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Remedial Action Report Former Strebor Site

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Prepared for
Tetra Pak Materials
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K/J Project No. 016066.11

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List of Abbreviations

COC = chemicals of concern
FS = feasibility study
HASP = Health and Safety Plan
HpCDD = Heptachlorodibenzo-*p*-dioxin
HpCDF = Heptachlorodibenzofuran
HxCDD = Hexachlorodibenzo-*p*-dioxin
HxCDF = Hexachlorodibenzofuran
µg/l = micrograms per liter
mg/kg = milligrams per kilogram
msl = mean sea level
MTCA = Model Toxics Control Act
NFA = No Further Action
OCDD = Octachlorodibenzo-*p*-dioxin
OCDF = Octachlorodibenzofuran
PCP = pentachlorophenol
pg/g = picograms per gram
PeCDD = Pentachlorodibenzo-*p*-dioxin
PeCDF = Pentachlorodibenzofuran
PQL = Practical Quantitation Limit
RA = risk assessment
RI = remedial investigation
SAP = Sampling and Analysis Plan
STL = Severn Trent Laboratories, Inc.
TCDD = Tetrachlorodibenzo-*p*-dioxin
TCDF = Tetrachlorodibenzofuran
TEC = Toxicity Equivalent Concentration
TEF = Toxicity Equivalency Factor

Section 1: Introduction

Kennedy/Jenks Consultants (Kennedy/Jenks) has prepared this Remedial Action Report on behalf of Tetra Pak Materials for the removal of the rail spur and of dioxin-impacted soils along the rail spur at the Former Strebtor Site (Site) located in Vancouver, WA (Figure 1). The removal activities within the study area were completed in accordance with the Remedial Action Work Plan – Former Strebtor Site (Work Plan) (Kennedy/Jenks 2006). Washington Department of Ecology (Ecology) generally approved of the Work Plan during a meeting between Kennedy/Jenks and Mr. Scott Rose of Ecology on 11 September 2006. Mr. Rose also conducted a follow-up Site visit during the remedial action activities.

1.1 Background

The Site is located on approximately 3.7 acres in the lowland valley of the Columbia River at an elevation of approximately 50 feet above mean sea level (msl). A vicinity map is included as Figure 1 and the general Site layout is shown on Figure 2. The Site is located at 3125 Thompson Avenue in Vancouver, Washington in the SW $\frac{1}{4}$, of the NE $\frac{1}{4}$ of Section 21, Township 2 North, Range 1 East. There is one structure on the property, a 14,000-square foot (approximate) building constructed in 1974. Land use in the vicinity of the Site is commercial, industrial, and residential.

Prior to 1974, the Site was undeveloped rural land and was owned by the former Burlington Northern Railroad, now the BNSF Railway Company, (Shannon and Wilson, 1989). Roberts Consolidated Industries constructed a facility on the Site in 1974 to formulate wood treatment products. Roberts Consolidated Industries closed the facility in March 1986 (Bay West 1988). The property went through a series of property transfers between 1987 and 1989, when Tetra Pak purchased the property.

Until 1986, Site operations consisted primarily of receiving raw material, and mixing, packaging and storing of wood-treating solutions. Raw material was delivered to the Site by trucks, tanker trucks, and rail tanker cars (Shannon and Wilson 1989). The railroad spur on the east side of the facility was primarily used for receiving bulk shipments of petroleum hydrocarbon-based raw materials such as naphtha and mineral spirits (Bay West 1988) used as carriers for the wood preservatives.

The Site is zoned commercial/industrial. Tetra Pak uses the existing building for office space, maintenance activities, storage of parts and equipment, and certain photolithographic (label making) processes. The former tank farm area is paved and used as a temporary storage area for pallets and miscellaneous equipment and employee parking.

Kennedy/Jenks Consultants performed a Remedial Investigation, Risk Assessment, and Feasibility Study (RI/RA/FS) from 2003 to 2004. These investigations identified PCP and dioxin and furan congeners (dioxin) as chemicals of concern (COC) in soil at certain locations at the Site, and PCP as a COC in groundwater at the Site (Kennedy/Jenks 2004).

1.2 Remedial Action Objectives

The purpose of the remedial action was to remove the rail spur on Site to allow access for the removal of as much soil that contained PCP or dioxin at or above Model Toxics Control Act (MTCA) Method B cleanup levels (cleanup levels) as practicable without causing structural damage to the existing building. Although the land use at the site is zoned commercial/industrial, cleanup levels protective of unrestricted land use were used due to the proximity of residential areas to the Site and since the Site does not qualify for the use of soil cleanup levels for industrial properties under MTCA, as defined in Washington Administrative Code (WAC) 173-340-745.

The objective of the remedial action is to fulfill the requirements to receive an Ecology No Further Action (NFA) determination for the Site.

Section 2: Pre-excavation Activities

The following sections describe activities performed prior to the commencement of removal actions.

2.1 Health and Safety Plan

Kennedy/Jenks prepared a project-specific Health and Safety Plan (HASP) covering each field task for the scope of work. The HASP was provided to Kennedy/Jenks field personnel for review prior to initiating field activities. The organization of safety procedures was established based on an analysis of potential hazards associated with the anticipated field activities, and personnel protection measures were selected in response to these risks. In addition, Terra Hydr, Inc. (Contractor) performed work in accordance with their corporate in-house HASP procedures.

2.2 Utility Locating

Underground utilities in the vicinity of the anticipated excavation locations were marked by Locates Down Under, Inc. with spray paint. In addition, the Northwest Utility Notification Center was contacted to identify public underground utilities.

Section 3: Soil Removal, Backfill, and Site Restoration

This section describes the excavation of areas identified in the Work Plan (Kennedy/Jenks 2006) and methods used in the field to transport and dispose of impacted material. Photographs referencing Site features and construction practices pertaining to the remedial action are included in Appendix A.

Transportation and disposal receipts and truck logs for the offsite transportation and disposal of impacted material are included as Appendix B.

Laboratory analytical reports, case narratives and chain-of-custody documentation are included in Appendix C.

Imported Material Weight Certificates are included in Appendix D.

3.1 Excavation Activities

The Contractor completed the excavation activities in the areas identified in the Work Plan (Kennedy/Jenks 2006), which are illustrated on Figure 3. Excavation and removal activities were conducted in September 2006. Approximately 320 lineal feet of rail spur was removed (see Photograph 1). In the area beneath and around the rail spur, excavations continued below ground surface (bgs) to depths ranging from approximately 2 to 6 feet bgs. Excavation depths were established based on results of Geoprobe® soil samples collected in April 2002 (Kennedy/Jenks 2004). Groundwater was not encountered during excavation.

The edges of the excavation at the northeast corner of the building were sloped with a 1:1 sidewall, with extra care given around the toe of the building footing, as advised by the geotechnical consultant, Ash Creek Associates, Inc. This sloping was required to maintain structural integrity of the Strebor building during excavation activities. The excavation area is shown in Photograph 2.

Excavated soils were loaded directly into trucks and manifested for offsite disposal. During this remedial action, approximately 74 cubic yards (approximately 104 tons) of soil and debris were removed for offsite disposal. Additional detail is provided below.

3.1.1 Soil Management and Disposal

Soils were loaded directly onto trucks and transported offsite for disposal. Soils removed during the remedial action were previously characterized as non-hazardous waste and transported to Waste Management Company's Hillsboro Landfill, a permitted Class D landfill, for disposal.

3.1.2 Confirmation Soil Sampling Methods

A total of 4 "grab" samples were collected in the limits of the excavation. Locations of the confirmation samples are shown on Figure 3 and in Photographs 3 and 4. The soil samples were placed in a chilled ice chest for transport under chain-of-custody to Severn Trent

Laboratories, Inc. (STL), in Sacramento, California for laboratory analysis of PCP and dioxins using EPA Methods 8270C and 1613, respectively, with a standard (15-day) turnaround time. Laboratory analytical reports, case narratives and chain-of-custody documentation are included in Appendix C.

3.1.3 Backfill

The excavations were backfilled with approximately 126 tons of imported, clean, coarse-grained fill material. The Contractor backfilled the excavations to pre-existing grades and compacted the material using a vibratory drum roller. Excavations were graded to facilitate stormwater and precipitation runoff (see Photograph 5).

3.2 Equipment Decontamination

Equipment was swept of loose debris to prevent tracking of materials onto the roadway. Because the soils were determined to be non-hazardous solid waste, additional decontamination procedures were not deemed necessary in accordance with the HASP.

Section 4: Summary of Soil Confirmation Sample Results

This section presents the analytical results for laboratory testing of confirmation soil samples for residual concentrations of PCP and dioxin following excavation. Table 1 presents a summary of detected compounds in confirmation soil samples collected during the remedial action. In accordance with WAC 173-340-708(8)(d)(ii), the concentrations of individual dioxin compounds were multiplied by their respective toxicity equivalency factors (TEFs) and summed, to estimate a total 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (2,3,7,8-TCDD) toxicity equivalent concentration (TEC) for each sample. These total 2,3,7,8-TCDD TECs are compared to the MTCA Method B cleanup level for 2,3,7,8-TCDD (6.67 picograms per gram [pg/g]) (Ecology 2007). The total 2,3,7,8-TCDD TECs that exceed the MTCA Method B cleanup level are in bold.

4.1 Summary of Analytical Results

A total of four confirmation soil samples were collected from within the limits of the excavations to establish residual PCP and dioxin levels. The calculated total 2,3,7,8-TCDD TECs ranged from 14.22 pg/g (sample CF-2-4) to 597.57 pg/g (sample CF3-3) and exceeded the MTCA Method B cleanup levels. PCP was not detected above the practical quantitation level (PQL) in any of the confirmation soil samples collected. The highest PQL for the analysis of PCP in confirmation samples (2.1 milligrams per kilogram [mg/kg]) did not exceed the MTCA Method B cleanup level of 8.3 mg/kg.

4.2 Data Quality

Concentrations of the compound octachlorodibenzo-*p*-dioxin (OCDD) was estimated in three out of the four confirmation soil samples (CF-1-3, CF-2-4, and CF-3-3), because the detected concentrations exceeded the calibration range of the laboratory equipment. The concentrations of 1,2,3,4,6,7,8-heptachlorodibenzo-*p*-dioxin (1,2,3,4,6,7,8-HpCDD) in confirmation sample CS-1-3 and 1,2,3,4,6,7,8-heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF) in confirmation sample CF-3-3 were also estimated due to result concentrations exceeding the calibration range.

Five results were estimated by STL because the result concentration was less than the reporting limit (1,2,3,4,7,8,9-HpCDF and 1,2,3,4,7,8-hexachlorodibenzofuran [1,2,3,4,7,8-HxCDF]) in confirmation sample CF-1-3; 1,2,3,4,7,8,9-HpCDF in confirmation sample CF-2-4; 1,2,3,7,8-pentachlorodibenzo-*p*-dioxin (1,2,3,7,8-PeCDD) in confirmation sample CF-3-3; and 2,3,4,6,7,8-HxCDF in confirmation sample CS-1-3).

Based on a review of the laboratory report, it is our opinion that the analytical data are of acceptable quality for their intended use and meet the data quality objectives established in the Sampling and Analyses Plan (SAP) (Kennedy/Jenks 2001).

Section 5: Summary of Groundwater Monitoring

Semiannual groundwater monitoring activities were completed in July and December 2006. Activities and results are summarized below.

5.1 Groundwater Monitoring Activities

Depth to groundwater was measured in six on-site monitoring wells (MW-1 to MW-3, MW-5, MW-6, and MW-8) using an electronic water-level indicator on 6 July and 28 December 2006. Water level measurements from the July and December 2006 groundwater monitoring events are presented in Table 2. Monitoring well locations are shown on Figure 2.

Groundwater samples were collected from 5 of the 6 wells using dedicated bailers. The casing in monitoring well MW-3 is bent, so the groundwater samples from MW-3 were collected using a Waterra inertial lift pump and dedicated tubing. Samples were submitted under chain of custody protocol to STL in Tacoma, Washington for analysis of PCP, 2,4,6-trichlorophenol, 2,4,5-trichlorophenol, 2,3,4,6-tetrachlorophenol, and 2,3,5,6-tetrachlorophenol, using EPA Method 8270C.

5.2 Groundwater Monitoring Results

In July 2006, PCP was detected above the PQL in the groundwater sample collected from monitoring well MW-1, at a concentration of 1.2 micrograms per liter ($\mu\text{g/l}$), slightly above the MTCA Method B cleanup level of 0.73 $\mu\text{g/l}$. PCP was also detected at an estimated concentration (0.16 $\mu\text{g/l}$) below the PQL in the groundwater sample collected from monitoring well MW-6. 2,3,5,6-Tetrachlorophenol was detected at an estimated concentration (0.078 $\mu\text{g/l}$) below the PQL in the groundwater sample collected from monitoring well MW-1. No other compounds were detected in groundwater samples collected in July 2006.

In December 2006, PCP was detected at a concentration (0.68 $\mu\text{g/l}$) above the PQL in the groundwater sample collected from monitoring well MW-1. PCP was also detected at an estimated concentration below the PQLs in the groundwater samples collected from monitoring wells MW-2, MW-3, MW-6, and MW-8. These estimated PCP concentrations ranged from 0.13 $\mu\text{g/l}$ (MW-3) to 0.21 $\mu\text{g/l}$ (MW-6). 2,3,4,6-Tetrachlorophenol and 2,3,5,6-tetrachlorophenol were detected at estimated concentrations below PQLs in the groundwater sample collected from monitoring well MW-1, at concentrations of 0.033 $\mu\text{g/l}$ and 0.044 $\mu\text{g/l}$, respectively. No other compounds were detected in groundwater samples collected in December 2006. None of the compounds detected above the PQL were above their respective MTCA Method B cleanup level.

Data from the July and December 2006 groundwater monitoring events are summarized in Table 3. Laboratory data reports are included in Appendix C.

Section 6: Future Activities

Kennedy/Jenks Consultants will complete two rounds of semi-annual groundwater monitoring in 2007 (July and December). Monitoring wells MW-1 to MW-3, MW-5, MW-6, and MW-8 will be sampled for PCP, 2,4,6-trichlorophenol, 2,5,6-trichlorophenol, 2,3,4,6-tetrachlorophenol, and 2,3,5,6-tetrachlorophenol for laboratory analysis by EPA Method 8270C. Samples will be collected using dedicated bailers or Wattera inertial lift pump and dedicated tubing. Samples will be submitted under chain of custody protocol to Test America Laboratories located in Tacoma, Washington.

Analytical data received from the lab will be reviewed for acceptable quality for their intended use and meet the data quality objectives established in the SAP.

Results of the 2007 groundwater monitoring activities will be submitted to Ecology in a brief letter report.

Section 7: Summary and Recommendations

7.1 Summary

Tetra Pak undertook the remedial action to remove surface and subsurface soils identified by previous investigations to contain elevated concentrations of PCP and dioxin. A total of 104 tons of PCP and dioxin-containing soil was removed from the Site.

A total of four “grab” confirmation soil samples were collected from within the limits of the excavations during the remedial action. The excavations were backfilled with clean, imported, coarse-grained fill material.

Confirmation samples collected from the excavated soil areas indicate that residual concentrations of dioxin exceed MTCA Method B cleanup level for 2,3,7,8-TCDD. PCP was not detected above the analytical method PQL in any of the confirmation soil samples.

Results of groundwater sampling activities completed in 2006 indicate low levels of PCP in monitoring wells MW-1 and MW-6. The concentration of PCP detected in the sample collected from MW-1 in July 2006 (1.2 µg/l) slightly exceeded the MTCA Method B cleanup level of 0.73 µg/l. Laboratory detection limits continue to be well below the established MTCA Method B cleanup levels. Results reported in 2006 were consistent with those reported in previous groundwater sampling events.

7.2 Recommendations

Based on the results of the RI/RA/FS; the remedial actions; and continued and planned industrial activities at the Site, Kennedy/Jenks recommends the following actions:

- Implement institutional controls (deed restrictions) to address residual chemicals that remain above MTCA cleanup levels for soils beneath the building. Include the adjacent former rail spur area in the deed restriction. Limit potential future groundwater usage to non-potable uses only.
- Continue with semi-annual groundwater monitoring through the end of 2007. If groundwater concentrations of the chemicals listed in Section 6 remain consistent with levels detected previously, Kennedy/Jenks will recommend that groundwater monitoring be discontinued.

Section 8: References

Bay West 1988. *Remedial Investigation Report for Strebor, Inc.* Bay West Environmental Services. December 1988.

Kennedy/Jenks. 2001. *Remedial Investigation/Risk Assessment/Feasibility Study Work Plan for Former Strebor Facility.* Kennedy/Jenks Consultants. December 2001

Kennedy/Jenks. 2004. *Remedial Investigation, Risk Assessment, and Feasibility Study Report (RI/RA/FS Report) – Former Strebor Facility – Tetra Pak Materials.* Kennedy/Jenks Consultants. August 2004.

Kennedy/Jenks. 2006. *Remedial Action Work Plan – Former Strebor Site.* Kennedy/Jenks Consultants. 12 September 2006.

Shannon & Wilson 1989. *Environmental Site Assessment, Strebor Site, Vancouver, Washington.* Shannon & Wilson, Inc., July 1989.

Washington Department of Ecology. 2007. Cleanup Levels and Risk Calculations (CLARC) Information System. Accessed on 7 March 2007.

Tables

Table 1: Dioxin Concentrations and Toxicity Equivalent Concentrations in Confirmation Soil Samples

Sample	Date	Congener	Result	Detection			2,3,7,8-TCDD			
				Limit ^(a)	Units	TEF ^(b)	TEC ^(c)			
CF-1-3	9/27/2006	1,2,3,4,6,7,8-HpCDD ^(d)	570			pg/g ^(e)	0.01	5.7		
		1,2,3,4,6,7,8-HpCDF ^(f)	69			pg/g	0.01	0.69		
		1,2,3,4,7,8,9-HpCDF	5.0	J ^(g)		pg/g	0.01	0.05		
		1,2,3,4,7,8-HxCDD ^(h)	ND ⁽ⁱ⁾		1.2	pg/g	0.1			
		1,2,3,4,7,8-HxCDF ^(j)	3.5	J	1.2	pg/g	0.1	0.35		
		1,2,3,6,7,8-HxCDD	24			pg/g	0.1	2.4		
		1,2,3,6,7,8-HxCDF	ND		1.3	pg/g	0.1			
		1,2,3,7,8,9-HxCDD	ND		2.8	pg/g	0.1			
		1,2,3,7,8,9-HxCDF	ND	G ^(k)	5.2	pg/g	0.1			
		1,2,3,7,8-PeCDD ^(l)	ND		1.4	pg/g	0.5			
		1,2,3,7,8-PeCDF ^(m)	ND		1.7	pg/g	0.05			
		2,3,4,6,7,8-HxCDF	ND		1.2	pg/g	0.1			
		2,3,4,7,8-PeCDF	ND		1.2	pg/g	0.5			
		2,3,7,8-TCDD	ND		0.74	pg/g	1			
		2,3,7,8-TCDF ⁽ⁿ⁾	0.96	J, JA ^(o)		pg/g	0.1	0.096		
		OCDD ^(p)	5000	E ^(q)		pg/g	0.001	5		
		OCDF ^(r)	470			pg/g	0.001	0.47		
		Adjusted Total								14.756
		CF-2-4	9/27/2006	1,2,3,4,6,7,8-HpCDD	440			pg/g	0.01	4.4
1,2,3,4,6,7,8-HpCDF	40					pg/g	0.01	0.4		
1,2,3,4,7,8,9-HpCDF	6.0			J		pg/g	0.01	0.06		
1,2,3,4,7,8-HxCDD	ND				1.4	pg/g	0.1			
1,2,3,4,7,8-HxCDF	ND				2.2	pg/g	0.1			
1,2,3,6,7,8-HxCDD	8.3					pg/g	0.1	0.83		
1,2,3,6,7,8-HxCDF	ND				1.4	pg/g	0.1			
1,2,3,7,8,9-HxCDD	ND				2.7	pg/g	0.1			
1,2,3,7,8,9-HxCDF	ND				0.32	pg/g	0.1			
1,2,3,7,8-PeCDD	ND				0.67	pg/g	0.5			
1,2,3,7,8-PeCDF	ND				0.38	pg/g	0.05			
2,3,4,6,7,8-HxCDF	ND				0.63	pg/g	0.1			
2,3,4,7,8-PeCDF	ND				0.46	pg/g	0.5			
2,3,7,8-TCDD	ND				0.35	pg/g	1			
2,3,7,8-TCDF	ND				0.35	pg/g	0.1			
OCDD	8200			E		pg/g	0.001	8.2		
OCDF	330					pg/g	0.001	0.33		
Adjusted Total								14.22		
CF-3-3	9/27/2006			1,2,3,4,6,7,8-HpCDD	26000	D ^(s)		pg/g	0.01	260
		1,2,3,4,6,7,8-HpCDF	3100	E		pg/g	0.01	31		
		1,2,3,4,7,8,9-HpCDF	290			pg/g	0.01	2.9		
		1,2,3,4,7,8-HxCDD	17			pg/g	0.1	1.7		
		1,2,3,4,7,8-HxCDF	68			pg/g	0.1	6.8		
		1,2,3,6,7,8-HxCDD	640			pg/g	0.1	64		
		1,2,3,6,7,8-HxCDF	28			pg/g	0.1	2.8		
		1,2,3,7,8,9-HxCDD	52			pg/g	0.1	5.2		
		1,2,3,7,8,9-HxCDF	ND		2.3	pg/g	0.1			
		1,2,3,7,8-PeCDD	4.5	J		pg/g	0.5	2.25		
		1,2,3,7,8-PeCDF	11			pg/g	0.05	0.55		
		2,3,4,6,7,8-HxCDF	13			pg/g	0.1	1.3		
		2,3,4,7,8-PeCDF	7.2			pg/g	0.5	3.6		
		2,3,7,8-TCDD	ND		1.0	pg/g	1			
		2,3,7,8-TCDF	4.7			pg/g	0.1	0.47		
		OCDD	190000	D,E		pg/g	0.001	190		
		OCDF	25000	D		pg/g	0.001	25		
		Adjusted Total								597.57
		CS-1-3	9/27/2006	1,2,3,4,6,7,8-HpCDD	7700	E		pg/g	0.01	77
1,2,3,4,6,7,8-HpCDF	700					pg/g	0.01	7		
1,2,3,4,7,8,9-HpCDF	96					pg/g	0.01	0.96		

Table 1: Dioxin Concentrations and Toxicity Equivalent Concentrations in Confirmation Soil Samples

Sample	Date	Congener	Result	Detection Limit ^(a)	Units	TEF ^(b)	2,3,7,8-TCDD TEC ^(c)
		1,2,3,4,7,8-HxCDD	10		pg/g	0.1	1
		1,2,3,4,7,8-HxCDF	20		pg/g	0.1	2
		1,2,3,6,7,8-HxCDD	130		pg/g	0.1	13
		1,2,3,6,7,8-HxCDF	13		pg/g	0.1	1.3
		1,2,3,7,8,9-HxCDD	28		pg/g	0.1	2.8
		1,2,3,7,8,9-HxCDF	ND	0.62	pg/g	0.1	
		1,2,3,7,8-PeCDD	ND	3.5	pg/g	0.5	
		1,2,3,7,8-PeCDF	ND	2.0	pg/g	0.05	
		2,3,4,6,7,8-HxCDF	5.3		pg/g	0.1	0.53
		2,3,4,7,8-PeCDF	ND	1.3	pg/g	0.5	
		2,3,7,8-TCDD	ND	0.58	pg/g	1	
		2,3,7,8-TCDF	ND	0.33	pg/g	0.1	
		OCDD	70000		pg/g	0.001	70
		OCDF	5900		pg/g	0.001	5.9
		Adjusted Total					181.49
		MTCA Method B Cleanup Level ^(t)					6.67

Notes:

- (a) Detection limit listed for congeners reported as non-detect.
- (b) 2,3,7,8-TCDD TEF = 2,3,7,8-Tetrachlorodibenzo-*p*-dioxin (2,3,7,8-TCDD) toxicity equivalency factor (TEF). 2,3,7,8-TCDD TEFs obtained from Washington Department of Ecology (Ecology) Cleanup Levels and Risk Calculations (CLARC) Information System Notes titled "Assessing the Carcinogenic Risk of Mixtures using Toxicity Equivalence Factors" (Ecology 2007).
- (c) TEC = toxicity equivalent concentration.
- (d) HpCDD = Heptachlorodibenzo-*p*-dioxin.
- (e) pg/g = picograms per gram.
- (f) HpCDF = Heptachlorodibenzofuran.
- (g) J = Estimated result. Result is less than reporting limit.
- (h) HxCDD = Hexachlorodibenzo-*p*-dioxin.
- (i) ND = not detected above the PQL.
- (j) HxCDF = Hexachlorodibenzofuran.
- (k) G = Elevated reporting limit. The reporting limit is elevated due to matrix interference.
- (l) PeCDD = Pentachlorodibenzo-*p*-dioxin.
- (m) PeCDF = Pentachlorodibenzofuran.
- (n) TCDF = Tetrachlorodibenzofuran.
- (o) JA = The analyte was positively identified, but the quantitation is an estimate.
- (p) OCDD = Octachlorodibenzo-*p*-dioxin.
- (q) E = Estimated result. Result concentration exceeds the calibration range.
- (r) OCDF = Octachlorodibenzofuran.
- (s) D = Result was obtained from the analysis of dilution.
- (t) Model Toxics Control Act Method B Cleanup Level for unrestricted land use, in accordance with WAC 173-340-703.

Total TECs greater than the MTCA Method B Cleanup Level for 2,3,7,8-TCDD are shown in **bold**.

Table 2: Water Level Measurements

Well	Date	TOC elevation (ft msl) ^(a)	Total Well Depth (ft)	Depth to Water (ft) ^(b)	Water Elevation (ft msl) ^(c)
MW-1	02/19/02	54.40	50.05	48.62	5.78
	02/27/02			47.73	6.67
	03/25/02			48.78	5.62
	04/18/02			43.55	10.85
	05/28/02		49.94	45.70	8.70
	08/19/02			49.45	4.95
	11/18/02			49.64	4.76
	02/25/03			48.23	6.17
	07/06/06		51.00	48.27	6.13
	12/28/06			45.36	9.04
MW-2	10/08/01	51.44	50.05	48.10	3.34
	02/19/02			45.73	5.71
	02/27/02			44.72	6.72
	03/25/02			45.80	5.64
	04/18/02		49.91	40.55	10.89
	05/28/02			42.78	8.66
	08/19/02			46.55	4.89
	11/18/02			46.73	4.71
	02/25/03		50.12	45.32	6.12
	07/06/06		50.11	45.35	6.09
MW-3	12/28/06		50.5	42.37	9.07
	10/08/01	53.38	54.88	50.28	3.10
	02/19/02			47.53	5.85
	02/27/02			46.70	6.68
	03/25/02			47.79	5.59
	04/18/02		54.72	42.78	10.60
	05/28/02			44.68	8.70
	08/19/02			48.43	4.95
	11/18/02			48.63	4.75
	02/24/03		54.90	47.23	6.15
	07/06/06		54.99	47.28	6.10
MW-5	12/28/06		55.50	44.37	9.01
	10/08/01	51.17	50.18	48.05	3.12
	02/19/02			45.52	5.65
	02/27/02			44.42	6.75
	03/25/02			45.50	5.67
	04/18/02		50.05	40.24	10.93
	05/28/02			42.46	8.71
	08/19/02			46.25	4.92
	11/18/02			46.42	4.75
	02/25/03		50.28	45.02	6.15
	07/06/06		50.29	45.02	6.15
	12/28/06		50	42.07	9.10

Table 2: Water Level Measurements

Well	Date	TOC elevation (ft msl) ^(a)	Total Well Depth (ft)	Depth to Water (ft) ^(b)	Water Elevation (ft msl) ^(c)
MW-6	04/18/02	49.94	53.71	38.92	11.02
	05/28/02			41.45	8.49
	08/19/02			44.92	5.02
	11/18/02		52.88	45.10	4.84
	02/24/03		53.89	43.73	6.21
	07/06/06		54.5	43.75	6.19
	12/28/06			40.81	9.13
MW-7	08/07/02	49.76	54.55	44.39	5.37
	08/19/02		54.55	44.80	4.96
	11/18/02		54.22	44.97	4.79
	02/25/03		54.53	43.55	6.21
MW-8	02/25/03	48.42	54.45	42.18	6.24
	07/06/06		55	42.22	6.20
	12/28/06			39.32	9.10

Notes:

(a) Top of casing (TOC) elevations reported in feet (ft) above mean sea level (msl).

(b) Depth to water measured in feet below ground surface.

(c) Water elevation calculated as the difference between the TOC elevation and the depth to water.

Table 3: Summary of Groundwater Analytical Results for Monitoring Wells

Monitoring Well Number	Date Sampled	Semivolatile Organic Compounds (µg/l) ^(a,b)				
		Pentachlorophenol	2,3,4,6 Tetrachlorophenol	2,3,5,6 Tetrachlorophenol	2,4,5 Trichlorophenol	2,4,6 Trichlorophenol
MW-1	04/19/02	<0.8 ^(c)	NA ^(d)	NA	NA	NA
	08/21/02	1.48	NA	NA	<0.8	<0.8
	11/19/02	1.67	NA	NA	<1.6	<1.6
	02/25/03	<0.19	NA	NA	<0.19	<0.19
	07/06/06	1.2	<0.10	0.078 J ^(e)	<0.051	<0.083
	12/28/06	0.68	0.033 J	0.044 J	<0.0083	<0.0097
MW-2	04/18/02	<0.8	NA	NA	NA	NA
	08/21/02	<0.8	NA	NA	<0.8	<0.8
	11/19/02	<0.8	NA	NA	<0.8	<0.8
	02/25/03	<0.19	NA	NA	<0.19	<0.19
	07/06/06	<0.11	<0.11	<0.056	<0.055	<0.089
	12/28/06	0.15 J	<0.0089	<0.019	<0.0091	<0.011
MW-3	04/18/02	<0.8	NA	NA	NA	NA
	08/20/02	<0.8	NA	NA	<0.8	<0.8
	11/18/02	<0.8	NA	NA	<1.6	<1.6
	02/24/03	0.254	NA	NA	<0.189	<0.189
	07/06/06	<0.11	<0.11	<0.055	<0.054	<0.087
	12/28/06	0.13 J	<0.0081	<0.018	<0.0083	<0.0098
MW-5	04/19/02	<0.8	NA	NA	NA	NA
	08/21/02	<0.8	NA	NA	<0.8	<0.8
	11/19/02	<0.8	NA	NA	<1.6	<1.6
	02/25/03	<0.189	NA	NA	<0.189	<0.189
	07/06/06	<0.11	<0.11	<0.053	<0.052	<0.083
	12/28/06	<0.013	<0.0081	<0.018	<0.0083	<0.0098
MW-6	04/18/02	<0.8	NA	NA	NA	NA
	08/20/02	<0.813	NA	NA	<0.813	<0.813
	11/18/02	<0.8	NA	NA	<1.6	<1.6
	02/24/03	<0.19	NA	NA	<0.19	<0.19
	07/06/06	0.16 J	<0.12	<0.059	<0.058	<0.092
	12/28/06	0.21 J	<0.0083	<0.018	<0.0085	<0.01
MW-7	08/07/02	0.412 J	NA	NA	<0.8	<0.8
	08/20/02	0.347 J	NA	NA	<0.8	<0.8
	11/19/02	7.58	NA	NA	<1.6	<1.6
	02/25/03	<0.191	NA	NA	<0.191	<0.191

Table 3: Summary of Groundwater Analytical Results for Monitoring Wells

Monitoring Well Number	Date Sampled	Semivolatile Organic Compounds (µg/l) ^(a,b)				
		Pentachlorophenol	2,3,4,6 Tetrachlorophenol	2,3,5,6 Tetrachlorophenol	2,4,5 Trichlorophenol	2,4,6 Trichlorophenol
MW-8	02/25/03	<0.189	NA	NA	<0.189	<0.189
	07/06/06	<0.11	<0.11	<0.055	<0.054	<0.087
	12/28/06	0.16 J	<0.0081	<0.018	<0.0083	<0.0098
MTCA Method B Cleanup Level ^(f)		0.73	480	NL ^(g)	1,800	4

Notes:

(a) Results are reported in micrograms per liter (µg/l).

(b) Samples were analyzed for selected semivolatile organic compounds by EPA Method 8270C.

(c) "<" denotes analyte was not detected above the indicated detection limit.

(d) NA = not analyzed.

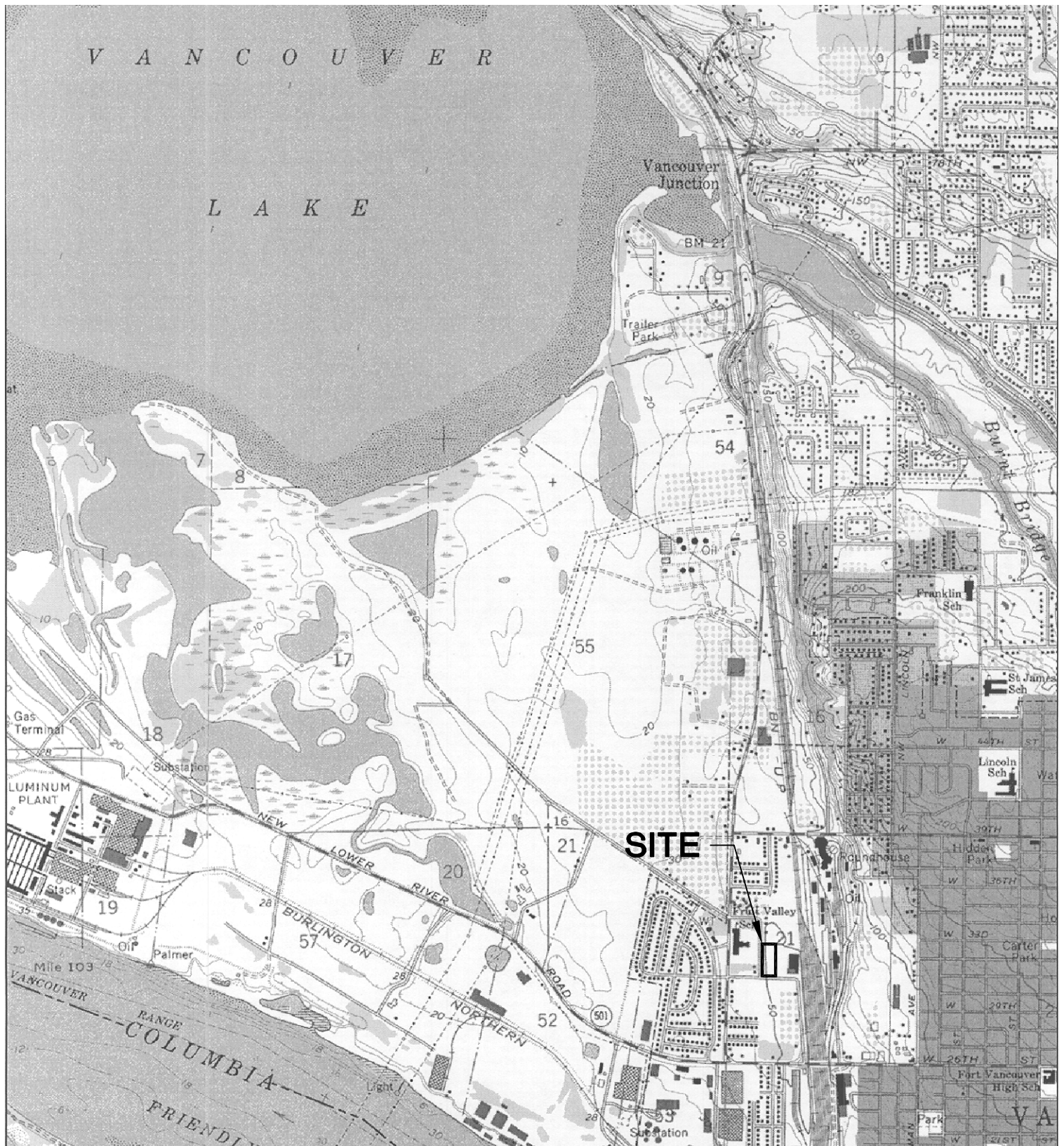
(e) J denotes positively identified, but numerical value is an estimated quantity.

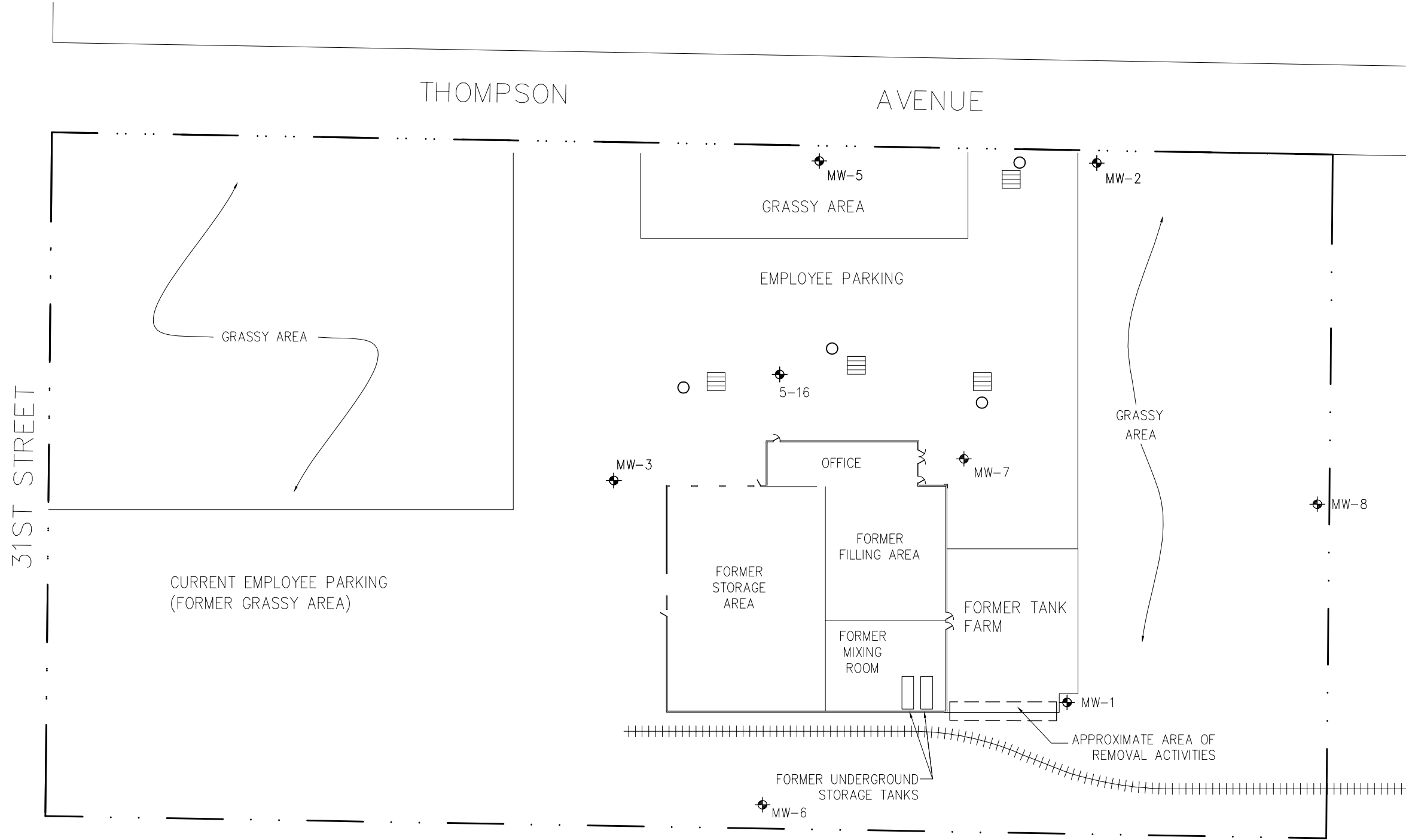
(f) MTCA Method B Groundwater Cleanup Level. Washington Department of Ecology (Ecology) Cleanup Levels and Risk Calculations (CLARC) Information System (Ecology 2007).

(g) NL = not listed in the CLARC Information System.

Bold values indicate positive laboratory detection above the Method B Groundwater Cleanup Level.

Figures

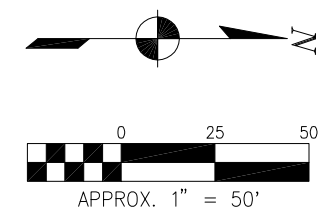




LEGEND

- STORMWATER DRYWELLS
- STORMWATER CATCH BASIN
- APPROXIMATE SITE BOUNDARY
- FORMER RAILROAD SPUR
- MONITORING WELL LOCATION
- APPROXIMATE AREA OF REMOVAL ACTIVITIES

NOTE:
ALL LOCATIONS APPROXIMATE.



REFERENCE: SITE PLAN PROVIDED BY TETRA PAK

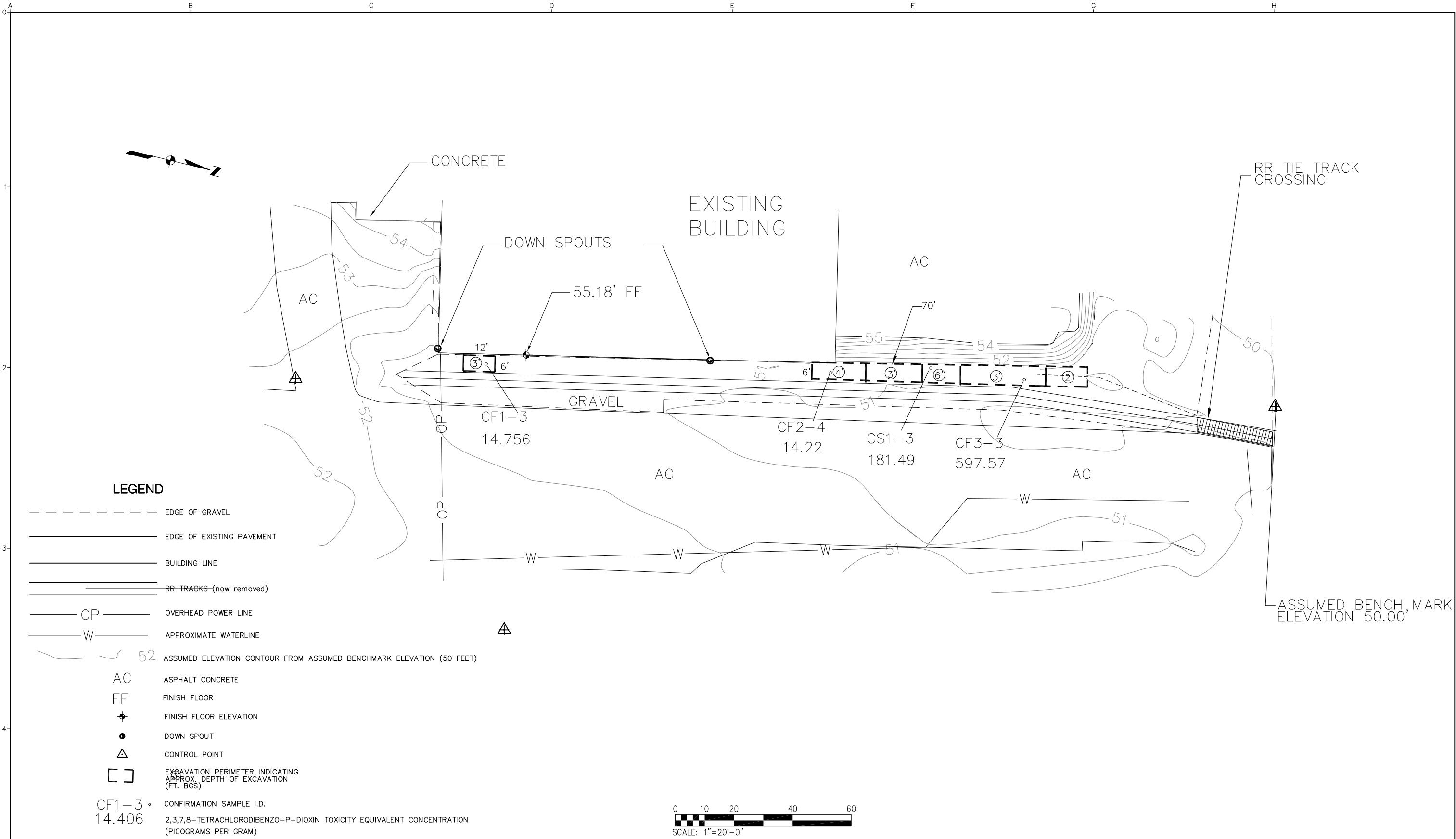
Kennedy/Jenks Consultants

TETRA PAK
FORMER STREBOR SITE

SITE PLAN

K/J 016066.11/P02SK002

FIGURE 2



USE OF DOCUMENTS

THIS DOCUMENT, INCLUDING THE INCORPORATED DESIGNS, IS AN INSTRUMENT OF SERVICE FOR THIS PROJECT AND SHALL NOT BE USED FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF KENNEDY/JENKS CONSULTANTS.

NO.	REVISION	DATE	BY

SCALES

0 1" 25mm

IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

DESIGNED
DMK

DRAWN
JKG

CHECKED
DMK

**TETRA-PAK - FORMER STREBOR SITE
VANCOUVER, WASHINGTON
REMEDIAL ACTION SOIL REMOVAL**

**Kennedy/Jenks Consultants
PORTLAND, OREGON**

**FIGURE 3
SOIL REMOVAL
EXCAVATION AND CONFIRMATION
SOIL SAMPLE LOCATIONS**

FILE NAME
016066-3

JOB NO.
016066.11

DATE
AUGUST 2006

SHEET
3

Appendix A

Photographs of Site Work



Photograph 1:

Rail spur removal



Photograph 2:

Excavation area, south end of former rail spur, adjacent to Strebor building.



Photograph 3:

Excavation area, north end of Strebor building (looking south), with approximate sample locations.



Photograph 4:

Excavation area, north end of rail spur (looking north), with approximate sample locations. MW-1 is upper left of photograph.



Photograph 5:

Finished grading after backfill and compaction (looking south).

Appendix B

Transportation and Disposal Receipts

Driver's Signature



Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Original
Ticket# 1011881✓

Customer Name TETRAPAK Tetra Pak

Ticket Date 09/27/2006

Payment Type Credit Account

Manual Ticket#

Hauling Ticket#

Route

State Waste Code

Manifest na

Destination

PO 10182

Profile 10182 (Contaminated Soil)

Generator 168-TETRAPAK Tetra Pak

Carrier WEST COAST MARINE WEST COAST MARINE

Vehicle# 125 Volume

Container

Driver

Check#

Billing # 0002464

Gen EPA ID

Grid

	Time	Scale	Operator	Inbound	Gross		
In	09/27/2006 13:43:03	Inbound 1	BML		Tare	56560	1b
Out	09/27/2006 14:02:48	MANUAL WT	BML		Net	31960	1b
					Tons	24600	1b
						12.30	

Comments

Consumer Comments? We want to know. Please call.

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 Cont Soil Pet-RGC-	100	12.30	Tons	33.65	16.61	\$413.90	CLARK
2 EVL-Env Fee Lg.	100	1	Load	4.00		\$4.00	CLARK

Not & Don't for

Total Tax \$16.61
Total Ticket \$434.51





Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Original
Ticket# 1011899 ✓

Customer Name TETRAPAK Tetra Pak

Ticket Date 09/27/2006

Payment Type Credit Account

Manual Ticket#

Hauling Ticket#

Route

State Waste Code

Manifest na

Destination

PO 10182

Profile 10182 (Contaminated Soil)

Generator 168-TETRAPAK Tetra Pak

Carrier WEST COAST MARINE WEST COAST MARINE

Vehicle# 110

Volume

Container

Driver doug

Check#

Billing # 0002464

Gen EPA ID

Grid

	Time	Scale	Operator	Inbound	Gross	55500	1b
In	09/27/2006 14:16:13	Inbound 1	BML		Tare	32960	1b
Out	09/27/2006 14:32:56	Outbound	tmm		Net	22540	1b
					Tons		11.27

Comments

Consumer Comments? We want to know. Please call.

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 Cont Soil Pet-RGC-	100	11.27	Tons	33.65	15.21	\$379.24	CLARK
2 EVL-Env Fee Lg.	100	1	Load	4.00		\$4.00	CLARK

Total Tax \$15.21
Total Ticket \$398.45

Driver's Signature



Hillsboro Landfill, Inc.
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Original
Ticket# 1011908 ✓

Customer Name	TETRAPAK Tetra Pak	Carrier	WEST COAST MARINE WEST COAST MARINE
Ticket Date	09/27/2006	Vehicle#	111 Volume
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	keith
Hauling Ticket#		Check#	
Route		Billing #	0002464
State Waste Code		Gen EPA ID	
Manifest	na		
Destination		Grid	
PO	10182		
Profile	10182 (Contaminated Soil)		
Generator	168-TETRAPAK Tetra Pak		

	Time	Scale	Operator	Inbound	Gross	
In	09/27/2006 14:29:41	Inbound 2	bml		Tare	75980 1b
Out	09/27/2006 14:52:56	Outbound	tmm		Net	48800 1b
					Tons	27180 1b
						13.59

Comments

Consumer Comments? We want to know. Please call.

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 Cont Soil Pet-RGC-	100	13.59	Tons	33.65	18.35	\$457.30	CLARK
2 EVL-Env Fee Lg.	100	1	Load	4.00		\$4.00	CLARK

Total Tax \$18.35
Total Ticket \$479.65

Driver's Signature



Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

KM 005

Original
Ticket# 1011936✓

Customer Name TETRAPAK Tetra Pak

Ticket Date 09/27/2006

Payment Type Credit Account

Manual Ticket#

Hauling Ticket#

Route

State Waste Code

Manifest na

Destination

PO 10182

Profile 10182 (Contaminated Soil)

Generator 168-TETRAPAK Tetra Pak

Carrier WEST COAST MARINE WEST COAST MARINE

Vehicle# 138

Volume

Container

Driver

Check#

Billing # 0002464

Gen EPA ID

Grid

	Time	Scale	Operator	Inbound	Gross		
In	09/27/2006 15:17:54	Inbound 1	tmm		Tare	38040	1b
Out	09/27/2006 15:47:18	Outbound	tmm		Net	23460	1b
					Tons		11.73

Comments

Consumer Comments? We want to know. Please call.

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 Cont Soil Pet-RGC-	100	11.73	Tons	33.65	15.84	\$394.71	CLARK
2 EVL-Env Fee Lg.	100	1	Load	4.00		\$4.00	CLARK

Total Tax \$15.84
Total Ticket \$414.55

Driver's Signature





Hillsboro Landfill, Inc.
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Original
Ticket# 1012088 ✓

Customer Name TETRAPAK Tetra Pak

Ticket Date 09/28/2006

Payment Type Credit Account

Manual Ticket#

Hauling Ticket#

Route

State Waste Code

Manifest na

Destination

PO 10182

Profile 10182 (Contaminated Soil)

Generator 168-TETRAPAK Tetra Pak

Carrier WEST COAST MARINE WEST COAST MARINE

Vehicle# 133 Volume

Container

Driver

Check#

Billing # 0002464

Gen EPA ID

Grid


	Time	Scale	Operator	Inbound	Gross	
In	09/28/2006 10:34:33	Inbound 2	bml		42780	1b
Out	09/28/2006 10:49:45	Outbound	sdm		31640	1b
					11140	1b
					Tons	5.57

Comments

Consumer Comments? We want to know. Please call.

Product	LDX	Qty	UOM	Rate	Tax	Amount	Origin
1 Cont Soil Pet-RGC-	100	5.57	Tons	33.65	7.52	\$187.43	CLARK
2 EVL-Env Fee Lg.	100	1	Load	4.00		\$4.00	CLARK

Total Tax \$7.52
Total Ticket \$198.95

Driver's Signature 





Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Original
Ticket# 1013963 ✓

Customer Name TETRAPAK Tetra Pak

Ticket Date 10/04/2006

Payment Type Credit Account

Manual Ticket#

Hauling Ticket#

Route

State Waste Code

Manifest NA

Destination

PD 10182

Profile 10182 (Contaminated Soil)

Generator 168-TETRAPAK Tetra Pak

Carrier WEST COAST MARINE WEST COAST MARINE

Vehicle# 143 Volume

Container

Driver kathy

Check#

Billing # 0002464

Gen EPA ID

Grid

	Time	Scale	Operator	Inbound	Gross		
In	10/04/2006 12:55:39	Inbound 2	tmm			41560	1b
Out	10/04/2006 13:19:57	MANUAL WT	bml		Tare	33120	1b
					Net	8440	1b
					Tons		4.22

Comments

Consumer Comments? We want to know. Please call.

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 Cont Soil Pet-RGC-	100	4.22	Tons	33.65	5.70	\$142.00	CLARK
2 EVL-Env Fee Lg.	100	1	Load	4.00		\$4.00	CLARK

K. Chapman

Total Tax \$5.70
Total Ticket \$151.70



Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Original
Ticket# 1011760 ✓

Customer Name TETRAPAK Tetra Pak

Ticket Date 09/27/2006

Payment Type Credit Account

Manual Ticket#

Hauling Ticket#

Route

State Waste Code

Manifest NA

Destination

PO 10182

Profile 10182 (Contaminated Soil)

Generator 168-TETRAPAK Tetra Pak

Carrier WEST COAST MARINE WEST COAST MARINE

Vehicle# 101 Volume

Container

Driver KEITH

Check#

Billing # 0002464

Gen EPA ID

Grid

	Time	Scale	Operator	Inbound	Gross	
In	09/27/2006 10:57:31	Inbound 1	SDM		Tare	99920 1b
Out	09/27/2006 11:41:25	Outbound	sdm		Net	45300 1b
					Tons	54620 1b
						27.31

Comments

Consumer Comments? We want to know. Please call.

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 Cont Soil Pet-RGC-	100	27.31	Tons	33.65	36.87	\$918.98	CLARK
2 EVL-Env Fee Lg.	100	1	Load	4.00		\$4.00	CLARK

Total Tax \$36.87
Total Ticket \$959.85

Driver's Signature



Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

361-20

Original
Ticket# 1011804 ✓

Customer Name	TETRAPAK Tetra Pak	Carrier	WEST COAST MARINE WEST COAST MARINE
Ticket Date	09/27/2006	Vehicle#	110 Volume
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	
Hauling Ticket#		Check#	
Route		Billing #	0002464
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO	10182		
Profile	10182 (Contaminated Soil)		
Generator	168-TETRAPAK Tetra Pak		

	Time	Scale	Operator	Inbound	Gross	
In	09/27/2006 11:58:59	Inbound 1	SDM		Tare	75220 1b
Out	09/27/2006 12:49:19	Outbound	bml		Net	38800 1b
					Tons	36420 1b
						18.21

Comments

Consumer Comments? We want to know. Please call.

Product	LDX	Qty	UOM	Rate	Tax	Amount	Origin
1 Cont Soil Pet-RGC-	100	18.21	Tons	33.65	24.58	\$612.77	CLARK
2 EVL-Env Fee Lg.	100	1	Load	4.00		\$4.00	CLARK

Total Tax \$24.58
Total Ticket \$641.35

Driver's Signature



Appendix C

Analytical Laboratory Reports

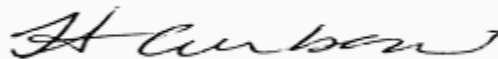
ANALYTICAL REPORT

Job Number: 580-2999-1

Job Description: Tetra Pak

For:
Kennedy/Jenks Consultants
200 Market Street
Suite 500
Portland, OR 97201

Attention: Deonne Knill



Heather Curbow
Project Mgmt. Assistant
hcurbow@stl-inc.com
07/18/2006
Revision: 1

Project Manager: Darla Powell

STL Seattle is a part of Severn Trent Laboratories, Inc.

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METHOD SUMMARY

Client: Kennedy/Jenks Consultants

Job Number: 580-2999-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	STL-SEA	SW846 8270C	
Separatory Funnel Liquid-Liquid Extraction	STL-SEA		SW846 3510C

LAB REFERENCES:

STL-SEA = STL-Seattle

METHOD REFERENCES:

SW846 - "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986
And Its Updates.

SAMPLE SUMMARY

Client: Kennedy/Jenks Consultants

Job Number: 580-2999-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
580-2999-1	MW-1	Water	07/06/2006 1145	07/07/2006 0815
580-2999-2	MW-2	Water	07/06/2006 1015	07/07/2006 0815
580-2999-3	MW-3	Water	07/06/2006 1215	07/07/2006 0815
580-2999-4	MW-5	Water	07/06/2006 0945	07/07/2006 0815
580-2999-5	MW-6	Water	07/06/2006 1115	07/07/2006 0815
580-2999-6	MW-8	Water	07/06/2006 1045	07/07/2006 0815

Analytical Data

Client: Kennedy/Jenks Consultants

Job Number: 580-2999-1

Client Sample ID: MW-1

Lab Sample ID: 580-2999-1

Client Matrix: Water

Date Sampled: 07/06/2006 1145

Date Received: 07/07/2006 0815

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C

Analysis Batch: 580-8900

Instrument ID: SEA002

Preparation: 3510C

Prep Batch: 580-8702

Lab File ID: AT06398.D

Dilution: 1.0

Initial Weight/Volume: 1030 mL

Date Analyzed: 07/12/2006 1600

Final Weight/Volume: 1 mL

Date Prepared: 07/10/2006 0820

Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Pentachlorophenol	1.2		0.10	0.34
2,4,6-Trichlorophenol	0.083	U	0.083	0.29
2,4,5-Trichlorophenol	0.051	U	0.051	0.19
2,3,4,6-Tetrachlorophenol	0.10	U	0.10	0.34
2,3,5,6-Tetrachlorophenol	0.078	J	0.052	0.19
Surrogate	%Rec		Acceptance Limits	
2-Fluorophenol	31		10 - 120	
Phenol-d5	21		10 - 102	
2,4,6-Tribromophenol	104		29 - 151	

Analytical Data

Client: Kennedy/Jenks Consultants

Job Number: 580-2999-1

Client Sample ID: MW-2

Lab Sample ID: 580-2999-2

Date Sampled: 07/06/2006 1015

Client Matrix: Water

Date Received: 07/07/2006 0815

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C

Analysis Batch: 580-8900

Instrument ID: SEA002

Preparation: 3510C

Prep Batch: 580-8702

Lab File ID: AT06399.D

Dilution: 1.0

Initial Weight/Volume: 960 mL

Date Analyzed: 07/12/2006 1627

Final Weight/Volume: 1 mL

Date Prepared: 07/10/2006 0820

Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Pentachlorophenol	0.11	U	0.11	0.36
2,4,6-Trichlorophenol	0.089	U	0.089	0.31
2,4,5-Trichlorophenol	0.055	U	0.055	0.21
2,3,4,6-Tetrachlorophenol	0.11	U	0.11	0.36
2,3,5,6-Tetrachlorophenol	0.056	U	0.056	0.21
Surrogate	%Rec		Acceptance Limits	
2-Fluorophenol	33		10 - 120	
Phenol-d5	22		10 - 102	
2,4,6-Tribromophenol	101		29 - 151	

Analytical Data

Client: Kennedy/Jenks Consultants

Job Number: 580-2999-1

Client Sample ID: MW-3

Lab Sample ID: 580-2999-3

Client Matrix: Water

Date Sampled: 07/06/2006 1215

Date Received: 07/07/2006 0815

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C

Analysis Batch: 580-8900

Instrument ID: SEA002

Preparation: 3510C

Prep Batch: 580-8702

Lab File ID: AT06400.D

Dilution: 1.0

Initial Weight/Volume: 975 mL

Date Analyzed: 07/12/2006 1655

Final Weight/Volume: 1 mL

Date Prepared: 07/10/2006 0820

Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Pentachlorophenol	0.11	U	0.11	0.36
2,4,6-Trichlorophenol	0.087	U	0.087	0.31
2,4,5-Trichlorophenol	0.054	U	0.054	0.21
2,3,4,6-Tetrachlorophenol	0.11	U	0.11	0.36
2,3,5,6-Tetrachlorophenol	0.055	U	0.055	0.21
Surrogate	%Rec		Acceptance Limits	
2-Fluorophenol	32		10 - 120	
Phenol-d5	21		10 - 102	
2,4,6-Tribromophenol	97		29 - 151	

Analytical Data

Client: Kennedy/Jenks Consultants

Job Number: 580-2999-1

Client Sample ID: MW-5

Lab Sample ID: 580-2999-4

Client Matrix: Water

Date Sampled: 07/06/2006 0945

Date Received: 07/07/2006 0815

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C

Analysis Batch: 580-8900

Instrument ID: SEA002

Preparation: 3510C

Prep Batch: 580-8702

Lab File ID: AT06401.D

Dilution: 1.0

Initial Weight/Volume: 1020 mL

Date Analyzed: 07/12/2006 1722

Final Weight/Volume: 1 mL

Date Prepared: 07/10/2006 0820

Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Pentachlorophenol	0.11	U	0.11	0.34
2,4,6-Trichlorophenol	0.083	U	0.083	0.29
2,4,5-Trichlorophenol	0.052	U	0.052	0.20
2,3,4,6-Tetrachlorophenol	0.11	U	0.11	0.34
2,3,5,6-Tetrachlorophenol	0.053	U	0.053	0.20
Surrogate	%Rec		Acceptance Limits	
2-Fluorophenol	36		10 - 120	
Phenol-d5	23		10 - 102	
2,4,6-Tribromophenol	104		29 - 151	

Analytical Data

Client: Kennedy/Jenks Consultants

Job Number: 580-2999-1

Client Sample ID: MW-6

Lab Sample ID: 580-2999-5

Client Matrix: Water

Date Sampled: 07/06/2006 1115

Date Received: 07/07/2006 0815

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C

Analysis Batch: 580-8900

Instrument ID: SEA002

Preparation: 3510C

Prep Batch: 580-8702

Lab File ID: AT06402.D

Dilution: 1.0

Initial Weight/Volume: 920 mL

Date Analyzed: 07/12/2006 1750

Final Weight/Volume: 1 mL

Date Prepared: 07/10/2006 0820

Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Pentachlorophenol	0.16	J	0.12	0.38
2,4,6-Trichlorophenol	0.092	U	0.092	0.33
2,4,5-Trichlorophenol	0.058	U	0.058	0.22
2,3,4,6-Tetrachlorophenol	0.12	U	0.12	0.38
2,3,5,6-Tetrachlorophenol	0.059	U	0.059	0.22
Surrogate	%Rec		Acceptance Limits	
2-Fluorophenol	30		10 - 120	
Phenol-d5	19		10 - 102	
2,4,6-Tribromophenol	88		29 - 151	

Analytical Data

Client: Kennedy/Jenks Consultants

Job Number: 580-2999-1

Client Sample ID: MW-8

Lab Sample ID: 580-2999-6

Client Matrix: Water

Date Sampled: 07/06/2006 1045

Date Received: 07/07/2006 0815

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C

Analysis Batch: 580-8900

Instrument ID: SEA002

Preparation: 3510C

Prep Batch: 580-8702

Lab File ID: AT06403.D

Dilution: 1.0

Initial Weight/Volume: 980 mL

Date Analyzed: 07/12/2006 1817

Final Weight/Volume: 1 mL

Date Prepared: 07/10/2006 0820

Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Pentachlorophenol	0.11	U	0.11	0.36
2,4,6-Trichlorophenol	0.087	U	0.087	0.31
2,4,5-Trichlorophenol	0.054	U	0.054	0.20
2,3,4,6-Tetrachlorophenol	0.11	U	0.11	0.36
2,3,5,6-Tetrachlorophenol	0.055	U	0.055	0.20
Surrogate	%Rec		Acceptance Limits	
2-Fluorophenol	34		10 - 120	
Phenol-d5	23		10 - 102	
2,4,6-Tribromophenol	94		29 - 151	

Quality Control Results

Client: Kennedy/Jenks Consultants

Job Number: 580-2999-1

Method Blank - Batch: 580-8702

Lab Sample ID: MB 580-8702/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/12/2006 1410
Date Prepared: 07/10/2006 0820

Analysis Batch: 580-8900
Prep Batch: 580-8702
Units: ug/L

Method: 8270C Preparation: 3510C

Instrument ID: SEA002
Lab File ID: AT06394.D
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
Injection Volume:

Analyte	Result	Qual	MDL	RL
Pentachlorophenol	0.11	U	0.11	0.35
2,4,6-Trichlorophenol	0.085	U	0.085	0.30
2,4,5-Trichlorophenol	0.053	U	0.053	0.20
2,3,4,6-Tetrachlorophenol	0.11	U	0.11	0.35
2,3,5,6-Tetrachlorophenol	0.054	U	0.054	0.20
Surrogate	% Rec		Acceptance Limits	
2-Fluorophenol	40		10 - 120	
Phenol-d5	24		10 - 102	
2,4,6-Tribromophenol	85		29 - 151	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Kennedy/Jenks Consultants

Job Number: 580-2999-1

Laboratory Control/ Laboratory Control Duplicate Recovery Report - Batch: 580-8702

Method: 8270C
Preparation: 3510C

LCS Lab Sample ID: LCS 580-8702/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/12/2006 1438
Date Prepared: 07/10/2006 0820

Analysis Batch: 580-8900
Prep Batch: 580-8702
Units: ug/L

Instrument ID: SEA002
Lab File ID: AT06395.D
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
Injection Volume:

LCSD Lab Sample ID: LCSD 580-8702/3-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/12/2006 1505
Date Prepared: 07/10/2006 0820

Analysis Batch: 580-8900
Prep Batch: 580-8702
Units: ug/L

Instrument ID: SEA002
Lab File ID: AT06396.D
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
Injection Volume:

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Pentachlorophenol	77	82	10 - 160	6	67		
2,4,6-Trichlorophenol	88	88	20 - 150	1	50		
2,4,5-Trichlorophenol	87	87	20 - 150	0	50		
2,3,4,6-Tetrachlorophenol	83	85	50 - 150	2	50		
2,3,5,6-Tetrachlorophenol	86	87	50 - 150	1	50		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
2-Fluorophenol	36		39		10 - 120		
Phenol-d5	22		24		10 - 102		
2,4,6-Tribromophenol	99		99		29 - 151		

Calculations are performed before rounding to avoid round-off errors in calculated results.

DATA REPORTING QUALIFIERS

Client: Kennedy/Jenks Consultants

Job Number: 580-2999-1

Lab Section	Qualifier	Description
GC/MS Semi VOA		
	U	Indicates the analyte was analyzed for but not detected.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Chain of Custody Record

[illegible]

LOGIN SAMPLE RECEIPT CHECK LIST

Client: Kennedy/Jenks Consultants

Job Number: 580-2999-1

Login Number: 2999

Question	T/F/NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	NA	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

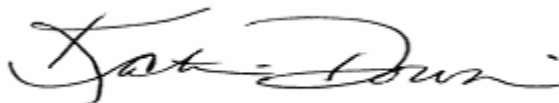
ANALYTICAL REPORT

Job Number: 580-4614-1

Job Description: Tetra Pak

For:
Kennedy/Jenks Consultants
200 Market Street
Suite 500
Portland, OR 97201

Attention: Deonne Knill



Katie Downie
Project Manager II
kdownie@stl-inc.com
01/08/2007

Project Manager: Katie Downie

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SAMPLE SUMMARY

Client: Kennedy/Jenks Consultants

Job Number: 580-4614-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
580-4614-1	MW-1	Water	12/28/2006 1120	12/29/2006 1000
580-4614-2	MW-2	Water	12/28/2006 1445	12/29/2006 1000
580-4614-3	MW-3	Water	12/28/2006 0940	12/29/2006 1000
580-4614-4	MW-5	Water	12/28/2006 1400	12/29/2006 1000
580-4614-5	MW-6	Water	12/28/2006 1210	12/29/2006 1000
580-4614-6	MW-8	Water	12/28/2006 1030	12/29/2006 1000

Analytical Data

Client: Kennedy/Jenks Consultants

Job Number: 580-4614-1

Client Sample ID: MW-1

Lab Sample ID: 580-4614-1

Client Matrix: Water

Date Sampled: 12/28/2006 1120

Date Received: 12/29/2006 1000

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C

Analysis Batch: 580-14530

Instrument ID: SEA002

Preparation: 3510C

Prep Batch: 580-14399

Lab File ID: AT06874.D

Dilution: 1.0

Initial Weight/Volume: 1030 mL

Date Analyzed: 01/03/2007 0945

Final Weight/Volume: 1 mL

Date Prepared: 01/02/2007 1057

Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Pentachlorophenol	0.68		0.013	0.34
2,4,6-Trichlorophenol	0.0097	U	0.0097	0.29
2,4,5-Trichlorophenol	0.0083	U	0.0083	0.19
2,3,4,6-Tetrachlorophenol	0.033	J	0.0081	0.34
2,3,5,6-Tetrachlorophenol	0.044	J	0.017	0.19
Surrogate	%Rec		Acceptance Limits	
2-Fluorophenol	43		10 - 120	
Phenol-d5	24		10 - 102	
2,4,6-Tribromophenol	114		29 - 151	

Analytical Data

Client: Kennedy/Jenks Consultants

Job Number: 580-4614-1

Client Sample ID: MW-2

Lab Sample ID: 580-4614-2

Date Sampled: 12/28/2006 1445

Client Matrix: Water

Date Received: 12/29/2006 1000

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C

Analysis Batch: 580-14530

Instrument ID: SEA002

Preparation: 3510C

Prep Batch: 580-14399

Lab File ID: AT06875.D

Dilution: 1.0

Initial Weight/Volume: 935 mL

Date Analyzed: 01/03/2007 1012

Final Weight/Volume: 1 mL

Date Prepared: 01/02/2007 1057

Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Pentachlorophenol	0.15	J	0.014	0.37
2,4,6-Trichlorophenol	0.011	U	0.011	0.32
2,4,5-Trichlorophenol	0.0091	U	0.0091	0.21
2,3,4,6-Tetrachlorophenol	0.0089	U	0.0089	0.37
2,3,5,6-Tetrachlorophenol	0.019	U	0.019	0.21
Surrogate	%Rec		Acceptance Limits	
2-Fluorophenol	47		10 - 120	
Phenol-d5	27		10 - 102	
2,4,6-Tribromophenol	115		29 - 151	

Analytical Data

Client: Kennedy/Jenks Consultants

Job Number: 580-4614-1

Client Sample ID: MW-3

Lab Sample ID: 580-4614-3

Client Matrix: Water

Date Sampled: 12/28/2006 0940

Date Received: 12/29/2006 1000

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C

Analysis Batch: 580-14530

Instrument ID: SEA002

Preparation: 3510C

Prep Batch: 580-14399

Lab File ID: AT06876.D

Dilution: 1.0

Initial Weight/Volume: 1020 mL

Date Analyzed: 01/03/2007 1040

Final Weight/Volume: 1 mL

Date Prepared: 01/02/2007 1057

Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Pentachlorophenol	0.13	J	0.013	0.34
2,4,6-Trichlorophenol	0.0098	U	0.0098	0.29
2,4,5-Trichlorophenol	0.0083	U	0.0083	0.20
2,3,4,6-Tetrachlorophenol	0.0081	U	0.0081	0.34
2,3,5,6-Tetrachlorophenol	0.018	U	0.018	0.20
Surrogate	%Rec		Acceptance Limits	
2-Fluorophenol	49		10 - 120	
Phenol-d5	29		10 - 102	
2,4,6-Tribromophenol	116		29 - 151	

Analytical Data

Client: Kennedy/Jenks Consultants

Job Number: 580-4614-1

Client Sample ID: MW-5

Lab Sample ID: 580-4614-4

Client Matrix: Water

Date Sampled: 12/28/2006 1400

Date Received: 12/29/2006 1000

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C

Analysis Batch: 580-14530

Instrument ID: SEA002

Preparation: 3510C

Prep Batch: 580-14399

Lab File ID: AT06877.D

Dilution: 1.0

Initial Weight/Volume: 1025 mL

Date Analyzed: 01/03/2007 1107

Final Weight/Volume: 1 mL

Date Prepared: 01/02/2007 1057

Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Pentachlorophenol	0.013	U	0.013	0.34
2,4,6-Trichlorophenol	0.0098	U	0.0098	0.29
2,4,5-Trichlorophenol	0.0083	U	0.0083	0.20
2,3,4,6-Tetrachlorophenol	0.0081	U	0.0081	0.34
2,3,5,6-Tetrachlorophenol	0.018	U	0.018	0.20
Surrogate	%Rec		Acceptance Limits	
2-Fluorophenol	48		10 - 120	
Phenol-d5	28		10 - 102	
2,4,6-Tribromophenol	126		29 - 151	

Analytical Data

Client: Kennedy/Jenks Consultants

Job Number: 580-4614-1

Client Sample ID: MW-6

Lab Sample ID: 580-4614-5

Client Matrix: Water

Date Sampled: 12/28/2006 1210

Date Received: 12/29/2006 1000

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C

Analysis Batch: 580-14530

Instrument ID: SEA002

Preparation: 3510C

Prep Batch: 580-14399

Lab File ID: AT06880.D

Dilution: 1.0

Initial Weight/Volume: 1000 mL

Date Analyzed: 01/03/2007 1237

Final Weight/Volume: 1 mL

Date Prepared: 01/02/2007 1057

Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Pentachlorophenol	0.21	J	0.013	0.35
2,4,6-Trichlorophenol	0.010	U	0.010	0.30
2,4,5-Trichlorophenol	0.0085	U	0.0085	0.20
2,3,4,6-Tetrachlorophenol	0.0083	U	0.0083	0.35
2,3,5,6-Tetrachlorophenol	0.018	U	0.018	0.20
Surrogate	%Rec		Acceptance Limits	
2-Fluorophenol	48		10 - 120	
Phenol-d5	27		10 - 102	
2,4,6-Tribromophenol	122		29 - 151	

Analytical Data

Client: Kennedy/Jenks Consultants

Job Number: 580-4614-1

Client Sample ID: MW-8

Lab Sample ID: 580-4614-6

Date Sampled: 12/28/2006 1030

Client Matrix: Water

Date Received: 12/29/2006 1000

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C

Analysis Batch: 580-14530

Instrument ID: SEA002

Preparation: 3510C

Prep Batch: 580-14399

Lab File ID: AT06881.D

Dilution: 1.0

Initial Weight/Volume: 1020 mL

Date Analyzed: 01/03/2007 1304

Final Weight/Volume: 1 mL

Date Prepared: 01/02/2007 1057

Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Pentachlorophenol	0.16	J	0.013	0.34
2,4,6-Trichlorophenol	0.0098	U	0.0098	0.29
2,4,5-Trichlorophenol	0.0083	U	0.0083	0.20
2,3,4,6-Tetrachlorophenol	0.0081	U	0.0081	0.34
2,3,5,6-Tetrachlorophenol	0.018	U	0.018	0.20
Surrogate	%Rec		Acceptance Limits	
2-Fluorophenol	49		10 - 120	
Phenol-d5	30		10 - 102	
2,4,6-Tribromophenol	134		29 - 151	

Quality Control Results

Client: Kennedy/Jenks Consultants

Job Number: 580-4614-1

Method Blank - Batch: 580-14399

Lab Sample ID: MB 580-14399/1-AA
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/03/2007 1359
Date Prepared: 01/02/2007 1057

Analysis Batch: 580-14530
Prep Batch: 580-14399
Units: ug/L

Method: 8270C Preparation: 3510C

Instrument ID: SEA002
Lab File ID: AT06883.D
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
Injection Volume:

Analyte	Result	Qual	MDL	RL
Pentachlorophenol	0.013	U	0.013	0.35
2,4,6-Trichlorophenol	0.010	U	0.010	0.30
2,4,5-Trichlorophenol	0.0085	U	0.0085	0.20
2,3,4,6-Tetrachlorophenol	0.0083	U	0.0083	0.35
2,3,5,6-Tetrachlorophenol	0.018	U	0.018	0.20
Surrogate	% Rec	Acceptance Limits		
2-Fluorophenol	51	10 - 120		
Phenol-d5	31	10 - 102		
2,4,6-Tribromophenol	107	29 - 151		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Kennedy/Jenks Consultants

Job Number: 580-4614-1

**Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 580-14399**

**Method: 8270C
Preparation: 3510C**

LCS Lab Sample ID: LCS 580-14399/2-AA
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/03/2007 0851
Date Prepared: 01/02/2007 1057

Analysis Batch: 580-14530
Prep Batch: 580-14399
Units: ug/L

Instrument ID: SEA002
Lab File ID: AT06872.D
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
Injection Volume:

LCSD Lab Sample ID: LCSD 580-14399/3-AA
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/03/2007 0918
Date Prepared: 01/02/2007 1057

Analysis Batch: 580-14530
Prep Batch: 580-14399
Units: ug/L

Instrument ID: SEA002
Lab File ID: AT06873.D
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
Injection Volume:

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Pentachlorophenol	90	95	40 - 115	6	67		
2,4,6-Trichlorophenol	92	97	50 - 115	5	50		
2,4,5-Trichlorophenol	91	93	50 - 110	2	50		
2,3,4,6-Tetrachlorophenol	93	95	50 - 150	2	50		
2,3,5,6-Tetrachlorophenol	96	96	50 - 150	0	50		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
2-Fluorophenol	45		50		10 - 120		
Phenol-d5	28		30		10 - 102		
2,4,6-Tribromophenol	120		119		29 - 151		

Calculations are performed before rounding to avoid round-off errors in calculated results.

DATA REPORTING QUALIFIERS

Client: Kennedy/Jenks Consultants

Job Number: 580-4614-1

Lab Section	Qualifier	Description
GC/MS Semi VOA	U	Indicates the analyte was analyzed for but not detected.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Chain of Custody Record

STL Seattle
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Tacoma, WA 98424
Tel. 253-922-2310
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SEVERN
TRENT

STL®

Client Kennedy/Jeans Consultants		Project Manager Deanne Kuhl		Date 12/28/06	Chain of Custody Number 26874
Address 200 SW Market St. St. 500		Telephone Number (Area Code)/Fax Number 503-295-4911		Lab Number 41614	Page 1 of 1
City Portland	State OR	Zip Code 97201	Site Contact Betsy Brosnan	Analysis (Attach list if more space is needed)	
Project Name and Location (State) Tetra Pak Vancouver, WA		Carrier/Mapbill Number FedEx		Special Instructions/ Conditions of Receipt	
Contract/Purchase Order/Quote No. 0160266.11					

Sample ID, and Location/Description (Containers for each sample may be combined on one line)	Date	Time	Matrix				Containers & Preservatives						Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt	
			Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH			
MW-1	12/28/06	1120	X												Please run these samples with low level detection
MW-2		1445	X												
MW-3		940	X												
MW-5		1400	X												
MW-6		1210	X												
MW-8		1030	X												

Cooler	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Cooler Temp.	Possible Hazard Identification	<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown	Sample Disposal	<input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Return To Client <input type="checkbox"/> Archive For _____ Months	(A fee may be assessed if samples are retained longer than 1 month)
Turn Around Time Required (business days)	<input type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/> 5 Days <input type="checkbox"/> 10 Days <input type="checkbox"/> 15 Days						
1. Relinquished By	Penner	Date	12/28/06	Time	1600	1. Received By	
2. Relinquished By		Date		Time		2. Received By	
3. Relinquished By		Date		Time		3. Received By	

LOGIN SAMPLE RECEIPT CHECK LIST

Client: Kennedy/Jenks Consultants

Job Number: 580-4614-1

Login Number: 4614

Question	T/F/NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	NA	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	



STL

STL Sacramento
880 Riverside Parkway
West Sacramento, CA 95605

Tel: 916 373 5600
Fax: 916 372 1059
www.stl-inc.com

October 18, 2006

STL SACRAMENTO PROJECT NUMBER: G6I280238
PO/CONTRACT:

Deonne Knill
Kennedy/Jenks Consultants
200 SW Market Street
Suite 500
Portland, OR 97201

Dear Mr. Knill,

This report contains the analytical results for the samples received under chain of custody by STL Sacramento on September 28, 2006. These samples are associated with your Tetrapak, Vancouver WA project.

The test results in this report meet all NELAC requirements for parameters that accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The case narrative is an integral part of this report.

If you have any questions, please feel free to call me at (916) 374-4442.

Sincerely,

A handwritten signature in black ink, appearing to read "Pravani Pillay".

Pravani Pillay
Project Manager

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STL Sacramento Quality Assurance Program

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Samples: 1, 2, 3, 4

Sample Data Sheets

Method Blank Reports

Laboratory QC Reports

SOLID, 1613B, Dioxins/Furans, 17 isomers

Samples: 1, 2, 3, 4

Sample Data Sheets

Method Blank Reports

Laboratory QC Reports

CASE NARRATIVE

STL SACRAMENTO PROJECT NUMBER G6I280238

SOLID, 8270C, Pentachlorophenol only

Sample(s): 1, 2, 3, 4

The matrix spike/matrix spike duplicate (MS/MSD) analyzed with this batch had the relative percent difference for pentachlorophenol outside of control limits. The recoveries for this analyte in the MS/MSD and in the laboratory control sample (LCS) were within control limits. Also the MS/MSD was performed on another client's sample. Therefore the data is reported with no further action.

SOLID, 1613B, Dioxins/Furans, 17 isomers

Sample(s): 1

The 2,3,7,8-TCDF confirmation analysis was performed on October 10, 2006 at 12:45. The result has a CON flag to indicate this.

The "JA" flag indicates that due to matrix interference the ion ratio is outside QC limits. The result has been qualified as "positively identified but estimated quantitation" because the quantitation is based on theoretical ratios.

The 1,2,3,7,8,9-HxCDF had an elevated reporting limit due to matrix interference. Therefore the data has been G flagged.

Sample(s): 3

The 2,3,7,8-TCDF confirmation analysis was performed on October 10, 2006 at 13:22. The result has a CON flag to indicate this.

Several isomers have been reported from the 20x dilution of the sample since these isomers saturated the detector on the analysis of the 1x dilution. The D flag indicates this. The analysis was performed on October 10, 2006 at 15:38.

Sample(s): 4

Several isomers have been reported from the 20x dilution of the sample since these isomers saturated the detector on the analysis of the 1x dilution. The D flag indicates this. The analysis was performed on October 10, 2006 at 14:57.

Sample(s): 1, 2, 3, 4

The concentrations of several isomers in these samples exceeded the upper quantitation level of the initial calibration curve, but the peaks did not saturate the instrument detector. Historical data indicates that for the isotope dilution method, dilution and re-injection will not produce significantly different results from those reported with the E flag.

CASE NARRATIVE

STL SACRAMENTO PROJECT NUMBER G6I280238

There were no anomalies associated with this project.

STL Sacramento Certifications/Accreditations

Certifying State	Certificate #	Certifying State	Certificate #
Alaska	UST-055	Oregon*	CA 200005
Arizona	AZ0616	Pennsylvania	68-1272
Arkansas	04-067-0	South Carolina	87014002
California*	01119CA	Texas	TX 270-2004A
Colorado	NA	Utah*	QUANI
Connecticut	PH-0691	Virginia	00178
Florida*	E87570	Washington	C087
Georgia	960	West Virginia	9930C, 334
Hawaii	NA	Wisconsin	998204680
Louisiana*	01944	NFESC	NA
Michigan	9947	USACE	NA
Nevada	CA44	USDA Foreign Plant	37-82605
New Jersey*	CA005	USDA Foreign Soil	S-46613
New York*	I1666		

*NELAP accredited. A more detailed parameter list is available upon request. Update 1/27/05

QC Parameter Definitions

QC Batch: The QC batch consists of a set of up to 20 field samples that behave similarly (i.e., same matrix) and are processed using the same procedures, reagents, and standards at the same time.

Method Blank: An analytical control consisting of all reagents, which may include internal standards and surrogates, and is carried through the entire analytical procedure. The method blank is used to define the level of laboratory background contamination.

Laboratory Control Sample and Laboratory Control Sample Duplicate (LCS/LCSD):

An aliquot of blank matrix spiked with known amounts of representative target analytes. The LCS (and LCSD as required) is carried through the entire analytical process and is used to monitor the accuracy of the analytical process independent of potential matrix effects. If an LCSD is performed, it may also be used to evaluate the precision of the process.

Duplicate Sample (DU): Different aliquots of the same sample are analyzed to evaluate the precision of an analysis.

Surrogates: Organic compounds not expected to be detected in field samples, which behave similarly to target analytes. These are added to every sample within a batch at a known concentration to determine the efficiency of the sample preparation and analytical process.

Matrix Spike and Matrix Spike Duplicate (MS/MSD): An MS is an aliquot of a matrix fortified with known quantities of specific compounds and subjected to an entire analytical procedure in order to indicate the appropriateness of the method for a particular matrix. The percent recovery for the respective compound(s) is then calculated. The MSD is a second aliquot of the same matrix as the matrix spike, also spiked, in order to determine the precision of the method.

Isotope Dilution: For isotope dilution methods, isotopically labeled analogs (internal standards) of the native target analytes are spiked into the sample at time of extraction. These internal standards are used for quantitation, and monitor and correct for matrix effects. Since matrix effects on method performance can be judged by the recovery of these analogs, there is little added benefit of performing MS/MSD for these methods. MS/MSD are only performed for client or QAPP requirements.

Control Limits: The reported control limits are either based on laboratory historical data, method requirements, or project data quality objectives. The control limits represent the estimated uncertainty of the test results.

Sample Summary

G6I280238

<u>WO#</u>	<u>Sample #</u>	<u>Client Sample ID</u>	<u>Sampling Date</u>	<u>Received Date</u>
JE8RR	1	CF-1-3	9/27/2006 09:00 AM	9/28/2006 09:00 AM
JE8RT	2	CF-2-4	9/27/2006 10:00 AM	9/28/2006 09:00 AM
JE8RV	3	CF-3-3	9/27/2006 11:30 AM	9/28/2006 09:00 AM
JE8RW	4	CS-1-3	9/27/2006 12:00 PM	9/28/2006 09:00 AM

Notes(s):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity, pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight

STL-4124 (09/01)

Client
Kennedy/Sarkis
Address
500 E Market St. Ste. 500
City
Portland
State
OR
Zip Code
97201
Contract/Purchase Order/Quote No.
Tetra Pak, Vancouver WA

Project Manager
Deanne Kull
Telephone Number (Area Code)/Fax Number
(503) 245-1401
Site Contact
S. Spargo
Carrier/Waybill Number
P. Craven

Date
9/27/06
Lab Number
295683
Page
1 of 1

Analysis (Attach list if more space is needed)

Containers & Preservatives

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix	Containers & Preservatives
			Aqueous Sed Soil	Unpres H2SO4 HNO3 HCl NaOH ZnAc HNO3
CF-1-3	9/27	0900	X	X
CF-2-4	↓	1000	X	X
CF-3-3	↓	1130	X	X
CS-1-3	↓	1200	X	X

**Special Instructions/
Conditions of Receipt**

RECEIVED BY: S. SPARGO
DATE: SEP 28 2006
INITIALS: [Signature]

Possible Hazard Identification

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other: Standards

1. Relinquished By
Date: 9/27/06 Time: 1600
Signature: [Signature]

2. Relinquished By
Date: 9/28/06 Time: 0940
Signature: [Signature]

3. Relinquished By
Date: _____ Time: _____

Comments



STL

LOT RECEIPT CHECKLIST STL Sacramento

CLIENT Kennedy/Jenks PM PP LOG # 41322

LOT# (QUANTIMS ID) 66I 280238 QUOTE# 72435 LOCATION WSP

DATE RECEIVED 9/28/06 TIME RECEIVED 0900

Initials W Date 9/28/06

DELIVERED BY ☒ FEDEX ☐ CA OVERNIGHT ☐ CLIENT
☐ AIRBORNE ☐ GOLDENSTATE ☐ DHL
☐ UPS ☐ BAX GLOBAL ☐ GO-GETTERS
☐ STL COURIER ☐ COURIERS ON DEMAND
☐ OTHER

CUSTODY SEAL STATUS ☒ INTACT ☐ BROKEN ☐ N/A

CUSTODY SEAL #(S) 797642, 797652

SHIPPING CONTAINER(S) ☒ STL ☐ CLIENT ☐ N/A

TEMPERATURE RECORD (IN °C) IR 1 ☒ 3 ☐ OTHER ☐

COC #(S) 295683

TEMPERATURE BLANK Observed: NA Corrected:

SAMPLE TEMPERATURE

Observed: 4 5 7 Average: 5 Corrected Average: 5

COLLECTOR'S NAME: ☐ Verified from COC ☒ Not on COC

pH MEASURED ☐ YES ☐ ANOMALY ☒ N/A

LABELED BY.....

LABELS CHECKED BY.....

PEER REVIEW ☒ NA

SHORT HOLD TEST NOTIFICATION

SAMPLE RECEIVING

WETCHEM ☒ N/A

VOA-ENCORES ☒ N/A

☐ METALS NOTIFIED OF FILTER/PRESERVE VIA VERBAL & EMAIL ☒ N/A

☒ COMPLETE SHIPMENT RECEIVED IN GOOD CONDITION WITH APPROPRIATE TEMPERATURES, CONTAINERS, PRESERVATIVES ☐ N/A

☐ Clouseau ☐ TEMPERATURE EXCEEDED (2 °C - 6 °C)*1 ☒ N/A

☐ WET ICE ☐ BLUE ICE ☐ GEL PACK ☐ NO COOLING AGENTS USED

☐ PM NOTIFIED

Notes: 8-250 AGT were unused and returned. These were disposed.

*1 Acceptable temperature range for State of Wisconsin samples is $\leq 4^{\circ}\text{C}$.

Lot
ID:

G6I280238

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
VOA*	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
VOAh*	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
AGB																				
AGBs																				
250AGB																				
250AGBs																				
250AGBn																				
500AGB																				
___AGJ																				
500AGJ																				
250AGJ	/	/	/	/																
125AGJ																				
___CGJ																				
500CGJ																				
250CGJ																				
125CGJ																				
PJ																				
PJn																				
500PJ																				
500PJn																				
500PJna																				
500PJzn/na																				
250PJ																				
250PJn																				
250PJna																				
250PJzn/na																				
Acetate Tube																				
___"CT																				
Encore																				
Folder/filter																				
PUF																				
Petri/Filter																				
XAD Trap																				
Ziploc																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

h = hydrochloric acid s = sulfuric acid na = sodium hydroxide n = nitric acid zn = zinc acetate

Number of VOAs with air bubbles present / total number of VOA's

**SOLID, 8270C,
Pentachlorophenol only**

Kennedy/Jenks Consultants

Client Sample ID: CF-1-3

GC/MS Semivolatiles

Lot-Sample #....: G6I280238-001 Work Order #....: JE8RR1AD Matrix.....: SOLID
Date Sampled....: 09/27/06 Date Received...: 09/28/06
Prep Date.....: 10/05/06 Analysis Date...: 10/13/06
Prep Batch #....: 6278349
Dilution Factor: 1
% Moisture.....: 18 Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	ND	1900	ug/kg	800
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS		
2-Chlorophenol-d4	64	(37 - 98)		
1,2-Dichlorobenzene-d4	51	(23 - 103)		
2-Fluorobiphenyl	92	(43 - 110)		
2-Fluorophenol	52	(30 - 93)		
Nitrobenzene-d5	63	(37 - 93)		
Phenol-d5	64	(41 - 100)		
Terphenyl-d14	108	(40 - 165)		
2,4,6-Tribromophenol	88	(33 - 125)		

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

Kennedy/Jenks Consultants

Client Sample ID: CF-2-4

GC/MS Semivolatiles

Lot-Sample #...: G6I280238-002 Work Order #...: JE8RT1AD Matrix.....: SOLID
 Date Sampled...: 09/27/06 Date Received...: 09/28/06
 Prep Date.....: 10/05/06 Analysis Date...: 10/13/06
 Prep Batch #...: 6278349
 Dilution Factor: 1
 % Moisture.....: 25 Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	ND	2100	ug/kg	880

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Chlorophenol-d4	62	(37 - 98)
1,2-Dichlorobenzene-d4	44	(23 - 103)
2-Fluorobiphenyl	61	(43 - 110)
2-Fluorophenol	50	(30 - 93)
Nitrobenzene-d5	62	(37 - 93)
Phenol-d5	61	(41 - 100)
Terphenyl-d14	106	(40 - 165)
2,4,6-Tribromophenol	52	(33 - 125)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

Kennedy/Jenks Consultants

Client Sample ID: CF-3-3

GC/MS Semivolatiles

Lot-Sample #....: G6I280238-003 Work Order #....: JE8RV1AD Matrix.....: SOLID
 Date Sampled....: 09/27/06 Date Received...: 09/28/06
 Prep Date.....: 10/05/06 Analysis Date...: 10/13/06
 Prep Batch #....: 6278349
 Dilution Factor: 1
 % Moisture.....: 22 Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	ND	2100	ug/kg	850

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Chlorophenol-d4	65	(37 - 98)
1,2-Dichlorobenzene-d4	51	(23 - 103)
2-Fluorobiphenyl	64	(43 - 110)
2-Fluorophenol	55	(30 - 93)
Nitrobenzene-d5	62	(37 - 93)
Phenol-d5	63	(41 - 100)
Terphenyl-d14	94	(40 - 165)
2,4,6-Tribromophenol	49	(33 - 125)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

Kennedy/Jenks Consultants

Client Sample ID: CS-1-3

GC/MS Semivolatiles

Lot-Sample #....: G6I280238-004 Work Order #....: JE8RW1AD Matrix.....: SOLID
Date Sampled....: 09/27/06 Date Received...: 09/28/06
Prep Date.....: 10/05/06 Analysis Date...: 10/13/06
Prep Batch #....: 6278349
Dilution Factor: 1
% Moisture.....: 22 Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	ND	2100	ug/kg	850

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Chlorophenol-d4	62	(37 - 98)
1,2-Dichlorobenzene-d4	52	(23 - 103)
2-Fluorobiphenyl	65	(43 - 110)
2-Fluorophenol	52	(30 - 93)
Nitrobenzene-d5	63	(37 - 93)
Phenol-d5	61	(41 - 100)
Terphenyl-d14	102	(40 - 165)
2,4,6-Tribromophenol	53	(33 - 125)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

QC DATA ASSOCIATION SUMMARY

G6I280238

Sample Preparation and Analysis Control Numbers

<u>SAMPLE#</u>	<u>MATRIX</u>	<u>ANALYTICAL METHOD</u>	<u>LEACH BATCH #</u>	<u>PREP BATCH #</u>	<u>MS RUN#</u>
001	SOLID	SW846 8270C		6278349	6278226
002	SOLID	SW846 8270C		6278349	6278226
003	SOLID	SW846 8270C		6278349	6278226
004	SOLID	SW846 8270C		6278349	6278226

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: G6I280238
MB Lot-Sample #: G6J050000-349

Work Order #...: JFP7P1AA

Matrix.....: SOLID

Analysis Date...: 10/13/06
Dilution Factor: 1

Prep Date.....: 10/05/06
Prep Batch #...: 6278349

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	METHOD
Pentachlorophenol	ND	1600	ug/kg	SW846 8270C
SURROGATE	PERCENT	RECOVERY		
	RECOVERY	LIMITS		
2-Chlorophenol-d4	70	(37 - 98)		
1,2-Dichlorobenzene-d4	78	(23 - 103)		
2-Fluorobiphenyl	74	(43 - 110)		
2-Fluorophenol	57	(30 - 93)		
Nitrobenzene-d5	83	(37 - 93)		
Phenol-d5	66	(41 - 100)		
Terphenyl-d14	104	(40 - 165)		
2,4,6-Tribromophenol	62	(33 - 125)		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #....: G6I280238 Work Order #....: JFP7P1AC Matrix.....: SOLID
 LCS Lot-Sample#: G6J050000-349
 Prep Date.....: 10/05/06 Analysis Date...: 10/13/06
 Prep Batch #....: 6278349
 Dilution Factor: 1

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCENT RECOVERY</u>	<u>METHOD</u>
Pentachlorophenol	3330	2060	ug/kg	62	SW846 8270C
<u>SURROGATE</u>		<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>		
2-Chlorophenol-d4		81	(37 - 98)		
1,2-Dichlorobenzene-d4		75	(23 - 103)		
2-Fluorobiphenyl		87	(43 - 110)		
2-Fluorophenol		62	(30 - 93)		
Nitrobenzene-d5		83	(37 - 93)		
Phenol-d5		74	(41 - 100)		
Terphenyl-d14		112	(40 - 165)		
2,4,6-Tribromophenol		88	(33 - 125)		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #....: G6I280238 Work Order #....: JFP7P1AC Matrix.....: SOLID
 LCS Lot-Sample#: G6J050000-349
 Prep Date.....: 10/05/06 Analysis Date...: 10/13/06
 Prep Batch #....: 6278349
 Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
Pentachlorophenol	62	(46 - 122)	SW846 8270C

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
2-Chlorophenol-d4	81	(37 - 98)
1,2-Dichlorobenzene-d4	75	(23 - 103)
2-Fluorobiphenyl	87	(43 - 110)
2-Fluorophenol	62	(30 - 93)
Nitrobenzene-d5	83	(37 - 93)
Phenol-d5	74	(41 - 100)
Terphenyl-d14	112	(40 - 165)
2,4,6-Tribromophenol	88	(33 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: G6I280238 Work Order #...: JFKP41AK-MS Matrix.....: SOLID
 MS Lot-Sample #: G6J030279-001 JFKP41AL-MSD
 Date Sampled...: 09/29/06 Date Received...: 10/03/06
 Prep Date.....: 10/05/06 Analysis Date...: 10/16/06
 Prep Batch #...: 6278349
 Dilution Factor: 1 % Moisture.....: 0.0

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Pentachlorophenol	ND	3330	1860	ug/kg	56		SW846 8270C
	ND	3330	2370	ug/kg	71 p	24	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Chlorophenol-d4	58	(37 - 98)
	70	(37 - 98)
1,2-Dichlorobenzene-d4	52	(23 - 103)
	63	(23 - 103)
2-Fluorobiphenyl	51	(43 - 110)
	67	(43 - 110)
2-Fluorophenol	49	(30 - 93)
	63	(30 - 93)
Nitrobenzene-d5	50	(37 - 93)
	59	(37 - 93)
Phenol-d5	58	(41 - 100)
	67	(41 - 100)
Terphenyl-d14	56	(40 - 165)
	73	(40 - 165)
2,4,6-Tribromophenol	90	(33 - 125)
	110	(33 - 125)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

p Relative percent difference (RPD) is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #....: G6I280238 Work Order #....: JFKP41AK-MS Matrix.....: SOLID
 MS Lot-Sample #: G6J030279-001 JFKP41AL-MSD
 Date Sampled...: 09/29/06 Date Received...: 10/03/06
 Prep Date.....: 10/05/06 Analysis Date...: 10/16/06
 Prep Batch #....: 6278349
 Dilution Factor: 1 % Moisture.....: 0.0

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Pentachlorophenol	56	(46 - 122)			SW846 8270C
	71 p	(46 - 122)	24	(0-20)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Chlorophenol-d4	58	(37 - 98)
	70	(37 - 98)
1,2-Dichlorobenzene-d4	52	(23 - 103)
	63	(23 - 103)
2-Fluorobiphenyl	51	(43 - 110)
	67	(43 - 110)
2-Fluorophenol	49	(30 - 93)
	63	(30 - 93)
Nitrobenzene-d5	50	(37 - 93)
	59	(37 - 93)
Phenol-d5	58	(41 - 100)
	67	(41 - 100)
Terphenyl-d14	56	(40 - 165)
	73	(40 - 165)
2,4,6-Tribromophenol	90	(33 - 125)
	110	(33 - 125)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

p Relative percent difference (RPD) is outside stated control limits.

**SOLID, 1613B,
Dioxins/Furans, 17 isomers**

Kennedy/Jenks Consultants

Client Sample ID: CF-1-3

Trace Level Organic Compounds

Lot-Sample #....: G6I280238-001 Work Order #....: JE8RR1AC Matrix.....: SOLID
 Date Sampled....: 09/27/06 Date Received...: 09/28/06
 Prep Date.....: 10/05/06 Analysis Date...: 10/09/06
 Prep Batch #....: 6278525
 Dilution Factor: 1
 % Moisture.....: 18

PARAMETER	RESULT	DETECTION LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	0.74	pg/g	EPA-5 1613B
1,2,3,7,8-PeCDD	ND	1.4	pg/g	EPA-5 1613B
1,2,3,4,7,8-HxCDD	ND	1.2	pg/g	EPA-5 1613B
1,2,3,6,7,8-HxCDD	24		pg/g	EPA-5 1613B
1,2,3,7,8,9-HxCDD	ND	2.8	pg/g	EPA-5 1613B
1,2,3,4,6,7,8-HpCDD	570		pg/g	EPA-5 1613B
OCDD	5000 E		pg/g	EPA-5 1613B
2,3,7,8-TCDF	0.96 J, JA, CON		pg/g	EPA-5 1613B
1,2,3,7,8-PeCDF	ND	1.7	pg/g	EPA-5 1613B
2,3,4,7,8-PeCDF	ND	1.2	pg/g	EPA-5 1613B
1,2,3,4,7,8-HxCDF	3.5 J		pg/g	EPA-5 1613B
1,2,3,6,7,8-HxCDF	ND	1.3	pg/g	EPA-5 1613B
2,3,4,6,7,8-HxCDF	ND	1.2	pg/g	EPA-5 1613B
1,2,3,7,8,9-HxCDF	ND G	5.2	pg/g	EPA-5 1613B
1,2,3,4,6,7,8-HpCDF	69		pg/g	EPA-5 1613B
1,2,3,4,7,8,9-HpCDF	5.0 J		pg/g	EPA-5 1613B
OCDF	470		pg/g	EPA-5 1613B

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	66	(25 - 164)
13C-1,2,3,7,8-PeCDD	75	(25 - 181)
13C-1,2,3,4,7,8-HxCDD	75	(32 - 141)
13C-1,2,3,6,7,8-HxCDD	73	(28 - 130)
13C-1,2,3,4,6,7,8-HpCDD	63	(23 - 140)
13C-OCDD	63	(17 - 157)
13C-2,3,7,8-TCDF	71	(24 - 169)
13C-1,2,3,7,8-PeCDF	68	(24 - 185)
13C-2,3,4,7,8-PeCDF	67	(21 - 178)
13C-1,2,3,6,7,8-HxCDF	69	(26 - 123)
13C-2,3,4,6,7,8-HxCDF	71	(28 - 136)
13C-1,2,3,7,8,9-HxCDF	77	(29 - 147)
13C-1,2,3,4,6,7,8-HpCDF	61	(28 - 143)
13C-1,2,3,4,7,8,9-HpCDF	64	(26 - 138)
13C-1,2,3,4,7,8-HxCDF	67	(26 - 152)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	65	(35 - 197)

(Continued on next page)

Kennedy/Jenks Consultants

Client Sample ID: CF-1-3

Trace Level Organic Compounds

Lot-Sample #....: G6I280238-001 Work Order #....: JE8RR1AC Matrix.....: SOLID

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

E Estimated result. Result concentration exceeds the calibration range.

J Estimated result. Result is less than the reporting limit.

JA The analyte was positively identified, but the quantitation is an estimate.

CON Confirmation analysis.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

Kennedy/Jenks Consultants

Client Sample ID: CF-2-4

Trace Level Organic Compounds

Lot-Sample #....: G6I280238-002 Work Order #....: JE8RT1AC Matrix.....: SOLID
 Date Sampled....: 09/27/06 Date Received...: 09/28/06
 Prep Date.....: 10/05/06 Analysis Date...: 10/10/06
 Prep Batch #....: 6278525
 Dilution Factor: 1
 % Moisture.....: 25

PARAMETER	RESULT	DETECTION LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	0.35	pg/g	EPA-5 1613B
1,2,3,7,8-PeCDD	ND	0.67	pg/g	EPA-5 1613B
1,2,3,4,7,8-HxCDD	ND	1.4	pg/g	EPA-5 1613B
1,2,3,6,7,8-HxCDD	8.3		pg/g	EPA-5 1613B
1,2,3,7,8,9-HxCDD	ND	2.7	pg/g	EPA-5 1613B
1,2,3,4,6,7,8-HpCDD	440		pg/g	EPA-5 1613B
OCDD	8200 E		pg/g	EPA-5 1613B
2,3,7,8-TCDF	ND	0.35	pg/g	EPA-5 1613B
1,2,3,7,8-PeCDF	ND	0.38	pg/g	EPA-5 1613B
2,3,4,7,8-PeCDF	ND	0.46	pg/g	EPA-5 1613B
1,2,3,4,7,8-HxCDF	ND	2.2	pg/g	EPA-5 1613B
1,2,3,6,7,8-HxCDF	ND	1.4	pg/g	EPA-5 1613B
2,3,4,6,7,8-HxCDF	ND	0.63	pg/g	EPA-5 1613B
1,2,3,7,8,9-HxCDF	ND	0.32	pg/g	EPA-5 1613B
1,2,3,4,6,7,8-HpCDF	40		pg/g	EPA-5 1613B
1,2,3,4,7,8,9-HpCDF	6.0 J		pg/g	EPA-5 1613B
OCDF	330		pg/g	EPA-5 1613B

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	65	(25 - 164)
13C-1,2,3,7,8-PeCDD	74	(25 - 181)
13C-1,2,3,4,7,8-HxCDD	69	(32 - 141)
13C-1,2,3,6,7,8-HxCDD	64	(28 - 130)
13C-1,2,3,4,6,7,8-HpCDD	70	(23 - 140)
13C-OCDD	80	(17 - 157)
13C-2,3,7,8-TCDF	60	(24 - 169)
13C-1,2,3,7,8-PeCDF	63	(24 - 185)
13C-2,3,4,7,8-PeCDF	57	(21 - 178)
13C-1,2,3,6,7,8-HxCDF	59	(26 - 123)
13C-2,3,4,6,7,8-HxCDF	67	(28 - 136)
13C-1,2,3,7,8,9-HxCDF	70	(29 - 147)
13C-1,2,3,4,6,7,8-HpCDF	66	(28 - 143)
13C-1,2,3,4,7,8,9-HpCDF	74	(26 - 138)
13C-1,2,3,4,7,8-HxCDF	56	(26 - 152)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	65	(35 - 197)

(Continued on next page)

Kennedy/Jenks Consultants

Client Sample ID: CF-2-4

Trace Level Organic Compounds

Lot-Sample #....: G6I280238-002 Work Order #....: JE8RT1AC Matrix.....: SOLID

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

E Estimated result. Result concentration exceeds the calibration range.

J Estimated result. Result is less than the reporting limit.

Kennedy/Jenks Consultants

Client Sample ID: CF-3-3

Trace Level Organic Compounds

Lot-Sample #....: G6I280238-003 Work Order #....: JE8RV1AC Matrix.....: SOLID
 Date Sampled....: 09/27/06 Date Received...: 09/28/06
 Prep Date.....: 10/05/06 Analysis Date...: 10/09/06
 Prep Batch #....: 6278525
 Dilution Factor: 1
 % Moisture.....: 22

PARAMETER	RESULT	DETECTION LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	1.0	pg/g	EPA-5 1613B
1,2,3,7,8-PeCDD	4.5 J		pg/g	EPA-5 1613B
1,2,3,4,7,8-HxCDD	17		pg/g	EPA-5 1613B
1,2,3,6,7,8-HxCDD	640		pg/g	EPA-5 1613B
1,2,3,7,8,9-HxCDD	52		pg/g	EPA-5 1613B
1,2,3,4,6,7,8-HpCDD	26000 D		pg/g	EPA-5 1613B
OCDD	190000 D,E		pg/g	EPA-5 1613B
2,3,7,8-TCDF	4.7 CON		pg/g	EPA-5 1613B
1,2,3,7,8-PeCDF	11		pg/g	EPA-5 1613B
2,3,4,7,8-PeCDF	7.2		pg/g	EPA-5 1613B
1,2,3,4,7,8-HxCDF	68		pg/g	EPA-5 1613B
1,2,3,6,7,8-HxCDF	28		pg/g	EPA-5 1613B
2,3,4,6,7,8-HxCDF	13		pg/g	EPA-5 1613B
1,2,3,7,8,9-HxCDF	ND	2.3	pg/g	EPA-5 1613B
1,2,3,4,6,7,8-HpCDF	3100 E		pg/g	EPA-5 1613B
1,2,3,4,7,8,9-HpCDF	290		pg/g	EPA-5 1613B
OCDF	25000 D		pg/g	EPA-5 1613B

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	65	(25 - 164)
13C-1,2,3,7,8-PeCDD	65	(25 - 181)
13C-1,2,3,4,7,8-HxCDD	53	(32 - 141)
13C-1,2,3,6,7,8-HxCDD	56	(28 - 130)
13C-1,2,3,4,6,7,8-HpCDD	63	(23 - 140)
13C-OCDD	67	(17 - 157)
13C-2,3,7,8-TCDF	70	(24 - 169)
13C-1,2,3,7,8-PeCDF	64	(24 - 185)
13C-2,3,4,7,8-PeCDF	63	(21 - 178)
13C-1,2,3,6,7,8-HxCDF	52	(26 - 123)
13C-2,3,4,6,7,8-HxCDF	53	(28 - 136)
13C-1,2,3,7,8,9-HxCDF	63	(29 - 147)
13C-1,2,3,4,6,7,8-HpCDF	53	(28 - 143)
13C-1,2,3,4,7,8,9-HpCDF	59	(26 - 138)
13C-1,2,3,4,7,8-HxCDF	50	(26 - 152)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	68	(35 - 197)

(Continued on next page)

Kennedy/Jenks Consultants

Client Sample ID: CF-3-3

Trace Level Organic Compounds

Lot-Sample #...: G6I280238-003 Work Order #...: JE8RV1AC Matrix.....: SOLID

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

J Estimated result, Result is less than the reporting limit.

D Result was obtained from the analysis of a dilution.

E Estimated result, Result concentration exceeds the calibration range.

CON Confirmation analysis.

Kennedy/Jenks Consultants

Client Sample ID: CS-1-3

Trace Level Organic Compounds

Lot-Sample #....: G6I280238-004 Work Order #....: JE8RW1AC Matrix.....: SOLID
 Date Sampled....: 09/27/06 Date Received...: 09/28/06
 Prep Date.....: 10/05/06 Analysis Date...: 10/09/06
 Prep Batch #....: 6278525
 Dilution Factor: 1
 % Moisture.....: 22

PARAMETER	RESULT	DETECTION LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	0.58	pg/g	EPA-5 1613B
1,2,3,7,8-PeCDD	ND	3.5	pg/g	EPA-5 1613B
1,2,3,4,7,8-HxCDD	10		pg/g	EPA-5 1613B
1,2,3,6,7,8-HxCDD	130		pg/g	EPA-5 1613B
1,2,3,7,8,9-HxCDD	28		pg/g	EPA-5 1613B
1,2,3,4,6,7,8-HpCDD	7700 E		pg/g	EPA-5 1613B
OCDD	70000 D		pg/g	EPA-5 1613B
2,3,7,8-TCDF	ND	0.33	pg/g	EPA-5 1613B
1,2,3,7,8-PeCDF	ND	2.0	pg/g	EPA-5 1613B
2,3,4,7,8-PeCDF	ND	1.3	pg/g	EPA-5 1613B
1,2,3,4,7,8-HxCDF	20		pg/g	EPA-5 1613B
1,2,3,6,7,8-HxCDF	13		pg/g	EPA-5 1613B
2,3,4,6,7,8-HxCDF	5.3 J		pg/g	EPA-5 1613B
1,2,3,7,8,9-HxCDF	ND	0.62	pg/g	EPA-5 1613B
1,2,3,4,6,7,8-HpCDF	700		pg/g	EPA-5 1613B
1,2,3,4,7,8,9-HpCDF	96		pg/g	EPA-5 1613B
OCDF	5900 D		pg/g	EPA-5 1613B

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	85	(25 - 164)
13C-1,2,3,7,8-PeCDD	80	(25 - 181)
13C-1,2,3,4,7,8-HxCDD	62	(32 - 141)
13C-1,2,3,6,7,8-HxCDD	69	(28 - 130)
13C-1,2,3,4,6,7,8-HpCDD	80	(23 - 140)
13C-OCDD	67	(17 - 157)
13C-2,3,7,8-TCDF	90	(24 - 169)
13C-1,2,3,7,8-PeCDF	81	(24 - 185)
13C-2,3,4,7,8-PeCDF	76	(21 - 178)
13C-1,2,3,6,7,8-HxCDF	65	(26 - 123)
13C-2,3,4,6,7,8-HxCDF	70	(28 - 136)
13C-1,2,3,7,8,9-HxCDF	88	(29 - 147)
13C-1,2,3,4,6,7,8-HpCDF	69	(28 - 143)
13C-1,2,3,4,7,8,9-HpCDF	79	(26 - 138)
13C-1,2,3,4,7,8-HxCDF	59	(26 - 152)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	85	(35 - 197)

(Continued on next page)

Kennedy/Jenks Consultants

Client Sample ID: CS-1-3

Trace Level Organic Compounds

Lot-Sample #...: G6I280238-004 Work Order #...: JE8RW1AC Matrix.....: SOLID

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

E Estimated result. Result concentration exceeds the calibration range.

D Result was obtained from the analysis of a dilution.

J Estimated result. Result is less than the reporting limit.

QC DATA ASSOCIATION SUMMARY

G6I280238

Sample Preparation and Analysis Control Numbers

<u>SAMPLE#</u>	<u>MATRIX</u>	<u>ANALYTICAL METHOD</u>	<u>LEACH BATCH #</u>	<u>PREP BATCH #</u>	<u>MS RUN#</u>
001	SOLID	EPA-5 1613B		6278525	
	SOLID	ASTM D 2216-90		6271509	6271302
	SOLID	SW846 8270C		6278349	6278226
002	SOLID	EPA-5 1613B		6278525	
	SOLID	ASTM D 2216-90		6271509	6271302
	SOLID	SW846 8270C		6278349	6278226
003	SOLID	EPA-5 1613B		6278525	
	SOLID	ASTM D 2216-90		6271509	6271302
	SOLID	SW846 8270C		6278349	6278226
004	SOLID	EPA-5 1613B		6278525	
	SOLID	ASTM D 2216-90		6271509	6271302
	SOLID	SW846 8270C		6278349	6278226

METHOD BLANK REPORT

Trace Level Organic Compounds

Client Lot #...: G6I280238
MB Lot-Sample #: G6J050000-525

Work Order #...: JFR3J1AA

Matrix.....: SOLID

Analysis Date...: 10/09/06

Prep Date.....: 10/05/06

Dilution Factor: 1

Prep Batch #...: 6278525

PARAMETER	RESULT	DETECTION LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	0.44	pg/g	EPA-5 1613B
1,2,3,7,8-PeCDD	ND	0.83	pg/g	EPA-5 1613B
1,2,3,4,7,8-HxCDD	ND	0.50	pg/g	EPA-5 1613B
1,2,3,6,7,8-HxCDD	ND	0.48	pg/g	EPA-5 1613B
1,2,3,7,8,9-HxCDD	ND	0.46	pg/g	EPA-5 1613B
1,2,3,4,6,7,8-HpCDD	ND	0.55	pg/g	EPA-5 1613B
OCDD	ND	2.7	pg/g	EPA-5 1613B
2,3,7,8-TCDF	ND	0.30	pg/g	EPA-5 1613B
1,2,3,7,8-PeCDF	ND	0.48	pg/g	EPA-5 1613B
2,3,4,7,8-PeCDF	ND	0.56	pg/g	EPA-5 1613B
1,2,3,4,7,8-HxCDF	ND	0.32	pg/g	EPA-5 1613B
1,2,3,6,7,8-HxCDF	ND	0.27	pg/g	EPA-5 1613B
2,3,4,6,7,8-HxCDF	ND	0.25	pg/g	EPA-5 1613B
1,2,3,7,8,9-HxCDF	ND	0.26	pg/g	EPA-5 1613B
1,2,3,4,6,7,8-HpCDF	ND	0.31	pg/g	EPA-5 1613B
1,2,3,4,7,8,9-HpCDF	ND	0.40	pg/g	EPA-5 1613B
OCDF	ND	0.61	pg/g	EPA-5 1613B

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	65	(25 - 164)
13C-1,2,3,7,8-PeCDD	67	(25 - 181)
13C-1,2,3,4,7,8-HxCDD	56	(32 - 141)
13C-1,2,3,6,7,8-HxCDD	62	(28 - 130)
13C-1,2,3,4,6,7,8-HpCDD	66	(23 - 140)
13C-OCDD	60	(17 - 157)
13C-2,3,7,8-TCDF	71	(24 - 169)
13C-1,2,3,7,8-PeCDF	68	(24 - 185)
13C-2,3,4,7,8-PeCDF	62	(21 - 178)
13C-1,2,3,6,7,8-HxCDF	63	(26 - 123)
13C-2,3,4,6,7,8-HxCDF	64	(28 - 136)
13C-1,2,3,7,8,9-HxCDF	72	(29 - 147)
13C-1,2,3,4,6,7,8-HpCDF	65	(28 - 143)
13C-1,2,3,4,7,8,9-HpCDF	67	(26 - 138)
13C-1,2,3,4,7,8-HxCDF	56	(26 - 152)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	74	(35 - 197)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

Trace Level Organic Compounds

Client Lot #....: G6I280238 Work Order #....: JFR3J1AC Matrix.....: SOLID
 LCS Lot-Sample#: G6J050000-525
 Prep Date.....: 10/05/06 Analysis Date...: 10/09/06
 Prep Batch #....: 6278525
 Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
2,3,7,8-TCDD	20.0	22.0	pg/g	110	EPA-5 1613B
1,2,3,7,8-PeCDD	100	111	pg/g	111	EPA-5 1613B
1,2,3,4,7,8-HxCDD	100	114	pg/g	114	EPA-5 1613B
1,2,3,6,7,8-HxCDD	100	115	pg/g	115	EPA-5 1613B
1,2,3,7,8,9-HxCDD	100	120	pg/g	120	EPA-5 1613B
1,2,3,4,6,7,8-HpCDD	100	113	pg/g	113	EPA-5 1613B
OCDD	200	244	pg/g	122	EPA-5 1613B
2,3,7,8-TCDF	20.0	21.2	pg/g	106	EPA-5 1613B
1,2,3,7,8-PeCDF	100	114	pg/g	114	EPA-5 1613B
2,3,4,7,8-PeCDF	100	119	pg/g	119	EPA-5 1613B
1,2,3,4,7,8-HxCDF	100	111	pg/g	111	EPA-5 1613B
1,2,3,6,7,8-HxCDF	100	114	pg/g	114	EPA-5 1613B
2,3,4,6,7,8-HxCDF	100	115	pg/g	115	EPA-5 1613B
1,2,3,7,8,9-HxCDF	100	113	pg/g	113	EPA-5 1613B
1,2,3,4,6,7,8-HpCDF	100	114	pg/g	114	EPA-5 1613B
1,2,3,4,7,8,9-HpCDF	100	113	pg/g	113	EPA-5 1613B
OCDF	200	240	pg/g	120	EPA-5 1613B

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

Trace Level Organic Compounds

Client Lot #....: G6I280238
LCS Lot-Sample#: G6J050000-525

Work Order #....: JFR3J1AC

Matrix.....: SOLID

<u>INTERNAL STANDARD</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
13C-2,3,7,8-TCDD	82	(25 - 164)
13C-1,2,3,7,8-PeCDD	83	(25 - 181)
13C-1,2,3,4,7,8-HxCDD	78	(32 - 141)
13C-1,2,3,6,7,8-HxCDD	83	(28 - 130)
13C-1,2,3,4,6,7,8-HpCDD	85	(23 - 140)
13C-OCDD	76	(17 - 157)
13C-2,3,7,8-TCDF	90	(24 - 169)
13C-1,2,3,7,8-PeCDF	83	(24 - 185)
13C-2,3,4,7,8-PeCDF	82	(21 - 178)
13C-1,2,3,6,7,8-HxCDF	84	(26 - 123)
13C-2,3,4,6,7,8-HxCDF	84	(28 - 136)
13C-1,2,3,7,8,9-HxCDF	94	(29 - 147)
13C-1,2,3,4,6,7,8-HpCDF	87	(28 - 143)
13C-1,2,3,4,7,8,9-HpCDF	87	(26 - 138)
13C-1,2,3,4,7,8-HxCDF	78	(26 - 152)

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
37Cl4-2,3,7,8-TCDD	81	(35 - 197)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

Trace Level Organic Compounds

Client Lot #....: G6I280238 Work Order #....: JFR3J1AC Matrix.....: SOLID
 LCS Lot-Sample#: G6J050000-525
 Prep Date.....: 10/05/06 Analysis Date...: 10/09/06
 Prep Batch #....: 6278525
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
2,3,7,8-TCDD	110	(67 - 158)	EPA-5 1613B
1,2,3,7,8-PeCDD	111	(70 - 142)	EPA-5 1613B
1,2,3,4,7,8-HxCDD	114	(70 - 164)	EPA-5 1613B
1,2,3,6,7,8-HxCDD	115	(76 - 134)	EPA-5 1613B
1,2,3,7,8,9-HxCDD	120	(64 - 162)	EPA-5 1613B
1,2,3,4,6,7,8-HpCDD	113	(70 - 140)	EPA-5 1613B
OCDD	122	(78 - 144)	EPA-5 1613B
2,3,7,8-TCDF	106	(75 - 158)	EPA-5 1613B
1,2,3,7,8-PeCDF	114	(80 - 134)	EPA-5 1613B
2,3,4,7,8-PeCDF	119	(68 - 160)	EPA-5 1613B
1,2,3,4,7,8-HxCDF	111	(72 - 134)	EPA-5 1613B
1,2,3,6,7,8-HxCDF	114	(84 - 130)	EPA-5 1613B
2,3,4,6,7,8-HxCDF	115	(70 - 156)	EPA-5 1613B
1,2,3,7,8,9-HxCDF	113	(78 - 130)	EPA-5 1613B
1,2,3,4,6,7,8-HpCDF	114	(82 - 122)	EPA-5 1613B
1,2,3,4,7,8,9-HpCDF	113	(78 - 138)	EPA-5 1613B
OCDF	120	(63 - 170)	EPA-5 1613B

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

Trace Level Organic Compounds

Client Lot #....: G6I280238 Work Order #....: JFR3J1AC Matrix.....: SOLID
 LCS Lot-Sample#: G6J050000-525

<u>INTERNAL STANDARD</u>	PERCENT	RECOVERY
	<u>RECOVERY</u>	<u>LIMITS</u>
13C-2,3,7,8-TCDD	82	(25 - 164)
13C-1,2,3,7,8-PeCDD	83	(25 - 181)
13C-1,2,3,4,7,8-HxCDD	78	(32 - 141)
13C-1,2,3,6,7,8-HxCDD	83	(28 - 130)
13C-1,2,3,4,6,7,8-HpCDD	85	(23 - 140)
13C-OCDD	76	(17 - 157)
13C-2,3,7,8-TCDF	90	(24 - 169)
13C-1,2,3,7,8-PeCDF	83	(24 - 185)
13C-2,3,4,7,8-PeCDF	82	(21 - 178)
13C-1,2,3,6,7,8-HxCDF	84	(26 - 123)
13C-2,3,4,6,7,8-HxCDF	84	(28 - 136)
13C-1,2,3,7,8,9-HxCDF	94	(29 - 147)
13C-1,2,3,4,6,7,8-HpCDF	87	(28 - 143)
13C-1,2,3,4,7,8,9-HpCDF	87	(26 - 138)
13C-1,2,3,4,7,8-HxCDF	78	(26 - 152)
<u>SURROGATE</u>	PERCENT	RECOVERY
	<u>RECOVERY</u>	<u>LIMITS</u>
37Cl4-2,3,7,8-TCDD	81	(35 - 197)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Appendix D

Imported Material Weight Certificates

Table 1

Off Site Disposal = Invoiced directly to Terra Hydr from Hillsboro Landfill						
Date	Description	Destination	Permit	Ticket Number	Quantity	Costs
9-27-06	PCS	Hillsboro Landfill	10182	1011881	12.30 ton	\$434.51
9-27-06	PCS	Hillsboro Landfill	10182	1011908	13.59 ton	\$479.65
9-27-06	PCS	Hillsboro Landfill	10182	1011760	27.31 ton	\$959.85
9-27-06	PCS	Hillsboro Landfill	10182	1011899	11.27 ton	\$398.45
9-27-06	PCS	Hillsboro Landfill	10182	1011804	18.21 ton	\$641.35
9-27-06	PCS	Hillsboro Landfill	10182	1011936	11.73 ton	\$414.55
9-28-06	PCS	Hillsboro Landfill	10182	1012088	05.57 ton	\$198.95
10-04-06	PCS	Hillsboro Landfill	10182	1013963	04.22 ton	\$151.70
Total Delivered					104.20 ton	\$3,679.01

Table 2

Fill material transported to site = Invoiced to Terra Hydr by WCMCI				
Date	Description	Ticket Number	Quantity	Cost
9-27-06	1 1/4 Base Aggregate	412259	11.76 ton	\$157.16
9-27-06	1 1/4 Base Aggregate	412265	09.29 ton	\$124.15
9-27-06	1 1/4 Base Aggregate	412269	10.11 ton	\$135.10
9-27-06	1 1/4 Base Aggregate	412280	12.23 ton	\$163.44
9-27-06	1 1/4 Base Aggregate	412283	10.26 ton	\$137.11
9-27-06	1 1/4 Base Aggregate	412286	09.86 ton	\$131.78
9-27-06	1 1/4 Base Aggregate	412293	10.55 ton	\$140.99
9-27-06	1 1/4 Base Aggregate	412300	09.87 ton	\$131.89
9-27-06	1 1/4 Base Aggregate	412302	10.48 ton	\$140.06
9-27-06	1 1/4 Base Aggregate	412305	10.47 ton	\$139.92
9-27-06	1 1/4 Base Aggregate	412306	09.65 ton	\$128.96
9-28-06	Fill Sand	412326	11.83 ton	\$91.92
			126.36 ton	\$1,622.48

From:HILLSBORO LANDFILL

5036483942

10/27/2006 11:22 #046 P.002/002

Customer Summary Report (Legal)

Criteria: 06/01/2006 12:00 AM to 10/27/2006 11:59 PM

Business Unit Name: Hillsboro Landfill, Inc

Customer Name: TETRAPAK(Tetra Pak)

User: DT

Operation Type: All

Date: Oct 27 2006, 11:31:56 AM

Ticket Dat	Ticket ID	Customer Generator Profile	Material	Origin	Rt. Unit	Rt. Qty
9/27/2006	1011760	Tetra Pak 168-TETR/10182	Cont Soil F	CLARK	TON	27.31
9/27/2006	1011804	Tetra Pak 168-TETR/10182	Cont Soil F	CLARK	TON	16.21
9/27/2006	1011881	Tetra Pak 168-TETR/10182	Cont Soil F	CLARK	TON	12.3
9/27/2006	1011899	Tetra Pak 168-TETR/10182	Cont Soil F	CLARK	TON	11.27
9/27/2006	1011908	Tetra Pak 168-TETR/10182	Cont Soil F	CLARK	TON	13.59
9/27/2006	1011936	Tetra Pak 168-TETR/10182	Cont Soil F	CLARK	TON	11.73
9/28/2006	1012088	Tetra Pak 168-TETR/10182	Cont Soil F	CLARK	TON	5.57
10/4/2006	1013963	Tetra Pak 168-TETR/10182	Cont Soil F	CLARK	TON	4.22
Mat. Tot.	8					104.2
Cust. Tot.	8					104.2
Ticket Tot	8					104.2

Customer Summary:

Loads Tons

Internal:

No information was found.

External:

Tetra Pak 8 104.20