	39.6-131		%REC	1	4/10/2009 10:01:00 PM
VOLATILE ORGANICS BY GC/MS		SW8260B				Analyst: bda
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	4/1/2009 2:40:00 PM
1,2-Dibromoethane	ND	1.00		µg/L	1	4/1/2009 2:40:00 PM
1,2-Dichloroethane	ND	1.00		µg/L	1	4/1/2009 2:40:00 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	4/1/2009 2:40:00 PM
Benzene	ND	0.300		µg/L	1	4/1/2009 2:40:00 PM
Ethylbenzene	ND	1.00		µg/L	1	4/1/2009 2:40:00 PM
Isopropylbenzene	ND	1.00		µg/L	1	4/1/2009 2:40:00 PM
m,p-Xylene	ND	2.00		µg/L	1	4/1/2009 2:40:00 PM
Methyl tert-butyl ether	ND	1.00		µg/L	1	4/1/2009 2:40:00 PM
n-Propylbenzene	ND	1.00		µg/L	1	4/1/2009 2:40:00 PM

Specialty Analytical

Date: 20-Apr-09

CLIENT: Environmental Compliance Northwest, Inc.
Lab Order: 0903144
Project: Powell-Molalla
Lab ID: 0903144-03

Client Sample ID: MW-3
Collection Date: 3/26/2009 3:40:00 PM

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC/MS		SW8260B		Analyst: bda		
Naphthalene	ND	1.00		µg/L	1	4/1/2009 2:40:00 PM
o-Xylene	ND	1.00		µg/L	1	4/1/2009 2:40:00 PM
Toluene	ND	1.00		µg/L	1	4/1/2009 2:40:00 PM
Surr: 1,2-Dichloroethane-d4	92.0	72.2-129		%REC	1	4/1/2009 2:40:00 PM
Surr: 4-Bromofluorobenzene	101	73.5-125		%REC	1	4/1/2009 2:40:00 PM
Surr: Dibromofluoromethane	95.2	58.8-148		%REC	1	4/1/2009 2:40:00 PM
Surr: Toluene-d8	99.6	79.8-137		%REC	1	4/1/2009 2:40:00 PM

Specialty Analytical

Date: 20-Apr-09

CLIENT: Environmental Compliance Northwest, Inc.
Lab Order: 0903144
Project: Powell-Molalla
Lab ID: 0903144-04

Client Sample ID: MW-4
Collection Date: 3/26/2009 4:10:00 PM

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
NWTPH-DX						
Diesel	1.70	0.242	L	mg/L	1	Analyst: jrp 3/31/2009
Lube Oil	0.893	0.484		mg/L	1	3/31/2009
Surr: o-Terphenyl	69.0	50-150		%REC	1	3/31/2009
NWTPH-GX						
Gasoline	8010	1000		µg/L	10	Analyst: jrp 4/1/2009
Surr: 4-Bromofluorobenzene	107	50-150		%REC	10	4/1/2009
DISSOLVED METALS BY ICP/MS						
Lead	0.82	0.10		ug/L	1	Analyst: zau 4/1/2009 6:02:00 PM
LOW LEVEL PAH BY GC/MS OARSIM (8270C)						
Acenaphthene	0.138	0.0492		µg/L	1	Analyst: kmn 4/10/2009 10:26:00 PM
Acenaphthylene	ND	0.0492		µg/L	1	4/10/2009 10:26:00 PM
Anthracene	ND	0.0492		µg/L	1	4/10/2009 10:26:00 PM
Benz(a)anthracene	ND	0.0492		µg/L	1	4/10/2009 10:26:00 PM
Benzo(a)pyrene	ND	0.0492		µg/L	1	4/10/2009 10:26:00 PM
Benzo(b)fluoranthene	ND	0.0492		µg/L	1	4/10/2009 10:26:00 PM
Benzo(g,h,i)perylene	ND	0.0492		µg/L	1	4/10/2009 10:26:00 PM
Benzo(k)fluoranthene	ND	0.0492		µg/L	1	4/10/2009 10:26:00 PM
Chrysene	ND	0.0492		µg/L	1	4/10/2009 10:26:00 PM
Dibenz(a,h)anthracene	ND	0.0492		µg/L	1	4/10/2009 10:26:00 PM
Fluoranthene	ND	0.0492		µg/L	1	4/10/2009 10:26:00 PM
Fluorene	0.138	0.0492		µg/L	1	4/10/2009 10:26:00 PM
Indeno(1,2,3-cd)pyrene	ND	0.0492		µg/L	1	4/10/2009 10:26:00 PM
Naphthalene	56.9	0.246		µg/L	5	4/16/2009 3:06:00 PM
Phenanthrene	0.0984	0.0492		µg/L	1	4/10/2009 10:26:00 PM
Pyrene	0.0591	0.0492		µg/L	1	4/10/2009 10:26:00 PM
Surr: 2-Fluorobiphenyl	55.6	18.6-106		%REC	1	4/10/2009 10:26:00 PM
Surr: Nitrobenzene-d5	74.0	17-130		%REC	1	4/10/2009 10:26:00 PM
Surr: p-Terphenyl-d14	81.5	39.6-131		%REC	1	4/10/2009 10:26:00 PM
VOLATILE ORGANICS BY GC/MS						
1,2,4-Trimethylbenzene	125	1.00		µg/L	1	Analyst: bda 4/1/2009 11:09:00 AM
1,2-Dibromoethane	ND	1.00		µg/L	1	4/1/2009 11:09:00 AM
1,2-Dichloroethane	ND	1.00		µg/L	1	4/1/2009 11:09:00 AM
1,3,5-Trimethylbenzene	23.7	1.00		µg/L	1	4/1/2009 11:09:00 AM
Benzene	480	1.50		µg/L	5	4/1/2009 3:51:00 PM
Ethylbenzene	356	5.00		µg/L	5	4/1/2009 3:51:00 PM
Isopropylbenzene	87.6	1.00		µg/L	1	4/1/2009 11:09:00 AM
m,p-Xylene	78.9	2.00		µg/L	1	4/1/2009 11:09:00 AM
Methyl tert-butyl ether	1.80	1.00		µg/L	1	4/1/2009 11:09:00 AM
n-Propylbenzene	185	5.00		µg/L	5	4/1/2009 3:51:00 PM

Specialty Analytical

Date: 20-Apr-09

CLIENT: Environmental Compliance Northwest, Inc.
Lab Order: 0903144
Project: Powell-Molalla
Lab ID: 0903144-04

Client Sample ID: MW-4
Collection Date: 3/26/2009 4:10:00 PM

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC/MS		SW8260B		Analyst: bda		
Naphthalene	119	1.00		µg/L	1	4/1/2009 11:09:00 AM
o-Xylene	12.5	1.00		µg/L	1	4/1/2009 11:09:00 AM
Toluene	4.49	1.00		µg/L	1	4/1/2009 11:09:00 AM
Surr: 1,2-Dichloroethane-d4	92.7	72.2-129		%REC	1	4/1/2009 11:09:00 AM
Surr: 4-Bromofluorobenzene	110	73.5-125		%REC	1	4/1/2009 11:09:00 AM
Surr: Dibromofluoromethane	96.9	58.8-148		%REC	1	4/1/2009 11:09:00 AM
Surr: Toluene-d8	101	79.8-137		%REC	1	4/1/2009 11:09:00 AM

Specialty Analytical

Date: 20-Apr-09

CLIENT: Environmental Compliance Northwest, Inc.

Work Order: 0903144

Project: Powell-Molalla

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_WDISS

Sample ID: 0903129-01GMS	SampType: MS	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 3/31/2009	Run ID: ICPMS_090401C						
Client ID: ZZZZZ	Batch ID: 22933	TestNo: SW6020		Analysis Date: 4/1/2009	SeqNo: 592812						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	58.89	1.0	50	10.37	97	70	130	0	0		
Lead	42.54	0.10	50	0	85.1	70	130	0	0		

Sample ID: 0903129-01GMSD	SampType: MSD	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 3/31/2009	Run ID: ICPMS_090401C						
Client ID: ZZZZZ	Batch ID: 22933	TestNo: SW6020		Analysis Date: 4/1/2009	SeqNo: 592813						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	59.39	1.0	50	10.37	98	70	130	58.89	0.845	20	
Lead	42.37	0.10	50	0	84.7	70	130	42.54	0.400	20	

Sample ID: 0903129-01GDUP	SampType: DUP	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 3/31/2009	Run ID: ICPMS_090401C						
Client ID: ZZZZZ	Batch ID: 22933	TestNo: SW6020		Analysis Date: 4/1/2009	SeqNo: 592811						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.57	1.0	0	0	0	0	0	10.37	1.91	20	
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_090401C						
Client ID: ZZZZZ	Batch ID: 22933	TestNo: SW6020		Analysis Date: 4/1/2009	SeqNo: 592808						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	50.64	1.0	50	0	101	90	110	0	0		
Lead	50.49	0.10	50	0	101	90	110	0	0		

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_090401C						
Client ID: ZZZZZ	Batch ID: 22933	TestNo: SW6020		Analysis Date: 4/1/2009	SeqNo: 592818						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	50.74	1.0	50	0	101	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: 0903144
Project: Powell-Molalla

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_WDISS

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_090401C						
Client ID: ZZZZZ	Batch ID: 22933	TestNo: SW6020		Analysis Date: 4/1/2009	SeqNo: 592818						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	51.31	0.10	50	0	103	90	110	0	0		

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:				Run ID: ICPMS_090401C			
Client ID: ZZZZZ	Batch ID: 22933	TestNo: SW6020	Analysis Date: 4/1/2009				SeqNo: 592828				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	51.03	1.0	50	0	102	90	110	0	0		
Lead	47.01	0.10	50	0	94	90	110	0	0		

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_090401C						
Client ID: ZZZZZ	Batch ID: 22933	TestNo: SW6020		Analysis Date: 4/3/2009	SeqNo: 593075						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	50.42	1.0	50	0	101	90	110	0	0		

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_090401C						
Client ID: ZZZZZ	Batch ID: 22933	TestNo: SW6020		Analysis Date: 4/3/2009	SeqNo: 593080						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	50.35	1.0	50	0	101	90	110	0	0		

Sample ID: ICV	SampType: ICV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_090401C						
Client ID: ZZZZZ	Batch ID: 22933	TestNo: SW6020		Analysis Date: 4/1/2009	SeqNo: 592807						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	51.66	1.0	50	0	103	90	110	0	0		
Lead	50.92	0.10	50	0	102	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: 0903144
Project: Powell-Molalla

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_WDISS

Sample ID: ICV	SampType: ICV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_090401C						
Client ID: ZZZZZ	Batch ID: 22933	TestNo: SW6020		Analysis Date: 4/3/2009	SeqNo: 593070						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	50.13	1.0	50	0	100	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: 0903144
Project: Powell-Molalla

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_W

Sample ID: MB-22936	SampType: MBLK	TestCode: 8260_W	Units: µg/L	Prep Date: 4/1/2009	Run ID: 5973J_090401A						
Client ID: ZZZZZ	Batch ID: 22936	TestNo: SW8260B		Analysis Date: 4/1/2009	SeqNo: 592882						
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	5.68	50.0									
Acrylonitrile	ND	5.00									J
Benzene	ND	0.300									
Bromobenzene	ND	1.00									

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: 0903144
Project: Powell-Molalla

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_W

TestCode: 8260_W

Sample ID: MB-22936	SampType: MBLK	TestCode: 8260_W	Units: µg/L	Prep Date: 4/1/2009	Run ID: 5973J_090401A						
Client ID: ZZZZZ	Batch ID: 22936	TestNo: SW8260B		Analysis Date: 4/1/2009	SeqNo: 592882						
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	0.12	1.00									
Hexachlorobutadiene	ND	1.00									J
Isopropylbenzene	ND	1.00									
m,p-Xylene	ND	2.00									
Methyl tert-butyl ether	ND	1.00									
Methylene chloride	1.51	20.0									
n-Butylbenzene	ND	1.00									J
n-Propylbenzene	ND	1.00									
Naphthalene	ND	1.00									
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
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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: 0903144
Project: Powell-Molalla

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_W

Sample ID: MB-22936		SampType: MBLK		TestCode: 8260_W		Units: µg/L		Prep Date: 4/1/2009		Run ID: 5973J_090401A	
Client ID: ZZZZZ		Batch ID: 22936		TestNo: SW8260B		Analysis Date: 4/1/2009		SeqNo: 592882			
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	86.81	0	100	0	86.8	72.2	129	0	0		
Surr: 4-Bromofluorobenzene	106.6	0	100	0	107	73.5	125	0	0		
Surr: Dibromofluoromethane	88.03	0	100	0	88	58.8	148	0	0		
Surr: Toluene-d8	106.7	0	100	0	107	79.8	137	0	0		

Sample ID: LCS-22936		SampType: LCS		TestCode: 8260_W		Units: µg/L		Prep Date: 4/1/2009		Run ID: 5973J_090401A	
Client ID: ZZZZZ		Batch ID: 22936		TestNo: SW8260B		Analysis Date: 4/1/2009		SeqNo: 592881			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	42.21	1.00	40	0	106	69.9	130	0	0		
Benzene	39.8	0.300	40	0	99.5	77.9	125	0	0		
Chlorobenzene	36.34	1.00	40	0	90.8	82.5	114	0	0		
Toluene	35.74	1.00	40	0	89.4	74.6	119	0	0		
Trichloroethene	39.92	1.00	40	0	99.8	74.7	125	0	0		

Sample ID: 0903143-03AMS		SampType: MS		TestCode: 8260_W		Units: µg/L		Prep Date: 4/1/2009		Run ID: 5973J_090401A	
Client ID: ZZZZZ		Batch ID: 22936		TestNo: SW8260B		Analysis Date: 4/2/2009		SeqNo: 592900			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	30.7	1.00	40	0	76.8	51.4	176	0	0		
Benzene	38.97	0.300	40	1.3	94.2	71.5	118	0	0		
Chlorobenzene	33.91	1.00	40	0	84.8	79.8	114	0	0		
Toluene	32.39	1.00	40	0	81	79.6	121	0	0		
Trichloroethene	38.69	1.00	40	0	96.7	73.6	120	0	0		

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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: 0903144
Project: Powell-Molalla

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_W

Sample ID: 0903143-03AMSD		SampType: MSD	TestCode: 8260_W		Units: µg/L	Prep Date: 4/1/2009		Run ID: 5973J_090401A			
Client ID: ZZZZZ		Batch ID: 22936	TestNo: SW8260B			Analysis Date: 4/2/2009		SeqNo: 592901			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	31.46	1.00	40	0	78.7	51.4	176	30.7	2.45	20	
Benzene	40.99	0.300	40	1.3	99.2	71.5	118	38.97	5.05	20	
Chlorobenzene	36.32	1.00	40	0	90.8	79.8	114	33.91	6.86	20	
Toluene	34.92	1.00	40	0	87.3	79.6	121	32.39	7.52	20	
Trichloroethene	38.93	1.00	40	0	97.3	73.6	120	38.69	0.618	20	

Sample ID: CCV-22936		SampType: CCV	TestCode: 8260_W		Units: µg/L	Prep Date:		Run ID: 5973J_090401A			
Client ID: ZZZZZ		Batch ID: 22936	TestNo: SW8260B			Analysis Date: 4/1/2009		SeqNo: 592880			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	42.24	1.00	40	0	106	80	120	0	0		
1,2-Dichloropropane	40.2	1.00	40	0	100	80	120	0	0		
Chloroform	43.62	1.00	40	0	109	80	120	0	0		
Ethylbenzene	35.7	1.00	40	0	89.2	80	120	0	0		
Toluene	35.71	1.00	40	0	89.3	80	120	0	0		
Vinyl chloride	43.23	1.00	40	0	108	80	120	0	0		

Sample ID: CCV-22936		SampType: CCV	TestCode: 8260_W		Units: µg/L	Prep Date:		Run ID: 5973J_090401A			
Client ID: ZZZZZ		Batch ID: 22936	TestNo: SW8260B			Analysis Date: 4/2/2009		SeqNo: 592898			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	41.42	1.00	40	0	104	80	120	0	0		
1,2-Dichloropropane	44.92	1.00	40	0	112	80	120	0	0		
Chloroform	47.81	1.00	40	0	120	80	120	0	0		
Ethylbenzene	39.4	1.00	40	0	98.5	80	120	0	0		
Toluene	39.49	1.00	40	0	98.7	80	120	0	0		
Vinyl chloride	45.9	1.00	40	0	115	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: 0903144
Project: Powell-Molalla

ANALYTICAL QC SUMMARY REPORT

TestCode: BTEXRBC_W

Sample ID: MB-22938		SampType: MBLK		TestCode: BTEXRBC_W		Units: µg/L		Prep Date: 4/1/2009		Run ID: GC-I_090401A	
Client ID: ZZZZZ		Batch ID: 22938		TestNo: SW8021B				Analysis Date: 4/1/2009		SeqNo: 592708	
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-22938	SampType: LCS	TestCode: BTEXRBC_W	Units: µg/L	Prep Date: 4/1/2009	Run ID: GC-I_090401A						
Client ID: ZZZZZ	Batch ID: 22938	TestNo: SW8021B		Analysis Date: 4/1/2009	SeqNo: 592707						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	49.85	0.300	50	0	99.7	75.8	113	0	0		
Toluene	56.5	0.500	50	0	113	77	116	0	0		
Ethylbenzene	56.37	0.500	50	0	113	76.6	118	0	0		
Xylenes, Total	170.6	1.50	150	0	114	76.7	118	0	0		

Sample ID: 0903143-01AMS		SampType: MS		TestCode: BTEXRBC_W Units: µg/L		Prep Date: 4/1/2009		Run ID: GC-I_090401A			
Client ID: ZZZZZ		Batch ID: 22938		TestNo: SW8021B		Analysis Date: 4/1/2009		SeqNo: 592710			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	23.31	0.300	25	0	93.2	67.8	118	0	0		
Toluene	24.19	0.500	25	0	96.8	74.7	117	0	0		
Ethylbenzene	24.24	0.500	25	0	97	74.5	115	0	0		
Xylenes, Total	73.47	1.50	75	0	98	76.8	120	0	0		

Sample ID: 0903143-01AMSD		SampType: MSD		TestCode: BTEXRBC_W Units: µg/L		Prep Date: 4/1/2009		Run ID: GC-I_090401A			
Client ID: ZZZZZ		Batch ID: 22938		TestNo: SW8021B		Analysis Date: 4/1/2009		SeqNo: 592711			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	23.81	0.300	25	0	95.2	67.8	118	23.31	2.12	20	
Toluene	24.5	0.500	25	0	98	74.7	117	24.19	1.27	20	
Ethylbenzene	24.59	0.500	25	0	98.4	74.5	115	24.24	1.43	20	

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B - Analyte detected in the associated Method Blank

CLIENT: Environmental Compliance Northwest, Inc.
Work Order: 0903144
Project: Powell-Molalla

ANALYTICAL QC SUMMARY REPORT

TestCode: BTEXRBC_W

Sample ID: 0903143-01AMSD	SampType: MSD	TestCode: BTEXRBC_W	Units: µg/L	Prep Date: 4/1/2009	Run ID: GC-I_090401A						
Client ID: ZZZZZ	Batch ID: 22938	TestNo: SW8021B		Analysis Date: 4/1/2009	SeqNo: 592711						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Xylenes, Total	74.96	1.50	75	0	99.9	76.8	120	73.47	2.01	20	

Sample ID: CCV	SampType: CCV	TestCode: BTEXRBC_W	Units: µg/L	Prep Date:	Run ID: GC-I_090401A						
Client ID: ZZZZZ	Batch ID: 22938	TestNo: SW8021B		Analysis Date: 4/1/2009	SeqNo: 592706						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	49.85	0.300	50	0	99.7	85	115	0	0		
Toluene	56.5	0.500	50	0	113	85	115	0	0		
Ethylbenzene	56.37	0.500	50	0	113	85	115	0	0		
Xylenes, Total	170.6	1.50	150	0	114	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: 0903144
Project: Powell-Molalla

ANALYTICAL QC SUMMARY REPORT

TestCode: NWTPHDX_W

TestCode: NWTPHDX_W

Sample ID: MB-22921	SampType: MBLK	TestCode: NWTPHDX_	Units: mg/L	Prep Date: 3/30/2009	Run ID: GC-M_090331A						
Client ID: ZZZZZ	Batch ID: 22921	TestNo: NWTPH-Dx		Analysis Date: 3/31/2009	SeqNo: 592458						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	0.1012	0.250									J
Lube Oil	0.2557	0.500									J
Surr: o-Terphenyl	0.4451	0	0.5	0	89	50	150	0	0		

Sample ID: LCS-22921	SampType: LCS	TestCode: NWTPHDX_	Units: mg/L	Prep Date: 3/30/2009	Run ID: GC-M_090331A						
Client ID: ZZZZZ	Batch ID: 22921	TestNo: NWTPH-Dx		Analysis Date: 3/31/2009	SeqNo: 592459						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	2.393	0.250	2.5	0	95.7	60.7	121	0	0		
Lube Oil	2.06	0.500	2.5	0	82.4	64	126	0	0		

Sample ID: LCSD-22921	SampType: LCSD	TestCode: NWTPHDX_	Units: mg/L	Prep Date: 3/30/2009	Run ID: GC-M_090331A						
Client ID: ZZZZZ	Batch ID: 22921	TestNo: NWTPH-Dx		Analysis Date: 3/31/2009	SeqNo: 592460						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	2.181	0.250	2.5	0	87.2	60.7	121	2.393	9.29	20	
Lube Oil	2.124	0.500	2.5	0	85	64	126	2.06	3.04	20	

Sample ID: CCV	SampType: CCV	TestCode: NWTPHDX_	Units: mg/L	Prep Date:	Run ID: GC-M_090331A						
Client ID: ZZZZZ	Batch ID: 22921	TestNo: NWTPH-Dx		Analysis Date: 3/31/2009	SeqNo: 592461						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	16.1	0.250	15	0	107	85	115	0	0		
Lube Oil	8.226	0.500	7.5	0	110	85	115	0	0		

Sample ID: CCV	SampType: CCV	TestCode: NWTPHDX_	Units: mg/L	Prep Date:	Run ID: GC-M_090331A						
Client ID: ZZZZZ	Batch ID: 22921	TestNo: NWTPH-Dx		Analysis Date: 3/31/2009	SeqNo: 592476						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	21.72	0.250	20	0	109	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: 0903144

Project: Powell-Molalla

ANALYTICAL QC SUMMARY REPORT

TestCode: NWTPHDX_W

Sample ID: CCV	SampType: CCV	TestCode: NWTPHDX_	Units: mg/L	Prep Date:	Run ID: GC-M_090331A						
Client ID: ZZZZZ	Batch ID: 22921	TestNo: NWTPH-Dx		Analysis Date: 3/31/2009	SeqNo: 592476						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lube Oil	10.24	0.500	10	0	102	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: 0903144
Project: Powell-Molalla

ANALYTICAL QC SUMMARY REPORT

TestCode: NWTPHGX_W

Sample ID: MB-22939	SampType: MBLK	TestCode: NWTPHGX_	Units: µg/L	Prep Date: 4/1/2009	Run ID: GC-I_090401B						
Client ID: ZZZZZ	Batch ID: 22939	TestNo: NWTPH-Gx		Analysis Date: 4/1/2009	SeqNo: 592718						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	100									
Surr: 4-Bromofluorobenzene	99.18	0	100	0	99.2	50	150	0	0		

Sample ID: LCS-22939	SampType: LCS	TestCode: NWTPHGX_	Units: µg/L	Prep Date: 4/1/2009	Run ID: GC-I_090401B						
Client ID: ZZZZZ	Batch ID: 22939	TestNo: NWTPH-Gx		Analysis Date: 4/1/2009	SeqNo: 592717						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	2501	100	2500	0	100	74.4	128	0	0		

Sample ID: 0903143-01ADUP	SampType: DUP	TestCode: NWTPHGX_	Units: µg/L	Prep Date: 4/1/2009	Run ID: GC-I_090401B						
Client ID: ZZZZZ	Batch ID: 22939	TestNo: NWTPH-Gx		Analysis Date: 4/1/2009	SeqNo: 592720						
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_090401B						
Client ID: ZZZZZ	Batch ID: 22939	TestNo: NWTPH-Gx		Analysis Date: 4/1/2009	SeqNo: 592729						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	2914	100	3000	0	97.2	80	120	0	0		

Sample ID: CCV	SampType: CCV	TestCode: NWTPHGX_	Units: µg/L	Prep Date:	Run ID: GC-I_090401B						
Client ID: ZZZZZ	Batch ID: 22939	TestNo: NWTPH-Gx		Analysis Date: 4/2/2009	SeqNo: 592893						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	2542	100	2500	0	102	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: 0903144
Project: Powell-Molalla

ANALYTICAL QC SUMMARY REPORT

TestCode: NWTPHGX_W

Sample ID: CCV	SampType: CCV	TestCode: NWTPHGX_	Units: µg/L	Prep Date:	Run ID: GC-I_090401B						
Client ID: ZZZZZ	Batch ID: 22939	TestNo: NWTPH-Gx		Analysis Date: 4/2/2009	SeqNo: 592897						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	3040	100	3000	0	101	80	120	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: 0903144
Project: Powell-Molalla

ANALYTICAL QC SUMMARY REPORT

TestCode: PAHLL_W

Sample ID: MB-22985	SampType: MBLK	TestCode: PAHLL_W	Units: µg/L	Prep Date: 4/8/2009	Run ID: 5973P_090410A						
Client ID: ZZZZZ	Batch ID: 22985	TestNo: 8270SIM		Analysis Date: 4/10/2009	SeqNo: 595205						
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	ND	0.0500									
Benzo(a)anthracene	0.01	0.0500									J
Benzo(a)pyrene	0.01	0.0500									J
Benzo(b)fluoranthene	0.01	0.0500									J
Benzo(g,h,i)perylene	0.03	0.0500									J
Benzo(k)fluoranthene	0.01	0.0500									J
Chrysene	0.02	0.0500									J
Dibenz(a,h)anthracene	0.03	0.0500									J
Fluoranthene	0.01	0.0500									J
Fluorene	ND	0.0500									
Indeno(1,2,3-cd)pyrene	0.03	0.0500									J
Naphthalene	0.01	0.0500									J
Phenanthrene	0.01	0.0500									J
Pyrene	0.01	0.0500									J
Surr: 2-Fluorobiphenyl	78.33	1.00	100	0	78.3	18.6	106	0	0		
Surr: Nitrobenzene-d5	90.41	1.00	100	0	90.4	17	130	0	0		
Surr: p-Terphenyl-d14	101.7	1.00	100	0	102	39.6	131	0	0		

Sample ID: LCS-22985	SampType: LCS	TestCode: PAHLL_W	Units: µg/L	Prep Date: 4/8/2009	Run ID: 5973P_090410A						
Client ID: ZZZZZ	Batch ID: 22985	TestNo: 8270SIM		Analysis Date: 4/10/2009	SeqNo: 595206						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	2.41	0.0500	5	0.02	47.8	35.1	100	0	0		
Benzo(g,h,i)perylene	2.8	0.0500	5	0.03	55.4	20.8	120	0	0		
Chrysene	3.05	0.0500	5	0.02	60.6	39.1	119	0	0		
Naphthalene	2.09	0.0500	5	0.01	41.6	25.6	106	0	0		
Phenanthrene	2.03	0.0500	5	0.01	40.4	38.1	106	0	0		
Pyrene	2.84	0.0500	5	0.01	56.6	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: 0903144
Project: Powell-Molalla

ANALYTICAL QC SUMMARY REPORT

TestCode: PAHLL_W

Sample ID: LCSD-22985	SampType: LCSD	TestCode: PAHLL_W	Units: µg/L	Prep Date: 4/8/2009	Run ID: 5973P_090410A						
Client ID: ZZZZZ	Batch ID: 22985	TestNo: 8270SIM		Analysis Date: 4/10/2009	SeqNo: 595207						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	2.44	0.0500	5	0.02	48.4	35.1	100	2.41	1.24	20	
Benzo(g,h,i)perylene	2.96	0.0500	5	0.03	58.6	20.8	120	2.8	5.56	20	
Chrysene	3.13	0.0500	5	0.02	62.2	39.1	119	3.05	2.59	20	
Naphthalene	2.16	0.0500	5	0.01	43	25.6	106	2.09	3.29	20	
Phenanthrene	2.05	0.0500	5	0.01	40.8	38.1	106	2.03	0.980	20	
Pyrene	2.89	0.0500	5	0.01	57.6	41.3	118	2.84	1.75	20	

Sample ID: CCV	SampType: CCV	TestCode: PAHLL_W	Units: µg/L	Prep Date:	Run ID: 5973P_090410A						
Client ID: ZZZZZ	Batch ID: 22985	TestNo: 8270SIM		Analysis Date: 4/10/2009	SeqNo: 595192						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	5.02	0.0500	5	0	100	70	130	0	0		
Acenaphthylene	4.88	0.0500	5	0	97.6	70	130	0	0		
Anthracene	5.67	0.0500	5	0	113	70	130	0	0		
Benz(a)anthracene	5.04	0.0500	5	0	101	70	130	0	0		
Benzo(a)pyrene	5.2	0.0500	5	0	104	70	130	0	0		
Benzo(b)fluoranthene	5.08	0.0500	5	0	102	70	130	0	0		
Benzo(g,h,i)perylene	4.91	0.0500	5	0	98.2	70	130	0	0		
Benzo(k)fluoranthene	5.93	0.0500	5	0	119	70	130	0	0		
Chrysene	5.38	0.0500	5	0	108	70	130	0	0		
Dibenz(a,h)anthracene	5.02	0.0500	5	0	100	70	130	0	0		
Fluoranthene	5.32	0.0500	5	0	106	70	130	0	0		
Fluorene	4.89	0.0500	5	0	97.8	70	130	0	0		
Indeno(1,2,3-cd)pyrene	5.1	0.0500	5	0	102	70	130	0	0		
Naphthalene	4.35	0.0500	5	0	87	70	130	0	0		
Phenanthrene	3.8	0.0500	5	0	76	70	130	0	0		
Pyrene	4.81	0.0500	5	0	96.2	70	130	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

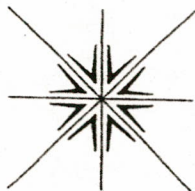
S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

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.

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 372 9760

Fax 213 9920

Project No. 05-106

Project Name

Project Site Location OR

WA

Other

Invoice To

P.O. No. _____

For Laboratory Use

Lab Job No. 0903/44

Shipped Via

Air Bill No. _____

Temperature On Receipt _____ °C

Specialty Analytical Containers? Y / N

Specialty Analytical Trip Blanks? Y / N

Date	Time	Sample I.D.	Matrix	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000
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Copies: White-Original

Yellow-Project File

Pink-Customer Copy