Delta
Environmental
Consultants, Inc.

Solving environment-related business problems worldwide

www.deltaenv.com

7150 SW Hampton • Suite 220
Tigard, Oregon 97223 USA

503.639.8098 800.477.7411
Fax 503.639.7619

ORIGINAL

October 27, 2005

Mr. Bill Robertson
Project Manager, Northwest Region
Oregon Department of Environmental Quality
2020 SW 4th Avenue, Suite 400
Portland, Oregon 97201

Re: Groundwater Corrective Action Effectiveness and Semiannual Sampling Report, Permapost Products Company (Second Quarter 2005)

Dear Mr. Robertson:

On behalf of Permapost Products Company (Permapost), Delta Environmental Consultants (Delta) has evaluated the effectiveness of the groundwater corrective action, as required by Section 4.0 of the June 2005 Interim Corrective Action Groundwater Monitoring Plan (Monitoring Plan). Section 4.0 requires Permapost to submit a report demonstrating the effectiveness of the pump and treat hydraulic containment corrective action every six months after semiannual groundwater sampling (March and September, see Table 1). Included, as Appendix A, are the March 2005 semiannual groundwater sampling results.

EFFECTIVENESS OF CORRECTIVE ACTION

Section 4.0 of the Monitoring Plan specifies that effective performance of the corrective action will be demonstrated by:

1. *A demonstration that pentachlorphenol (PCP) concentrations in monitoring wells P-18b and P-19b remain statistically unchanged (diffusion limited). This will be demonstrated using linear regression analyses of new data combined with the historical data from the start of the pulse pumping schedule (March 15, 1995). The significance*

(significantly different from no slope) of the linear fit of the data will then be evaluated to a 95% confidence level.

The March 2005 groundwater sampling event was the 21st event since 1995. Linear regression analyses of data from the 21 sampling events show that pentachlorophenol concentrations in monitoring wells P-18b and P-19b remain statistically unchanged and diffusion limited.

2. *A demonstration that pentachlorophenol concentration in groundwater from monitoring well P-18b remains below 200 mg/L.*

   The PCP concentration detected in monitoring P-18b in March 2005 was 1.2 mg/L and remains below the 200 mg/L effectiveness concentration (see Table 2).

   220 ppb not 200 ppm

3. *A demonstration the arsenic concentration in groundwater from monitoring well P-19b remains below 0.150 mg/L.*

   The arsenic concentration detected in monitoring well P-19b in March 2005 was 0.0050 mg/L and remains below the 0.150 mg/L effectiveness concentration.

GENERAL PERFORMANCE MONITORING

The Corrective Action Groundwater Monitoring Plan also outlines the periodic performance monitoring to assess the general operation of the pump and treat hydraulic containment system. General performance monitoring consists of semiannual groundwater sampling and analysis of both effectiveness and plume detection monitoring wells identified on Table 1 and shown on Figure 1. The purpose of the groundwater sampling and analysis is to monitor the general effectiveness of the corrective action in maintaining stable (diffusion limited) PCP concentrations within the hydraulic containment system. Plume detection wells are located along the perimeter of the PCP plume and historically do not contain detectable PCP.

Semiannual Groundwater Sampling Results

Groundwater quality samples were collected on March 14, 15, and 16, 2005 from each well specified in Table 1. Sampling and analysis procedures are provided in Appendix A. The results have been validated and entered in the existing database. As mentioned previously, this represents the 21st sampling event since 1995. Analytical results from the 21 sampling events were statistically reduced for trends consistent with the guidelines from the Monitoring Plan.

Linear regression analyses of the data show statistically significant trends in PCP concentrations in groundwater from three of the nine effectiveness wells listed on Table 1. Two significant trends show decreasing PCP concentrations in groundwater from monitoring wells P-15b and P-14c. The statistically significant increase in PCP concentrations was measured on groundwater from monitoring well P-12c. This well is located between recovery wells R-7 and R-11 (see Figure 1). Permapost will increase the recovery in R-7 in an attempt to reduce the PCP detected in P-12c.

PCP concentrations in groundwater from all other effectiveness wells did show a statistically significant change suggesting the corrective action is effective in keeping the downgradient PCP concentrations diffusion limited.

Plume Detection Monitoring Wells

Groundwater analytical results from the March 2005 sampling event show that groundwater from plume detection monitoring wells P-16, P-17R, and P-18C do not contain detectable PCP (see Table 2 and Figure 1).

CONCLUSIONS

For the following reasons the groundwater corrective action hydraulic containment system is effective in meeting the performance criteria specified in Section 4.0 of the Monitoring Plan.

- Statistical reduction of the data show that PCP concentrations in monitoring wells P-18b and P-19b remain unchanged and diffusion limited.

220 ppb

- The PCP concentration detected in monitoring P-18b remains below the 200 mg/L effectiveness concentration. The arsenic concentration detected in monitoring well P-19b remains below the 0.150 mg/L effectiveness concentration.
- Groundwater from plume detection monitoring wells P-16, P-17R, and P-18c do not contain detectable PCP.

Please call if you have questions or need additional information.

Sincerely,

DELTA ENVIRONMENTAL CONSULTANTS

Tim Browning
Senior Project Manager

Attachments: Tables 1 and 2,
Figure 1
Appendix A – Semiannual Groundwater Sampling Results

cc/att: Jayne Bond; Permapost Products Company

Table 1
Groundwater Corrective Action Monitoring Plan
Permapost Products, Inc.
Hillsboro, Oregon

Station/Well	Purpose	Monitoring Frequency				Analytical	Screened Elevation	
		Chemistry	Month	Water Levels	Month	Testing	Top	Bottom
P-8	upgradient	annual	M	quarterly	M,J,S,D	CP	159.3	148.3
P-9	hydrology	--	--	quarterly	M,J,S,D	--	147.1	137.1
P-10	compliance	annual	M	quarterly	M,J,S,D	CP	147.5	137.5
P-11b	compliance	annual	M	quarterly	M,J,S,D	CP	155.1	140.1
P-11c	compliance	annual	M	quarterly	M,J,S,D	CP, As	103.1	91.1
P-12b	effectiveness	semi-annual	M,S	quarterly	M,J,S,D	CP	149.1	139.1
P-12c	effectiveness	semi-annual	M,S	quarterly	M,J,S,D	CP	133.6	123.6
P-14a	effectiveness	semi-annual	M,S	quarterly	M,J,S,D	CP	155.6	150.6
P-14b	effectiveness	semi-annual	M,S	quarterly	M,J,S,D	CP	144.0	139.0
P-14c	effectiveness	semi-annual	M,S	quarterly	M,J,S,D	CP	109.0	99.0
P-15a	hydrology	--	--	quarterly	M,J,S,D	--	148.6	143.6
P-15b	effectiveness	semi-annual	M,S	quarterly	M,J,S,D	CP	139.1	129.1
P-16	plume detection	semi-annual	M,S	quarterly	M,J,S,D	CP	133.7	123.7
P-17R	plume detection	semi-annual	M,S	quarterly	M,J,S,D	CP	138.3	128.3
P-18a	hydrology	--	--	quarterly	M,J,S,D	--	143.2	133.2
P-18b	effectiveness	semi-annual	M,S	quarterly	M,J,S,D	CP	122.9	112.9
P-18C	plume detection	semi-annual	M,S	quarterly	M,J,S,D	CP	97.9	92.9
P-19a	effectiveness	semi-annual	M,S	quarterly	M,J,S,D	CP	151.6	141.6
P-19b	effectiveness	semi-annual	M,S	quarterly	M,J,S,D	CP, As	133.5	123.5
P-21	compliance	annual	M	quarterly	M,J,S,D	CP	152.1	142.1
R-1	recovery	annual	S	quarterly	M,J,S,D	CP	165.3	135.3
R-2	recovery	annual	S	quarterly	M,J,S,D	CP, As	160.0	125.0
R-3	recovery	annual	S	quarterly	M,J,S,D	CP, As	159.3	129.3
R-4	recovery	annual	S	quarterly	M,J,S,D	CP	157.8	117.8
R-5	recovery	annual	S	quarterly	M,J,S,D	CP	160.8	130.8
R-6	recovery	well equipped with oil recovery stripper.						
R-7	recovery	annual	S	quarterly	M,J,S,D	CP, As	159.8	134.8
R-8	recovery	annual	S	quarterly	M,J,S,D	CP	161.2	141.2
R-9	recovery	annual	S	quarterly	M,J,S,D	CP	159.4	139.4
R-10	recovery	annual	S	quarterly	M,J,S,D	CP	158.2	123.2
R-11	recovery	annual	S	quarterly	M,J,S,D	CP	158.4	123.4
RMP-1	hydrology	--	--	quarterly	M,J,S,D	--	--	--
RMP-2	hydrology	--	--	quarterly	M,J,S,D	--	--	--

compliance = monitoring wells immediately downgradient of the RCRA closure.
effectiveness = monitoring wells located to assess the effectiveness of the hydraulic containment in maintaining diffusion limited phenolic concentrations in downgradient groundwater (statistical analysis completed on data from these wells).
plume detection = sidegradient plume detection
recovery = hydraulic containment pumping well
M = March, J = June, S = September, D = December
CP = chlorinated phenolics, EPA Test Method 8151
As = total arsenic, EPA 7000 Series Method
RMP = redistribution trench monitoring points (used to evaluate performance of the redistribution system)
elevations in feet above mean seal level

Where are RMP results?

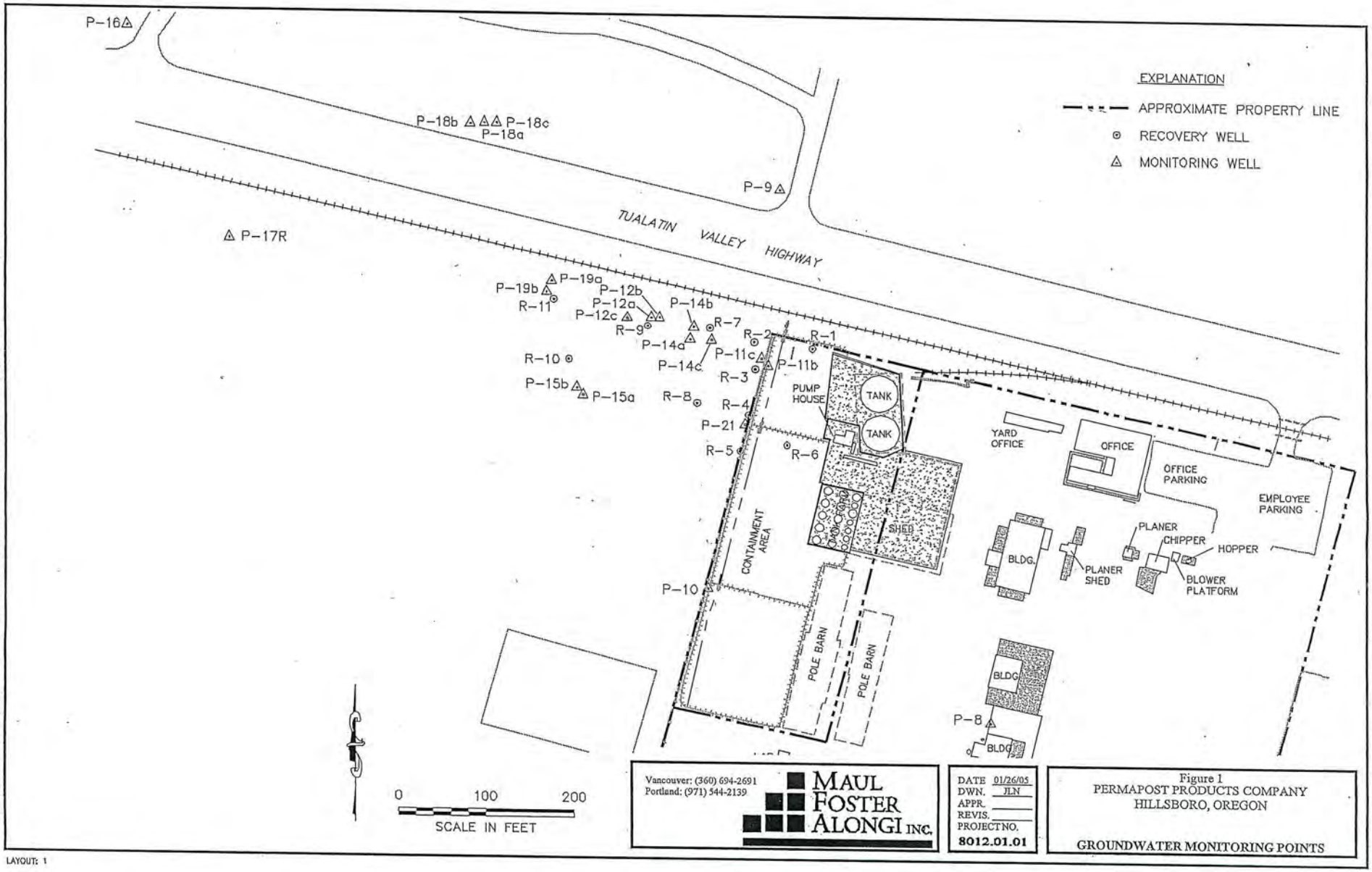
Table 2

Analytical Results Summary
Permapost Products, Inc.
March 2005

Well Number	Sample I.D.	Total Tetrachlorophenols (EPA Method 8151M) mg/L	Pentachlorophenol (EPA Method 8151M) mg/L	Total Arsenic (EPA Method 7060A) mg/L
Monitoring Wells				
P-8	PP- 031505- P-8	0.00050 U	0.00050 U	
P-10	PP- 031605- P-10	0.00050 U	0.00099	
P-11b	PP- 031605- P-11b	0.590	12.000	
P-11c	PP- 031605- P-11c	0.00050 U	0.00050 U	0.0672
P-11c (dup)	PP- 031605- P-11cd	0.00050 U	0.00050 U	0.0694
P-12b	PP- 031505- P-12b	0.0050 U	0.058	
P-12c	PP- 031505- P-12c	0.500	1.900	
P-14a	PP- 031605- P-14a	0.091	2.300	
P-14b	PP- 031605- P-14b	0.050 U	0.580	
P-14c	PP- 031605- P-14c	0.0064 U	0.024	
P-15b	PP- 031505- P-15b	0.050 U	0.960	
P-16	PP- 031405- P-16	0.00050 U	0.00050 U	
P-17R	PP- 031505- P-17R	0.00050 U	0.00050 U	
P-18b	PP- 031405- P-18b	0.070	1.200	
P-18b (dup)	PP- 031405- P-18bd	0.063	1.300	
P-18c	PP- 031405- P-18c	0.00050 U	0.00053	
P-19a	PP- 031505- P-19a	0.00050 U	0.0029	
P-19b	PP- 031505- P-19b	0.301	3.700	0.0050 U
P-21	PP- 031605- P-21	2.500 U	55.000	
QA/QC				
Field Blank #1	PP- 031505- FB-1	0.00050 U	0.00050 U	
Field Blank #2	PP- 031605- FB-2	0.00050 U	0.00050 U	

U = The compound was not detected at or above the Method Reporting Limit/Method Detection Limit
(dup) = duplicate sample

RMP results?



File: G:\8000\8012-PERMAPST\001\GW-TREATMENT SITEMAP.DWG Last edited: JAN. 26, 2005 @ 11:16 a.m. by: jness Xrefs: BASE block/white

LAYOUT: 1

APPENDIX A

ANALYTICAL REPORTS, FIELD SAMPLING DATA SHEETS, AND CHAIN-OF-CUSTODY FORMS

1317 South 13th Avenue P.O. Box 479 Kelso, Washington 98626 (360) 577-7222 ph (360) 636-1068 fax

Columbia Analytical Services INC.
An Employee - Owned Company

April 1, 2005 Service Request No: K2501918

Tim Browning
Permapost
25600 SW TV Hwy
P.O. Box 100
Hillsboro, OR 97123

RE: Perma Post / PERM-001

Dear Tim:

Enclosed are the results of the sample(s) submitted to our laboratory on March 17, 2005. For your reference, these analyses have been assigned our service request number K2501918.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAC standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3260.

Respectfully submitted,

Columbia Analytical Services, Inc.

Harvey Jacky
Project Chemist

HJ/jeb

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
i	The MRL/MDL has been elevated due to a matrix interference.
X	See case narrative.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
B	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL has been elevated due to a matrix interference.
X	See case narrative.
*	The duplicate analysis not within control limits. See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
i	The MRL/MDL has been elevated due to a chromatographic interference.
X	See case narrative.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Permapost	**Service Request No.:**	K2501918
Project:	Permapost / PERM-001	**Date Received:**	3/17/05
Sample Matrix:	Water		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Duplicate (DUP), Matrix Spike (MS), Matrix/Duplicate Matrix Spike (MS/DMS), and Laboratory Control Sample (LCS).

Sample Receipt

Twenty-one water samples were received for analysis at Columbia Analytical Services on 3/17/05. The following discrepancies were noted upon initial sample inspection. A sample bottle was received identified as PP031605-12C-03-16-05 10:39. The sample was placed as PP031605 14C as noted on the Chain of Custody and by time sample was taken. Another sample bottle was received labeled as PP031505 8; sample was identified as PP031505 P-8 as noted on the Chain of Custody. The exceptions are also noted on the cooler receipt and preservation form included in this data package. Except as noted, the samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Total Metals

No anomalies associated with the analysis of these samples were observed.

Chlorophenols by EPA Method 8151M

Continuing Calibration Verification (CCV) Exceptions:
The primary evaluation criterion was exceeded for the following analytes in Continuing Calibration Verification (CCV) 0323F041: Pentachlorophenol. In accordance with CAS standard operating procedures, the alternative evaluation specified in the EPA method was performed using the average percent recovery of all analytes in the verification standard. The standard meets the alternative evaluation criteria.

Surrogate Exceptions:
The control criteria for the following surrogate in several samples are not applicable: 4-Bromo-2,6-dichlorophenol. The analysis of the sample required a dilution, which resulted in a surrogate concentration below the Method Reporting Limit (MRL). No further corrective action was appropriate.

Matrix Spike Recovery Exceptions:
The control criteria for matrix spike recoveries of all analytes for sample PP-031505-12C are not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

Elevated Method Reporting Limits:
Several samples required dilution due to the presence of elevated levels of target analyte. The reporting limits are adjusted to reflect the dilution.

Approved by _____ **Date** 4/5/05

Chain of Custody Documentation

Columbia Analytical Services INC.
An Employee-Owned Company

LANDFILL CHAIN OF CUSTODY

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222 • FAX (360) 636-1068

SR#: K2601918

PAGE 1 OF 3 COC #

PROJECT NAME: Permapost Corrective Action Plan
PROJECT NUMBER: PERM-001
PROJECT MANAGER: Tim Bramming
COMPANY/ADDRESS: P.O Box 100 Hilsboro OR 97123
PHONE #: 503-648-4156 FAX #:
SAMPLER'S SIGNATURE:

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Volatile Organics 524.2 ☐ 8021 ☐ 8260 ☐	Base / Neutral / Acid Organics 625 ☐ 8270 ☐	Metals, Total or Dissolved (list below)	pH, Cond., TDS, TSS, BOD, Turb, Color Orthophosphate, Tanin/Lignin (circle)	COD, TOC, Total Phos, TKN, NH_3, NH_4 (circle)	ALK, HCO_3, CO_3, Hardness (circle)	Anion Scan (Cl, SO_4, NO_3, NO_2, F)	Anion: Cation Ratio	☐ Enterococcus ☐ E. coli ☐ T-Coliform ☐ F-Coliform	Hardness	☐ Cyanide ☐	8151 chlorinated phenolics		Total Metals 7000 series							REMARKS
PR031505-PB-1	3/15/05	1305	1	W	1											X										
P-8		955	2	W	1											X										
12B		1430	3	W	1											X										
12C		1039	4	W	1											X										
15R		1328	5	W	1											X										
17R		1228	6	W	1											X										
19A		1120	7	W	1											X										
19B		1105	8	W	2											X		X								
PR031405-16	3/14/05	1635	9	W	1											X										
18C		1450	10	W	1											X										

00007

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
X II. Report Dup., MS, MSD as required
___ III. Data Validation Report (includes all raw data)
___ IV. CLP Deliverable Report
___ V. EDD

INVOICE INFORMATION

P.O. #
Bill To:

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.
___ 5 Day
X Standard (10-15 working days)
___ Provide FAX Results

Requested Report Date

Circle which metals are to be analyzed:

Total Metals: As Sb Ba Be Ca Cd Co Cr Cu Fe Pb Mg Mn Na Ni K Ag Se Si Tl V Zn Hg

Dissolved Metals: As Sb Ba Be Ca Cd Co Cr Cu Fe Pb Mg Mn Na Ni K Ag Se Si Tl V Zn Hg

SPECIAL INSTRUCTIONS/COMMENTS:
Contact Tim Bramming to confirm Analysis
503-704-9617

sim-phen

RELINQUISHED BY:
Signature: 3/17/05 1030 Date/Time
Printed Name: S Hargrave Firm: CES

RELINQUISHED BY:
Signature: A. Juell Date/Time: 3/17/05 1400
Printed Name: Firm: CES

RELINQUISHED BY:
Signature Date/Time
Printed Name Firm

RELINQUISHED BY:
Signature Date/Time
Printed Name Firm

LANDFILL CHAIN OF CUSTODY

Columbia Analytical Services INC.
An Employee-Owned Company

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222 • FAX (360) 636-1068

SR#: K2501918

PAGE 2 OF 3 COC #

PROJECT NAME: Pumpout Corrective Action Plan
PROJECT NUMBER: Tim Bramming PERM-001
PROJECT MANAGER: Tim Bramm
COMPANY/ADDRESS: PO Box 100 Ariel WA
PHONE #: 618-4156 FAX #:
SAMPLER'S SIGNATURE:

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Volatile Organics 524.2☐ 8021☐ 8260☐	Base / Neutral / Acid Organics 625☐ 8270☐	Metals, Total or Dissolved (list below)	pH, Cond., TDS, TSS, BOD, Turb, Color Orthophosphate, Tanin/Lignin (circle)	COD, TOC, Total Phos, TKN, NH_3, NH_4 (circle)	ALK, HCO_3, CO_3, Hardness (circle)	Anion Scan (Cl, SO_4, NO_3, NO_2, F)	Anion: Cation Ratio	☐Enterococcus ☐E. coli ☐T-Coliform ☐F-Coliform Hardness ☐ Cyanide☐	8151 Chlorinated Phenolics	Tinctals 7000 series								REMARKS
PP-031405-18B	3/14/05	1330	11	W	1										X									
18BD		1335	12	W	1										X									
PP-031005-10	3/10/05	1340	13	W	1										X									
11B		1230	14	W	1										X									
11C		1210	15	W	2										X		X							
11CD		1215	16	W	2										X		X							
14A		935	17	W	1										X									
14B		1015	18	W	1										X									
14C		1039	19	W	1										X									
FB-2		1355	20	W	1										X									

8000

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
X II. Report Dup., MS, MSD as required
___ III. Data Validation Report (includes all raw data)
___ IV. CLP Deliverable Report
___ V. EDD

INVOICE INFORMATION

P.O. #
Bill To:

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.
___ 5 Day
X Standard (10-15 working days)
___ Provide FAX Results

Requested Report Date

Circle which metals are to be analyzed:

Total Metals: As Sb Ba Be Ca Cd Co Cr Cu Fe Pb Mg Mn Na Ni K Ag Se Si Tl V Zn Hg

Dissolved Metals: As Sb Ba Be Ca Cd Co Cr Cu Fe Pb Mg Mn Na Ni K Ag Se Si Tl V Zn Hg

SPECIAL INSTRUCTIONS/COMMENTS:

RELINQUISHED BY:	RELINQUISHED BY:	RELINQUISHED BY:	RELINQUISHED BY:
Signature: [illegible]	Signature: A. Juell	Signature:	Signature:
Date/Time: 3/17/05 1040	Date/Time: 3/17/05 1400	Date/Time:	Date/Time:
Printed Name: S Hargrui	Printed Name:	Printed Name:	Printed Name:
Firm: CAS	Firm: CAS	Firm:	Firm:

CHAIN OF CUSTODY

SR#: K2501918

Columbia Analytical Services INC.
An Employee - Owned Company

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222x07 • FAX (360) 636-1068

PAGE 3 OF 3 COC #

PROJECT NAME: Pumpout CA Plan
PROJECT NUMBER: PERM-001
PROJECT MANAGER: Tim Brannon
COMPANY/ADDRESS: P.O. Box 100
Hillsboro OR
CITY/STATE/ZIP:
E-MAIL ADDRESS:
PHONE# 503-648-4156 FAX#
SAMPLER'S SIGNATURE:

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☐	Volatile Organics 624☐ 8260☐ 8021☐ BTEX☐	Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐ ☐ Fuel Fingerprint (FIQ) ☐ NW-HCID Screen	Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐	PCB's Aroclors☐ Congeners☐	Pesticides/Herbicides 608☐ 8081A☐ 8141A☐ 8151A☐	Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐	PAHS 8310☐ SIM☐	Metals, Total or Dissolved (See list below)	Cyanide☐	Hex-Chrom☐	pH, Cond., Cl, SO_4, PO_4, F, NO_2, NO_3, BOD, TSS, TDS (circle)	NH_3-N, COD, Total-P, TKN, TOC, DOC (circle) NO_2+NO_3	TOX 9020☐ AOX 1650☐ 506☐	8151 chlorophenolics				REMARKS
PP031605-21	3/16/05	1445	21	W	1																				(Hot)

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
X II. Report Dup., MS, MSD as required
___ III. Data Validation Report (includes all raw data)
___ IV. CLP Deliverable Report
___ V. EDD

INVOICE INFORMATION

P.O. # _____
Bill To: _____

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.
___ 5 Day
X Standard (10-15 working days)
___ Provide FAX Results

Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER:_____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

⊗ Hot N 2-3000 ppm

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: 3/17/05 1045	Signature: A. Juell 3/17/05 1400	Signature	Signature
Date/Time	Date/Time	Date/Time	Date/Time
Printed Name: S Hannah Firm: ES	Printed Name Firm: CAS	Printed Name Firm	Printed Name Firm

Columbia Analytical Services Inc.
Cooler Receipt and Preservation Form

PC Harvey

Project/Client Q.T.S. Work Order K250 1918

Cooler received on 3.17.05 and opened on 3.17.05 by BW

1.	Were custody seals on outside of coolers?					(Y) N
	If yes, how many and where? 1 Front					
2.	Were custody seals intact?					(Y) N
3.	Were signature and date present on the custody seals?					(Y) N
4.	Is the shipper's airbill available and filed? If no, record airbill number:					Y ~~N~~
5.	COC#					
	Temperature of cooler(s) upon receipt: (°C)	4.1	4.0	5.1		
	Temperature Blank: (°C)	2.8	5.0	5.3		
	Were samples hand delivered on the same day as collection?					~~Y~~ N
6.	Were custody papers properly filled out (ink, signed, etc.)?					(Y) N
7.	Type of packing material present foam inserts, ICE					
8.	**Did all bottles arrive in good condition (unbroken)?**					(Y) N
9.	Were all bottle labels complete (i.e analysis, preservation, etc.)?					Y (N)
10.	Did all bottle labels and tags agree with custody papers?					Y (N)
11.	**Were the correct types of bottles used for the tests indicated?**					(Y) N
12.	Were all of the preserved bottles received at the lab with the appropriate pH?					(Y) N
13.	Were VOA vials checked for absence of air bubbles, and if present, noted below?					~~Y~~ N
14.	Did the bottles originate from CAS/K or a branch laboratory?					(Y) N
15.	**Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection?**					~~Y~~ N
16.	Was C12/Res negative?					Y N

Explain any discrepancies: Bottle I.D on sample PP031505 8. on C.O.C as PP031505 P-8
Bottle I.D on sample PP031605-12C - 3-16-05 10:39 on C.O.C as PP031605 14C 3-16-05 10:39 placed by time

RESOLUTION:

Samples that required preservation or received out of temperature:

Sample ID	Reagent	Volume	Lot Number	Bottle Type	Rec'd out of Temperature	Initials

00010

Metals

METALS

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: Permapost

Service Request: K2501918

Project No.: PERM-001

Project Name: Permapost

Sample No.	Lab Sample ID.
PP-031505-19B	K2501918-008
PP-031605-11C	K2501918-015
PP-031605-11CD	K2501918-016
Method Blank	K2501918-MB
Batch QC	K2501924-001D
Batch QC	K2501924-001S

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:

Signature: _____ Date: 4/5/05

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: Permapost
Project No.: PERM-001
Project Name: Permapost
Matrix: WATER

Service Request: K2501918
Date Collected: 03/15/05
Date Received: 03/17/05
Units µG/L
Basis NA

Sample Name: PP-031505-19B
Lab Code: K2501918-008

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	1	3/29/05	3/30/05	5.0	U	

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: Permapost
Project No.: PERM-001
Project Name: Permapost
Matrix: WATER

Service Request: K2501918
Date Collected: 03/16/05
Date Received: 03/17/05
Units µG/L
Basis NA

Sample Name: PP-031605-11C
Lab Code: K2501918-015

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	10.0	2	3/29/05	3/30/05	67.2		

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: Permapost
Project No.: PERM-001
Project Name: Permapost
Matrix: WATER

Service Request: K2501918
Date Collected: 03/16/05
Date Received: 03/17/05
Units µG/L
Basis NA

Sample Name: PP-031605-11CD
Lab Code: K2501918-016

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	10.0	2	3/29/05	3/30/05	69.4		

% Solids: 0.0

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: Permapost
Project No.: PERM-001
Project Name: Permapost
Matrix: WATER

Service Request: K2501918
Date Collected: NA
Date Received: NA
Units µG/L
Basis NA

Sample Name: Method Blank
Lab Code: K2501918-MB

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	1	3/29/05	3/30/05	5.0	U	

% Solids: 0.0

Comments:

00016

METALS

- 5a -

SPIKE SAMPLE RECOVERY

Client: Permapost
Service Request: K2501918
Project No.: PERM-001
Units: µg/L
Project Name: Permapost
Basis: NA
Matrix: WATER
% Solids: 0.0

Sample Name: Batch QC
Lab Code: K2501924-001S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Arsenic	60 - 120	34.6		5.0	U	40.0	86		7060A

An empty field in the Control Limit column indicates the control limit is not applicable.

METALS
-6-
DUPLICATES

Client: Permapost
Project No.: PERM-001
Project Name: Permapost
Matrix: WATER

Service Request: K2501918
Units: µg/L
Basis: NA
% Solids: 0.0

Sample Name: Batch QC
Lab Code: K2501924-001D

Analyte	Control Limit(%)	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Arsenic		5.0	U	5.0	U			7060A

An empty field in the Control Limit column indicates the control limit is not applicable.

METALS

- 7 -

LABORATORY CONTROL SAMPLE

Client: Permapost

Service Request: K2501918

Project No.: PERM-001

Project Name: Permapost

Aqueous LCS Source: Inorganic Ventures

Solid LCS Source:

Analyte	Aqueous ug/L True	Found	%R	Solid (mg/kg) True	Found	C	Limits	%R
Arsenic	25.0	23.8	95					

PCP and Chlorinated Phenols
EPA Method 8151 M

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Permapost	**Service Request:**	K2501918
Project:	Perma Post/PERM-001	**Date Collected:**	03/15/2005
Sample Matrix:	Water	**Date Received:**	03/17/2005

Chlorinated Phenols

Sample Name:	PP-031505-FB-1	**Units:**	ug/L
Lab Code:	K2501918-001	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	8151M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2,4,6-Trichlorophenol	ND	U	0.50	1	03/21/05	03/23/05	KWG0504422	
2,3,4,5-Tetrachlorophenol	ND	U	0.50	1	03/21/05	03/23/05	KWG0504422	
2,3,5,6-Tetrachlorophenol†	ND	U	0.50	1	03/21/05	03/23/05	KWG0504422	
Pentachlorophenol	ND	U	0.50	1	03/21/05	03/23/05	KWG0504422	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromo-2,6-dichlorophenol	89	35-133	03/23/05	Acceptable

† Analyte Comments

2,3,5,6-Tetrachlorophenol	This analyte cannot be separated from 2,3,4,6-Tetrachlorophenol.

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Permapost	**Service Request:**	K2501918
Project:	Perma Post/PERM-001	**Date Collected:**	03/15/2005
Sample Matrix:	Water	**Date Received:**	03/17/2005

Chlorinated Phenols

Sample Name:	PP-031505-P-8	**Units:**	ug/L
Lab Code:	K2501918-002	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	8151M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2,4,6-Trichlorophenol	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	
2,3,4,5-Tetrachlorophenol	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	
2,3,5,6-Tetrachlorophenol†	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	
Pentachlorophenol	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromo-2,6-dichlorophenol	82	35-133	03/29/05	Acceptable

† Analyte Comments

2,3,5,6-Tetrachlorophenol	This analyte cannot be separated from 2,3,4,6-Tetrachlorophenol.

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Permapost	**Service Request:**	K2501918
Project:	Perma Post/PERM-001	**Date Collected:**	03/15/2005
Sample Matrix:	Water	**Date Received:**	03/17/2005

Chlorinated Phenols

Sample Name:	PP-031505-12B	**Units:**	ug/L
Lab Code:	K2501918-003	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	8151M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
,4,6-Trichlorophenol	ND	U	5.0	10	03/21/05	03/29/05	KWG0504423	
,3,4,5-Tetrachlorophenol	ND	U	5.0	10	03/21/05	03/29/05	KWG0504423	
2,3,5,6-Tetrachlorophenol†	ND	U	5.0	10	03/21/05	03/29/05	KWG0504423	
Pentachlorophenol	**58**	D	5.0	10	03/21/05	03/29/05	KWG0504423	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
-Bromo-2,6-dichlorophenol	74	35-133	03/29/05	Acceptable

† Analyte Comments

,3,5,6-Tetrachlorophenol	This analyte cannot be separated from 2,3,4,6-Tetrachlorophenol.

Comments:

00023

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Permapost	**Service Request:**	K2501918
Project:	Perma Post/PERM-001	**Date Collected:**	03/15/2005
Sample Matrix:	Water	**Date Received:**	03/17/2005

Chlorinated Phenols

Sample Name:	PP-031505-12C	**Units:**	ug/L
Lab Code:	K2501918-004	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	8151M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2,4,6-Trichlorophenol	ND	U	50	100	03/21/05	03/29/05	KWG0504423	
2,3,4,5-Tetrachlorophenol	**360**	D	50	100	03/21/05	03/29/05	KWG0504423	
2,3,5,6-Tetrachlorophenol†	**140**	D	50	100	03/21/05	03/29/05	KWG0504423	
Pentachlorophenol	**1900**	D	50	100	03/21/05	03/29/05	KWG0504423	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromo-2,6-dichlorophenol	90	35-133	03/29/05	Acceptable

† Analyte Comments

2,3,5,6-Tetrachlorophenol	This analyte cannot be separated from 2,3,4,6-Tetrachlorophenol.

Comments:

00024

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Permapost	**Service Request:**	K2501918
Project:	Perma Post/PERM-001	**Date Collected:**	03/15/2005
Sample Matrix:	Water	**Date Received:**	03/17/2005

Chlorinated Phenols

Sample Name:	PP-031505-15B	**Units:**	ug/L
Lab Code:	K2501918-005	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	8151M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2,4,6-Trichlorophenol	ND	U	50	100	03/21/05	03/29/05	KWG0504423	
2,3,4,5-Tetrachlorophenol	ND	U	50	100	03/21/05	03/29/05	KWG0504423	
2,3,5,6-Tetrachlorophenol†	ND	U	50	100	03/21/05	03/29/05	KWG0504423	
Pentachlorophenol	**960**	D	50	100	03/21/05	03/29/05	KWG0504423	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromo-2,6-dichlorophenol	83	35-133	03/29/05	Acceptable

† Analyte Comments

2,3,5,6-Tetrachlorophenol	This analyte cannot be separated from 2,3,4,6-Tetrachlorophenol.

Comments:

00025

Analytical Results

Client:	Permapost	**Service Request:**	K2501918
Project:	Perma Post/PERM-001	**Date Collected:**	03/15/2005
Sample Matrix:	Water	**Date Received:**	03/17/2005

Chlorinated Phenols

Sample Name:	PP-031505-17R	**Units:**	ug/L
Lab Code:	K2501918-006	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	8151M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2,4,6-Trichlorophenol	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	
2,3,4,5-Tetrachlorophenol	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	
2,3,5,6-Tetrachlorophenol†	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	
Pentachlorophenol	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromo-2,6-dichlorophenol	87	35-133	03/29/05	Acceptable

† Analyte Comments

2,3,5,6-Tetrachlorophenol	This analyte cannot be separated from 2,3,4,6-Tetrachlorophenol.

Comments:

00026

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Permapost	**Service Request:**	K2501918
Project:	Perma Post/PERM-001	**Date Collected:**	03/15/2005
Sample Matrix:	Water	**Date Received:**	03/17/2005

Chlorinated Phenols

Sample Name:	PP-031505-19A	**Units:**	ug/L
Lab Code:	K2501918-007	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	8151M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2,4,6-Trichlorophenol	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	
2,3,4,5-Tetrachlorophenol	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	
2,3,5,6-Tetrachlorophenol†	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	
Pentachlorophenol	**2.9**		0.50	1	03/21/05	03/29/05	KWG0504423	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromo-2,6-dichlorophenol	82	35-133	03/29/05	Acceptable

† Analyte Comments

2,3,5,6-Tetrachlorophenol	This analyte cannot be separated from 2,3,4,6-Tetrachlorophenol.

Comments:

00027

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Permapost	**Service Request:**	K2501918
Project:	Perma Post/PERM-001	**Date Collected:**	03/15/2005
Sample Matrix:	Water	**Date Received:**	03/17/2005

Chlorinated Phenols

Sample Name:	PP-031505-19B	**Units:**	ug/L
Lab Code:	K2501918-008	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	8151M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2,4,6-Trichlorophenol	ND	U	50	100	03/21/05	03/29/05	KWG0504423	
2,3,4,5-Tetrachlorophenol	**71**	D	50	100	03/21/05	03/29/05	KWG0504423	
2,3,5,6-Tetrachlorophenol†	**230**	D	50	100	03/21/05	03/29/05	KWG0504423	
Pentachlorophenol	**3700**	D	50	100	03/21/05	03/29/05	KWG0504423	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromo-2,6-dichlorophenol	80	35-133	03/29/05	Acceptable

† Analyte Comments

2,3,5,6-Tetrachlorophenol	This analyte cannot be separated from 2,3,4,6-Tetrachlorophenol.

Comments:

00028

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Permapost	**Service Request:**	K2501918
Project:	Perma Post/PERM-001	**Date Collected:**	03/14/2005
Sample Matrix:	Water	**Date Received:**	03/17/2005

Chlorinated Phenols

Sample Name:	PP-031405-16	**Units:**	ug/L
Lab Code:	K2501918-009	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	8151M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2,4,6-Trichlorophenol	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	
2,3,4,5-Tetrachlorophenol	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	
2,3,5,6-Tetrachlorophenol†	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	
Pentachlorophenol	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromo-2,6-dichlorophenol	83	35-133	03/29/05	Acceptable

† Analyte Comments

2,3,5,6-Tetrachlorophenol	This analyte cannot be separated from 2,3,4,6-Tetrachlorophenol.

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Permapost	**Service Request:**	K2501918
Project:	Perma Post/PERM-001	**Date Collected:**	03/14/2005
Sample Matrix:	Water	**Date Received:**	03/17/2005

Chlorinated Phenols

Sample Name:	PP-031405-18C	**Units:**	ug/L
Lab Code:	K2501918-010	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	8151M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
,4,6-Trichlorophenol	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	
,3,4,5-Tetrachlorophenol	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	
2,3,5,6-Tetrachlorophenol†	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	
Pentachlorophenol	**0.53**		0.50	1	03/21/05	03/29/05	KWG0504423	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
-Bromo-2,6-dichlorophenol	87	35-133	03/29/05	Acceptable

†Analyte Comments

,3,5,6-Tetrachlorophenol	This analyte cannot be separated from 2,3,4,6-Tetrachlorophenol.

Comments:

00030

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Permapost	**Service Request:**	K2501918
Project:	Perma Post/PERM-001	**Date Collected:**	03/14/2005
Sample Matrix:	Water	**Date Received:**	03/17/2005

Chlorinated Phenols

Sample Name:	PP-031405-18B	**Units:**	ug/L
Lab Code:	K2501918-011	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	8151M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2,4,6-Trichlorophenol	ND	U	50	100	03/21/05	03/29/05	KWG0504423	
2,3,4,5-Tetrachlorophenol	ND	U	50	100	03/21/05	03/29/05	KWG0504423	
2,3,5,6-Tetrachlorophenol†	70	D	50	100	03/21/05	03/29/05	KWG0504423	
Pentachlorophenol	**1200**	D	50	100	03/21/05	03/29/05	KWG0504423	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromo-2,6-dichlorophenol	78	35-133	03/29/05	Acceptable

† Analyte Comments

2,3,5,6-Tetrachlorophenol	This analyte cannot be separated from 2,3,4,6-Tetrachlorophenol.

Comments:

00031

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Permapost	**Service Request:**	K2501918
Project:	Perma Post/PERM-001	**Date Collected:**	03/14/2005
Sample Matrix:	Water	**Date Received:**	03/17/2005

Chlorinated Phenols

Sample Name:	PP-031405-18BD	**Units:**	ug/L
Lab Code:	K2501918-012	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	8151M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2,4,6-Trichlorophenol	ND	U	50	100	03/21/05	03/29/05	KWG0504423	
2,3,4,5-Tetrachlorophenol	ND	U	50	100	03/21/05	03/29/05	KWG0504423	
2,3,5,6-Tetrachlorophenol†	**63**	D	50	100	03/21/05	03/29/05	KWG0504423	
Pentachlorophenol	**1300**	D	50	100	03/21/05	03/29/05	KWG0504423	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromo-2,6-dichlorophenol	105	35-133	03/29/05	Acceptable

† Analyte Comments

2,3,5,6-Tetrachlorophenol	This analyte cannot be separated from 2,3,4,6-Tetrachlorophenol.

Comments:

00032

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Permapost	**Service Request:**	K2501918
Project:	Perma Post/PERM-001	**Date Collected:**	03/16/2005
Sample Matrix:	Water	**Date Received:**	03/17/2005

Chlorinated Phenols

Sample Name:	PP-031605-10	**Units:**	ug/L
Lab Code:	K2501918-013	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	8151M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
,4,6-Trichlorophenol	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	
,3,4,5-Tetrachlorophenol	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	
2,3,5,6-Tetrachlorophenol†	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	
Pentachlorophenol	**0.99**		0.50	1	03/21/05	03/29/05	KWG0504423	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
-Bromo-2,6-dichlorophenol	93	35-133	03/29/05	Acceptable

† Analyte Comments

,3,5,6-Tetrachlorophenol	This analyte cannot be separated from 2,3,4,6-Tetrachlorophenol.

Comments:

00033

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Permapost	**Service Request:**	K2501918
Project:	Perma Post/PERM-001	**Date Collected:**	03/16/2005
Sample Matrix:	Water	**Date Received:**	03/17/2005

Chlorinated Phenols

Sample Name:	PP-031605-11B	**Units:**	ug/L
Lab Code:	K2501918-014	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	8151M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2,4,6-Trichlorophenol	ND	U	500	1000	03/21/05	03/29/05	KWG0504423	
2,3,4,5-Tetrachlorophenol	ND	U	500	1000	03/21/05	03/29/05	KWG0504423	
2,3,5,6-Tetrachlorophenol†	**590**	D	500	1000	03/21/05	03/29/05	KWG0504423	
Pentachlorophenol	**12000**	D	500	1000	03/21/05	03/29/05	KWG0504423	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromo-2,6-dichlorophenol	0	35-133	03/29/05	Outside Control Limits

† Analyte Comments

2,3,5,6-Tetrachlorophenol	This analyte cannot be separated from 2,3,4,6-Tetrachlorophenol.

Comments:

00034

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Permapost	**Service Request:**	K2501918
Project:	Perma Post/PERM-001	**Date Collected:**	03/16/2005
Sample Matrix:	Water	**Date Received:**	03/17/2005

Chlorinated Phenols

Sample Name:	PP-031605-11C	**Units:**	ug/L
Lab Code:	K2501918-015	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	8151M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2,4,6-Trichlorophenol	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	
2,3,4,5-Tetrachlorophenol	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	
2,3,5,6-Tetrachlorophenol†	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	
Pentachlorophenol	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromo-2,6-dichlorophenol	88	35-133	03/29/05	Acceptable

†Analyte Comments

2,3,5,6-Tetrachlorophenol	This analyte cannot be separated from 2,3,4,6-Tetrachlorophenol.

Comments:

00035

Analytical Results

Client:	Permapost	**Service Request:**	K2501918
Project:	Perma Post/PERM-001	**Date Collected:**	03/16/2005
Sample Matrix:	Water	**Date Received:**	03/17/2005

Chlorinated Phenols

Sample Name:	PP-031605-11CD	**Units:**	ug/L
Lab Code:	K2501918-016	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	8151M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2,4,6-Trichlorophenol	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	
2,3,4,5-Tetrachlorophenol	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	
2,3,5,6-Tetrachlorophenol†	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	
Pentachlorophenol	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromo-2,6-dichlorophenol	90	35-133	03/29/05	Acceptable

†Analyte Comments

2,3,5,6-Tetrachlorophenol	This analyte cannot be separated from 2,3,4,6-Tetrachlorophenol.

Comments:

00036

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Permapost	**Service Request:**	K2501918
Project:	Perma Post/PERM-001	**Date Collected:**	03/16/2005
Sample Matrix:	Water	**Date Received:**	03/17/2005

Chlorinated Phenols

Sample Name:	PP-031605-14A	**Units:**	ug/L
Lab Code:	K2501918-017	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	8151M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2,4,6-Trichlorophenol	ND	U	50	100	03/21/05	03/29/05	KWG0504423	
2,3,4,5-Tetrachlorophenol	ND	U	50	100	03/21/05	03/29/05	KWG0504423	
2,3,5,6-Tetrachlorophenol†	**91**	D	50	100	03/21/05	03/29/05	KWG0504423	
Pentachlorophenol	**2300**	D	50	100	03/21/05	03/29/05	KWG0504423	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromo-2,6-dichlorophenol	77	35-133	03/29/05	Acceptable

† Analyte Comments

2,3,5,6-Tetrachlorophenol	This analyte cannot be separated from 2,3,4,6-Tetrachlorophenol.

Comments:

00037

Analytical Results

Client:	Permapost	**Service Request:**	K2501918
Project:	Perma Post/PERM-001	**Date Collected:**	03/16/2005
Sample Matrix:	Water	**Date Received:**	03/17/2005

Chlorinated Phenols

Sample Name:	PP-031605-14B	**Units:**	ug/L
Lab Code:	K2501918-018	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	8151M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2,4,6-Trichlorophenol	ND	U	50	100	03/21/05	03/29/05	KWG0504423	
2,3,4,5-Tetrachlorophenol	ND	U	50	100	03/21/05	03/29/05	KWG0504423	
2,3,5,6-Tetrachlorophenol†	ND	U	50	100	03/21/05	03/29/05	KWG0504423	
Pentachlorophenol	**580**	D	50	100	03/21/05	03/29/05	KWG0504423	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromo-2,6-dichlorophenol	79	35-133	03/29/05	Acceptable

† Analyte Comments

2,3,5,6-Tetrachlorophenol	This analyte cannot be separated from 2,3,4,6-Tetrachlorophenol.

Comments:

00038

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Permapost	**Service Request:**	K2501918
Project:	Perma Post/PERM-001	**Date Collected:**	03/16/2005
Sample Matrix:	Water	**Date Received:**	03/17/2005

Chlorinated Phenols

Sample Name:	PP-031605-14C	**Units:**	ug/L
Lab Code:	K2501918-019	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	8151M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2,4,6-Trichlorophenol	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	
2,3,4,5-Tetrachlorophenol	**3.6**		0.50	1	03/21/05	03/29/05	KWG0504423	
2,3,5,6-Tetrachlorophenol†	**2.8**		0.50	1	03/21/05	03/29/05	KWG0504423	
Pentachlorophenol	**24**		0.50	1	03/21/05	03/29/05	KWG0504423	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromo-2,6-dichlorophenol	85	35-133	03/29/05	Acceptable

† Analyte Comments

2,3,5,6-Tetrachlorophenol	This analyte cannot be separated from 2,3,4,6-Tetrachlorophenol.

Comments:

00039

Analytical Results

Client:	Permapost	**Service Request:**	K2501918
Project:	Perma Post/PERM-001	**Date Collected:**	03/16/2005
Sample Matrix:	Water	**Date Received:**	03/17/2005

Chlorinated Phenols

Sample Name:	PP-031605-FB-2	**Units:**	ug/L
Lab Code:	K2501918-020	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	8151M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2,4,6-Trichlorophenol	ND	U	0.50	1	03/21/05	03/30/05	KWG0504423	
2,3,4,5-Tetrachlorophenol	ND	U	0.50	1	03/21/05	03/30/05	KWG0504423	
2,3,5,6-Tetrachlorophenol†	ND	U	0.50	1	03/21/05	03/30/05	KWG0504423	
Pentachlorophenol	ND	U	0.50	1	03/21/05	03/30/05	KWG0504423	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromo-2,6-dichlorophenol	85	35-133	03/30/05	Acceptable

† Analyte Comments

2,3,5,6-Tetrachlorophenol	This analyte cannot be separated from 2,3,4,6-Tetrachlorophenol.

Comments:

00040

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Permapost	**Service Request:**	K2501918
Project:	Perma Post/PERM-001	**Date Collected:**	03/16/2005
Sample Matrix:	Water	**Date Received:**	03/17/2005

Chlorinated Phenols

Sample Name:	PP-031605-21	**Units:**	ug/L
Lab Code:	K2501918-021	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	8151M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
,4,6-Trichlorophenol	ND	U	2500	5000	03/21/05	03/30/05	KWG0504423	
,3,4,5-Tetrachlorophenol	ND	U	2500	5000	03/21/05	03/30/05	KWG0504423	
2,3,5,6-Tetrachlorophenol†	ND	U	2500	5000	03/21/05	03/30/05	KWG0504423	
Pentachlorophenol	**55000**	D	2500	5000	03/21/05	03/30/05	KWG0504423	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
-Bromo-2,6-dichlorophenol	0	35-133	03/30/05	Outside Control Limits

† Analyte Comments

,3,5,6-Tetrachlorophenol	This analyte cannot be separated from 2,3,4,6-Tetrachlorophenol.

Comments:

00041

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Permapost	**Service Request:**	K2501918
Project:	Perma Post/PERM-001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Chlorinated Phenols

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0504422-4	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	8151M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2,4,6-Trichlorophenol	ND	U	0.50	1	03/21/05	03/23/05	KWG0504422	
2,3,4,5-Tetrachlorophenol	ND	U	0.50	1	03/21/05	03/23/05	KWG0504422	
2,3,5,6-Tetrachlorophenol†	ND	U	0.50	1	03/21/05	03/23/05	KWG0504422	
Pentachlorophenol	ND	U	0.50	1	03/21/05	03/23/05	KWG0504422	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromo-2,6-dichlorophenol	90	35-133	03/23/05	Acceptable

† Analyte Comments

2,3,5,6-Tetrachlorophenol	This analyte cannot be separated from 2,3,4,6-Tetrachlorophenol.

Comments:

00042

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Permapost	**Service Request:**	K2501918
Project:	Perma Post/PERM-001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Chlorinated Phenols

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0504423-4	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	8151M		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
,4,6-Trichlorophenol	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	
,3,4,5-Tetrachlorophenol	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	
2,3,5,6-Tetrachlorophenol†	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	
entachlorophenol	ND	U	0.50	1	03/21/05	03/29/05	KWG0504423	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
-Bromo-2,6-dichlorophenol	75	35-133	03/29/05	Acceptable

† Analyte Comments

,3,5,6-Tetrachlorophenol	This analyte cannot be separated from 2,3,4,6-Tetrachlorophenol.

Comments:

00043

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Permapost
Project: Perma Post/PERM-001
Sample Matrix: Water

Service Request: K2501918

Surrogate Recovery Summary
Chlorinated Phenols

Extraction Method: METHOD
Analysis Method: 8151M

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1
PP-031505-FB-1	K2501918-001	89
PP-031505-P-8	K2501918-002	82
PP-031505-12B	K2501918-003	74 D
PP-031505-12C	K2501918-004	90 D #
PP-031505-15B	K2501918-005	83 D #
PP-031505-17R	K2501918-006	87
PP-031505-19A	K2501918-007	82
PP-031505-19B	K2501918-008	80 D #
PP-031405-16	K2501918-009	83
PP-031405-18C	K2501918-010	87
PP-031405-18B	K2501918-011	78 D #
PP-031405-18BD	K2501918-012	105 D #
PP-031605-10	K2501918-013	93
PP-031605-11B	K2501918-014	0 D #
PP-031605-11C	K2501918-015	88
PP-031605-11CD	K2501918-016	90
PP-031605-14A	K2501918-017	77 D #
PP-031605-14B	K2501918-018	79 D #
PP-031605-14C	K2501918-019	85
PP-031605-FB-2	K2501918-020	85
PP-031605-21	K2501918-021	0 D #
Method Blank	KWG0504422-4	90
Method Blank	KWG0504423-4	75
PP-031505-12CMS	KWG0504423-1	106 D #
PP-031505-12CDMS	KWG0504423-2	107 D #
Lab Control Sample	KWG0504422-3	91
Lab Control Sample	KWG0504423-3	86

Surrogate Recovery Control Limits (%)

Sur1 = 4-Bromo-2,6-dichlorophenol 35-133

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

00044

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Permapost	**Service Request:**	K2501918
Project:	Perma Post/PERM-001	**Date Extracted:**	03/21/2005
Sample Matrix:	Water	**Date Analyzed:**	03/29/2005

Matrix Spike/Duplicate Matrix Spike Summary
Chlorinated Phenols

Sample Name:	PP-031505-12C	**Units:**	ug/L
Lab Code:	K2501918-004	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	8151M	**Extraction Lot:**	KWG0504423

Analyte Name	Sample Result	PP-031505-12CMS KWG0504423-1 Matrix Spike			PP-031505-12CDMS KWG0504423-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
2,4,6-Trichlorophenol	ND	15.5	10.0	155 *	17.5	10.0	175 *	20-112	12	30
2,3,4,5-Tetrachlorophenol	360	377	10.0	147 #	396	10.0	340 #	12-147	5	30
2,3,5,6-Tetrachlorophenol	140	146	10.0	35 #	151	10.0	82 #	20-135	3	30
Pentachlorophenol	1900	1860	10.0	-51 #	1900	10.0	366 #	34-124	2	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

00045

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Permapost	**Service Request:**	K2501918
Project:	Perma Post/PERM-001	**Date Extracted:**	03/21/2005
Sample Matrix:	Water	**Date Analyzed:**	03/23/2005

Lab Control Spike Summary
Chlorinated Phenols

Extraction Method:	METHOD	**Units:**	ug/L
Analysis Method:	8151M	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG0504422

	Lab Control Sample KWG0504422-3 Lab Control Spike			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
2,4,6-Trichlorophenol	8.40	10.0	84	28-101
2,3,4,5-Tetrachlorophenol	9.29	10.0	93	40-112
2,3,5,6-Tetrachlorophenol	8.39	10.0	84	41-113
Pentachlorophenol	9.10	10.0	91	44-116

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

00046

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Permapost
Project: Perma Post/PERM-001
Sample Matrix: Water

Service Request: K2501918
Date Extracted: 03/21/2005
Date Analyzed: 03/29/2005

Lab Control Spike Summary
Chlorinated Phenols

Extraction Method: METHOD
Analysis Method: 8151M

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG0504423

Analyte Name	Lab Control Sample KWG0504423-3 Lab Control Spike Result	Expected	%Rec	%Rec Limits
2,4,6-Trichlorophenol	7.32	10.0	73	28-101
2,3,4,5-Tetrachlorophenol	7.52	10.0	75	40-112
2,3,5,6-Tetrachlorophenol	8.99	10.0	90	41-113
Pentachlorophenol	10.2	10.0	102	44-116

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

00047

PERMAPOST
WATER LEVELS

DATE: 3/14/05
PERSONNEL: S Hargrave
PROBE #

Well Number	Time	Depth to Water	Depth to Bottom	Well Integrity
Monitoring Wells				
P-8	1010	10.75		
P-9	1206	9.35		
P-10	1017	14.07		
P-11b	1149	11.71		
P-11c	1143	12.03		
P-12a	1112	9.13		
P-12b	1119	12.88		
P-12c	1109	12.90		
P-14a	1123	10.81		
P-14b	1130	11.02		
P-14c	1133	12.91		
P-15a	1100	11.27		
P-15b	1104	13.57		
P-16	1203	9.58		
P-17R	1037	16.21		
P-18a	1217	9.20		
P-18b	1218	8.86		
P-18c	1215	6.35		
P-19a	1048	12.58		
P-19b	1046	13.75		
P-20				Down (knocked over
P-21				
Recovery Wells				
R-1	1201	20.10		
R-2	1150	10.03		
R-3	1152	10.75		
R-4				Product NR
R-5	1157	26.10		
R-6				Product NR
R-7	1136	10.88		
R-8	1140	12.82		
R-9	1116	14.42		
R-10	1056	14.27		
R-11	1053	18.30		
RMW-1	1923	9.30		
RMW-2	1012	6.06		
T-6	1030	13.48		

FIELD SAMPLING DATA SHEET

QUALITY TECHNICAL SERVICES

1733 NE 51st Avenue
Portland, Oregon 97213

Office: (503) 572-5550 Fax: 503-335-6992

PROJECT NAME: Permapost **WELL ID:** Field Blank #1

SITE ADDRESS: Hilsboro, Oregon **BLIND ID:** PP-031505-FB-1

DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY	CLOUDY	RAIN	?					**TEMPERATURE:**	55 .	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	[Product Thickness] DTP-DTW	[Water Column] DTB-DTW		[Water Column x Gal/ft] Volume (gal)
/ /	:	.	.	.	.	.	X 1	.
/ /	:	.	.	.	.		X 3	.

Gal/ft = (dia./2)^2 x 0.163	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	√
VOA Glass	/ /	:		3	40 ml HCl	YES	NO		
Amber Glass	3/15/05	13:05		1	250, 500, 1L (None) (HCl) (H_2SO_4)	YES	NO		
White Poly	/ /	:			250, 500, 1L None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L NaOH	YES	NO		
Red Total Poly	/ /	:			250, 500, 1L HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L HNO_3	YES	YES		
	/ /	:			250, 500, 1L	YES			

Total Bottles (include duplicate count): 1

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8010) (8010/8020) (8020) (8240) (8260) (BTEX) (TPH-G) (BTEX/TPH-G) OR [ ] WA [ ]
AMBER - Glass	(PAH) (TPH-HCID) (TPH-D) (TPH-418.1) (Oil &Grease) 8151 OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (NO_3) (NO_2) (F)
YELLOW - Poly	(COD) (TOC) (Total PO_4) (Total Keldahl Nitrogen) (NH_3) (NO_3/NO_2)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)
RED DISSOLVED - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica)

WATER QUALITY DATA Purge Start Time: : Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	E Cond (µS)	Temp °C	ORP	D/O	DTW	Water Quality
4		.	.		.		.	.	
3		.	.		.		.	.	
2		.	.		.		.	.	
1		.	7.63	004	14.9		.	.	
0		0.00	.		.		.	.	

[Casing] [Select A-G] [Cumulative Totals] [Clarity, Color]

SAMPLER: J Hargvail
(PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

QUALITY TECHNICAL SERVICES

1733 NE 51st Avenue
Portland, Oregon 97213

Office: (503) 572-5550 Fax: 503-335-6992

PROJECT NAME: Permapost **WELL ID:** P-8

SITE ADDRESS: Hilsboro, Oregon **BLIND ID:** PP-031505-8

DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	(W)	NW	(LIGHT)	MEDIUM	HEAVY
WEATHER:	(SUNNY)		CLOUDY		RAIN		?		**TEMPERATURE:**	°F 50 .	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	[Product Thickness] DTP-DTW	[Water Column] DTB-DTW		[Water Column x Gal/ft] Volume (gal)
3/15/05	9:00	24.60	.	10.75	.	13.25	X 1	2.15
/ /	:	.	.	.	.		X 3	6.47

Gal/ft = (dia./2)^2 x 0.163	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	/ /	:		3	40 ml	HCl	YES	NO		
Amber Glass	3/15/05	9:55	B	1	250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			250, 500, 1L	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			
	Total Bottles (include duplicate count):			1						

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
	VOA - Glass	(8010) (8010/8020) (8020) (8240) (8260) (BTEX) (TPH-G) (BTEX/TPH-G) OR [ ] WA [ ]
	AMBER - Glass	(PAH) (TPH-HCID) (TPH-D) (TPH-418.1) (Oil &Grease) 8151 OR [ ] WA [ ]
	WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (NO_3) (NO_2) (F)
	YELLOW - Poly	(COD) (TOC) (Total PO_4) (Total Keldahl Nitrogen) (NH_3) (NO_3/NO_2)
	GREEN - Poly	(Cyanide)
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)
	RED DISSOLVED - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica)

WATER QUALITY DATA Purge Start Time: : Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	E Cond (µS)	Temp °C	ORP	D/O	DTW	Water Quality
4		.	.		.		.	.	
3	B	6.6	6.82	662	14.7		.	.	Clear, colorless
2		4.4	6.84	659	14.7		.	.	"
1		2.2	7.18	657	14.8		.	.	"
0		0.00	.		.		.	.	

[Casing] [Select A-G] [Cumulative Totals] [Clarity, Color]

SAMPLER: S Haraval

(PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

QUALITY TECHNICAL SERVICES

1733 NE 51st Avenue
Portland, Oregon 97213

Office: (503) 572-5550 Fax: 503-335-6992

PROJECT NAME: Permapost **WELL ID:** P-12B

SITE ADDRESS: Hilsboro, Oregon **BLIND ID:** PP-031505.12B

DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	(W)	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	(SUNNY)		CLOUDY		RAIN		?		**TEMPERATURE:**	°F 60 .	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
/ /	13 50	27 .35	.	12 .88	.	14 .47	X 1	2 .35
/ /	:	.	.	.	.		X 3	7 .07

Gal/ft = $(dia./2)^2 \times 0.163$	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	/ /	:		3	40 ml	HCl	YES	NO		
Amber Glass	3 15 05	14:30	B	1	250, 500, (1L)	(None) (HCl) (H_2SO_4)	(YES)	NO		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			250, 500, 1L	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 1

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8010) (8010/8020) (8020) (8240) (8260) (BTEX) (TPH-G) (BTEX/TPH-G) OR [ ] WA [ ]
AMBER - Glass	(PAH) (TPH-HCID) (TPH-D) (TPH-418.1) (Oil &Grease) 8151 OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (NO_3) (NO_2) (F)
YELLOW - Poly	(COD) (TOC) (Total PO_4) (Total Keldahl Nitrogen) (NH_3) (NO_3/NO_2)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)
RED DISSOLVED - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica)

WATER QUALITY DATA Purge Start Time: : Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	E Cond (µS)	Temp °C	ORP	D/O	DTW	Water Quality
4		.	.		.		.	.	
3	B	7 .2	6 .58	285	13 .5		.	.	Clear, Colorless
2		4 .8	6 .65	288	13 .5		.	.	"
1		2 .4	6 .76	28.5	13 .6		.	.	"
0		0.00	.		.		.	.	

[Casing] [Select A-G] [Cumulative Totals] [Clarity, Color]

SAMPLER: S Hargrave
(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

QUALITY TECHNICAL SERVICES

1733 NE 51st Avenue
Portland, Oregon 97213

Office: (503) 572-5550 Fax: 503-335-6992

PROJECT NAME: Permapost **WELL ID:** PP-12C

SITE ADDRESS: Hilsboro, Oregon **BLIND ID:** PP-031505-12C

DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	(W)	NW	(LIGHT)	MEDIUM	HEAVY
WEATHER:	(SUNNY)		CLOUDY		RAIN		?		**TEMPERATURE:**	°F 60 .	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	[Product Thickness] DTP-DTW	[Water Column] DTB-DTW		[Water Column x Gal/ft] Volume (gal)
3/15/05	13:35	38.76	.	12.90	.	25.86	X 1	4.21
/ /	:	.	.	.	.		X 3	12.64

Gal/ft = (dia./2)² x 0.163	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	/ /	:		3	40 ml	HCl	YES	NO		
Amber Glass	3/15/05	10:39	B	1	250, 500, 1L	(None) (HCl) (H_2SO_4)	(YES)	NO		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			250, 500, 1L	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 1

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8010) (8010/8020) (8020) (8240) (8260) (BTEX) (TPH-G) (BTEX/TPH-G) OR [ ] WA [ ]
AMBER - Glass	(PAH) (TPH-HCID) (TPH-D) (TPH-418.1) (Oil &Grease) 8151 OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (NO_3) (NO_2) (F)
YELLOW - Poly	(COD) (TOC) (Total PO_4) (Total Keldahl Nitrogen) (NH_3) (NO_3/NO_2)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)
RED DISSOLVED - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica)

WATER QUALITY DATA Purge Start Time: : Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	E Cond (µS)	Temp °C	ORP	D/O	DTW	Water Quality
4		.	.		.		.	.	
3	B	12.9	7.86	521	13.6		.	.	Clear colorless
2		8.6	7.81	517	13.6		.	.	
1		4.3	7.92	506	13.6		.	.	
0		0.00	.		.		.	.	

[Casing] [Select A-G] [Cumulative Totals] [Clarity, Color]

SAMPLER: S Harrison (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

QUALITY TECHNICAL SERVICES

1733 NE 51st Avenue
Portland, Oregon 97213

Office: (503) 572-5550 Fax: 503-335-6992

PROJECT NAME: Permapost **WELL ID:** P-15B

SITE ADDRESS: Hilsboro, Oregon **BLIND ID:** PP-031505-15B

DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		**TEMPERATURE:**	°F 55 .	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
3/15/05	12:40	34.80	.	13.57	.	21.23	X 1	3.46
/ /	:	.	.	.	.		X 3	10.38

Gal/ft = (dia./2)^2 x 0.163	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	/ /	:		3	40 ml	HCl	YES	NO		
Amber Glass	3/15/05	13:28	B	1	250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			250, 500, 1L	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			
Total Bottles (include duplicate count):				1						

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8010) (8010/8020) (8020) (8240) (8260) (BTEX) (TPH-G) (BTEX/TPH-G) OR [ ] WA [ ]
AMBER - Glass	(PAH) (TPH-HCID) (TPH-D) (TPH-418.1) (Oil &Grease) 8151 OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (NO_3) (NO_2) (F)
YELLOW - Poly	(COD) (TOC) (Total PO_4) (Total Keldahl Nitrogen) (NH_3) (NO_3/NO_2)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)
RED DISSOLVED - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica)

WATER QUALITY DATA Purge Start Time: : Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	E Cond (µS)	Temp °C	ORP	D/O	DTW	Water Quality
4		.	.		.		.	.	
3		.	7.68	583	13.8		.	.	Cloudy/clear
2		.	7.65	580	13.8		.	.	"
1		.	7.24	573	13.9		.	.	"
0		0.00	.		.		.	.	

[Casing] [Select A-G] [Cumulative Totals] [Clarity, Color]

SAMPLER: S Hargrave

(PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

QUALITY TECHNICAL SERVICES

1733 NE 51st Avenue
Portland, Oregon 97213

Office: (503) 572-5550 Fax: 503-335-6992

PROJECT NAME: Permapost **WELL ID:** P-21

SITE ADDRESS: Hillsboro, Oregon **BLIND ID:** PP-031605-21

DUP ID: NA

WIND FROM:	(N)	NE	E	SE	S	SW	W	NW	_ LIGHT	(MEDIUM)	HEAVY
WEATHER:	SUNNY		CLOUDY		(RAIN)		?		**TEMPERATURE:**	°F 45 .	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	[Product Thickness] DTP-DTW	[Water Column] DTB-DTW		[Water Column x Gal/ft] Volume (gal)
3/16/05	:	25.29	.	10.0	.	13.29	X 1	2.16
/ /	:	.	. 25t	.	.		X 3	.

Gal/ft = (dia./2)^2 x 0.163	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth:

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	[√ if used] √
VOA Glass	/ /	:		3	40 ml	HCl	YES	NO		
Amber Glass	3/16/05	14:45	B	1	250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			250, 500, 1L	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 1

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
	VOA - Glass	(8010) (8010/8020) (8020) (8240) (8260) (BTEX) (TPH-G) (BTEX/TPH-G) OR[ ] WA[ ]
	AMBER - Glass	(PAH) (TPH-HCID) (TPH-D) (TPH-418.1) (Oil &Grease) (515) OR[ ] WA[ ]
	WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (NO_3) (NO_2) (F)
	YELLOW - Poly	(COD) (TOC) (Total PO_4) (Total Keldahl Nitrogen) (NH_3) (NO_3/NO_2)
	GREEN - Poly	(Cyanide)
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)
	RED DISSOLVED - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica)

WATER QUALITY DATA Purge Start Time: : Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	E Cond (µS)	Temp °C	ORP	D/O	DTW	Water Quality
4		.	.		.		.	.	
3		.	.		.		.	.	
2		.	.		.		.	.	
1		3.0	NR	NR	NR		.	.	cloudy, Dk brown
0		0.00	.		.		.	.	

[Casing] [Select A-G] [Cumulative Totals] [Clarity, Color]

DTW at 3.0 (product on top)

SAMPLER: S Harquail (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

QUALITY TECHNICAL SERVICES

1733 NE 51st Avenue
Portland, Oregon 97213

Office: (503) 572-5550 Fax: 503-335-6992

PROJECT NAME: Permapost **WELL ID:** Field Blank #2

SITE ADDRESS: Hilsboro, Oregon **BLIND ID:** PP-031605FB2

DUP ID: NA

WIND FROM:	(N)	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		(RAIN)		?		**TEMPERATURE:**	°F 45 .	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	[Product Thickness] DTP-DTW	[Water Column] DTB-DTW		[Water Column x Gal/ft] Volume (gal)
/ /	:	.	.	.	.	.	X 1	.
/ /	:	.	.	.	.		X 3	.

Gal/ft = $(dia./2)^2 \times 0.163$	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth:

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	[√ if used] √
VOA Glass	/ /	:		3	40 ml	HCl	YES	NO		
Amber Glass	3/16/05	13:55	B	1	250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			250, 500, 1L	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			
Total Bottles (include duplicate count):				1						

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8010) (8010/8020) (8020) (8240) (8260) (BTEX) (TPH-G) (BTEX/TPH-G) OR [ ] WA [ ]
AMBER - Glass	(PAH) (TPH-HCID) (TPH-D) (TPH-418.1) (Oil &Grease) 8151 OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (NO_3) (NO_2) (F)
YELLOW - Poly	(COD) (TOC) (Total PO_4) (Total Keldahl Nitrogen) (NH_3) (NO_3/NO_2)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)
RED DISSOLVED - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica)

WATER QUALITY DATA Purge Start Time: : Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	E Cond (µS)	Temp °C	ORP	D/O	DTW	Water Quality
4		.	.		.		.	.	
3		.	.		.		.	.	
2		.	.		.		.	.	
1		.	7.72	003	14.7		.	.	Clear, colorless
0		0.00	.		.		.	.	

[Casing] [Select A-G] [Cumulative Totals] [Clarity, Color]

SAMPLER: S Hargrave (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

QUALITY TECHNICAL SERVICES

1733 NE 51st Avenue
Portland, Oregon 97213

Office: (503) 572-5550 Fax: 503-335-6992

PROJECT NAME: Permapost **WELL ID:** P-14C

SITE ADDRESS: Hilsboro, Oregon **BLIND ID:** PQ-031605-14C

DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	(W)	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		(CLOUDY)		RAIN		?		**TEMPERATURE:**	°F 50 .	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft) [Product Thickness] [Water Column] [Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW		Volume (gal)
3/16/05	9 :12	63.45	.	12.91	.	50.54	X 1	8.23
/ /	:	.	.	.	.		X 3	24.71

Gal/ft = (dia./2)² x 0.163	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	/ /	:		3	40 ml	HCl	YES	NO		
Amber Glass	3/16/05	10 :39	B	1	250, 500, (1L)	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			250, 500, 1L	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			
Total Bottles (include duplicate count):				1						

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8010) (8010/8020) (8020) (8240) (8260) (BTEX) (TPH-G) (BTEX/TPH-G) OR [ ] WA [ ]
AMBER - Glass	(PAH) (TPH-HCID) (TPH-D) (TPH-418.1) (Oil &Grease) 8151 OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (NO_3) (NO_2) (F)
YELLOW - Poly	(COD) (TOC) (Total PO_4) (Total Keldahl Nitrogen) (NH_3) (NO_3/NO_2)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)
RED DISSOLVED - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica)

WATER QUALITY DATA Purge Start Time: : Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	E Cond (µS)	Temp °C	ORP	D/O	DTW	Water Quality
4		.	.		.		.	.	
3	B	24.9	7.96	306	13.2		.	.	Clear, colorless
2		16.6	7.98	303	13.2		.	.	" "
1		8.3	8.03	297	13.3		.	.	" "
0		0.00	.		.		.	.	

[Casing] [Select A-G] [Cumulative Totals] [Clarity, Color]

SAMPLER: S Hagvall
(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

QUALITY TECHNICAL SERVICES

1733 NE 51st Avenue
Portland, Oregon 97213

Office: (503) 572-5550 Fax: 503-335-6992

PROJECT NAME: Permapost **WELL ID:** R14B

SITE ADDRESS: Hilsboro, Oregon **BLIND ID:** PR31605-14B

DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		**TEMPERATURE:**	°F 50 .	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft) [Product Thickness] [Water Column] [Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW		Volume (gal)
3/16/05	9:20	30.50	.	11.02	.	19.48	X 1	3.17
/ /	:	.	.	.	.		X 3	9.52

Gal/ft = (dia./2)² x 0.163	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	/ /	:		3	40 ml	HCl	YES	NO		
Amber Glass	3/16/05	10:15	B	1	250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			250, 500, 1L	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			
Total Bottles (include duplicate count):				1						

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8010) (8010/8020) (8020) (8240) (8260) (BTEX) (TPH-G) (BTEX/TPH-G) OR [ ] WA [ ]
AMBER - Glass	(PAH) (TPH-HCID) (TPH-D) (TPH-418.1) (Oil &Grease) 8151 OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (NO_3) (NO_2) (F)
YELLOW - Poly	(COD) (TOC) (Total PO_4) (Total Keldahl Nitrogen) (NH_3) (NO_3/NO_2)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)
RED DISSOLVED - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica)

WATER QUALITY DATA Purge Start Time: : Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	E Cond (µS)	Temp °C	ORP	D/O	DTW	Water Quality
4		.	.		.		.	.	
3	B	9.6	.		13.3		.	.	Clear, Colorless
2		6.4	7.77	455	13.3		.	.	Clear, Colorless
1		3.2	7.68	458	13.3		.	.	Cloudy Grey
0		0.00	.		.		.	.	

[Casing] [Select A-G] [Cumulative Totals] [Clarity, Color]

SAMPLER: S Harguail
(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

QUALITY TECHNICAL SERVICES

1733 NE 51st Avenue
Portland, Oregon 97213
Office: (503) 572-5550 Fax: 503-335-6992

PROJECT NAME: Permapost **WELL ID:** P-14A

SITE ADDRESS: Hilsboro, Oregon **BLIND ID:** PP-031605-14A

DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		TEMPERATURE:	50 .	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	[Product Thickness] DTP-DTW	[Water Column] DTB-DTW		[Water Column x Gal/ft] Volume (gal)
3/16/05	9:05	17.97	.	10.81	.	7.16	X 1	1.16
/ /	:	.	.	.	.		X 3	3.50

Gal/ft = (dia./2)² x 0.163 | 1" = 0.041 | 2" = 0.163 | 3" = 0.367 | 4" = 0.653 | 6" = 1.469 | 10" = 4.080 | 12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	/ /	:		3	40 ml	HCl	YES	NO		
Amber Glass	3/16/05	9:35	B	1	250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			250, 500, 1L	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 1

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8010) (8010/8020) (8020) (8240) (8260) (BTEX) (TPH-G) (BTEX/TPH-G) OR[ ] WA[ ]
AMBER - Glass	(PAH) (TPH-HCID) (TPH-D) (TPH-418.1) (Oil &Grease) 8151 OR[ ] WA[ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (NO_3) (NO_2) (F)
YELLOW - Poly	(COD) (TOC) (Total PO_4) (Total Keldahl Nitrogen) (NH_3) (NO_3/NO_2)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)
RED DISSOLVED - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica)

WATER QUALITY DATA Purge Start Time: : Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	E Cond (µS)	Temp °C	ORP	D/O	DTW	Water Quality
4		.	.		.		.	.	
3	B	3.6	6.80	703	13.1		.	.	
2		2.4	6.81	701	13.1		.	.	
1		1.2	6.94	697	13.2		.	.	Sit dark, Lt Tan
0		0.00	.		.		.	.	

[Casing] [Select A-G] [Cumulative Totals] [Clarity, Color]

SAMPLER: J Harvial
(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

QUALITY TECHNICAL SERVICES

1733 NE 51st Avenue
Portland, Oregon 97213

Office: (503) 572-5550 Fax: 503-335-6992

PROJECT NAME: Permapost **WELL ID:** P-11C

SITE ADDRESS: Hilsboro, Oregon **BLIND ID:** PP-031605-11C

DUP ID: PP-031605-11CD NA

WIND FROM:	N	(NE)	E	SE	S	SW	W	NW

(LIGHT) MEDIUM HEAVY

WEATHER:	SUNNY	(CLOUDY)	RAIN	?

TEMPERATURE: °F 50 . °C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		[Water Column x Gal/ft] Volume (gal)
3/10/05	10:25	72.48	.	12.03	.	60.45	X 1	9.85
/ /	:	.	.	.	.		X 3	29.56

Gal/ft = (dia./2)² x 0.163	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth:

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	[√ if used] √
VOA Glass	/ /	:		3	40 ml	HCl	YES	NO		
Amber Glass	3/16/05	12:10	B	1	250, 500, (1L)	(None) (HCl) (H_2SO_4)	(YES)	NO		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			250, 500, 1L	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 1

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8010) (8010/8020) (8020) (8240) (8260) (BTEX) (TPH-G) (BTEX/TPH-G) OR [ ] WA [ ]
AMBER - Glass	(PAH) (TPH-HCID) (TPH-D) (TPH-418.1) (Oil &Grease) 8151 OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (NO_3) (NO_2) (F)
YELLOW - Poly	(COD) (TOC) (Total PO_4) (Total Keldahl Nitrogen) (NH_3) (NO_3/NO_2)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)
RED DISSOLVED - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica)

WATER QUALITY DATA Purge Start Time: : Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	E Cond (µS)	Temp °C	ORP	D/O	DTW	Water Quality
4		.	.		.		.	.	
3	B	30.-	8.01	272	13.6		.	.	Cloudy, colorless
2		20.-	8.05	275	13.6		.	.	"
1		10.-	8.09	288	13.7		.	.	"
0		0.00	.		.		.	.	

[Casing] [Select A-G] [Cumulative Totals] 1215 [Clarity, Color]

SAMPLER: S Hargrave (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

QUALITY TECHNICAL SERVICES

1733 NE 51st Avenue
Portland, Oregon 97213

Office: (503) 572-5550 Fax: 503-335-6992

PROJECT NAME: Permapost **WELL ID:** R11B

SITE ADDRESS: Hilsboro, Oregon **BLIND ID:** PP-031605-11B

DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		**TEMPERATURE:**	°F 52 .	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		[Water Column x Gal/ft] Volume (gal)
3/16/05	:	24.78	.	11.71	.	13.07	X 1	2.13
/ /	:	.	.	.	.		X 3	6.39

Gal/ft = (dia./2)^2 x 0.163 | 1" = 0.041 | 2" = 0.163 | 3" = 0.367 | 4" = 0.653 | 6" = 1.469 | 10" = 4.080 | 12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	/ /	:		3	40 ml	HCl	YES	NO		
Amber Glass	3/16/05	12:30	B	1	250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			250, 500, 1L	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 1

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8010) (8010/8020) (8020) (8240) (8260) (BTEX) (TPH-G) (BTEX/TPH-G) OR [ ] WA [ ]
AMBER - Glass	(PAH) (TPH-HCID) (TPH-D) (TPH-418.1) (Oil &Grease) 8151 OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (NO_3) (NO_2) (F)
YELLOW - Poly	(COD) (TOC) (Total PO_4) (Total Keldahl Nitrogen) (NH_3) (NO_3/NO_2)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)
RED DISSOLVED - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica)

WATER QUALITY DATA Purge Start Time: : Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	E Cond (µS)	Temp °C	ORP	D/O	DTW	Water Quality
4		.	.		.		.	.	
3		.	6.71	1879	.		.	.	Cl, colorless
2		.	6.74	1881	.		.	.	"
1		.	6.79	1886	.		.	.	"
0		0.00	.		.		.	.	

[Casing] [Select A-G] [Cumulative Totals] [Clarity, Color]

SAMPLER: S Hargrail (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

QUALITY TECHNICAL SERVICES

1733 NE 51st Avenue
Portland, Oregon 97213

Office: (503) 572-5550 Fax: 503-335-6992

PROJECT NAME: Permapost **WELL ID:** P-10

SITE ADDRESS: Hilsboro, Oregon **BLIND ID:** PP-031605-10

DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		**TEMPERATURE:**	°F 50 .	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft) [Product Thickness] [Water Column] [Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW		Volume (gal)
3/16/05	12:55	29.85	.	14.07	.	15.78	X 1	2.57
/ /	:	.	.	.	.		X 3	7.71

Gal/ft = $(dia./2)^2 \times 0.163$ | 1" = 0.041 | 2" = 0.163 | 3" = 0.367 | 4" = 0.653 | 6" = 1.469 | 10" = 4.080 | 12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	/ /	:		3	40 ml	HCl	YES	NO		
Amber Glass	3/16/05	13:40	B	1	250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			250, 500, 1L	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 1

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(6010) (8010/8020) (8020) (8240) (8260) (BTEX) (TPH-G) (BTEX/TPH-G) OR [ ] WA [ ]
AMBER - Glass	(PAH) (TPH-HCID) (TPH-D) (TPH-418.1) (Oil &Grease) 8151 OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (NO_3) (NO_2) (F)
YELLOW - Poly	(COD) (TOC) (Total PO_4) (Total Keldahl Nitrogen) (NH_3) (NO_3/NO_2)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)
RED DISSOLVED - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica)

WATER QUALITY DATA Purge Start Time: : Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	E Cond (µS)	Temp °C	ORP	D/O	DTW	Water Quality
4		.	.		.		.	.	
3	B	7.8	6.90	416	15.1		.	.	Clear, colorless
2		5.2	6.92	408	15.1		.	.	"
1		2.6	6.99	397	14.8		.	.	"
0		0.00	.		.		.	.	

[Casing] [Select A-G] [Cumulative Totals] [Clarity, Color]

SAMPLER: S Hargrail
(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

QUALITY TECHNICAL SERVICES

1733 NE 51st Avenue
Portland, Oregon 97213

Office: (503) 572-5550 Fax: 503-335-6992

PROJECT NAME: Permapost **WELL ID:** P-18B *

SITE ADDRESS: Hilsboro, Oregon **BLIND ID:** PP-031405-18B

DUP ID: PP-031405-18BD NA

WIND FROM:	N	NE	E	SE	S	SW	W	(NW)	(LIGHT)	MEDIUM	HEAVY
WEATHER:	(SUNNY)		CLOUDY		RAIN		?		**TEMPERATURE:**	°F 65 .	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	[Product Thickness] DTP-DTW	[Water Column] DTB-DTW	[Water Column x Gal/ft] Volume (gal)
3/14/05	12:28	39.95	.	12.88	.	14.47	X1 X 305.05
/ /	:	39.90	.	8.86	31.04	27.02	X3 13 215.1

Gal/ft = (dia./2)² x 0.163	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	/ /	:		3	40 ml	HCl	YES	NO		
Amber Glass	3/14/05	13:30	B	1	250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			250, 500, 1L	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			
Total Bottles (include duplicate count):				1						

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8010) (8010/8020) (8020) (8240) (8260) (BTEX) (TPH-G) (BTEX/TPH-G) OR [ ] WA [ ]
AMBER - Glass	(PAH) (TPH-HCID) (TPH-D) (TPH-418.1) (Oil &Grease) 8150 OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (NO_3) (NO_2) (F)
YELLOW - Poly	(COD) (TOC) (Total PO_4) (Total Keldahl Nitrogen) (NH_3) (NO_3/NO_2)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)
RED DISSOLVED - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica)

WATER QUALITY DATA Purge Start Time: : Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	E Cond (µS)	Temp °C	ORP	D/O	DTW	Water Quality
4		.	.		.		.	.	
3	B	15.3	7.78	454	14.9		.	.	Clay colored
2		10.2	7.51	451	14.9		.	.	"
1		5.1	7.89	449	15.0		.	.	"
0		0.00	.		.		.	.	

[Casing] [Select A-G] [Cumulative Totals] [Clarity, Color]

1335

SAMPLER: S Harquail
(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

QUALITY TECHNICAL SERVICES

1733 NE 51st Avenue
Portland, Oregon 97213

Office: (503) 572-5550 Fax: 503-335-6992

PROJECT NAME: Permapost **WELL ID:** MW-18C

SITE ADDRESS: Hilsboro, Oregon **BLIND ID:** PP-031405-18C

DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	W	(NW)	LIGHT	MEDIUM	HEAVY
WEATHER:	(SUNNY)		CLOUDY		RAIN		?		TEMPERATURE:	°F 63	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	[Product Thickness] DTP-DTW	[Water Column] DTB-DTW		[Water Column x Gal/ft] Volume (gal)
/ /	12:40	60.30	.	6.35	.	53.95	X 1	8.79
/ /	:	.	.	.	.		X 3	26.38

Gal/ft = (dia./2)² x 0.163	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	/ /	:		3	40 ml	HCl	YES	NO		
Amber Glass	3/14/05	14:50	B/P	1	250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			250, 500, 1L	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 1

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8010) (8010/8020) (8020) (8240) (8260) (BTEX) (TPH-G) (BTEX/TPH-G) OR [ ] WA [ ]
AMBER - Glass	(PAH) (TPH-HCID) (TPH-D) (TPH-418.1) (Oil &Grease) 5151 OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (NO_3) (NO_2) (F)
YELLOW - Poly	(COD) (TOC) (Total PO_4) (Total Keldahl Nitrogen) (NH_3) (NO_3/NO_2)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)
RED DISSOLVED - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica)

WATER QUALITY DATA Purge Start Time: : Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	E Cond (µS)	Temp °C	ORP	D/O	DTW	Water Quality
4		.	.	.	.		.	.	
3		.	.	.	.		.	.	
2		.	.	.	.		.	.	
1		.	.		.		.	.	
0		0.00	.		.		.	.	

[Casing] [Select A-G] [Cumulative Totals] [Clarity, Color]

SAMPLER: S Hargrave (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

QUALITY TECHNICAL SERVICES

1733 NE 51st Avenue
Portland, Oregon 97213

Office: (503) 572-5550 Fax: 503-335-6992

PROJECT NAME: Permapost **WELL ID:** P-16

SITE ADDRESS: Hilsboro, Oregon **BLIND ID:** PP-031405-16

DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	W	(NW)	(LIGHT)	MEDIUM	HEAVY
WEATHER:	(SUNNY)	CLOUDY	RAIN	?	**TEMPERATURE:**	°F 65 .	°C				

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft) [Product Thickness] [Water Column] [Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW		Volume (gal)
3/14/05	14:58	22.99	.	9.58	.	13.41	X 1	2.18
/ /	:	.	.	.	.		X 3	6.55

Gal/ft = (dia./2)² x 0.163	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	/ /	:		3	40 ml	HCl	YES	NO		
Amber Glass	3/14/05	16:35	B	1	250, 500, (1L)	(None) (HCl) (H_2SO_4)	(YES)	NO		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			250, 500, 1L	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 1

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8010) (8010/8020) (8020) (8240) (8260) (BTEX) (TPH-G) (BTEX/TPH-G) OR [ ] WA [ ]
AMBER - Glass	(PAH) (TPH-HCID) (TPH-D) (TPH-418.1) (Oil &Grease) 8151 OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (NO_3) (NO_2) (F)
YELLOW - Poly	(COD) (TOC) (Total PO_4) (Total Keldahl Nitrogen) (NH_3) (NO_3/NO_2)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)
RED DISSOLVED - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica)

WATER QUALITY DATA Purge Start Time: : Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	E Cond (µS)	Temp °C	ORP	D/O	DTW	Water Quality
4		.	.		.		.	.	
3	B	6.6	6.91	410	13.0		.	.	Chalk
2		4.4	6.93	412	13.0		.	.	
1		2.2	6.98	416	13.1		.	.	
0		0.00	.		.		.	.	

[Casing] [Select A-G] [Cumulative Totals] [Clarity, Color]

SAMPLER: J Hargrail

(PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

QUALITY TECHNICAL SERVICES

1733 NE 51st Avenue
Portland, Oregon 97213

Office: (503) 572-5550 Fax: 503-335-6992

PROJECT NAME: Permapost **WELL ID:** P-19B

SITE ADDRESS: Hilsboro, Oregon **BLIND ID:** PP-031505-19B

DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY	CLOUDY	RAIN	?					TEMPERATURE:	°F 50 .	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		[Water Column x Gal/ft] Volume (gal)
3/15/05	10:07	38.95	.	13.75	.	25.2	X 1	4.10
/ /	:	.	.	.	.		X 3	12.30

Gal/ft = (dia./2)² x 0.163 | 1" = 0.041 | 2" = 0.163 | 3" = 0.367 | 4" = 0.653 | 6" = 1.469 | 10" = 4.080 | 12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	/ /	:		3	40 ml	HCl	YES	NO		
Amber Glass	3 15 05	11 :85	B	1	250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 2

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8010) (8010/8020) (8020) (8240) (8260) (BTEX) (TPH-G) (BTEX/TPH-G) OR [ ] WA [ ]
AMBER - Glass	(PAH) (TPH-HCID) (TPH-D) (TPH-418.1) (Oil &Grease) 8151 OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (NO_3) (NO_2) (F)
YELLOW - Poly	(COD) (TOC) (Total PO_4) (Total Keldahl Nitrogen) (NH_3) (NO_3/NO_2)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)
RED DISSOLVED - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica)

WATER QUALITY DATA Purge Start Time: : Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	E Cond (µS)	Temp °C	ORP	D/O	DTW	Water Quality
4		.	.		.		.	.	
3	B	12.3	7.03	457	12.8		.	.	Clear, Colorless
2		8.2	7.07	455	12.8		.	.	"
1		4.1	7.19	452	12.8		.	.	"
0		0.00	.		.		.	.	

[Casing] [Select A-G] [Cumulative Totals] [Clarity, Color]

SAMPLER: S Hargrave
(PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

QUALITY TECHNICAL SERVICES

1733 NE 51st Avenue
Portland, Oregon 97213

Office: (503) 572-5550 Fax: 503-335-6992

PROJECT NAME: Permapost **WELL ID:** P-19A

SITE ADDRESS: Hilsboro, Oregon **BLIND ID:** PP03SES-19A

DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		TEMPERATURE:	50 °F	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft) [Product Thickness] [Water Column] [Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW		Volume (gal)
3/15/05	:	21.67	.	12.58	.	9.09	X 1	0.82
/ /	:	.091	.	.	.		X 3	2.48

Gal/ft = (dia./2)^2 x 0.163 | 1" = 0.041 | 2" = 0.163 | 3" = 0.367 | 4" = 0.653 | 6" = 1.469 | 10" = 4.080 | 12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	/ /	:		3	40 ml	HCl	YES	NO		
Amber Glass	3/15/05	11:20		1	250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			250, 500, 1L	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			
	Total Bottles (include duplicate count):			1						

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8010) (8010/8020) (8020) (8240) (8260) (BTEX) (TPH-G) (BTEX/TPH-G) OR [ ] WA [ ]
AMBER - Glass	(PAH) (TPH-HCID) (TPH-D) (TPH-418.1) (Oil &Grease) 8/15/05 OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (NO_3) (NO_2) (F)
YELLOW - Poly	(COD) (TOC) (Total PO_4) (Total Keldahl Nitrogen) (NH_3) (NO_3/NO_2)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)
RED DISSOLVED - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica)

WATER QUALITY DATA Purge Start Time: : Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	E Cond (µS)	Temp °C	ORP	D/O	DTW	Water Quality
4		.	.		.		.	.	
3		2.7	6.78	100.	12.4		.	.	Cln, colorless
2		1.8	6.81	99.0	12.4		.	.	Cln, colorless
1		0.9	6.85	101.	12.4		.	.	Sl cloudy, LtYlw
0		0.00	.		.		.	.	

[Casing] [Select A-G] [Cumulative Totals] [Clarity, Color]

SAMPLER: S Harguail (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

QUALITY TECHNICAL SERVICES

1733 NE 51st Avenue
Portland, Oregon 97213
Office: (503) 572-5550 Fax: 503-335-6992

PROJECT NAME: Permapost **WELL ID:** P-17R

SITE ADDRESS: Hilsboro, Oregon **BLIND ID:** PP-031505-17R

DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	(W)	NW	(LIGHT)	MEDIUM	HEAVY
WEATHER:	(SUNNY)		CLOUDY		RAIN			?	TEMPERATURE:	°F 55 .	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	[Product Thickness] DTP-DTW	[Water Column] DTB-DTW		[Water Column x Gal/ft] Volume (gal)
3/15/05	11:45	30.26	.	16.21	.	14.05	X 1	2.29
/ /	:	.	.	.	.		X 3	6.87

Gal/ft = (dia./2)² x 0.163	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	/ /	:		3	40 ml	HCl	YES	NO		
Amber Glass	3/15/05	12:28	B	1	250, 500, (1L)	(None) (HCl) (H_2SO_4)	(YES)	NO		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			250, 500, 1L	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			
Total Bottles (include duplicate count):				1						

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8010) (8010/8020) (8020) (8240) (8260) (BTEX) (TPH-G) (BTEX/TPH-G) OR [ ] WA [ ]
AMBER - Glass	(PAH) (TPH-HCID) (TPH-D) (TPH-418.1) (Oil &Grease) 8151 OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (NO_3) (NO_2) (F)
YELLOW - Poly	(COD) (TOC) (Total PO_4) (Total Keldahl Nitrogen) (NH_3) (NO_3/NO_2)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)
RED DISSOLVED - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica)

WATER QUALITY DATA Purge Start Time: : Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	E Cond (µS)	Temp °C	ORP	D/O	DTW	Water Quality
4		.	.		.		.	.	
3	B	6.9	6.40	471	13.0		.	.	Clear, colorless
2		4.6	6.39	469	13.0		.	.	Cloudy, Light tan
1		2.3	6.36	502	13.1		.	.	Cloudy, brown, tan
0		0.00	.		.		.	.	

[Casing] [Select A-G] [Cumulative Totals] [Clarity, Color]

SAMPLER: S Hargrave
(PRINTED NAME) (SIGNATURE)

LANDFILL CHAIN OF CUSTODY

Columbia Analytical Services, INC. — An Employee-Owned Company

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222 • FAX (360) 636-1068

SR#: _____ PAGE 1 OF 3 COC #: _____

PROJECT NAME: Permapost Collective Action Plan
PROJECT NUMBER: PERM-001
PROJECT MANAGER: Tim Browning
COMPANY/ADDRESS: P.O Box 100 Hillsboro OR 97123
PHONE #: 503-648-4155 FAX #:
SAMPLER'S SIGNATURE:

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Volatile Organics 524.2☐	Base/Neutral/Acid Organics 625☐ 8021☐ 8260☐ 8270☐	Metals: Total or Dissolved (list below)	pH, Cond., TDS, TSS, BOD, Turb, Color Orthophosphate, Tanin/Lignin (circle)	COD, TOC, Total Phos, TKN, NH_3, NH_4 (circle)	ALK, HCO_3, CO_3 Hardness (circle)	Anion Scan (Cl, SO_4, NO_3, NO_2, F)	Anion: Cation Ratio	☐Enterococcus ☐E.coli ☐T-Coliform ☐F-Coliform	Hardness ☐ Cyanide ☐	8151 Chlorinated phenolics	Total Metals 7000 series	REMARKS
PR031505-FB-1	3/15/05	1305		W	1											X		
8B		955		W	1											X		
12B		1430		W	1											X		
12C		1039		W	1											X		
15R		1328		W	1											X		
17R		1228		W	1											X		
19A		1120		W	1											X		
19B		1105		W	2											X	X	
PR031405-1.6	3/14/05	1635		W	1											X		
18C		1450		W	1											X		

REPORT REQUIREMENTS

- ___ I. Routine Report: Method Blank, Surrogate, as required
- X II. Report Dup., MS, MSD as required
- ___ III. Data Validation Report (includes all raw data)
- ___ IV. CLP Deliverable Report
- ___ V. EDD

INVOICE INFORMATION

P.O. # _____
Bill To: _____

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.
___ 5 Day
X Standard (10-15 working days)
___ Provide FAX Results

Requested Report Date

Circle which metals are to be analyzed:

Total Metals: As Sb Ba Be Ca Cd Co Cr Cu Fe Pb Mg Mn Na Ni K Ag Se Si Tl V Zn Hg

Dissolved Metals: As Sb Ba Be Ca Cd Co Cr Cu Fe Pb Mg Mn Na Ni K Ag Se Si Tl V Zn Hg

SPECIAL INSTRUCTIONS/COMMENTS:
Contact Tim Browning to confirm Analysis
503-704-9817

RELINQUISHED BY:	RELINQUISHED BY:	RELINQUISHED BY:	RELINQUISHED BY:
Signature: [signature] Date/Time: 3/17/05 1030	Signature: Date/Time:	Signature: Date/Time:	Signature: Date/Time:
Printed Name: S Haraguchi Firm: CIS	Printed Name: Firm:	Printed Name: Firm:	Printed Name: Firm:

LANDFILL CHAIN OF CUSTODY

Analytical Services INC.
An Employee-Owned Company

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222 • FAX (360) 636-1068

SR#: _____ PAGE 2 OF 3 COC # _____

PROJECT NAME: Permapost Coiata Actia Plan
PROJECT NUMBER: Tim Brauning PERM-001
PROJECT MANAGER: Tim Brauning
COMPANY/ADDRESS: PO Box 100 Hilham OR
PHONE #: 878-4156 FAX #:
SAMPLER'S SIGNATURE:

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Volatile Organics 524.2 ☐ 8021 ☐ 8260 ☐	Base/Neutral/Acid Organics 625 ☐ 8270 ☐	Metals, Total or Dissolved (list below)	pH, Cond., TDS, TSS, BOD, Turb, Color Orthophosphate, Tanin/Lignin (circle)	COD, TOC, Total Phos, TKN, NH_3, NH_4 (circle)	ALK, HCO_3, CO_3, Hardness (circle)	Anion Scan (Cl, SO_4, NO_3, NO_2, F)	Anion: Cation Ratio	☐ Enterococcus ☐ E. coli ☐ T-Coliform ☐ F-Coliform	Hardness	☐ Cyanide ☐	8151 Chlorinated Acids	Metals 7000 series								REMARKS
PP-031405-18B	3/14/05	1330		W	1											X									
18BD		1335		W	1											X									
PP-031605-10	3/16/05	1240		W	1											X									
11B		1230		W	1											X									
11C		1210		W	2											X		X							
11CD		1215		W	2											X		X							
14A		935		W	1											X									
14B		1015		W	1											X									
14C		1039		W	1											X									
FB2		1355		W	1											X									

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
_X_ II. Report Dup., MS, MSD as required
___ III. Data Validation Report (includes all raw data)
___ IV. CLP Deliverable Report
___ V. EDD

INVOICE INFORMATION

P.O. # _____
Bill To: _____

TURNAROUND REQUIREMENTS

____ 24 hr. ____ 48 hr.
____ 5 Day
_X_ Standard (10-15 working days)
____ Provide FAX Results

Requested Report Date

Circle which metals are to be analyzed:

Total Metals: (As) Sb Ba Be Ca Cd Co Cr Cu Fe Pb Mg Mn Na Ni K Ag Se Si Tl V Zn Hg

Dissolved Metals: As Sb Ba Be Ca Cd Co Cr Cu Fe Pb Mg Mn Na Ni K Ag Se Si Tl V Zn Hg

SPECIAL INSTRUCTIONS/COMMENTS:

RELINQUISHED BY:	RELINQUISHED BY:	RELINQUISHED BY:	RELINQUISHED BY:
Signature: [signature] Date/Time: 3/17/05 1040	Signature: Date/Time:	Signature: Date/Time:	Signature: Date/Time:
Printed Name: SHargrave Firm: QIS	Printed Name: Firm:	Printed Name: Firm:	Printed Name: Firm:

CHAIN OF CUSTODY

Columbia Analytical Services INC.
An Employee - Owned Company

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222x07 • FAX (360) 636-1068

PAGE 3 OF 3 SR#: _____ COC #: _____

PROJECT NAME: Romanoff CA Plant
PROJECT NUMBER: PE.RM-001
PROJECT MANAGER: Tim Blanning
COMPANY/ADDRESS: P.O. Box 100 Hillsboro OR
CITY/STATE/ZIP:
E-MAIL ADDRESS:
PHONE: 503-648-2451 FAX#:
SAMPLER'S SIGNATURE:

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☐	Volatile Organics 624☐ 8260☐	Hydrocarbons (*see below) Gas☐ 8021☐ BTEX☐ Diesel☐ Oil☐	Fuel Fingerprint (FIQ) NW-HCID Screen	Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐	PCB's Aroclors☐ Congeners☐	Pesticides/Herbicides 608☐ 8081A☐ 8141A☐ 8151A☐	Chlorophenolics Tri☐ Tetra☐ - 8151M PCP☐	PAHS 8310☐ SIM☐	Metals, Total or Dissolved (See list below)	Cyanide☐	pH, Cond., Cl, SO_4, PO_4, F, NO_2: NO_3, BOD, TSS, TDS (circle) NH_3-N, COD, Total-P, TKN, TOC, DOC (circle) NO_2+NO_3	TOX 9020☐ AOX 1650☐ 506☐	625 Chlorinated Phenolics	REMARKS
PP-031605-21	3/16/05	1445		W	1														⊗		(Hot)

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
X II. Report Dup., MS, MSD as required
___ III. Data Validation Report (includes all raw data)
___ IV. CLP Deliverable Report
___ V. EDD

INVOICE INFORMATION

P.O. # _____
Bill To: _____

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.
___ 5 Day
X Standard (10-15 working days)
___ Provide FAX Results

Requested Report Date: _____

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

⊗ Hot ~ 2-3000 ppm

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [signature]	Signature:	Signature:	Signature:
Date/Time: 3/17/05 1845	Date/Time:	Date/Time:	Date/Time:
Printed Name: S Hargadine	Printed Name:	Printed Name:	Printed Name:
Firm: CAS	Firm:	Firm:	Firm: