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Additional Investigation Report Former Strebor Site

9 January 2009

Prepared for
Tetra Pak Materials, LP
1616 W. 31st Street
Vancouver, WA 98660

K/J Project No. 016066.11

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List of Abbreviations

bgs = below ground surface
CAS = Columbia Analytical Services, Inc.
COC = chemicals of concern
Ecology = Washington State Department of Ecology
EPA = Environmental Protection Agency
FS = Feasibility Study
HRGC/HRMS = High-Resolution Gas Chromatography / High-Resolution Mass Spectrometry
HVOCs = halogenated volatile organic compounds
IDW = Investigation derived waste
MRL = method reporting limit
msl = mean sea level
MTCA = Model Toxics Control Act
ng/kg = nanograms per kilogram
PCP = pentachlorophenol
QA/QC = quality assurance / quality control
RA = Risk Assessment
RI = Remedial Investigation,
TEC = total toxicity equivalent concentration (TTEC, also referred to as TEQ by EPA)
TEFs = toxicity equivalency factors
VCP = Voluntary Cleanup Program
WAC = Washington Administrative Code

Section 1: Introduction

This document presents the results of additional investigation activities conducted at the former Strebor property (Site) located at 3125 Thompson Avenue in Vancouver, Washington. The Site is undergoing investigation and cleanup under the Voluntary Cleanup Program (VCP) (VCP No. SW0377) of Washington State Department of Ecology (Ecology). The additional investigation was conducted in accordance with the *Additional Investigation Work Plan, Former Strebor Site* (Work Plan, Kennedy/Jenks, 1 February 2008) pursuant to the Model Toxics Control Act (MTCA) Cleanup Regulations (Ecology, 2007a) under the VCP. The Work Plan was developed based on data collected during the Remedial Investigation (Kennedy/Jenks 2004) and the Remedial Action (Kennedy/Jenks 2007) and was approved by Ecology in a letter dated 27 March 2008 (Ecology 2007b).

1.1 Investigation Purpose and Objectives

This additional investigation was conducted to address Ecology comments provided to Tetra Pak, in a letter dated 5 April 2007 (Ecology 2007c), regarding the Site. In the comment letter, Ecology requested that further information be gathered to more completely characterize dioxin in the soil and pentachlorophenol (PCP) and halogenated volatile organic compounds (HVOCs) in the groundwater. Ecology requested additional characterization of dioxin in soil to the east of the building, which was the purpose of this investigation. Dioxin in soil has been adequately characterized in other areas of the Site. Monitoring and sampling of groundwater is being addressed as a separate task and a work plan for that monitoring will be submitted to Ecology under separate cover.

Section 2: 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 in the SW $\frac{1}{4}$, of the NE $\frac{1}{4}$ of Section 21, Township 2 North, Range 1 East in Vancouver. 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. The Site facility was developed in 1974 to formulate and store wood treatment products. The wood treatment formulating facility was closed in 1986 and the property was transferred between 1987 and 1989, when Tetra Pak purchased the property.

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. A former tank farm area, located on the north side of the existing building, is paved and used as a temporary storage area for pallets and miscellaneous equipment and employee parking.

2.1 Investigation and Remediation History

Kennedy/Jenks Consultants performed a Remedial Investigation, Risk Assessment, and Feasibility Study (RI/RA/FS) from 2002 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).

In September 2006, Tetra Pak undertook a Remedial Action to remove surface and subsurface soils identified during the RI process to contain elevated concentrations of PCP and dioxin (Kennedy/Jenks 2007). Approximately 320 lineal feet of rail spur was removed to accommodate soil removal activities. In the area beneath and around the rail spur, excavations ranged from approximately 2 to 6 below ground surface (bgs). Excavation depths were established based on results of Geoprobe® soil samples collected in April 2002. Approximately 78 cubic yards (104 tons) of PCP and dioxin-impacted soil was removed from the Site during the Remedial Action.

A total of four “grab” confirmation soil samples were collected from within the limits of the excavations during the Remedial Action. Confirmation samples collected from the floor of the excavation indicate that residual concentrations of dioxin exceed MTCA Method B cleanup level of 11 nanograms per kilogram (ng/kg) for 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD). PCP was not detected above the analytical method reporting limit (MRL) in any of the confirmation soil samples. The excavations were backfilled with clean, imported, coarse-grained fill material.

Section 3: Investigation Activities

On 12 May 2008, six soil borings were advanced, using direct-push drilling equipment for collection of soil samples to further characterize the horizontal and lateral extent of dioxin in soil. The direct push sampling equipment was operated by Cascade Drilling, Inc. of Gresham, Oregon under subcontract to Kennedy/Jenks. The locations of the borings are presented on Figure 2. Two borings were located within the footprint of an excavation area from the 2006 Removal Action to delineate the vertical extent of dioxin in soil below the fill material placed in the excavation. The four remaining boring locations were located to the south, east, and west of the building to delineate the horizontal and vertical extent of dioxin in soil.

The soil borings were advanced to a depth of 15 feet bgs. The soil type observed during the investigation was documented on soil boring logs using the Unified Soil Classification System, as a guideline, by Kennedy/Jenks personnel. Appendix A contains copies of the boring logs.

Soil samples were collected from the intervals of 0 to 2 feet bgs, 5 feet bgs, 10 feet bgs, and 15 feet bgs from borings B-8 through B-12. Soil samples were collected from boring B-13, located within the 2006 Remedial Action removal area, from depths at and below the bottom of the backfilled area (3, 6, 10, and 15 feet bgs). Soil samples were collected by cutting open the acetate sleeves and dispensing the selected soil interval into clean laboratory-supplied 8-ounce glass jars. The soil samples were sealed with a Teflon-lined lid, labeled, and placed in a chilled ice chest for transport, under chain-of-custody, to the laboratory.

The upper 0.4 to 0.5 feet of borings B-8, B-10, B-11, and B-12 consisted of asphalt/gravel base rock or gravel fill. The upper 0.4 feet of boring B-9 consisted of grass and the grass root zone. Tan brown sand or silty sand was encountered below the surface material (from the surface in the case of boring B-13) to the total depth of each boring with the exception of borings B-11 and B-12. Dark brown gravelly sand was encountered at a depth of approximately 14 feet bgs in borings B-11 and B-12. Borings B-11 and B-12 were terminated in the gravelly sand zone. The soil in each boring was moist and became saturated at a depth of approximately 13 feet bgs.

Upon completion, each boring was backfilled using bentonite chips and hydrated in accordance with Washington Administrative Code (WAC) 173-160-460. The ground surface was restored to the original condition (gravel or grass). A Geotechnical Hole report was submitted to Ecology for each soil boring by Cascade.

Investigation derived waste (IDW) was temporarily placed in 55-gallon drums labeled with the project name, contents, date, and was stored near adjacent to the southwest corner of the existing building. The soil data from the push-probes will be used to characterize the drummed wastes. The IDW will be disposed of at a licensed treatment/disposal facility.

Section 4: Investigation Results

The soil samples were submitted to Columbia Analytical Services, Inc. (CAS) located in Houston, Texas for analysis. Table 1 summarizes analytical results for this and previous investigations and remedial action, respective sample location, depth, and TTEC. The laboratory data package is provided in Appendix B.

In accordance with WAC 173-340-708(8)(d)(ii), the concentrations of individual dioxin congeners were multiplied by their respective toxicity equivalency factors (TEFs) established by the Environmental Protection Agency (EPA) and re-evaluated by the World Health Organization (Van den Berg, et al. 2006) and summed, to calculate a total 2,3,7,8-TCDD total toxicity equivalent concentration (TTEC, also referred to as TEQ by EPA) for each sample. The TTECs for each sample collected during this investigation are summarized in Table 1.

The soil sample collected from the interval of 0 to 2 feet bgs from each soil boring (3 feet for boring B-13) was analyzed for dioxins/furans using the CAS dioxin screening method by High-Resolution Gas Chromatography/High-Resolution Mass Spectrometry (HRGC/HRMS), which is based on the EPA Method 8290. The remaining samples were archived for possible future analysis. The screening results indicated dioxins and furans were present in all six of the soil samples. Therefore, Kennedy/Jenks instructed CAS to conduct further analysis using the full EPA Method 8290 analysis. The resulting TTEC concentrations of each of these samples was less than the MTCA Method B cleanup level of 11 ng/kg for unrestricted land use, with the exception of the sample collected from 3 feet in boring B-13 (sample B-13-3).

Sample B-13-3 contained a TTEC of 485 ng/kg. Based on this result, Kennedy/Jenks instructed the laboratory to analyze the sample collected from a depth of 15 feet from boring B-13 (sample B-13-15) using the dioxin screening method. Dioxins and furans were detected in sample B-13-15 based on the screening analysis and the full EPA Method 8290 analysis was completed. The resulting TTEC concentration in sample B-13-15 was less than the cleanup level.

Section 5: Conclusions and Recommendations

Conclusions and recommendations provided in this section are based on the results of investigations conducted in May 2008 and previous investigations and remedial activities. Based on the results of these investigations, the majority of the soil with TTEC concentrations that exceed the MTCA Method B cleanup level was removed during the remediation action.

The lateral and vertical extent of dioxins in the soil above the MTCA Method B cleanup level have been defined and is limited to the area of the former rail spur. Samples collected north, south, east and west (B-11, B-9, TF-1 and B-10 and B-12 respectively) of the rail spur contain dioxin concentrations below the clean up level. Boring B-13, advanced in the area with the highest reported dioxin results (CF-3-3 in the Remedial Action [Kennedy/Jenks 2007]) contained dioxins above the cleanup level in the sample collected from a depth of 3 feet bgs, but below the cleanup level in the soil sample collected from a depth of 15 feet bgs.

With the results of this investigation, Kennedy/Jenks believes no additional soil characterization is warranted at the site.

References

- Kennedy/Jenks Consultants (Kennedy/Jenks). 2004. Remedial Investigation, Risk Assessment, and Feasibility Study Report, Former Strebor Facility, Tetra Pak Materials. August 2004.
- Kennedy/Jenks. 2006. Additional Investigation Work Plan, Former Strebor Site. 1 February 2006.
- Kennedy/Jenks. 2007. Remedial Action Report, Former Strebor Site. 9 March 2007.
- Van den Berg et al. 2006. The 2005 World Health Organization Re-evaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds. *Toxicological Sciences* 93(2), 223-241, 20 May 2006.
- Washington Department of Ecology (Ecology). 2007a. Model Toxics Control Act Statute and Regulation, Publication No. 94-06. Revised November 2007.
- Ecology. 2007b. Opinion Pursuant to WAC 173-340-515(5) on Proposed Remedial Action. 27 March 2007.
- Ecology. 2007c. Opinion under WAC 173-340-515(5) on Remedial Action. 5 April 2007.

Tables

Table 1: Summary of Soil Analytical Results Dioxin - Toxic Equivalency Factors

Sample	Sample Depth (ft bgs) ^(a)	Date Sampled	TTEC ^(b) (ng/kg) ^(c)	Notes
Rail Spur				
RS-1-2	2	04/08/02	90.31^(d)	Soil has been removed
RS-4-2	2	04/08/02	122.22	Soil has been removed
RS-4-10	10	04/08/02	5.88	
RS-5-0-1	0-1	04/08/02	413.82	Soil has been removed
RS-5-2	2	04/08/02	76.92	Soil has been removed
RS-5-5	5	04/08/02	1398.2	Soil has been removed
RS-6-0-1	0-1	04/08/02	223.82	Soil has been removed
RS7-0-1	0-1	04/09/02	1971.34	Soil has been removed
RS7-2	2	04/09/02	7.45	Soil has been removed
Tank Farm				
TF-1-15	15	04/08/02	0.076	
TF5-5	5	04/10/02	0.067	
TF5-22	22	04/10/02	0.046	
TF-6-10	10	04/09/02	7.31	
TF-8-25	25	04/09/02	3.23	
Dry Wells				
DW3A-20	20	04/09/02	64.77	
DW3A-23	23	04/09/02	5.47	
Confirmation Samples, Rail Spur				
CF-1-3	3	09/27/06	14.76	
CF-2-4	4	09/27/06	14.22	
CF-3-3	3	09/27/06	597.57	
CS-1-3	3	09/27/06	181.49	
May 2008 Sample Results				
B-8-0-2	0-2	05/12/08	0.195	
B-9-0-2	0-2	05/12/08	5.81	
B-10-0-2	0-2	05/12/08	0.086	
B-11-0-2	0-2	05/12/08	0.127	
B-12-0-2	0-2	05/12/08	0.035	
B-13-3	3	05/12/08	485	
B-13-15	15	05/12/08	0.241	
MTCA Method B Cleanup Level ^(e)			11	

(a) ft bgs = feet below ground surface.

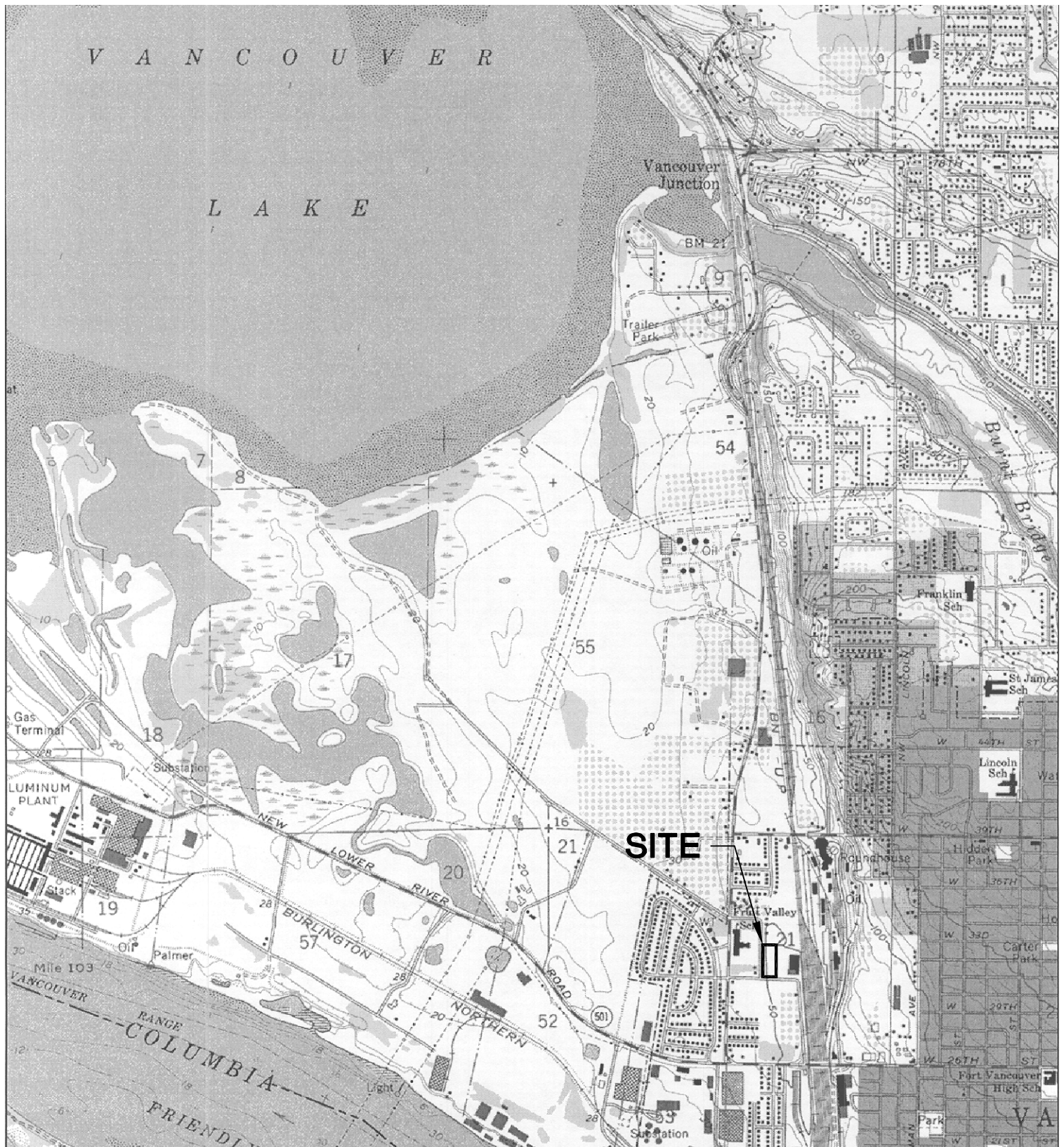
(b) TTEC = Total Toxicity Equivalence Concentration. TTECs were calculated using *The 2005 World Health Organization Reevaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-Like Compounds*, Van den Berg et al, Toxicological Sciences 93(2):223-241, 2006.

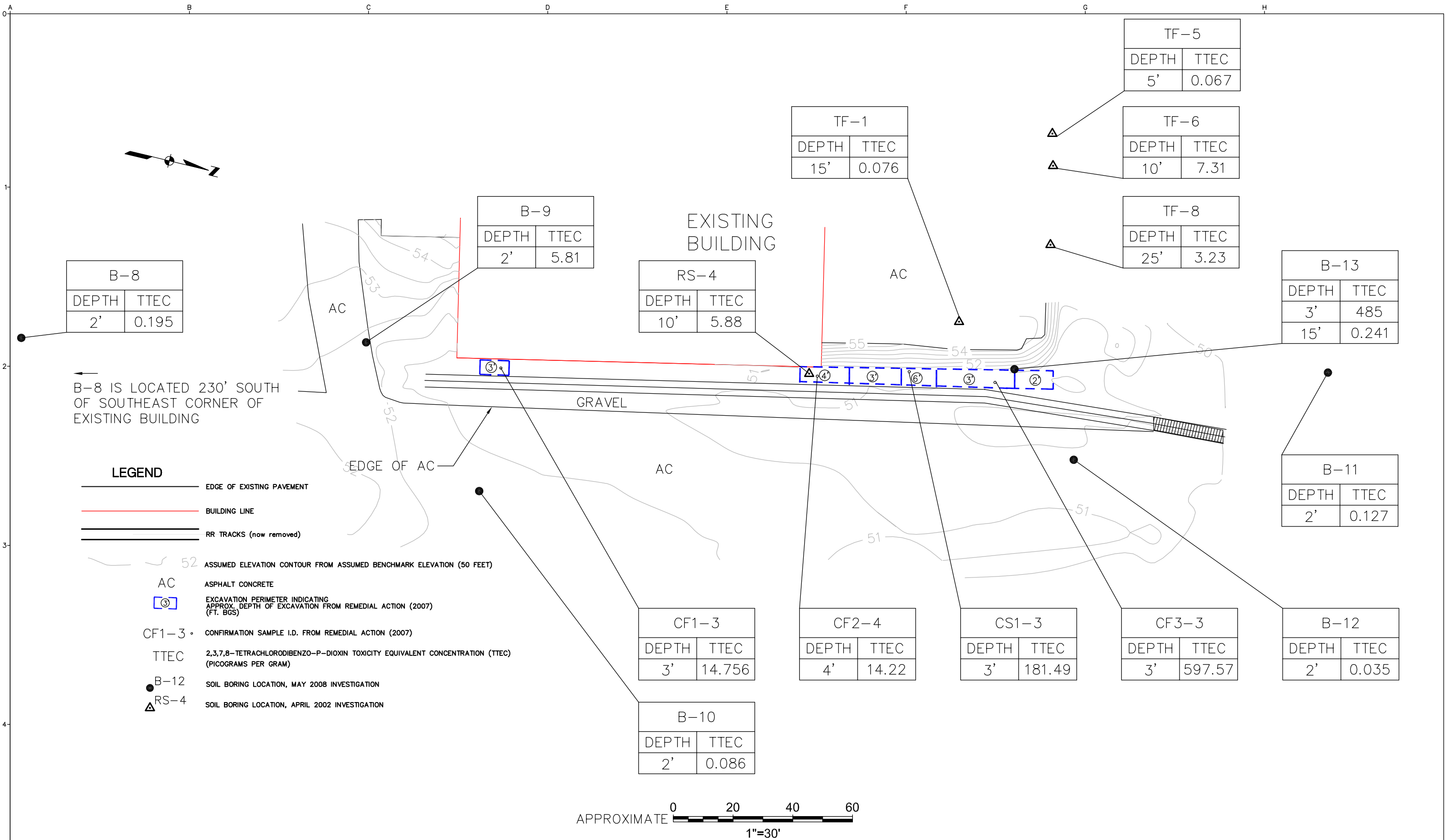
(c) ng/kg = nanograms per kilogram.

(d) Bold indicates TTECs exceeded MTCA Method B Cleanup Levels

(e) Model Toxics Control Act Method B Cleanup Level for unrestricted land use, in accordance with WAC 173-340-703.

Figures





Appendix A

Boring Logs

Boring Log

Kennedy/Jenks Consultants

BORING LOCATION TetraPak Former Strebor Site						Boring Name B-8	
DRILLING COMPANY CDI				DRILLER Eric Wilson		Project Name TetraPak	
DRILLING METHOD(S) Geoprobe				DRILL BIT(S) SIZE 2" OD		Project Number 016066.11	
ISOLATION CASING n/a				FROM n/a TO n/a FT.		ELEVATION AND DATUM	TOTAL DEPTH 15.0 ft. bgs
BLANK CASING n/a				FROM n/a TO n/a FT.		DATE STARTED 5/12/08	DATE COMPLETED 5/12/08
SLOTTED CASING n/a				FROM n/a TO n/a FT.		STATIC WATER ELEVATION n/a	
SIZE AND TYPE OF FILTER PACK n/a				FROM n/a TO n/a FT.		LOGGED BY S. Misner	
SEAL Hydrated Bentonite Chips				FROM 0 TO 15 FT.		SAMPLING METHODS Macrocore	WELL COMPLETION ☐ SURFACE HOUSING ☐ STAND PIPE n/a FT.
GROUT n/a				FROM n/a TO n/a FT.			

SAMPLES			Drill Depth (Feet)	BACKFILL DETAILS	USCS Log	Lithology	Color	SAMPLE DESCRIPTION and DRILLING REMARKS
Type & No.	Recovery (Feet)	Penetr. Resist. Blows/6"						
B-8-0-2					GW			(GW) SAND GRAVEL FILL
B-8-5			5		SM			(SM) TAN-BROWN SILTY FINE SAND; MOIST; MINOR MICA FLAKES
B-8-10			10		SP			(SP) TAN-BROWN FINE SAND; MOIST; MINOR MICA FLAKES
B-8-15			15		SM			(SM) TAN-BROWN SILTY FINE SAND AS 0.4-8'; VERY MOIST TO SATURATED

BORING & WELL CONSTRUCTION LOGS MAY08.GPJ KENNEDY-JENKS.GDT 9/8/08

Boring Log

Kennedy/Jenks Consultants

BORING LOCATION TetraPak Former Strebor Site						Boring Name B-9	
DRILLING COMPANY CDI				DRILLER Eric Wilson		Project Name TetraPak	
DRILLING METHOD(S) Geoprobe				DRILL BIT(S) SIZE 2" OD		Project Number 016066.11	
ISOLATION CASING n/a				FROM n/a TO n/a FT.		ELEVATION AND DATUM	
BLANK CASING n/a				FROM n/a TO n/a FT.		TOTAL DEPTH 15.0 ft. bgs	
SLOTTED CASING n/a				FROM n/a TO n/a FT.		DATE STARTED 5/12/08	
SIZE AND TYPE OF FILTER PACK n/a				FROM n/a TO n/a FT.		DATE COMPLETED 5/12/08	
SEAL Hydrated Bentonite Chips				FROM 0 TO 15 FT.		STATIC WATER ELEVATION n/a	
GROUT n/a				FROM n/a TO n/a FT.		LOGGED BY S. Misner	
						SAMPLING METHODS Macrocore	
						WELL COMPLETION ☐ SURFACE HOUSING ☐ STAND PIPE n/a FT.	

SAMPLES			Drill Depth (Feet)	BACKFILL DETAILS	USCS Log	Lithology	Color	SAMPLE DESCRIPTION and DRILLING REMARKS
Type & No.	Recovery (Feet)	Penetr. Resist. Blows/6"						
B-9-0-2					OH			(OH) GRASS AND ROOTS
B-9-5			5		SM			(SM) TAN-BROWN SILTY FINE SAND; MOIST; SOME MICA
B-9-10			10		SP			(SP) TAN-BROWN FINE SAND; MOIST; SOME MICA FLAKES. SAND BECOMES VERY FINE AND VERY MOIST AT APPROXIMATELY 13'; MINOR FE STAIN (BANDING) AT 13'.
B-9-15			15					

BORING & WELL CONSTRUCTION LOGS_MAY08.GPJ_KENNEDY_JENKS.GDT 9/8/08

Boring Log

Kennedy/Jenks Consultants

BORING LOCATION TetraPak Former Strebor Site		Boring Name B-10	
DRILLING COMPANY CDI		DRILLER Eric Wilson	
DRILLING METHOD(S) Geoprobe		DRILL BIT(S) SIZE 2" OD	
ISOLATION CASING n/a		Project Name TetraPak	
BLANK CASING n/a		Project Number 016066.11	
SLOTTED CASING n/a		ELEVATION AND DATUM	
SIZE AND TYPE OF FILTER PACK n/a		TOTAL DEPTH 15.0 ft. bgs	
SEAL Hydrated Bentonite Chips		DATE STARTED 5/12/08	
GROUT n/a		DATE COMPLETED 5/12/08	
		STATIC WATER ELEVATION n/a	
		LOGGED BY S. Misner	
		SAMPLING METHODS Macrocore	
		WELL COMPLETION ☐ SURFACE HOUSING ☐ STAND PIPE n/a FT.	

SAMPLES			Drill Depth (Feet)	BACKFILL DETAILS			USCS Log	Lithology	Color	SAMPLE DESCRIPTION and DRILLING REMARKS
Type & No.	Recovery (Feet)	Penetr. Resist. Blows/6"								
B-10-0-2										ASPHALT/GRAVEL FILL
							SP-SM			(SP-SM) TAN-BROWN; VERY FINE SAND; MINOR SILT; MOIST; MINOR MICA FLAKES
B-10-5			5				SP			(SP) GRADES TO FINE SAND
										(SP) VERY FINE SAND, SAME AS 0.5-5'. BECOMES SATURATED AT APPROXIMATELY 13'.
B-10-10			10				SP			
B-10-15			15							

BORING & WELL CONSTRUCTION LOGS MAY08.GPJ KENNEDY-JENKS.GDT 9/8/08

Boring Log

Kennedy/Jenks Consultants

BORING LOCATION				TetraPak Former Strebor Site				Boring Name B-11	
DRILLING COMPANY				CDI				DRILLER Eric Wilson	
DRILLING METHOD(S)				Geoprobe				DRILL BIT(S) SIZE 2" OD	
ISOLATION CASING				n/a				Project Name TetraPak	
BLANK CASING				n/a				Project Number 016066.11	
SLOTTED CASING				n/a				ELEVATION AND DATUM	
SIZE AND TYPE OF FILTER PACK				n/a				TOTAL DEPTH 15.0 ft. bgs	
SEAL				Hydrated Bentonite Chips				DATE STARTED 5/12/08	
GROUT				n/a				DATE COMPLETED 5/12/08	
								STATIC WATER ELEVATION n/a	
								LOGGED BY S. Misner	
								SAMPLING METHODS Macrocore	
								WELL COMPLETION	
								☐ SURFACE HOUSING	
								☐ STAND PIPE n/a FT.	

SAMPLES			Drill Depth (Feet)	BACKFILL DETAILS	USCS Log	Lithology	Color	SAMPLE DESCRIPTION and DRILLING REMARKS
Type & No.	Recovery (Feet)	Penetr. Resist. Blows/6"						
B-11-0-2								SAND/GRAVEL FILL
B-11-5			5		SM			(SM) TAN-BROWN SILTY VERY FINE SAND; MOIST; SOME MICA FLAKES
					SP			(SP) BECOMES TAN-BROWN FINE SAND WITH LITTLE OR NO FINES; VERY MOIST FROM 6-7'
B-11-10			10		SM			(SM) TAN-BROWN, SILTY VERY FINE SAND (SAME AS 0.4-6'); VERY MOIST
					SP			(SP) TAN-BROWN FINE SAND SAME AS 6-8'; MOIST TO VERY MOIST
B-11-15			15		SW			(SW) DARK BROWN GRAVELLY SAND; SLIGHTLY MOIST; MEDIUM TO COARSE SAND; SUBROUNDED TO SUBANGULAR GRAVEL TO APPROXIMATELY 1" DIAMETER; SOME FE STAINING; SHARP CONTACT AT 14'.

BORING & WELL CONSTRUCTION LOGS, MAY08.GPJ, KENNEDY-JENKS.GDT 9/8/08

Boring Log

Kennedy/Jenks Consultants

BORING LOCATION				TetraPak Former Strebor Site				Boring Name B-12	
DRILLING COMPANY				CDI				DRILLER Eric Wilson	
DRILLING METHOD(S)				Geoprobe				DRILL BIT(S) SIZE 2" OD	
ISOLATION CASING				n/a				Project Name TetraPak	
BLANK CASING				n/a				Project Number 016066.11	
SLOTTED CASING				n/a				ELEVATION AND DATUM	
SIZE AND TYPE OF FILTER PACK				n/a				TOTAL DEPTH 15.0 ft. bgs	
SEAL				Hydrated Bentonite Chips				DATE STARTED 5/12/08	
GROUT				Asphalt Cap				DATE COMPLETED 5/12/08	
								STATIC WATER ELEVATION n/a	
								LOGGED BY S. Misner	
								SAMPLING METHODS Macrocore	
								WELL COMPLETION	
								☐ SURFACE HOUSING	
								☐ STAND PIPE n/a FT.	

SAMPLES			Drill Depth (Feet)	BACKFILL DETAILS	USCS Log	Lithology	Color	SAMPLE DESCRIPTION and DRILLING REMARKS
Type & No.	Recovery (Feet)	Penetr. Resist. Blows/6"						
								ASPHALT/GRAVEL FILL
B-12-0-2					SM			(SM) TAN-BROWN SILTY SAND; MOIST; MINOR MICA FLAKES
B-12-5			5		SP			(SP) TAN-BROWN FINE SAND; MOIST; MINOR MICA FLAKES
					SM			(SM) TAN-BROWN SILTY SAND (SAME AS 0.5-5'); MOIST
B-12-10			10		SP			(SP) TAN-BROWN FINE SAND; VERY MOIST; MINOR MICA; BECOMES SATURATED AT APPROXIMATELY 13'
B-12-15			15		SW			(SW) DARK BROWN GRAVELLY SAND; SLIGHTLY MOIST; MEDIUM TO COARSE SAND; APPROXIMATELY 30% SUBROUNDED TO SUBANGULAR GRAVEL TO APPROXIMATELY 1.5" IN DIAMETER.

BORING & WELL CONSTRUCTION LOGS, MAY08.GPJ, KENNEDY-JENKS.GDT 9/8/08

Boring Log

Kennedy/Jenks Consultants

BORING LOCATION TetraPak Former Strebor Site						Boring Name B-13	
DRILLING COMPANY CDI				DRILLER Eric Wilson		Project Name TetraPak	
DRILLING METHOD(S) Geoprobe				DRILL BIT(S) SIZE 2" OD		Project Number 016066.11	
ISOLATION CASING n/a				FROM n/a TO n/a FT.		ELEVATION AND DATUM	TOTAL DEPTH 15.0 ft. bgs
BLANK CASING n/a				FROM n/a TO n/a FT.		DATE STARTED 5/12/08	DATE COMPLETED 5/12/08
SLOTTED CASING n/a				FROM n/a TO n/a FT.		STATIC WATER ELEVATION n/a	
SIZE AND TYPE OF FILTER PACK n/a				FROM n/a TO n/a FT.		LOGGED BY S. Misner	
SEAL Hydrated Bentonite Chips				FROM 0 TO 15 FT.		SAMPLING METHODS Macrocore	
GROUT n/a				FROM n/a TO n/a FT.		WELL COMPLETION ☐ SURFACE HOUSING ☐ STAND PIPE n/a FT.	

SAMPLES			Drill Depth (Feet)	BACKFILL DETAILS	USCS Log	Lithology	Color	SAMPLE DESCRIPTION and DRILLING REMARKS
Type & No.	Recovery (Feet)	Penetr. Resist. Blows/6"						
B-13-3			5		SP			(SP) TAN-BROWN FINE SAND; SLIGHTLY MOIST; (FILL?)
B-13-3					SM			(SM) TAN-BROWN SILTY VERY FINE SAND; MOIST; ROOTS FROM 4-5' (1/8" DIAMETER); MINOR MICA
B-13-10					SP			(SP) TAN-BROWN FINE SAND; MOIST; MINOR MICA; BECOMES VERY MOIST TO SATURATED AT APPROXIMATELY 12' WITH MINOR FE BANDING
B-13-15			15					

BORING & WELL CONSTRUCTION LOGS MAY08.GPJ KENNEDY-JENKS.GDT 9/8/08

Appendix B

Laboratory Analytical Report

July 23, 2008

Service Request No: E0800456

Steven Misner
Kennedy/Jenks Consultants, Incorporated
200 SW Market St., Suite 500
Portland, OR 97201-5715

RE: Tetra Pak/016066.11

Dear Steven:

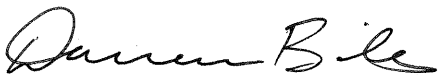
Enclosed are the results of the sample(s) submitted to our laboratory on May 13, 2008. For your reference, these analyses have been assigned our service request number **E0800456**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please call if you have any questions. My extension is 2954. You may also contact me via email at DBiles@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.



Darren Biles
Project Chemist

Page 1 of _____



Certificate of Analysis

19408 Park Row, Suite 320, Houston, TX 77084

Phone (713)266-1599 Fax (713)266-0130

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COLUMBIA ANALYTICAL SERVICES, INC

Client: Kennedy/Jenks Consultants, Inc.
Project: Tetra Park/016066.11
Sample Matrix: Solid

Service Request No.: E0800456
Date Received: 05/13/08

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Twenty-four solid samples were received for analysis at Columbia Analytical Services on 05/13/08. Seven samples were analyzed for dioxins/furans; the remaining samples were put on hold.

The samples were received at 6°C in good condition and are consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion**B flags – Method Blanks**

The Method Blank EQ0800207-01/U215763 contained low levels of 1234678-HpCDD, OCDD, and 1234678-HpCDF at or below the Method Reporting Limit (MRL).

The Method Blank EQ0800207-01/U128004 contained low levels of 1234678-HpCDD, OCDD, 1234678-HpCDF and OCDF at or below the Method Reporting Limit (MRL).

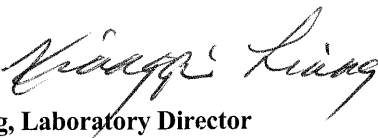
The Method Blank EQ0800235-01/U128285 contained low levels of 1234678-HpCDD and OCDD at or below the Method Reporting Limit (MRL).

The associated compounds in the samples are flagged with 'B' flags.

Y flags – Labeled Standards

Samples that had recoveries of labeled standards outside the acceptance limits are flagged with 'Y' flags. In all cases, the signal-to-noise ratios are greater than 10:1, making these data acceptable.

Approved by:



Xiangqiu Liang, Laboratory Director

Date:

7/24/08

MS/DMS

EQ0800207: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of an MS/DMS for this extraction batch. The batch quality control criteria were met.

EQ0800235: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of an MS/DMS for this extraction batch. The batch quality control criteria were met.

C flags – 2378-TCDF Confirmation

Confirmation of the TCDF compound: When 2378-TCDF is detected on the DB-5 column, confirmation analyses are performed on a second column (DB-225.) The results from both the DB-5 column and the DB-225 column are included in this data package.

The valid result for the 2378-TCDF compound is reported from the confirmation column.

The confirmation results have been included on the TEQ summary pages.

Dilution

Sample E0800456-021 required a dilution due to the presence of elevated levels of target analytes. The undiluted and diluted results were combined into one TEQ summary report for each sample. This reports a 'Total' result that includes the most appropriate concentration found for the associated target analyte.

E flags

When OCDD and/or OCDF exceed the upper method calibration limit (MCL), Method 8290 Section 7.9.3 advises the chemist to "report the measured concentration and indicate that the value exceeds the MCL." We use 'E' flag on the Form 1 results to indicate a compound has exceeded the MCL.

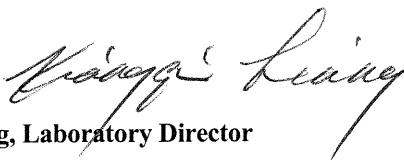
K flags

EMPC - When the ion abundance ratios associated with a particular compound are outside the QC limits, samples are flagged with a 'K' flag. A 'K' flag indicates an estimated maximum possible concentration for the associated compound.

Detection Limits

Detection limits are calculated for each congener in each sample by measuring the height of the noise level for each quantitation ion for the associated labeled standard. The concentration equivalent to 2.5 times the height of the noise is then calculated using the appropriate response factor and the weight of the sample. The calculated concentration equals the detection limit.

Approved by:



Xiangqiu Liang, Laboratory Director

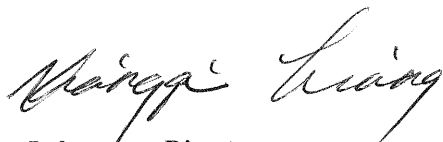
Date:

7/24/08

The TEQ results for each sample have been calculated by CAS/Houston to include:

- WHO-2005 TEFs ("The 2005 World Health Organization Reevaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-Like Compounds", M. Van den Berg et al., Toxicological Sciences 93(2):223-241, 2006)
- 2378-TCDF from the DB-225 column, when confirmation required
- Non-detected compounds are not included in the 'Total'
- The 1:1 and associated dilution have been combined into one TEQ summary report

Approved by:


Xiangqiu Liang, Laboratory Director

Date:

7/24/08

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11

6

Service Request: E0800456

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
E0800456-001	B-8-0-2	05/12/08	09:25
E0800456-002	B-8-5	05/12/08	09:30
E0800456-003	B-8-10	05/12/08	09:35
E0800456-004	B-8-15	05/12/08	09:40
E0800456-005	B-9-0-2	05/12/08	09:55
E0800456-006	B-9-5	05/12/08	10:00
E0800456-007	B-9-10	05/12/08	10:04
E0800456-008	B-9-15	05/12/08	10:07
E0800456-009	B-10-0-2	05/12/08	10:20
E0800456-010	B-10-5	05/12/08	10:25
E0800456-011	B-10-10	05/12/08	10:30
E0800456-012	B-10-15	05/12/08	10:35
E0800456-013	B-11-0-2	05/12/08	10:50
E0800456-014	B-11-5	05/12/08	10:55
E0800456-015	B-11-10	05/12/08	11:00
E0800456-016	B-11-15	05/12/08	11:05
E0800456-017	B-12-0-2	05/12/08	11:20
E0800456-018	B-12-5	05/12/08	11:25
E0800456-019	B-12-10	05/12/08	11:30
E0800456-020	B-12-15	05/12/08	11:35
E0800456-021	B-13-3	05/12/08	11:50
E0800456-022	B-13-6	05/12/08	11:55
E0800456-023	B-13-10	05/12/08	12:00
E0800456-024	B-13-15	05/12/08	12:05

Abbreviations, Acronyms & Definitions

Cal	Calibration
Conc	CONCentration
Dioxins	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furans	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Spike
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
ML	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD	Polychlorinated dibenzo-p-dioxin(s)
PCDF	Polychlorinated dibenzofuran(s)
ppm	Parts per million
ppb	Parts per billion
ppt	Parts per trillion
ppq	Parts per quadrillion
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

Data Qualifier Flags – Dioxin/Furans

- **B** Indicates the associated analyte is found in the method blank, as well as in the sample
 - **C** Confirmation of the TCDF compound: When 2378-TCDF is detected on the DB-5 column, confirmation analyses are performed on a second column (DB-225.) The results from both the DB-5 column and the DB-225 column are included in this data package. The results from the DB-225 analyses should be used to evaluate the 2378-TCDF in the samples. The confirmed result should be used in determining the TEQ value for TCDF.
 - **E** Indicates an estimated value – used when the analyte concentration exceeds the upper end of the linear calibration range
 - **J** Indicates an estimated value – used when the analyte concentration is below the method reporting limit (MRL) and above the estimated detection limit (EDL)
 - **K** EMPC - When the ion abundance ratios associated with a particular compound are outside the QC limits, samples are flagged with a 'K' flag. A 'K' flag indicates an estimated maximum possible concentration for the associated compound.
-
- **U** Indicates the compound was analyzed and not detected
 - **Y** Samples that had recoveries of labeled standards outside the acceptance limits are flagged with 'Y' flags on the Form 2s. In all cases, the signal-to-noise ratios are greater than 10:1, making these data acceptable.
 - **B** Indicates the associated analyte is found in the method blank, as well as in the sample
 - **ND** Indicates concentration is reported as 'Not Detected'
 - **S** Peak is saturated; data not reportable
 - **Q** Lock-mass interference by ether compounds

CAS/HOU - Form Production, Peer Review & Project Review Signatures

SR# Unique ID

EO800456

First Level - Data Processing - to be filled by person generating the forms

Date 06/10/08

Person 1

JB (024)

Date

Person 2

Second Level - Data Review - to be filled by person doing peer review

Date

06/11/08

Primary Data Reviewer

MC (024)

Date

Secondary Data Reviewer

Project Level - Review - to be filled by person doing project compliance review

Date

7/23/08

Reviewer

JB

10

CAS/HOU - Form Production, Peer Review & Project Review Signatures

SR# Unique ID

E0800456

First Level - Data Processing - to be filled by person generating the forms

Date

05/21/08

Person 1

89

Date

Person 2

Second Level - Data Review - to be filled by person doing peer review

Date

05/21/08

Primary Data Reviewer

mc

Date

Secondary Data Reviewer

Project Level - Review - to be filled by person doing project compliance review

Date

7/23/08

Reviewer

DB



Analytical Results

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Phone (713)266-1599 Fax (713)266-0130

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11
Sample Matrix: Soil

Service Request: E0800456
Date Collected: 05/12/2008
Date Received: 05/13/2008

Sample Name: B-8-0-2
Lab Code: E0800456-001

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method
Sample Amount: 10.081g
Percent Solids: 79.2
Data File Name: U215766
ICAL Name: 12/10/07

Date Analyzed: 5/19/08 21:50:00
Date Extracted: 5/14/08
Instrument Name: E-HRMS-02
GC Column: DB-5
Blank File Name: U215763
Cal Ver. File Name: U215761

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0931	1.25			1
1,2,3,7,8-PeCDD	ND	U	0.0733	3.13			1
1,2,3,4,7,8-HxCDD	0.121	J	0.0661	3.13	1.20	0.998	1
1,2,3,6,7,8-HxCDD	0.261	J	0.0655	3.13	1.25	1.000	1
1,2,3,7,8,9-HxCDD	0.273	J	0.0663	3.13	1.38	1.008	1
1,2,3,4,6,7,8-HpCDD	6.29	B	0.0731	3.13	1.06	1.000	1
OCDD	61.0	B	0.127	6.26	0.88	1.000	1
2,3,7,8-TCDF	0.585	CJ	0.0756	1.25	0.73	1.002	1
1,2,3,7,8-PeCDF	ND	U	0.0609	3.13			1
2,3,4,7,8-PeCDF	ND	U	0.0597	3.13			1
1,2,3,4,7,8-HxCDF	0.231	JK	0.0640	3.13	1.83	1.000	1
1,2,3,6,7,8-HxCDF	0.128	J	0.0668	3.13	1.21	1.003	1
1,2,3,7,8,9-HxCDF	ND	U	0.0824	3.13			1
2,3,4,6,7,8-HxCDF	ND	U	0.0706	3.13			1
1,2,3,4,6,7,8-HpCDF	1.13	BJ	0.0788	3.13	1.19	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.103	3.13			1
OCDF	3.59	J	0.156	6.26	1.02	1.004	1
Total Tetra-Dioxins	0.472	J	0.0931	1.25	0.80		1
Total Penta-Dioxins	0.371	J	0.0733	3.13	1.59		1
Total Hexa-Dioxins	1.96	J	0.0655	3.13	1.13		1
Total Hepta-Dioxins	12.1		0.0731	3.13	0.99		1
Total Tetra-Furans	0.585	J	0.0756	1.25	0.73		1
Total Penta-Furans	0.817	J	0.0597	3.13	1.71		1
Total Hexa-Furans	1.81	J	0.0668	3.13	1.20		1
Total Hepta-Furans	3.25		0.0788	3.13	1.19		1

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11
Sample Matrix: Soil

Service Request: E0800456
Date Collected: 05/12/2008
Date Received: 05/13/2008

Sample Name: B-8-0-2
Lab Code: E0800456-001

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method
Sample Amount: 10.081g
Percent Solids: 79.2
Data File Name: U215766
ICAL Name: 12/10/07

Date Analyzed: 5/19/08 21:50:00
Date Extracted: 5/14/08
Instrument Name: E-HRMS-02
GC Column: DB-5
Blank File Name: U215763
Cal Ver. File Name: U215761

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	524.819	52		40-135	0.79	1.007
13C-1,2,3,7,8-PeCDD	1000	528.780	53		40-135	1.54	1.156
13C-1,2,3,6,7,8-HxCDD	2500	1627.393	65		40-135	1.27	0.993
13C-1,2,3,4,6,7,8-HpCDD	2500	1618.730	65		40-135	1.04	1.069
13C-OCDD	5000	2707.131	54		40-135	0.90	1.154
13C-2,3,7,8-TCDF	1000	505.646	51		40-135	0.79	0.980
13C-1,2,3,7,8-PeCDF	1000	534.134	53		40-135	1.61	1.121
13C-1,2,3,4,7,8-HxCDF	2500	1557.340	62		40-135	0.52	0.973
13C-1,2,3,4,6,7,8-HpCDF	2500	1803.181	72		40-135	0.46	1.045
37Cl-2,3,7,8-TCDD	800	476.197	60		40-135	NA	1.007

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Kennedy/Jenks Consultants, Incorporated
 Project: Tetra Pak/016066.11
 Sample Matrix: Soil

Service Request: E0800456
 Date Collected: 05/12/2008
 Date Received: 05/13/2008

Sample Name: B-8-0-2
 Lab Code: E0800456-001

Units: ng/Kg
 Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
 Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0931	1	1	
1,2,3,7,8-PeCDD	ND	0.0733	1	1	
1,2,3,4,7,8-HxCDD	0.121	0.0661	1	0.1	0.0121
1,2,3,6,7,8-HxCDD	0.261	0.0655	1	0.1	0.0261
1,2,3,7,8,9-HxCDD	0.273	0.0663	1	0.1	0.0273
1,2,3,4,6,7,8-HpCDD	6.29	0.0731	1	0.01	0.0629
OCDD	61.0	0.127	1	0.0003	0.0183
2,3,7,8-TCDF	ND	0.0968	1	0.1	
1,2,3,7,8-PeCDF	ND	0.0609	1	0.03	
2,3,4,7,8-PeCDF	ND	0.0597	1	0.3	
1,2,3,4,7,8-HxCDF	0.231	0.0640	1	0.1	0.0231
1,2,3,6,7,8-HxCDF	0.128	0.0668	1	0.1	0.0128
1,2,3,7,8,9-HxCDF	ND	0.0824	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0706	1	0.1	
1,2,3,4,6,7,8-HpCDF	1.13	0.0788	1	0.01	0.0113
1,2,3,4,7,8,9-HpCDF	ND	0.103	1	0.01	
OCDF	3.59	0.156	1	0.0003	0.00108
Total TEQ					0.195

2005 WHO TEFs, ND = 0

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11
Sample Matrix: Soil

Service Request: E0800456
Date Collected: 05/12/2008
Date Received: 05/13/2008

Sample Name: B-8-0-2RE
Lab Code: E0800456-001

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method
Sample Amount: 10.081g
Percent Solids: 79.2
Data File Name: U128022
ICAL Name: 11/16/07

Date Analyzed: 5/21/08 21:01:00
Date Extracted: 5/14/08
Instrument Name: E-HRMS-01
GC Column: DB-225
Blank File Name: U128018
Cal Ver. File Name: U128017

Analyte Name	Result Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	ND U	0.0968	1.25			1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	459.780	46		40-135	0.76	1.061
37Cl-2,3,7,8-TCDD	800	512.402	64		40-135	NA	0.987

Comments:

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11
Sample Matrix: Soil

Service Request: E0800456
Date Collected: 05/12/2008
Date Received: 05/13/2008

Sample Name: B-9-0-2
Lab Code: E0800456-005

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method
Sample Amount: 10.089g
Percent Solids: 79.8
Data File Name: U215767
ICAL Name: 12/10/07

Date Analyzed: 5/19/08 22:37:00
Date Extracted: 5/14/08
Instrument Name: E-HRMS-02
GC Column: DB-5
Blank File Name: U215763
Cal Ver. File Name: U215761

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	0.260	J	0.0517	1.24	0.73	1.001	1
1,2,3,7,8-PeCDD	1.12	J	0.0637	3.11	1.52	1.000	1
1,2,3,4,7,8-HxCDD	2.02	J	0.0871	3.11	1.40	0.998	1
1,2,3,6,7,8-HxCDD	4.93		0.0862	3.11	1.29	1.000	1
1,2,3,7,8,9-HxCDD	5.10		0.0873	3.11	1.24	1.008	1
1,2,3,4,6,7,8-HpCDD	166	B	0.157	3.11	1.04	1.000	1
OCDD	1480	BE	0.0850	6.21	0.86	1.000	1
2,3,7,8-TCDF	1.27	C	0.0482	1.24	0.73	1.001	1
1,2,3,7,8-PeCDF	0.398	J	0.0625	3.11	1.60	1.001	1
2,3,4,7,8-PeCDF	0.498	J	0.0614	3.11	1.44	1.022	1
1,2,3,4,7,8-HxCDF	1.51	J	0.130	3.11	1.33	1.000	1
1,2,3,6,7,8-HxCDF	1.98	J	0.135	3.11	1.07	1.003	1
1,2,3,7,8,9-HxCDF	ND	U	0.167	3.11			1
2,3,4,6,7,8-HxCDF	2.28	J	0.143	3.11	1.28	1.016	1
1,2,3,4,6,7,8-HpCDF	29.5	B	0.144	3.11	1.03	1.000	1
1,2,3,4,7,8,9-HpCDF	2.14	J	0.189	3.11	1.05	1.035	1
OCDF	72.6		0.108	6.21	0.86	1.004	1
Total Tetra-Dioxins	2.54		0.0517	1.24	0.72		1
Total Penta-Dioxins	6.68		0.0637	3.11	1.42		1
Total Hexa-Dioxins	37.3		0.0862	3.11	1.27		1
Total Hepta-Dioxins	283		0.157	3.11	1.05		1
Total Tetra-Furans	5.15		0.0482	1.24	0.75		1
Total Penta-Furans	11.9		0.0614	3.11	1.44		1
Total Hexa-Furans	39.2		0.135	3.11	1.29		1
Total Hepta-Furans	72.0		0.144	3.11	1.03		1

Comments:

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11
Sample Matrix: Soil

Service Request: E0800456
Date Collected: 05/12/2008
Date Received: 05/13/2008

Sample Name: B-9-0-2
Lab Code: E0800456-005

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method
Sample Amount: 10.089g
Percent Solids: 79.8
Data File Name: U215767
ICAL Name: 12/10/07

Date Analyzed: 5/19/08 22:37:00
Date Extracted: 5/14/08
Instrument Name: E-HRMS-02
GC Column: DB-5
Blank File Name: U215763
Cal Ver. File Name: U215761

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	669.855	67		40-135	0.78	1.007
13C-1,2,3,7,8-PeCDD	1000	640.024	64		40-135	1.56	1.157
13C-1,2,3,6,7,8-HxCDD	2500	1804.665	72		40-135	1.27	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1708.197	68		40-135	1.04	1.069
13C-OCDD	5000	2639.529	53		40-135	0.90	1.153
13C-2,3,7,8-TCDF	1000	652.940	65		40-135	0.78	0.980
13C-1,2,3,7,8-PeCDF	1000	663.621	66		40-135	1.61	1.121
13C-1,2,3,4,7,8-HxCDF	2500	1665.569	67		40-135	0.54	0.972
13C-1,2,3,4,6,7,8-HpCDF	2500	1741.556	70		40-135	0.45	1.044
37Cl-2,3,7,8-TCDD	800	620.736	78		40-135	NA	1.007

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11
Sample Matrix: Soil

Service Request: E0800456
Date Collected: 05/12/2008
Date Received: 05/13/2008

Sample Name: B-9-0-2
Lab Code: E0800456-005

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	0.260	0.0517	1	1	0.260
1,2,3,7,8-PeCDD	1.12	0.0637	1	1	1.12
1,2,3,4,7,8-HxCDD	2.02	0.0871	1	0.1	0.202
1,2,3,6,7,8-HxCDD	4.93	0.0862	1	0.1	0.493
1,2,3,7,8,9-HxCDD	5.10	0.0873	1	0.1	0.510
1,2,3,4,6,7,8-HpCDD	166	0.157	1	0.01	1.66
OCDD	1480	0.0850	1	0.0003	0.444
2,3,7,8-TCDF	0.468	0.0873	1	0.1	0.0468
1,2,3,7,8-PeCDF	0.398	0.0625	1	0.03	0.0119
2,3,4,7,8-PeCDF	0.498	0.0614	1	0.3	0.149
1,2,3,4,7,8-HxCDF	1.51	0.130	1	0.1	0.151
1,2,3,6,7,8-HxCDF	1.98	0.135	1	0.1	0.198
1,2,3,7,8,9-HxCDF	ND	0.167	1	0.1	
2,3,4,6,7,8-HxCDF	2.28	0.143	1	0.1	0.228
1,2,3,4,6,7,8-HpCDF	29.5	0.144	1	0.01	0.295
1,2,3,4,7,8,9-HpCDF	2.14	0.189	1	0.01	0.0214
OCDF	72.6	0.108	1	0.0003	0.0218
Total TEQ					5.81

2005 WHO TEFs, ND = 0

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11
Sample Matrix: Soil

Service Request: E0800456
Date Collected: 05/12/2008
Date Received: 05/13/2008

Sample Name: B-9-0-2RE
Lab Code: E0800456-005

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method
Sample Amount: 10.089g
Percent Solids: 79.8
Data File Name: U128023
ICAL Name: 11/16/07

Date Analyzed: 5/21/08 21:35:00
Date Extracted: 5/14/08
Instrument Name: E-HRMS-01
GC Column: DB-225
Blank File Name: U128018
Cal Ver. File Name: U128017

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	0.468	J	0.0873	1.24	0.74	1.001	1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	602.610	60		40-135	0.76	1.061
37Cl-2,3,7,8-TCDD	800	675.651	84		40-135	NA	0.987

Comments:

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11
Sample Matrix: Soil

Service Request: E0800456
Date Collected: 05/12/2008
Date Received: 05/13/2008

Sample Name: B-10-0-2
Lab Code: E0800456-009

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method
Sample Amount: 10.092g
Percent Solids: 80.8
Data File Name: U215768
ICAL Name: 12/10/07

Date Analyzed: 5/19/08 23:25:00
Date Extracted: 5/14/08
Instrument Name: E-HRMS-02
GC Column: DB-5
Blank File Name: U215763
Cal Ver. File Name: U215761

Analyte Name	Result Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND U	0.0645	1.23			1
1,2,3,7,8-PeCDD	ND U	0.0818	3.07			1
1,2,3,4,7,8-HxCDD	ND U	0.0654	3.07			1
1,2,3,6,7,8-HxCDD	ND U	0.0648	3.07			1
1,2,3,7,8,9-HxCDD	0.122 JK	0.0655	3.07	1.75	1.008	1
1,2,3,4,6,7,8-HpCDD	3.77 B	0.0854	3.07	1.01	1.000	1
OCDD	37.4 B	0.105	6.13	0.91	1.000	1
2,3,7,8-TCDF	ND U	0.0716	1.23			1
1,2,3,7,8-PeCDF	ND U	0.0694	3.07			1
2,3,4,7,8-PeCDF	ND U	0.0682	3.07			1
1,2,3,4,7,8-HxCDF	0.172 J	0.0354	3.07	1.17	1.000	1
1,2,3,6,7,8-HxCDF	ND U	0.0370	3.07			1
1,2,3,7,8,9-HxCDF	ND U	0.0457	3.07			1
2,3,4,6,7,8-HxCDF	ND U	0.0391	3.07			1
1,2,3,4,6,7,8-HpCDF	0.746 BJ	0.0673	3.07	0.98	1.000	1
1,2,3,4,7,8,9-HpCDF	ND U	0.0881	3.07			1
OCDF	2.68 J	0.115	6.13	0.87	1.004	1
Total Tetra-Dioxins	ND U	0.0645	1.23			1
Total Penta-Dioxins	ND U	0.0818	3.07			1
Total Hexa-Dioxins	ND U	0.0648	3.07			1
Total Hepta-Dioxins	7.59	0.0854	3.07	1.13		1
Total Tetra-Furans	ND U	0.0716	1.23			1
Total Penta-Furans	ND U	0.0682	3.07			1
Total Hexa-Furans	0.403 J	0.0370	3.07	1.09		1
Total Hepta-Furans	1.82 J	0.0673	3.07	0.98		1

Comments:

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11
Sample Matrix: Soil

Service Request: E0800456
Date Collected: 05/12/2008
Date Received: 05/13/2008

Sample Name: B-10-0-2
Lab Code: E0800456-009

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method
Sample Amount: 10.092g
Percent Solids: 80.8
Data File Name: U215768
ICAL Name: 12/10/07

Date Analyzed: 5/19/08 23:25:00
Date Extracted: 5/14/08
Instrument Name: E-HRMS-02
GC Column: DB-5
Blank File Name: U215763
Cal Ver. File Name: U215761

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	646.018	65		40-135	0.79	1.007
13C-1,2,3,7,8-PeCDD	1000	646.739	65		40-135	1.53	1.157
13C-1,2,3,6,7,8-HxCDD	2500	1753.451	70		40-135	1.26	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1768.696	71		40-135	1.06	1.069
13C-OCDD	5000	2920.177	58		40-135	0.90	1.153
13C-2,3,7,8-TCDF	1000	623.126	62		40-135	0.78	0.980
13C-1,2,3,7,8-PeCDF	1000	652.456	65		40-135	1.53	1.121
13C-1,2,3,4,7,8-HxCDF	2500	1638.397	66		40-135	0.53	0.972
13C-1,2,3,4,6,7,8-HpCDF	2500	1929.109	77		40-135	0.45	1.044
37Cl-2,3,7,8-TCDD	800	587.504	73		40-135	NA	1.007

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11
Sample Matrix: Soil

Service Request: E0800456
Date Collected: 05/12/2008
Date Received: 05/13/2008

Sample Name: B-10-0-2
Lab Code: E0800456-009

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0645	1	1	
1,2,3,7,8-PeCDD	ND	0.0818	1	1	
1,2,3,4,7,8-HxCDD	ND	0.0654	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.0648	1	0.1	
1,2,3,7,8,9-HxCDD	0.122	0.0655	1	0.1	0.0122
1,2,3,4,6,7,8-HpCDD	3.77	0.0854	1	0.01	0.0377
OCDD	37.4	0.105	1	0.0003	0.0112
2,3,7,8-TCDF	ND	0.0716	1	0.1	
1,2,3,7,8-PeCDF	ND	0.0694	1	0.03	
2,3,4,7,8-PeCDF	ND	0.0682	1	0.3	
1,2,3,4,7,8-HxCDF	0.172	0.0354	1	0.1	0.0172
1,2,3,6,7,8-HxCDF	ND	0.0370	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.0457	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0391	1	0.1	
1,2,3,4,6,7,8-HpCDF	0.746	0.0673	1	0.01	0.00746
1,2,3,4,7,8,9-HpCDF	ND	0.0881	1	0.01	
OCDF	2.68	0.115	1	0.0003	0.000804
Total TEQ					0.0866

2005 WHO TEFs, ND = 0

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11
Sample Matrix: Soil

Service Request: E0800456
Date Collected: 05/12/2008
Date Received: 05/13/2008

Sample Name: B-11-0-2
Lab Code: E0800456-013

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method
Sample Amount: 10.500g
Percent Solids: 81.6
Data File Name: U215769
ICAL Name: 12/10/07

Date Analyzed: 5/20/08 00:13:00
Date Extracted: 5/14/08
Instrument Name: E-HRMS-02
GC Column: DB-5
Blank File Name: U215763
Cal Ver. File Name: U215761

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0734	1.17			1
1,2,3,7,8-PeCDD	ND	U	0.0663	2.92			1
1,2,3,4,7,8-HxCDD	ND	U	0.0571	2.92			1
1,2,3,6,7,8-HxCDD	0.214	J	0.0565	2.92	1.33	1.000	1
1,2,3,7,8,9-HxCDD	0.202	J	0.0572	2.92	1.27	1.007	1
1,2,3,4,6,7,8-HpCDD	6.05	B	0.0858	2.92	0.99	1.000	1
OCDD	56.2	B	0.103	5.84	0.90	1.000	1
2,3,7,8-TCDF	ND	U	0.0809	1.17			1
1,2,3,7,8-PeCDF	ND	U	0.0818	2.92			1
2,3,4,7,8-PeCDF	ND	U	0.0803	2.92			1
1,2,3,4,7,8-HxCDF	ND	U	0.0624	2.92			1
1,2,3,6,7,8-HxCDF	ND	U	0.0651	2.92			1
1,2,3,7,8,9-HxCDF	ND	U	0.0805	2.92			1
2,3,4,6,7,8-HxCDF	ND	U	0.0689	2.92			1
1,2,3,4,6,7,8-HpCDF	0.769	BJ	0.0798	2.92	1.07	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.104	2.92			1
OCDF	2.20	J	0.144	5.84	0.86	1.004	1
Total Tetra-Dioxins	ND	U	0.0734	1.17			1
Total Penta-Dioxins	ND	U	0.0663	2.92			1
Total Hexa-Dioxins	1.19	J	0.0565	2.92	1.41		1
Total Hepta-Dioxins	15.9		0.0858	2.92	1.10		1
Total Tetra-Furans	ND	U	0.0809	1.17			1
Total Penta-Furans	1.18	J	0.0803	2.92	1.50		1
Total Hexa-Furans	0.942	J	0.0651	2.92	1.11		1
Total Hepta-Furans	0.769	J	0.0798	2.92	1.07		1

Comments:

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11
Sample Matrix: Soil

Service Request: E0800456
Date Collected: 05/12/2008
Date Received: 05/13/2008

Sample Name: B-11-0-2
Lab Code: E0800456-013

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method
Sample Amount: 10.500g
Percent Solids: 81.6
Data File Name: U215769
ICAL Name: 12/10/07

Date Analyzed: 5/20/08 00:13:00
Date Extracted: 5/14/08
Instrument Name: E-HRMS-02
GC Column: DB-5
Blank File Name: U215763
Cal Ver. File Name: U215761

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	602.122	60		40-135	0.79	1.007
13C-1,2,3,7,8-PeCDD	1000	633.718	63		40-135	1.57	1.156
13C-1,2,3,6,7,8-HxCDD	2500	1723.930	69		40-135	1.26	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1699.788	68		40-135	1.03	1.069
13C-OCDD	5000	2742.795	55		40-135	0.89	1.153
13C-2,3,7,8-TCDF	1000	557.498	56		40-135	0.79	0.980
13C-1,2,3,7,8-PeCDF	1000	628.333	63		40-135	1.58	1.121
13C-1,2,3,4,7,8-HxCDF	2500	1570.068	63		40-135	0.53	0.972
13C-1,2,3,4,6,7,8-HpCDF	2500	1797.230	72		40-135	0.45	1.044
37Cl-2,3,7,8-TCDD	800	554.772	69		40-135	NA	1.007

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Kennedy/Jenks Consultants, Incorporated
 Project: Tetra Pak/016066.11
 Sample Matrix: Soil

Service Request: E0800456
 Date Collected: 05/12/2008
 Date Received: 05/13/2008

Sample Name: B-11-0-2
 Lab Code: E0800456-013

Units: ng/Kg
 Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
 Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0734	1	1	
1,2,3,7,8-PeCDD	ND	0.0663	1	1	
1,2,3,4,7,8-HxCDD	ND	0.0571	1	0.1	
1,2,3,6,7,8-HxCDD	0.214	0.0565	1	0.1	0.0214
1,2,3,7,8,9-HxCDD	0.202	0.0572	1	0.1	0.0202
1,2,3,4,6,7,8-HpCDD	6.05	0.0858	1	0.01	0.0605
OCDD	56.2	0.103	1	0.0003	0.0169
2,3,7,8-TCDF	ND	0.0809	1	0.1	
1,2,3,7,8-PeCDF	ND	0.0818	1	0.03	
2,3,4,7,8-PeCDF	ND	0.0803	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.0624	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.0651	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.0805	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0689	1	0.1	
1,2,3,4,6,7,8-HpCDF	0.769	0.0798	1	0.01	0.00769
1,2,3,4,7,8,9-HpCDF	ND	0.104	1	0.01	
OCDF	2.20	0.144	1	0.0003	0.000660
Total TEQ					0.127

2005 WHO TEFs, ND = 0

Comments:

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11
Sample Matrix: Soil

Service Request: E0800456
Date Collected: 05/12/2008
Date Received: 05/13/2008

Sample Name: B-12-0-2
Lab Code: E0800456-017

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method
Sample Amount: 10.021g
Percent Solids: 82.4
Data File Name: U215770
ICAL Name: 12/10/07

Date Analyzed: 5/20/08 01:00:00
Date Extracted: 5/14/08
Instrument Name: E-HRMS-02
GC Column: DB-5
Blank File Name: U215763
Cal Ver. File Name: U215761

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0593	1.21			1
1,2,3,7,8-PeCDD	ND	U	0.0621	3.03			1
1,2,3,4,7,8-HxCDD	ND	U	0.0282	3.03			1
1,2,3,6,7,8-HxCDD	ND	U	0.0280	3.03			1
1,2,3,7,8,9-HxCDD	0.0940	J	0.0283	3.03	1.09	1.008	1
1,2,3,4,6,7,8-HpCDD	1.85	BJ	0.0620	3.03	1.12	1.000	1
OCDD	16.8	B	0.106	6.06	0.86	1.000	1
2,3,7,8-TCDF	ND	U	0.0546	1.21			1
1,2,3,7,8-PeCDF	ND	U	0.0419	3.03			1
2,3,4,7,8-PeCDF	ND	U	0.0412	3.03			1
1,2,3,4,7,8-HxCDF	ND	U	0.0429	3.03			1
1,2,3,6,7,8-HxCDF	ND	U	0.0448	3.03			1
1,2,3,7,8,9-HxCDF	ND	U	0.0553	3.03			1
2,3,4,6,7,8-HxCDF	ND	U	0.0474	3.03			1
1,2,3,4,6,7,8-HpCDF	0.179	BJK	0.0474	3.03	0.70	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0620	3.03			1
OCDF	0.591	J	0.118	6.06	0.91	1.004	1
Total Tetra-Dioxins	ND	U	0.0593	1.21			1
Total Penta-Dioxins	ND	U	0.0621	3.03			1
Total Hexa-Dioxins	0.288	J	0.0280	3.03	1.11		1
Total Hepta-Dioxins	1.85	J	0.0620	3.03	1.12		1
Total Tetra-Furans	ND	U	0.0546	1.21			1
Total Penta-Furans	ND	U	0.0412	3.03			1
Total Hexa-Furans	0.0626	J	0.0448	3.03	1.16		1
Total Hepta-Furans	ND	U	0.0474	3.03			1

Comments:

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11
Sample Matrix: Soil

Service Request: E0800456
Date Collected: 05/12/2008
Date Received: 05/13/2008

Sample Name: B-12-0-2
Lab Code: E0800456-017

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method
Sample Amount: 10.021g
Percent Solids: 82.4
Data File Name: U215770
ICAL Name: 12/10/07

Date Analyzed: 5/20/08 01:00:00
Date Extracted: 5/14/08
Instrument Name: E-HRMS-02
GC Column: DB-5
Blank File Name: U215763
Cal Ver. File Name: U215761

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	787.621	79		40-135	0.78	1.007
13C-1,2,3,7,8-PeCDD	1000	807.406	81		40-135	1.54	1.156
13C-1,2,3,6,7,8-HxCDD	2500	2007.220	80		40-135	1.24	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1820.226	73		40-135	1.05	1.069
13C-OCDD	5000	2614.077	52		40-135	0.90	1.153
13C-2,3,7,8-TCDF	1000	756.268	76		40-135	0.78	0.980
13C-1,2,3,7,8-PeCDF	1000	802.849	80		40-135	1.62	1.121
13C-1,2,3,4,7,8-HxCDF	2500	1827.060	73		40-135	0.53	0.972
13C-1,2,3,4,6,7,8-HpCDF	2500	1808.388	72		40-135	0.45	1.044
37Cl-2,3,7,8-TCDD	800	726.640	91		40-135	NA	1.007

Comments:

Client: Kennedy/Jenks Consultants, Incorporated
 Project: Tetra Pak/016066.11
 Sample Matrix: Soil

Service Request: E0800456
 Date Collected: 05/12/2008
 Date Received: 05/13/2008

Sample Name: B-12-0-2
 Lab Code: E0800456-017

Units: ng/Kg
 Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
 Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0593	1	1	
1,2,3,7,8-PeCDD	ND	0.0621	1	1	
1,2,3,4,7,8-HxCDD	ND	0.0282	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.0280	1	0.1	
1,2,3,7,8,9-HxCDD	0.0940	0.0283	1	0.1	0.00940
1,2,3,4,6,7,8-HpCDD	1.85	0.0620	1	0.01	0.0185
OCDD	16.8	0.106	1	0.0003	0.00504
2,3,7,8-TCDF	ND	0.0546	1	0.1	
1,2,3,7,8-PeCDF	ND	0.0419	1	0.03	
2,3,4,7,8-PeCDF	ND	0.0412	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.0429	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.0448	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.0553	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0474	1	0.1	
1,2,3,4,6,7,8-HpCDF	0.179	0.0474	1	0.01	0.00179
1,2,3,4,7,8,9-HpCDF	ND	0.0620	1	0.01	
OCDF	0.591	0.118	1	0.0003	0.000177
Total TEQ					0.0349

2005 WHO TEFs, ND = 0

Comments:

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11
Sample Matrix: Soil

Service Request: E0800456
Date Collected: 05/12/2008
Date Received: 05/13/2008

Sample Name: B-13-3
Lab Code: E0800456-021

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method
Sample Amount: 10.636g
Percent Solids: 77.1
Data File Name: U215771
ICAL Name: 12/10/07

Date Analyzed: 5/20/08 01:48:00
Date Extracted: 5/14/08
Instrument Name: E-HRMS-02
GC Column: DB-5
Blank File Name: U215763
Cal Ver. File Name: U215761

Analyte Name	Result Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	0.427 J	0.0691	1.22	0.70	1.001	1
1,2,3,7,8-PeCDD	5.76	0.0894	3.05	1.43	1.000	1
1,2,3,4,7,8-HxCDD	11.7	0.115	3.05	1.24	0.998	1
1,2,3,6,7,8-HxCDD	350	0.114	3.05	1.27	1.000	1
1,2,3,7,8,9-HxCDD	39.5	0.116	3.05	1.31	1.008	1
1,2,3,4,6,7,8-HpCDD	21700 BE	0.152	3.05	1.05	1.000	1
OCDD	169000 BE	0.220	6.10	0.94	1.000	1
2,3,7,8-TCDF	0.203 CJ	0.0718	1.22	0.70	1.001	1
1,2,3,7,8-PeCDF	0.851 JK	0.0707	3.05	2.40	1.000	1
2,3,4,7,8-PeCDF	0.822 J	0.0695	3.05	1.68	1.022	1
1,2,3,4,7,8-HxCDF	31.9	4.51	3.05	1.26	1.000	1
1,2,3,6,7,8-HxCDF	13.0	4.70	3.05	1.23	1.003	1
1,2,3,7,8,9-HxCDF	ND U	5.81	3.05			1
2,3,4,6,7,8-HxCDF	30.0	4.97	3.05	1.24	1.015	1
1,2,3,4,6,7,8-HpCDF	1970 BE	5.78	3.05	1.02	1.000	1
1,2,3,4,7,8,9-HpCDF	197	7.57	3.05	1.02	1.035	1
OCDF	27300 E	0.192	6.10	0.89	1.004	1
Total Tetra-Dioxins	1.79	0.0691	1.22	0.70		1
Total Penta-Dioxins	14.7	0.0894	3.05	1.52		1
Total Hexa-Dioxins	765	0.114	3.05	1.25		1
Total Hepta-Dioxins	30300	0.152	3.05	1.05		1
Total Tetra-Furans	17.4	0.0718	1.22	0.76		1
Total Penta-Furans	47.3	0.0695	3.05	1.54		1
Total Hexa-Furans	441	4.70	3.05	1.20		1
Total Hepta-Furans	14300	5.78	3.05	1.02		1

Comments:

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11
Sample Matrix: Soil

Service Request: E0800456
Date Collected: 05/12/2008
Date Received: 05/13/2008

Sample Name: B-13-3
Lab Code: E0800456-021

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method
Sample Amount: 10.636g
Percent Solids: 77.1
Data File Name: U215771
ICAL Name: 12/10/07

Date Analyzed: 5/20/08 01:48:00
Date Extracted: 5/14/08
Instrument Name: E-HRMS-02
GC Column: DB-5
Blank File Name: U215763
Cal Ver. File Name: U215761

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	651.247	65		40-135	0.79	1.007
13C-1,2,3,7,8-PeCDD	1000	655.425	66		40-135	1.54	1.156
13C-1,2,3,6,7,8-HxCDD	2500	1506.835	60		40-135	1.24	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1344.506	54		40-135	1.05	1.069
13C-OCDD	5000	1871.528	37	Y	40-135	0.95	1.154
13C-2,3,7,8-TCDF	1000	632.235	63		40-135	0.78	0.980
13C-1,2,3,7,8-PeCDF	1000	668.053	67		40-135	1.56	1.121
13C-1,2,3,4,7,8-HxCDF	2500	1379.062	55		40-135	0.53	0.972
13C-1,2,3,4,6,7,8-HpCDF	2500	1406.392	56		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	595.528	74		40-135	NA	1.007

Comments:

Client: Kennedy/Jenks Consultants, Incorporated
 Project: Tetra Pak/016066.11
 Sample Matrix: Soil

Service Request: E0800456
 Date Collected: 05/12/2008
 Date Received: 05/13/2008

Sample Name: B-13-3
 Lab Code: E0800456-021

Units: ng/Kg
 Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
 Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	0.427	0.0691	1	1	0.427
1,2,3,7,8-PeCDD	5.76	0.0894	1	1	5.76
1,2,3,4,7,8-HxCDD	11.7	0.115	1	0.1	1.17
1,2,3,6,7,8-HxCDD	350	0.114	1	0.1	35.0
1,2,3,7,8,9-HxCDD	39.5	0.116	1	0.1	3.95
1,2,3,4,6,7,8-HpCDD	28600	13.7	100	0.01	286
OCDD	368000	18.5	100	0.0003	110
2,3,7,8-TCDF	ND	0.0841	1	0.1	
1,2,3,7,8-PeCDF	0.851	0.0707	1	0.03	0.0255
2,3,4,7,8-PeCDF	0.822	0.0695	1	0.3	0.247
1,2,3,4,7,8-HxCDF	31.9	4.51	1	0.1	3.19
1,2,3,6,7,8-HxCDF	13.0	4.70	1	0.1	1.30
1,2,3,7,8,9-HxCDF	ND	5.81	1	0.1	
2,3,4,6,7,8-HxCDF	30.0	4.97	1	0.1	3.00
1,2,3,4,6,7,8-HpCDF	2210	27.9	100	0.01	22.1
1,2,3,4,7,8,9-HpCDF	197	7.57	1	0.01	1.97
OCDF	35500	23.6	100	0.0003	10.7
Total TEQ					485

2005 WHO TEFs, ND = 0

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11
Sample Matrix: Soil

Service Request: E0800456
Date Collected: 05/12/2008
Date Received: 05/13/2008

Sample Name: B-13-3DL
Lab Code: E0800456-021

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method
Sample Amount: 10.636g
Percent Solids: 77.1
Data File Name: U215848
ICAL Name: 12/10/07

Date Analyzed: 5/23/08 09:48:00
Date Extracted: 5/14/08
Instrument Name: E-HRMS-02
GC Column: DB-5
Blank File Name: U215763
Cal Ver. File Name: U215844

Analyte Name	Result Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND U	7.28	122			100
1,2,3,7,8-PeCDD	ND U	6.91	305			100
1,2,3,4,7,8-HxCDD	19.6 J	4.10	305	1.29	0.998	100
1,2,3,6,7,8-HxCDD	436	4.06	305	1.18	1.000	100
1,2,3,7,8,9-HxCDD	59.4 J	4.11	305	1.25	1.008	100
1,2,3,4,6,7,8-HpCDD	28600 B	13.7	305	1.06	1.000	100
OCDD	368000 BE	18.5	610	0.89	1.000	100
2,3,7,8-TCDF	ND U	5.12	122			100
1,2,3,7,8-PeCDF	ND U	5.27	305			100
2,3,4,7,8-PeCDF	ND U	5.17	305			100
1,2,3,4,7,8-HxCDF	49.0 J	11.0	305	1.41	1.000	100
1,2,3,6,7,8-HxCDF	19.7 JK	11.5	305	0.93	1.002	100
1,2,3,7,8,9-HxCDF	ND U	14.2	305			100
2,3,4,6,7,8-HxCDF	47.8 J	12.1	305	1.15	1.015	100
1,2,3,4,6,7,8-HpCDF	2210 B	27.9	305	0.99	1.000	100
1,2,3,4,7,8,9-HpCDF	202 J	36.6	305	1.03	1.035	100
OCDF	35500	23.6	610	0.89	1.004	100
Total Tetra-Dioxins	ND U	7.28	122			100
Total Penta-Dioxins	ND U	6.91	305			100
Total Hexa-Dioxins	1000	4.06	305	1.36		100
Total Hepta-Dioxins	41300	13.7	305	1.03		100
Total Tetra-Furans	14.8 J	5.12	122	0.68		100
Total Penta-Furans	39.6 J	5.17	305	1.39		100
Total Hexa-Furans	2480	11.5	305	1.26		100
Total Hepta-Furans	15600	27.9	305	0.99		100

Comments:

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11
Sample Matrix: Soil

Service Request: E0800456
Date Collected: 05/12/2008
Date Received: 05/13/2008

Sample Name: B-13-3DL
Lab Code: E0800456-021

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method
Sample Amount: 10.636g
Percent Solids: 77.1
Data File Name: U215848
ICAL Name: 12/10/07

Date Analyzed: 5/23/08 09:48:00
Date Extracted: 5/14/08
Instrument Name: E-HRMS-02
GC Column: DB-5
Blank File Name: U215763
Cal Ver. File Name: U215844

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1540	927.344	60		40-135	0.80	1.007
13C-1,2,3,7,8-PeCDD	1520	850.552	56		40-135	1.55	1.157
13C-1,2,3,6,7,8-HxCDD	4170	2200.008	53		40-135	1.22	0.992
13C-1,2,3,4,6,7,8-HpCDD	4630	2322.654	50		40-135	1.04	1.069
13C-OCDD	13500	4175.106	31	Y	40-135	0.90	1.153
13C-2,3,7,8-TCDF	1590	948.230	60		40-135	0.79	0.980
13C-1,2,3,7,8-PeCDF	1490	873.815	59		40-135	1.56	1.121
13C-1,2,3,4,7,8-HxCDF	4550	2032.385	45		40-135	0.53	0.972
13C-1,2,3,4,6,7,8-HpCDF	4460	2586.963	58		40-135	0.46	1.044
37Cl-2,3,7,8-TCDD	800	6.764	85		40-135	NA	1.007

Comments:

Client: Kennedy/Jenks Consultants, Incorporated
 Project: Tetra Pak/016066.11
 Sample Matrix: Soil

Service Request: E0800456
 Date Collected: 05/12/2008
 Date Received: 05/13/2008

Sample Name: B-13-3RE
 Lab Code: E0800456-021

Units: ng/Kg
 Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
 Prep Method: Method
 Sample Amount: 10.636g
 Percent Solids: 77.1
 Data File Name: U128024
 ICAL Name: 11/16/07

Date Analyzed: 5/21/08 22:09:00
 Date Extracted: 5/14/08
 Instrument Name: E-HRMS-01
 GC Column: DB-225
 Blank File Name: U128018
 Cal Ver. File Name: U128017

Analyte Name	Result Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	ND U	0.0841	1.22			1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	549.595	55	40-135	0.77	1.060
37Cl-2,3,7,8-TCDD	800	603.498	75	40-135	NA	0.987

Comments:

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11
Sample Matrix: Soil

Service Request: E0800456
Date Collected: 05/12/2008
Date Received: 05/13/2008

Sample Name: B-13-15
Lab Code: E0800456-024

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method
Sample Amount: 5.826g
Percent Solids: 73.2
Data File Name: U128286
ICAL Name: 04/02/07

Date Analyzed: 6/5/08 20:53:00
Date Extracted: 6/2/08
Instrument Name: E-HRMS-01
GC Column: DB-5
Blank File Name: U128285
Cal Ver. File Name: U128283

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0598	2.34			1
1,2,3,7,8-PeCDD	ND	U	0.0675	5.86			1
1,2,3,4,7,8-HxCDD	0.157	JK	0.0640	5.86	1.01	0.998	1
1,2,3,6,7,8-HxCDD	0.214	J	0.0621	5.86	1.09	1.000	1
1,2,3,7,8,9-HxCDD	0.293	J	0.0671	5.86	1.06	1.007	1
1,2,3,4,6,7,8-HpCDD	3.14	BJ	0.104	5.86	1.00	1.000	1
OCDD	93.6	B	0.254	11.7	0.86	1.000	1
2,3,7,8-TCDF	ND	U	0.0657	2.34			1
1,2,3,7,8-PeCDF	0.180	J	0.0485	5.86	1.39	1.000	1
2,3,4,7,8-PeCDF	0.149	JK	0.0469	5.86	1.27	1.022	1
1,2,3,4,7,8-HxCDF	0.157	JK	0.0450	5.86	0.99	1.000	1
1,2,3,6,7,8-HxCDF	0.153	J	0.0460	5.86	1.39	1.003	1
1,2,3,7,8,9-HxCDF	0.146	J	0.0610	5.86	1.20	1.034	1
2,3,4,6,7,8-HxCDF	0.161	J	0.0509	5.86	1.31	1.016	1
1,2,3,4,6,7,8-HpCDF	0.258	J	0.0774	5.86	1.09	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.103	5.86			1
OCDF	0.750	J	0.257	11.7	0.90	1.004	1
Total Tetra-Dioxins	ND	U	0.0598	2.34			1
Total Penta-Dioxins	ND	U	0.0675	5.86			1
Total Hexa-Dioxins	1.07	J	0.0621	5.86	1.11		1
Total Hepta-Dioxins	6.49		0.104	5.86	1.06		1
Total Tetra-Furans	ND	U	0.0657	2.34			1
Total Penta-Furans	0.180	J	0.0469	5.86	1.39		1
Total Hexa-Furans	0.459	J	0.0460	5.86	1.39		1
Total Hepta-Furans	0.561	J	0.0774	5.86	1.09		1

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11
Sample Matrix: Soil

Service Request: E0800456
Date Collected: 05/12/2008
Date Received: 05/13/2008

Sample Name: B-13-15
Lab Code: E0800456-024

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method
Sample Amount: 5.826g
Percent Solids: 73.2
Data File Name: U128286
ICAL Name: 04/02/07

Date Analyzed: 6/5/08 20:53:00
Date Extracted: 6/2/08
Instrument Name: E-HRMS-01
GC Column: DB-5
Blank File Name: U128285
Cal Ver. File Name: U128283

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	642.615	64		40-135	0.77	1.007
13C-1,2,3,7,8-PeCDD	1000	633.364	63		40-135	1.58	1.158
13C-1,2,3,6,7,8-HxCDD	2500	1525.494	61		40-135	1.25	0.993
13C-1,2,3,4,6,7,8-HpCDD	2500	1174.992	47		40-135	1.04	1.067
13C-OCDD	5000	1848.490	37	Y	40-135	0.89	1.146
13C-2,3,7,8-TCDF	1000	575.059	58		40-135	0.80	0.980
13C-1,2,3,7,8-PeCDF	1000	538.858	54		40-135	1.55	1.122
13C-1,2,3,4,7,8-HxCDF	2500	1263.346	51		40-135	0.52	0.973
13C-1,2,3,4,6,7,8-HpCDF	2500	1149.043	46		40-135	0.45	1.043
37Cl-2,3,7,8-TCDD	800	602.379	75		40-135	NA	1.008

Comments:

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11
Sample Matrix: Soil

Service Request: E0800456
Date Collected: 05/12/2008
Date Received: 05/13/2008

Sample Name: B-13-15
Lab Code: E0800456-024

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0598	1	1	
1,2,3,7,8-PeCDD	ND	0.0675	1	1	
1,2,3,4,7,8-HxCDD	0.157	0.0640	1	0.1	0.0157
1,2,3,6,7,8-HxCDD	0.214	0.0621	1	0.1	0.0214
1,2,3,7,8,9-HxCDD	0.293	0.0671	1	0.1	0.0293
1,2,3,4,6,7,8-HpCDD	3.14	0.104	1	0.01	0.0314
OCDD	93.6	0.254	1	0.0003	0.0281
2,3,7,8-TCDF	ND	0.230	1	0.1	
1,2,3,7,8-PeCDF	0.180	0.0485	1	0.03	0.00540
2,3,4,7,8-PeCDF	0.149	0.0469	1	0.3	0.0447
1,2,3,4,7,8-HxCDF	0.157	0.0450	1	0.1	0.0157
1,2,3,6,7,8-HxCDF	0.153	0.0460	1	0.1	0.0153
1,2,3,7,8,9-HxCDF	0.146	0.0610	1	0.1	0.0146
2,3,4,6,7,8-HxCDF	0.161	0.0509	1	0.1	0.0161
1,2,3,4,6,7,8-HpCDF	0.258	0.0774	1	0.01	0.00258
1,2,3,4,7,8,9-HpCDF	ND	0.103	1	0.01	
OCDF	0.750	0.257	1	0.0003	0.000225
Total TEQ					0.241

2005 WHO TEFs, ND = 0

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11
Sample Matrix: Soil

Service Request: E0800456**Date Collected:****Date Received:**

Sample Name: Method Blank
Lab Code: EQ0800207-01

Units: ng/Kg**Basis:** Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method
Sample Amount: 10.0g
Percent Solids:
Data File Name: U215763
ICAL Name: 12/10/07

Date Analyzed: 5/19/08 19:27:00
Date Extracted: 5/14/08
Instrument Name: E-HRMS-02
GC Column: DB-5
Blank File Name: U215763
Cal Ver. File Name: U215761

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0808	1.00			1
1,2,3,7,8-PeCDD	ND	U	0.0748	2.50			1
1,2,3,4,7,8-HxCDD	ND	U	0.0713	2.50			1
1,2,3,6,7,8-HxCDD	ND	U	0.0707	2.50			1
1,2,3,7,8,9-HxCDD	ND	U	0.0715	2.50			1
1,2,3,4,6,7,8-HpCDD	0.367	J	0.118	2.50	1.16	1.000	1
OCDD	1.98	J	0.188	5.00	1.01	1.000	1
2,3,7,8-TCDF	ND	U	0.0728	1.00			1
1,2,3,7,8-PeCDF	ND	U	0.0573	2.50			1
2,3,4,7,8-PeCDF	ND	U	0.0563	2.50			1
1,2,3,4,7,8-HxCDF	ND	U	0.0539	2.50			1
1,2,3,6,7,8-HxCDF	ND	U	0.0563	2.50			1
1,2,3,7,8,9-HxCDF	ND	U	0.0695	2.50			1
2,3,4,6,7,8-HxCDF	ND	U	0.0595	2.50			1
1,2,3,4,6,7,8-HpCDF	0.262	J	0.0623	2.50	1.16	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0815	2.50			1
OCDF	ND	U	0.185	5.00			1
Total Tetra-Dioxins	ND	U	0.0808	1.00			1
Total Penta-Dioxins	ND	U	0.0748	2.50			1
Total Hexa-Dioxins	ND	U	0.0707	2.50			1
Total Hepta-Dioxins	1.12	J	0.118	2.50	0.98		1
Total Tetra-Furans	ND	U	0.0728	1.00			1
Total Penta-Furans	ND	U	0.0563	2.50			1
Total Hexa-Furans	ND	U	0.0563	2.50			1
Total Hepta-Furans	0.262	J	0.0623	2.50	1.16		1

Comments:

Client: Kennedy/Jenks Consultants, Incorporated
 Project: Tetra Pak/016066.11
 Sample Matrix: Soil

Service Request: E0800456

Date Collected:

Date Received:

Sample Name: Method Blank
 Lab Code: EQ0800207-01

Units: ng/Kg

Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
 Prep Method: Method
 Sample Amount: 10.0g
 Percent Solids:
 Data File Name: U215763
 ICAL Name: 12/10/07

Date Analyzed: 5/19/08 19:27:00
 Date Extracted: 5/14/08
 Instrument Name: E-HRMS-02
 GC Column: DB-5
 Blank File Name: U215763
 Cal Ver. File Name: U215761

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	479.767	48		40-135	0.79	1.007
13C-1,2,3,7,8-PeCDD	1000	509.659	51		40-135	1.56	1.157
13C-1,2,3,6,7,8-HxCDD	2500	1554.049	62		40-135	1.26	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1382.489	55		40-135	1.06	1.069
13C-OCDD	5000	1841.784	37	Y	40-135	0.89	1.153
13C-2,3,7,8-TCDF	1000	469.910	47		40-135	0.78	0.980
13C-1,2,3,7,8-PeCDF	1000	503.371	50		40-135	1.57	1.121
13C-1,2,3,4,7,8-HxCDF	2500	1431.916	57		40-135	0.53	0.972
13C-1,2,3,4,6,7,8-HpCDF	2500	1567.953	63		40-135	0.46	1.045
37Cl-2,3,7,8-TCDD	800	448.535	56		40-135	NA	1.007

Comments:

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11
Sample Matrix: Soil

Service Request: E0800456
Date Collected:
Date Received:

Sample Name: Method Blank
Lab Code: EQ0800207-01

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method
Sample Amount: 10.0g
Percent Solids:
Data File Name: U128004
ICAL Name: 04/02/07

Date Analyzed: 5/20/08 18:51:00
Date Extracted: 5/14/08
Instrument Name: E-HRMS-01
GC Column: DB-5
Blank File Name: U128004
Cal Ver. File Name: U128002

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0130	1.00			1
1,2,3,7,8-PeCDD	ND	U	0.00770	2.50			1
1,2,3,4,7,8-HxCDD	ND	U	0.0104	2.50			1
1,2,3,6,7,8-HxCDD	ND	U	0.0101	2.50			1
1,2,3,7,8,9-HxCDD	ND	U	0.0109	2.50			1
1,2,3,4,6,7,8-HpCDD	0.677	J	0.0233	2.50	0.96	1.000	1
OCDD	3.78	J	0.0540	5.00	0.87	1.000	1
2,3,7,8-TCDF	ND	U	0.0167	1.00			1
1,2,3,7,8-PeCDF	ND	U	0.00850	2.50			1
2,3,4,7,8-PeCDF	ND	U	0.00820	2.50			1
1,2,3,4,7,8-HxCDF	ND	U	0.0173	2.50			1
1,2,3,6,7,8-HxCDF	ND	U	0.0177	2.50			1
1,2,3,7,8,9-HxCDF	ND	U	0.0234	2.50			1
2,3,4,6,7,8-HxCDF	ND	U	0.0196	2.50			1
1,2,3,4,6,7,8-HpCDF	0.175	J	0.0289	2.50	0.91	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0385	2.50			1
OCDF	0.337	J	0.0400	5.00	0.91	1.002	1
Total Tetra-Dioxins	ND	U	0.0130	1.00			1
Total Penta-Dioxins	ND	U	0.00770	2.50			1
Total Hexa-Dioxins	ND	U	0.0101	2.50			1
Total Hepta-Dioxins	1.33	J	0.0233	2.50	1.03		1
Total Tetra-Furans	ND	U	0.0167	1.00			1
Total Penta-Furans	ND	U	0.00820	2.50			1
Total Hexa-Furans	ND	U	0.0177	2.50			1
Total Hepta-Furans	0.432	J	0.0289	2.50	0.91		1

Comments:

Client: Kennedy/Jenks Consultants, Incorporated
 Project: Tetra Pak/016066.11
 Sample Matrix: Soil

Service Request: E0800456

Date Collected:

Date Received:

Sample Name: Method Blank
 Lab Code: EQ0800207-01

Units: ng/Kg

Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
 Prep Method: Method
 Sample Amount: 10.0g
 Percent Solids:
 Data File Name: U128004
 ICAL Name: 04/02/07

Date Analyzed: 5/20/08 18:51:00
 Date Extracted: 5/14/08
 Instrument Name: E-HRMS-01
 GC Column: DB-5
 Blank File Name: U128004
 Cal Ver. File Name: U128002

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	563.585	56		40-135	0.78	1.013
13C-1,2,3,7,8-PeCDD	1000	504.478	50		40-135	1.51	1.256
13C-1,2,3,6,7,8-HxCDD	2500	1434.396	57		40-135	1.23	0.991
13C-1,2,3,4,6,7,8-HpCDD	2500	1137.287	45		40-135	1.03	1.073
13C-OCDD	5000	1775.991	36	Y	40-135	0.88	1.144
13C-2,3,7,8-TCDF	1000	444.241	44		40-135	0.75	0.969
13C-1,2,3,7,8-PeCDF	1000	420.314	42		40-135	1.53	1.201
13C-1,2,3,4,7,8-HxCDF	2500	1177.363	47		40-135	0.51	0.966
13C-1,2,3,4,6,7,8-HpCDF	2500	1087.133	43		40-135	0.44	1.049
37Cl-2,3,7,8-TCDD	800	485.961	61		40-135	NA	1.014

Comments:

Client: Kennedy/Jenks Consultants, Incorporated
 Project: Tetra Pak/016066.11
 Sample Matrix: Soil

Service Request: E0800456
 Date Collected:
 Date Received:

Sample Name: Method Blank
 Lab Code: EQ0800235-01

Units: ng/Kg
 Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
 Prep Method: Method
 Sample Amount: 10.000g
 Percent Solids:
 Data File Name: U128285
 ICAL Name: 04/02/07

Date Analyzed: 6/5/08 20:07:00
 Date Extracted: 6/2/08
 Instrument Name: E-HRMS-01
 GC Column: DB-5
 Blank File Name: U128285
 Cal Ver. File Name: U128283

Analyte Name	Result Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND U	0.0302	1.00			1
1,2,3,7,8-PeCDD	ND U	0.0253	2.50			1
1,2,3,4,7,8-HxCDD	ND U	0.0356	2.50			1
1,2,3,6,7,8-HxCDD	ND U	0.0344	2.50			1
1,2,3,7,8,9-HxCDD	ND U	0.0372	2.50			1
1,2,3,4,6,7,8-HpCDD	0.216 J	0.0642	2.50	1.07	1.000	1
OCDD	0.953 J	0.160	5.00	0.81	1.000	1
2,3,7,8-TCDF	ND U	0.0351	1.00			1
1,2,3,7,8-PeCDF	ND U	0.0266	2.50			1
2,3,4,7,8-PeCDF	ND U	0.0256	2.50			1
1,2,3,4,7,8-HxCDF	ND U	0.0316	2.50			1
1,2,3,6,7,8-HxCDF	ND U	0.0323	2.50			1
1,2,3,7,8,9-HxCDF	ND U	0.0428	2.50			1
2,3,4,6,7,8-HxCDF	ND U	0.0357	2.50			1
1,2,3,4,6,7,8-HpCDF	ND U	0.0406	2.50			1
1,2,3,4,7,8,9-HpCDF	ND U	0.0540	2.50			1
OCDF	ND U	0.166	5.00			1
Total Tetra-Dioxins	ND U	0.0302	1.00			1
Total Penta-Dioxins	ND U	0.0253	2.50			1
Total Hexa-Dioxins	ND U	0.0344	2.50			1
Total Hepta-Dioxins	0.216 J	0.0642	2.50	1.07		1
Total Tetra-Furans	0.0930 J	0.0351	1.00	0.75		1
Total Penta-Furans	ND U	0.0256	2.50			1
Total Hexa-Furans	ND U	0.0323	2.50			1
Total Hepta-Furans	ND U	0.0406	2.50			1

Comments:

Client: Kennedy/Jenks Consultants, Incorporated
 Project: Tetra Pak/016066.11
 Sample Matrix: Soil

Service Request: E0800456

Date Collected:

Date Received:

Sample Name: Method Blank
 Lab Code: EQ0800235-01

Units: ng/Kg

Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
 Prep Method: Method
 Sample Amount: 10.000g
 Percent Solids:
 Data File Name: U128285
 ICAL Name: 04/02/07

Date Analyzed: 6/5/08 20:07:00
 Date Extracted: 6/2/08
 Instrument Name: E-HRMS-01
 GC Column: DB-5
 Blank File Name: U128285
 Cal Ver. File Name: U128283

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	575.498	58		40-135	0.79	1.007
13C-1,2,3,7,8-PeCDD	1000	562.597	56		40-135	1.53	1.158
13C-1,2,3,6,7,8-HxCDD	2500	1385.910	55		40-135	1.25	0.993
13C-1,2,3,4,6,7,8-HpCDD	2500	970.570	39	Y	40-135	1.04	1.067
13C-OCDD	5000	1402.198	28	Y	40-135	0.89	1.146
13C-2,3,7,8-TCDF	1000	498.984	50		40-135	0.79	0.980
13C-1,2,3,7,8-PeCDF	1000	483.313	48		40-135	1.58	1.122
13C-1,2,3,4,7,8-HxCDF	2500	1195.074	48		40-135	0.52	0.973
13C-1,2,3,4,6,7,8-HpCDF	2500	969.196	39	Y	40-135	0.45	1.043
37Cl-2,3,7,8-TCDD	800	555.622	69		40-135	NA	1.008

Comments:



Accuracy and Precision

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COLUMBIA ANALYTICAL SERVICES, INC.

45
QA/QC Report

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11
Sample Matrix: Soil

Service Request: E0800456

Sample Name: Lab Control Sample
Lab Code: EQ0800207-02

Units: ng/Kg
Basis: Dry

Analytical Method: 8290
Prep Method: Method

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limi
	Result	Expected	% Rec	Result	Expected	% Rec			
2,3,7,8-TCDD	20.5	20.0	103	20.9	20.0	105	87 - 135	2	20
1,2,3,7,8-PeCDD	48.5	50.0	97	48.8	50.0	98	88 - 135	1	20
1,2,3,4,7,8-HxCDD	45.4	50.0	91	47.7	50.0	95	81 - 138	5	20
1,2,3,6,7,8-HxCDD	49.9	50.0	100	49.7	50.0	99	82 - 136	0	20
1,2,3,7,8,9-HxCDD	48.3	50.0	97	51.4	50.0	103	77 - 135	6	20
1,2,3,4,6,7,8-HpCDD	54.5	50.0	109	53.5	50.0	107	93 - 144	2	20
OCDD	115	100	115	116	100	116	93 - 162	1	20
2,3,7,8-TCDF	19.4	20.0	97	19.0	20.0	95	82 - 141	2	20
1,2,3,7,8-PeCDF	51.3	50.0	103	51.7	50.0	103	92 - 139	1	20
2,3,4,7,8-PeCDF	50.1	50.0	100	51.1	50.0	102	74 - 145	2	20
1,2,3,4,7,8-HxCDF	54.3	50.0	109	55.9	50.0	112	86 - 142	3	20
1,2,3,6,7,8-HxCDF	59.6	50.0	119	60.9	50.0	122	88 - 162	2	20
1,2,3,7,8,9-HxCDF	52.9	50.0	106	57.2	50.0	114	66 - 156	8	20
2,3,4,6,7,8-HxCDF	54.3	50.0	109	57.5	50.0	115	80 - 150	6	20
1,2,3,4,6,7,8-HpCDF	54.9	50.0	110	54.5	50.0	109	91 - 131	1	20
1,2,3,4,7,8,9-HpCDF	59.3	50.0	119	57.7	50.0	115	69 - 169	3	20
OCDF	120	100	120	122	100	122	82 - 200	2	20

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

46
QA/QC Report

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11
Sample Matrix: Soil

Service Request: E0800456

Sample Name: Lab Control Sample
Lab Code: EQ0800235-02

Units: ng/Kg
Basis: Dry

Analytical Method: 8290
Prep Method: Method

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limi
	Result	Expected	% Rec	Result	Expected	% Rec			
2,3,7,8-TCDD	24.2	20.0	121	23.7	20.0	119	87 - 135	2	20
1,2,3,7,8-PeCDD	58.8	50.0	118	58.5	50.0	117	88 - 135	1	20
1,2,3,4,7,8-HxCDD	61.3	50.0	123	63.7	50.0	127	81 - 138	4	20
1,2,3,6,7,8-HxCDD	60.4	50.0	121	58.4	50.0	117	82 - 136	3	20
1,2,3,7,8,9-HxCDD	58.4	50.0	117	55.9	50.0	112	77 - 135	4	20
1,2,3,4,6,7,8-HpCDD	63.2	50.0	126	61.9	50.0	124	93 - 144	2	20
OCDD	137	100	137	137	100	137	93 - 162	0	20
2,3,7,8-TCDF	25.0	20.0	125	24.1	20.0	121	82 - 141	4	20
1,2,3,7,8-PeCDF	60.6	50.0	121	58.9	50.0	118	92 - 139	3	20
2,3,4,7,8-PeCDF	63.0	50.0	126	62.9	50.0	126	74 - 145	0	20
1,2,3,4,7,8-HxCDF	62.1	50.0	124	61.5	50.0	123	86 - 142	1	20
1,2,3,6,7,8-HxCDF	64.0	50.0	128	60.8	50.0	122	88 - 162	5	20
1,2,3,7,8,9-HxCDF	59.0	50.0	118	60.8	50.0	122	66 - 156	3	20
2,3,4,6,7,8-HxCDF	58.6	50.0	117	59.8	50.0	120	80 - 150	2	20
1,2,3,4,6,7,8-HpCDF	56.4	50.0	113	56.6	50.0	113	91 - 131	0	20
1,2,3,4,7,8,9-HpCDF	66.3	50.0	133	66.8	50.0	134	69 - 169	1	20
OCDF	147	100	147	145	100	145	82 - 200	1	20

Comments:

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11
Sample Matrix: Soil

Service Request: E0800456**Date Collected:****Date Received:**

Sample Name: Lab Control Sample
Lab Code: EQ0800207-02

Units: ng/Kg**Basis:** Dry**Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS**

Analytical Method: 8290
Prep Method: Method
Sample Amount: 10.0g
Percent Solids:
Data File Name: U127997
ICAL Name: 04/02/07

Date Analyzed: 5/20/08 04:31:00
Date Extracted: 5/14/08
Instrument Name: E-HRMS-01
GC Column: DB-5
Blank File Name: U128004
Cal Ver. File Name: U127984

Analyte Name	Result Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	20.5	0.0197	1.00	0.78	1.001	1
1,2,3,7,8-PeCDD	48.5	0.0185	2.50	1.58	1.001	1
1,2,3,4,7,8-HxCDD	45.4	0.0155	2.50	1.20	0.998	1
1,2,3,6,7,8-HxCDD	49.9	0.0150	2.50	1.23	1.000	1
1,2,3,7,8,9-HxCDD	48.3	0.0162	2.50	1.25	1.009	1
1,2,3,4,6,7,8-HpCDD	54.5	0.0233	2.50	1.05	1.000	1
OCDD	115	0.256	5.00	0.86	1.000	1
2,3,7,8-TCDF	19.4	0.0181	1.00	0.79	1.001	1
1,2,3,7,8-PeCDF	51.3	0.0126	2.50	1.59	1.001	1
2,3,4,7,8-PeCDF	50.1	0.0121	2.50	1.53	1.031	1
1,2,3,4,7,8-HxCDF	54.3	0.0162	2.50	1.27	1.000	1
1,2,3,6,7,8-HxCDF	59.6	0.0165	2.50	1.29	1.004	1
1,2,3,7,8,9-HxCDF	52.9	0.0219	2.50	1.30	1.042	1
2,3,4,6,7,8-HxCDF	54.3	0.0183	2.50	1.23	1.020	1
1,2,3,4,6,7,8-HpCDF	54.9	0.0397	2.50	1.04	1.000	1
1,2,3,4,7,8,9-HpCDF	59.3	0.0528	2.50	1.05	1.033	1
OCDF	120	0.108	5.00	0.89	1.003	1
Total Tetra-Dioxins	20.5	0.0197	1.00	0.78		1
Total Penta-Dioxins	48.5	0.0185	2.50	1.58		1
Total Hexa-Dioxins	144	0.0150	2.50	1.20		1
Total Hepta-Dioxins	54.7	0.0233	2.50	1.17		1
Total Tetra-Furans	19.5	0.0181	1.00	0.73		1
Total Penta-Furans	101	0.0121	2.50	1.59		1
Total Hexa-Furans	221	0.0165	2.50	1.27		1
Total Hepta-Furans	114	0.0397	2.50	1.04		1

Comments:

Client: Kennedy/Jenks Consultants, Incorporated
 Project: Tetra Pak/016066.11
 Sample Matrix: Soil

Service Request: E0800456

Date Collected:

Date Received:

Sample Name: Lab Control Sample
 Lab Code: EQ0800207-02

Units: ng/Kg

Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
 Prep Method: Method
 Sample Amount: 10.0g
 Percent Solids:
 Data File Name: U127997
 ICAL Name: 04/02/07

Date Analyzed: 5/20/08 04:31:00
 Date Extracted: 5/14/08
 Instrument Name: E-HRMS-01
 GC Column: DB-5
 Blank File Name: U128004
 Cal Ver. File Name: U127984

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	710.644	71		40-135	0.76	1.013
13C-1,2,3,7,8-PeCDD	1000	626.130	63		40-135	1.55	1.250
13C-1,2,3,6,7,8-HxCDD	2500	1669.821	67		40-135	1.23	0.991
13C-1,2,3,4,6,7,8-HpCDD	2500	1247.147	50		40-135	1.02	1.073
13C-OCDD	5000	2029.671	41		40-135	0.89	1.145
13C-2,3,7,8-TCDF	1000	605.050	61		40-135	0.76	0.968
13C-1,2,3,7,8-PeCDF	1000	525.154	53		40-135	1.56	1.196
13C-1,2,3,4,7,8-HxCDF	2500	1307.760	52		40-135	0.51	0.966
13C-1,2,3,4,6,7,8-HpCDF	2500	1163.745	47		40-135	0.44	1.049
37Cl-2,3,7,8-TCDD	800	623.401	78		40-135	NA	1.014

Comments:

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11
Sample Matrix: Soil

Service Request: E0800456
Date Collected:
Date Received:

Sample Name: Lab Control Sample
Lab Code: EQ0800235-02

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method
Sample Amount: 10.000g
Percent Solids:
Data File Name: U216163
ICAL Name: 12/10/07

Date Analyzed: 6/8/08 15:09:00
Date Extracted: 6/2/08
Instrument Name: E-HRMS-02
GC Column: DB-5
Blank File Name: U128285
Cal Ver. File Name: U216153

Analyte Name	Result Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	24.2	0.0524	1.00	0.77	1.001	1
1,2,3,7,8-PeCDD	58.8	0.0486	2.50	1.58	1.000	1
1,2,3,4,7,8-HxCDD	61.3	0.0578	2.50	1.29	0.998	1
1,2,3,6,7,8-HxCDD	60.4	0.0532	2.50	1.30	1.000	1
1,2,3,7,8,9-HxCDD	58.4	0.0550	2.50	1.25	1.008	1
1,2,3,4,6,7,8-HpCDD	63.2	0.0553	2.50	1.04	1.000	1
OCDD	137	0.117	5.00	0.88	1.000	1
2,3,7,8-TCDF	25.0	0.0364	1.00	0.76	1.000	1
1,2,3,7,8-PeCDF	60.6	0.0336	2.50	1.58	1.001	1
2,3,4,7,8-PeCDF	63.0	0.0329	2.50	1.53	1.022	1
1,2,3,4,7,8-HxCDF	62.1	0.0247	2.50	1.24	1.000	1
1,2,3,6,7,8-HxCDF	64.0	0.0244	2.50	1.25	1.003	1
1,2,3,7,8,9-HxCDF	59.0	0.0281	2.50	1.26	1.035	1
2,3,4,6,7,8-HxCDF	58.6	0.0256	2.50	1.26	1.016	1
1,2,3,4,6,7,8-HpCDF	56.4	0.0720	2.50	1.05	1.000	1
1,2,3,4,7,8,9-HpCDF	66.3	0.0889	2.50	1.04	1.034	1
OCDF	147	0.0960	5.00	0.90	1.004	1
Total Tetra-Dioxins	24.2	0.0524	1.00	0.77		1
Total Penta-Dioxins	58.8	0.0486	2.50	1.58		1
Total Hexa-Dioxins	180	0.0532	2.50	1.29		1
Total Hepta-Dioxins	63.2	0.0553	2.50	1.04		1
Total Tetra-Furans	25.4	0.0364	1.00	0.73		1
Total Penta-Furans	125	0.0329	2.50	1.58		1
Total Hexa-Furans	244	0.0244	2.50	1.24		1
Total Hepta-Furans	123	0.0720	2.50	1.05		1

Comments:

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11
Sample Matrix: Soil

Service Request: E0800456
Date Collected:
Date Received:

Sample Name: Lab Control Sample
Lab Code: EQ0800235-02

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method
Sample Amount: 10.000g
Percent Solids:
Data File Name: U216163
ICAL Name: 12/10/07

Date Analyzed: 6/8/08 15:09:00
Date Extracted: 6/2/08
Instrument Name: E-HRMS-02
GC Column: DB-5
Blank File Name: U128285
Cal Ver. File Name: U216153

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	696.204	70		40-135	0.81	1.007
13C-1,2,3,7,8-PeCDD	1000	878.591	88		40-135	1.59	1.158
13C-1,2,3,6,7,8-HxCDD	2500	1794.377	72		40-135	1.28	0.993
13C-1,2,3,4,6,7,8-HpCDD	2500	1489.073	60		40-135	1.02	1.069
13C-OCDD	5000	2132.597	43		40-135	0.90	1.154
13C-2,3,7,8-TCDF	1000	651.994	65		40-135	0.79	0.980
13C-1,2,3,7,8-PeCDF	1000	813.663	81		40-135	1.59	1.122
13C-1,2,3,4,7,8-HxCDF	2500	1770.717	71		40-135	0.53	0.973
13C-1,2,3,4,6,7,8-HpCDF	2500	1517.324	61		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	606.079	76		40-135	NA	1.007

Comments:

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11
Sample Matrix: Soil

Service Request: E0800456**Date Collected:****Date Received:**

Sample Name: Lab Control Sample Dup
Lab Code: EQ0800207-03

Units: ng/Kg**Basis:** Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method
Sample Amount: 10.0g
Percent Solids:
Data File Name: U127998
ICAL Name: 04/02/07

Date Analyzed: 5/20/08 05:20:00
Date Extracted: 5/14/08
Instrument Name: E-HRMS-01
GC Column: DB-5
Blank File Name: U128004
Cal Ver. File Name: U127984

Analyte Name	Result Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	20.9	0.0178	1.00	0.74	1.001	1
1,2,3,7,8-PeCDD	48.8	0.0218	2.50	1.56	1.000	1
1,2,3,4,7,8-HxCDD	47.7	0.0167	2.50	1.25	0.998	1
1,2,3,6,7,8-HxCDD	49.7	0.0162	2.50	1.26	1.000	1
1,2,3,7,8,9-HxCDD	51.4	0.0175	2.50	1.22	1.009	1
1,2,3,4,6,7,8-HpCDD	53.5	0.0299	2.50	1.02	1.000	1
OCDD	116	0.130	5.00	0.86	1.000	1
2,3,7,8-TCDF	19.0	0.0191	1.00	0.76	1.001	1
1,2,3,7,8-PeCDF	51.7	0.0154	2.50	1.58	1.001	1
2,3,4,7,8-PeCDF	51.1	0.0149	2.50	1.54	1.031	1
1,2,3,4,7,8-HxCDF	55.9	0.0235	2.50	1.28	1.000	1
1,2,3,6,7,8-HxCDF	60.9	0.0240	2.50	1.22	1.004	1
1,2,3,7,8,9-HxCDF	57.2	0.0318	2.50	1.24	1.042	1
2,3,4,6,7,8-HxCDF	57.5	0.0266	2.50	1.29	1.020	1
1,2,3,4,6,7,8-HpCDF	54.5	0.0394	2.50	1.03	1.000	1
1,2,3,4,7,8,9-HpCDF	57.7	0.0525	2.50	1.00	1.033	1
OCDF	122	0.141	5.00	0.90	1.003	1
Total Tetra-Dioxins	21.2	0.0178	1.00	0.74		1
Total Penta-Dioxins	49.0	0.0218	2.50	1.56		1
Total Hexa-Dioxins	149	0.0162	2.50	1.25		1
Total Hepta-Dioxins	53.5	0.0299	2.50	1.02		1
Total Tetra-Furans	19.4	0.0191	1.00	0.76		1
Total Penta-Furans	104	0.0149	2.50	1.60		1
Total Hexa-Furans	232	0.0240	2.50	1.28		1
Total Hepta-Furans	112	0.0394	2.50	1.03		1

Comments:

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11
Sample Matrix: Soil

Service Request: E0800456
Date Collected:
Date Received:

Sample Name: Lab Control Sample Dup
Lab Code: EQ0800207-03

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method
Sample Amount: 10.0g
Percent Solids:
Data File Name: U127998
ICAL Name: 04/02/07

Date Analyzed: 5/20/08 05:20:00
Date Extracted: 5/14/08
Instrument Name: E-HRMS-01
GC Column: DB-5
Blank File Name: U128004
Cal Ver. File Name: U127984

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	705.010	71		40-135	0.76	1.014
13C-1,2,3,7,8-PeCDD	1000	601.344	60		40-135	1.56	1.251
13C-1,2,3,6,7,8-HxCDD	2500	1552.671	62		40-135	1.20	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1226.325	49		40-135	1.04	1.074
13C-OCDD	5000	1922.750	38	Y	40-135	0.90	1.145
13C-2,3,7,8-TCDF	1000	592.949	59		40-135	0.75	0.969
13C-1,2,3,7,8-PeCDF	1000	500.688	50		40-135	1.51	1.197
13C-1,2,3,4,7,8-HxCDF	2500	1221.555	49		40-135	0.52	0.966
13C-1,2,3,4,6,7,8-HpCDF	2500	1169.705	47		40-135	0.44	1.050
37Cl-2,3,7,8-TCDD	800	631.704	79		40-135	NA	1.015

Comments:

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11
Sample Matrix: Soil

Service Request: E0800456**Date Collected:****Date Received:**

Sample Name: Lab Control Sample Dup
Lab Code: EQ0800235-03

Units: ng/Kg**Basis:** Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method
Sample Amount: 10.000g
Percent Solids:
Data File Name: U216164
ICAL Name: 12/10/07

Date Analyzed: 6/8/08 15:57:00
Date Extracted: 6/2/08
Instrument Name: E-HRMS-02
GC Column: DB-5
Blank File Name: U128285
Cal Ver. File Name: U216153

Analyte Name	Result Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	23.7	0.0362	1.00	0.79	1.001	1
1,2,3,7,8-PeCDD	58.5	0.0463	2.50	1.60	1.000	1
1,2,3,4,7,8-HxCDD	63.7	0.0436	2.50	1.25	0.999	1
1,2,3,6,7,8-HxCDD	58.4	0.0401	2.50	1.26	1.000	1
1,2,3,7,8,9-HxCDD	55.9	0.0415	2.50	1.24	1.008	1
1,2,3,4,6,7,8-HpCDD	61.9	0.0357	2.50	1.04	1.000	1
OCDD	137	0.140	5.00	0.88	1.000	1
2,3,7,8-TCDF	24.1	0.0415	1.00	0.78	1.001	1
1,2,3,7,8-PeCDF	58.9	0.0321	2.50	1.59	1.001	1
2,3,4,7,8-PeCDF	62.9	0.0315	2.50	1.55	1.022	1
1,2,3,4,7,8-HxCDF	61.5	0.0363	2.50	1.25	1.000	1
1,2,3,6,7,8-HxCDF	60.8	0.0359	2.50	1.27	1.003	1
1,2,3,7,8,9-HxCDF	60.8	0.0413	2.50	1.22	1.035	1
2,3,4,6,7,8-HxCDF	59.8	0.0375	2.50	1.26	1.016	1
1,2,3,4,6,7,8-HpCDF	56.6	0.0447	2.50	1.04	1.000	1
1,2,3,4,7,8,9-HpCDF	66.8	0.0552	2.50	1.04	1.035	1
OCDF	145	0.0965	5.00	0.90	1.004	1
Total Tetra-Dioxins	23.7	0.0362	1.00	0.79		1
Total Penta-Dioxins	58.5	0.0463	2.50	1.60		1
Total Hexa-Dioxins	178	0.0401	2.50	1.25		1
Total Hepta-Dioxins	62.2	0.0357	2.50	0.99		1
Total Tetra-Furans	24.5	0.0415	1.00	0.87		1
Total Penta-Furans	122	0.0315	2.50	1.59		1
Total Hexa-Furans	243	0.0359	2.50	1.25		1
Total Hepta-Furans	123	0.0447	2.50	1.04		1

Comments: _____

Client: Kennedy/Jenks Consultants, Incorporated
Project: Tetra Pak/016066.11
Sample Matrix: Soil

Service Request: E0800456**Date Collected:****Date Received:**

Sample Name: Lab Control Sample Dup
Lab Code: EQ0800235-03

Units: ng/Kg**Basis:** Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method
Sample Amount: 10.000g
Percent Solids:
Data File Name: U216164
ICAL Name: 12/10/07

Date Analyzed: 6/8/08 15:57:00
Date Extracted: 6/2/08
Instrument Name: E-HRMS-02
GC Column: DB-5
Blank File Name: U128285
Cal Ver. File Name: U216153

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	704.139	70		40-135	0.80	1.007
13C-1,2,3,7,8-PeCDD	1000	914.416	91		40-135	1.56	1.158
13C-1,2,3,6,7,8-HxCDD	2500	1945.654	78		40-135	1.25	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1552.061	62		40-135	1.05	1.069
13C-OCDD	5000	2191.066	44		40-135	0.93	1.154
13C-2,3,7,8-TCDF	1000	652.584	65		40-135	0.78	0.980
13C-1,2,3,7,8-PeCDF	1000	830.741	83		40-135	1.59	1.123
13C-1,2,3,4,7,8-HxCDF	2500	1920.034	77		40-135	0.53	0.972
13C-1,2,3,4,6,7,8-HpCDF	2500	1560.595	62		40-135	0.46	1.045
37Cl-2,3,7,8-TCDD	800	589.241	74		40-135	NA	1.008

Comments: _____



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PAGE 1 OF 3 SR#: 3 COC # _____

PROJECT NAME <u>Tetra Pak</u>					NUMBER OF CONTAINERS Semivolatile Organics by GC/MS 625 ☐ 8270 ☐ 8270LL ☐ Volatile Organics 624 ☐ 8280 ☐ 8021 ☐ Hydrocarbons (*see below) Gas ☐ Diesel ☐ Oil ☐ Fuel Fingerprint (FIQ) ☐ Oil & Grease/TRPH ☐ 1664 SGT ☐ PCB's ☐ Aroclors ☐ Congeners ☐ 608 ☐ 8081A ☐ 8141A ☐ 8151A ☐ Chlorophenolics - 8151M ☐ Tri ☐ Tetra ☐ PCP ☐ PAHS 8310 ☐ SIM ☐ Metals, Total or Dissolved (See list below) Cyanide ☐ Hex-Chrom ☐ pH, Cond., Cl, SO4, PO4, F, NO2, NH3-N, BOD, TSS, TDS (circle) DOC (circle) NO2+NO3 TOX 9020 ☐ AOX 1650 ☐ 506 ☐ <u>D/F Screening</u> <u>Archive</u>
PROJECT NUMBER <u>016066-11</u>					
PROJECT MANAGER <u>Steve Misner</u>					
COMPANY/ADDRESS <u>Kennedy/Jenks Consultants</u>					
<u>200 SW Market St, Suite 500</u>					
CITY/STATE/ZIP <u>Portland, Ore 97201</u>					
E-MAIL ADDRESS <u>stevenmisner@kennedyjenks.com</u>					
PHONE # <u>503-245-4911</u> FAX# <u>503-245-4901</u>					
SAMPLER'S SIGNATURE <u>Steve Misner</u>					
SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	
B-8-0-2	5/12/08	0925		S	
B-8-5		0930			
B-8-10		0935			
B-8-15		0940			
B-9-0-2		0955			
B-9-5		1000			
B-9-10		1004			
B-9-15		1007			
B-9-B-10-0-2		1020			
B-10-5	✓	1025		✓	

REPORT REQUIREMENTS ☒ I. Routine Report: Method Blank, Surrogate, as required ___ II. Report Dup., MS, MSD as required ___ III. Data Validation Report (includes all raw data) ___ IV. CLP Deliverable Report ___ V. EDD	INVOICE INFORMATION P.O. # <u>016066-11</u> Bill To: <u>Kennedy/Jenks</u> <u>Portland</u> Attn: <u>Steve Misner</u>	Circle which metals are to be analyzed: Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg *INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE)
	TURNAROUND REQUIREMENTS ___ 24 hr. ___ 48 hr. ___ 5 Day ☒ Standard (10-15 working days) ___ Provide FAX Results Requested Report Date _____	SPECIAL INSTRUCTIONS/COMMENTS: <u>8290 OK 5/14/08 D/F Screening</u>

RELINQUISHED BY: <u>Steve Misner</u> 5/12/08/1505 Signature _____ Date/Time _____ Printed Name <u>Steve Misner</u> Firm <u>KJC</u>	RECEIVED BY: <u>Nicole Brown</u> 5/13/08 1020 Signature _____ Date/Time _____ Printed Name <u>Nicole Brown</u> Firm <u>CAS-Houston</u>	RELINQUISHED BY: Signature _____ Date/Time _____ Printed Name _____ Firm _____	RECEIVED BY: Signature _____ Date/Time _____ Printed Name _____ Firm _____
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PAGE 3 OF 3 SR#: _____ COC # _____

PROJECT NAME <u>Tetra Pak</u>		NUMBER OF CONTAINERS Semi-volatile Organics by GC/MS 625 ☐ 8270 ☐ 8270LL ☐ Volatile Organics 624 ☐ 8260 ☐ Hydrocarbons (*see below) Gas ☐ Diesel ☐ BTEX ☐ ☐ Fuel Fingerprint (FIQ) ☐ NW-HCID Screen Oil & Grease/TRPH 1664 SGT ☐ PCB's ☐ Congeners ☐ 608 ☐ 8081A ☐ 8141A ☐ 8151A ☐ Chlorophenolics - 8151M ☐ Tri ☐ Tetra ☐ PCP ☐ PAHS 8310 ☐ SIM ☐ Metals, Total or Dissolved (See list below) Cyanide ☐ Hex-Chrom ☐ pH, Cond., Cl, SO ₄ , PO ₄ , F, NO ₂ , NH ₃ -N, COD, TSS, TDS (circle) DOC (circle) NO ₂ +NO ₃ TOX 9020 ☐ AOX 1650 ☐ 506 ☐ <u>DIF screening</u> <u>HOLD for Archive</u>			
PROJECT NUMBER <u>016066-11</u>					
PROJECT MANAGER <u>Steve Misner - Kennedy/Jenks</u>					
COMPANY/ADDRESS <u>200 SW Market St. Suite 500</u>					
CITY/STATE/ZIP <u>Portland, Ore 97201</u>					
E-MAIL ADDRESS <u>stevenmisner@kennedyjenks.com</u>					
PHONE # <u>503-295-4911</u>	FAX# <u>503-295-4901</u>				
SAMPLER'S SIGNATURE <u>Steve Misner</u>					
SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	REMARKS
B-13-3	5/13/08	1150	S	1	
B-13-6		1155		1	
B-13-10		1200		1	
B-13-15	✓	1205	✓	1	

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REPORT REQUIREMENTS ☒ I. Routine Report: Method Blank, Surrogate, as required ___ II. Report Dup., MS, MSD as required ___ III. Data Validation Report (includes all raw data) ___ IV. CLP Deliverable Report ___ V. EDD	INVOICE INFORMATION P.O. # <u>016066-11</u> Bill To: <u>KTC Portland</u>	Circle which metals are to be analyzed: Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg *INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE)	
	TURNAROUND REQUIREMENTS ___ 24 hr. ___ 48 hr. ___ 5 Day ☒ Standard (10-15 working days) ___ Provide FAX Results Requested Report Date _____	SPECIAL INSTRUCTIONS/COMMENTS:	
	RELINQUISHED BY: <u>Steve Misner</u> 5/13/08 1505 Signature <u>Steve Misner</u> Date/Time Printed Name <u>KTC</u> Firm	RECEIVED BY: <u>Nicole Brown</u> 5/13/08 1020 Signature <u>Nicole Brown</u> Date/Time Printed Name <u>CAS - Houston</u> Firm	RELINQUISHED BY: Signature _____ Date/Time _____ Printed Name _____ Firm _____
	RECEIVED BY: Signature _____ Date/Time _____ Printed Name _____ Firm _____		

Cooler Receipt Form

Project: Tetra Pak

Client/Project: Kennedy/Jenks Consultants

Service Request: E08 00456

Received: 5/13/08 Opened (Date/Time): 5/13/08 1020 By: Nicole Brown

1. Samples were received via? ☐ US Mail ☐ Fedex ☒ UPS ☐ DHL ☐ Courier ☐ Hand Delivered
2. Samples were received in: (circle) ☒ Cooler ☐ Box ☐ Other ☐ NA
3. Were custody seals present on coolers? ☒ Y ☐ N If yes, how many and where? 2 Front
- If present, were custody seals intact? ☒ Y ☐ N If present, were they signed and dated? ☒ Y ☐ N
4. Is shipper's air-bill filed? ☐ NA ☐ Y ☒ N If not, record air bill number: 12 F72 0X4 01 963 2 7589
5. Temperature of cooler(s) upon receipt (°C): 6°C
6. If applicable, list Chain of Custody numbers: _____
7. Were custody papers properly filled out (ink, signed, etc.)? ☐ NA ☒ Y ☐ N
8. Packing material used: ☐ Inserts ☐ Bubble Wrap ☒ Blue Ice ☐ Wet Ice ☐ Sleeves ☒ Other Ziplocks
9. Were the correct types of bottles used for the tests indicated? ☒ Y ☐ N
- Did all bottles arrive in good condition (unbroken)? Indicate in the table below. ☒ Y ☐ N

Sample ID	Bottle Count	Bottle Type	Out of Temp	Broken	Initials
B-12-15	1	8 oz. Jar		Broken	AB

10. Were all bottle labels complete (i.e. analysis, ID, etc.)? ☒ Y ☐ N
- Did all bottle labels and tags agree with custody papers? Indicate in the table below. ☒ Y ☐ N

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

11. Additional notes, discrepancies, and resolutions: One jar is broken/cracked at base of jar. However, the sample is in a thick Ziplock baggie and does not appear to leak. YJB 5/13/08 Sample transferred to a clean jar for storage, since the original jar was cracked. OK 5/14/08

Sample Acceptance Policy

Custody Seals (desirable, mandatory if specified in SAP):

- ✓ On outside of cooler
- ✓ Seals intact, signed and dated

Chain-of-Custody documentation (mandatory):

- ✓ Properly filled out in ink & signed by the client
- ✓ Sign and date the coc for CAS/HOU upon cooler receipt
- ✓ Coc must list method number
- ✓ If no coc was submitted with the samples, complete a CAS/HOU coc for the client

Sample Integrity (mandatory):

- ✓ Sample containers must arrive in good condition (not broken or leaking)
- ✓ Sample IDs on the bottles must match the sample IDs on the coc
- ✓ The correct type of sample bottle must be used for the method requested
- ✓ The correct number of sample containers received must agree with the documentation on the coc
- ✓ The correct sample matrix must appear on the coc
- ✓ An appropriate sample volume or weight must be received

Temperature Preservatives (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6°C
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10°C
- ✓ Air samples can be shipped and stored at ambient temperature, ~23°C
- ✓ The sample temperature must be recorded on the coc
- ✓ Notify a Project Chemist if any samples are outside the acceptance temperature or have compromised sample integrity – the client must decide re: replacement sample submittal or continue with the analysis

Cooler Receipt Form, CRF (mandatory):

- ✓ Cooler receipt forms must be completed for each coc & SR#
- ✓ Sample integrity issues must be documented on the CRF
- ✓ A scan of the carrier and the airbill number must be recorded in CAS LIMS

Sample Integrity Issues/Resolutions (mandatory):

- ✓ Sample integrity issues are documented on the CRF and given to the Project Chemist for resolution with the client
- ✓ Client resolution is documented in writing (typically email or on the CRF) and filed in the project folder(s)

Service Request Summary

Folder #: E0800456
Client Name: Kennedy/Jenks Consultants, Incorporated
Project Name: Tetra Pak
Project Number: 016066.11

Report To: Steven Misner
Kennedy/Jenks Consultants, Incorporated
200 SW Market St., Suite 500
Portland, OR 97201-5715

Phone Number: 503-423-4004

Cell Number:

Fax Number: 503-295-4901

E-mail: stevenmisner@kennedyjenks.com

Project Chemist: Darren Biles
Originating Lab: HOUSTON
Logged By: NBROWN
Date Received: 05/13/2008
Internal Due Date: 06/10/2008
QAPP: LAB QAP
Qualifier Set: CAS Standard
Formset: CAS Standard
Merged?: N
Report to MDL?: Y
P.O. Number: 016066.11
EDD: BASIC_WQC_CASNo

25 - -N/A N/A
23 - 8 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
13 - 4 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved

Location: SMO, E-WIC-02, E-WIC01

CAS Samp No.	Client Samp No.	Matrix	Collected	SVM			
				PCDD PCDF/ 8290	ScreenPCDD PCDF/ ScreenPCDD PCDF	Total Solids/ 8290	
E0800456-001	B-8-0-2	Soil	5/12/08 0925	II	II	II	
E0800456-002	B-8-5	Soil	5/12/08 0930	II(H)		II(H)	
E0800456-003	B-8-10	Soil	5/12/08 0935	II(H)		II(H)	
E0800456-004	B-8-15	Soil	5/12/08 0940	II(H)		II(H)	
E0800456-005	B-9-0-2	Soil	5/12/08 0955	II	II	II	
E0800456-006	B-9-5	Soil	5/12/08 1000	II(H)		II(H)	
E0800456-007	B-9-10	Soil	5/12/08 1004	II(H)		II(H)	
E0800456-008	B-9-15	Soil	5/12/08 1007	II(H)		II(H)	
E0800456-009	B-10-0-2	Soil	5/12/08 1020	II	II	II	
E0800456-010	B-10-5	Soil	5/12/08 1025	II(H)		II(H)	
E0800456-011	B-10-10	Soil	5/12/08 1030	II(H)		II(H)	
E0800456-012	B-10-15	Soil	5/12/08 1035	II(H)		II(H)	
E0800456-013	B-11-0-2	Soil	5/12/08 1050	II	II	II	
E0800456-014	B-11-5	Soil	5/12/08 1055	II(H)		II(H)	
E0800456-015	B-11-10	Soil	5/12/08 1100	II(H)		II(H)	
E0800456-016	B-11-15	Soil	5/12/08 1105	II(H)		II(H)	
E0800456-017	B-12-0-2	Soil	5/12/08 1120	II	II	II	
E0800456-018	B-12-5	Soil	5/12/08 1125	II(H)		II(H)	
E0800456-019	B-12-10	Soil	5/12/08 1130	II(H)		II(H)	
E0800456-020	B-12-15	Soil	5/12/08 1135	II(H)		II(H)	
E0800456-021	B-13-3	Soil	5/12/08 1150	II	II	II	
E0800456-022	B-13-6	Soil	5/12/08 1155	II(H)		II(H)	
E0800456-023	B-13-10	Soil	5/12/08 1200	II(H)		II(H)	

Service Request Summary

Folder #: E0800456
Client Name: Kennedy/Jenks Consultants, Incorporated
Project Name: Tetra Pak
Project Number: 016066.11

Report To: Steven Misner
Kennedy/Jenks Consultants, Incorporated
200 SW Market St., Suite 500
Portland, OR 97201-5715

Phone Number: 503-423-4004

Cell Number:

Fax Number: 503-295-4901

E-mail: stevenmisner@kennedyjenks.com

Project Chemist: Darren Biles
Originating Lab: HOUSTON
Logged By: NBROWN
Date Received: 05/13/2008
Internal Due Date: 06/10/2008
QAPP: LAB QAP
Qualifier Set: CAS Standard
Formset: CAS Standard
Merged?: N
Report to MDL?: Y
P.O. Number: 016066.11
EDD: BASIC_WQC_CASNo

25 - -N/A N/A

23 - 8 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved

13 - 4 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved

Location: SMO, E-WIC-02, E-WIC01

SVM						
					PCDD PCDF/ 8290	ScreenPCDD PCDF/ ScreenPCDD PCDF
					Total Solids/ 8290	
E0800456-024	B-13-15	Soil	5/12/08	1205	II	II

Folder Comments:

Client requested full list on previously logged screen samples and screen test on sample E0800456-024. DB 5/27/08.

Preparation Information Benchsheet

Prep Run#: 66871
Team: Semivoia GCMS

Prep WorkFlow: OrgExtDioxS(30)

Prep Method: Method

Status: Prepped

Prep Date/Time: 05/14/2008 05:00

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Sample Description
1	EQ0800207-01	MB		8290/PCDD PCDF		Solid	10.0g	
2	EQ0800207-02	LCS		8290/PCDD PCDF		Solid	10.0g	
3	EQ0800207-03	DLCS		8290/PCDD PCDF		Solid	10.0g	
4	E0800453-001	B1-0.5	.01	8290/PCDD PCDF		Soil	11.590g	Dark brown soil
5	E0800453-002	B3-0.5	.01	8290/PCDD PCDF		Soil	9.841g	Brown soil
6	E0800454-001	MBB39E	.01	8290/PCDD PCDF		Bentonite	14.846g	Brown powder
7	E0800454-002	MBB39D	.01	8290/PCDD PCDF		Bentonite	14.543g	Red powder
8	E0800456-001	B-8-0-2	.01	8290/PCDD PCDF		Soil	10.081g	Brown soil
9	E0800456-005	B-9-0-2	.01	8290/PCDD PCDF		Soil	10.089g	Brown soil
10	E0800456-009	B-10-0-2	.01	8290/PCDD PCDF		Soil	10.092g	Brown clay
11	E0800456-013	B-11-0-2	.01	8290/PCDD PCDF		Soil	10.500g	Brown soil
12	E0800456-017	B-12-0-2	.01	8290/PCDD PCDF		Soil	10.021g	Brown soil
13	E0800456-021	B-13-3	.01	8290/PCDD PCDF		Soil	10.636g	Brown soil
14	E0800458-001	08E0191	.01	8290/PCDD PCDF		Sediment	10.646g	Brown soil
15	E0800460-001	9448-264-SI-1	.01	8290/PCDD PCDF		Soil	10.650g	Red soil with rocks
16	E0800464-001	23-SB124-02-1	.01	8290/PCDD PCDF		Soil	10.047g	Brown soil
17	E0800464-002	23-SB124-24-1	.01	8290/PCDD PCDF		Soil	11.074g	Brown soil
18	E0800464-003	23-SB124-68-1	.01	8290/PCDD PCDF		Soil	10.063g	Brown soil
19	E0800464-004	23-SB103-02-1	.01	8290/PCDD PCDF		Soil	10.464g	Brown soil
20	E0800464-005	23-SB103-24-1	.01	8290/PCDD PCDF		Soil	11.365g	Brown soil
21	E0800464-006	23-SB103-68-1	.01	8290/PCDD PCDF		Soil	10.715g	Brown grainy sand
22	E0800464-007	23-SB91-02-1	.01	8290/PCDD PCDF		Soil	10.027g	Brown soil

Reviewed By: *[Signature]* Date: *5/29/08*

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Preparation Information Benchsheet

Prep Run#: 66871
Team: Semivoa GCMS

Prep Workflow: OrgExtDioxS(30)
Prep Method: Method

Status: Prepped
Prep Date/Time: 05/14/2008 05:00

Spiking Solutions

Name: 8290 Matrix Working Standard	Inventory ID 3525	Logbook Ref: D9-38-2A	Expires On: 02/17/2018
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EQ0800207-02 100.00uL EQ0800207-03 100.00uL

Name: 8290 Internal Working Standard	Inventory ID 3939	Logbook Ref: D9-58-5A	Expires On: 05/03/2018
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E0800453-001 100.00uL	E0800453-002 100.00uL	E0800454-001 100.00uL	E0800454-002 100.00uL	E0800456-001 100.00uL	E0800456-005 100.00uL
E0800456-009 100.00uL	E0800456-013 100.00uL	E0800456-017 100.00uL	E0800456-021 100.00uL	E0800458-001 100.00uL	E0800460-001 100.00uL
E0800464-001 100.00uL	E0800464-002 100.00uL	E0800464-003 100.00uL	E0800464-004 100.00uL	E0800464-005 100.00uL	E0800464-006 100.00uL
E0800464-007 100.00uL	EQ0800207-01 100.00uL	EQ0800207-02 100.00uL	EQ0800207-03 100.00uL		

Name: 8290/1613B Cleanup Working Standard	Inventory ID 4000	Logbook Ref: D9-59-3A/B	Expires On: 05/09/2018
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E0800453-001 100.00uL	E0800453-002 100.00uL	E0800454-001 100.00uL	E0800454-002 100.00uL	E0800456-001 100.00uL	E0800456-005 100.00uL
E0800456-009 100.00uL	E0800456-013 100.00uL	E0800456-017 100.00uL	E0800456-021 100.00uL	E0800458-001 100.00uL	E0800460-001 100.00uL
E0800464-001 100.00uL	E0800464-002 100.00uL	E0800464-003 100.00uL	E0800464-004 100.00uL	E0800464-005 100.00uL	E0800464-006 100.00uL
E0800464-007 100.00uL	EQ0800207-01 100.00uL	EQ0800207-02 100.00uL	EQ0800207-03 100.00uL		

Preparation Materials

Salt Reagent Grade C1-99-1 (345)	Silica Gel Reagent Grade C2-6-004 (3305)	Carbon, High Purity C2-9-004 (3628)
Glass Wool C2-1-004 (3060)	Acetone 99.5% Minimum C1-124-004 (3063)	Nonane (n-Nonane) 99% C2-4-003 (3304)
Sodium Chloride Reagent Grade I C1-104-2 (3306)	Sodium Sulfate Anhydrous Reagent C2-10-001 (3635)	Dichloromethane (Methylene Chloride) C2-9-007 (3629)
Toluene 99.9% Minimum C2-9-005 (3634)	Ethyl Acetate 99.9% Minimum C2-1-005 (3059)	Hexane (n-Hexane) 98.5% Minimum C2-9-006 (3631)
Tridecane (n-Tridecane) C2-7-002 (3360)	Sulfuric Acid Reagent Grade C2-7-005 (3357)	Extraction Thimbles 43 x123 mm (1577)

Preparation Steps

Step: Extraction	Step: Acid Clean	Step: Silica Gel Clean	Step: Final Volume
Started: 5/14/08 17:00	Started: 5/16/08 13:00	Started: 5/16/08 15:00	Started: 5/19/08 08:00
Finished: 5/15/08 09:00	Finished: 5/16/08 14:00	Finished: 5/16/08 17:00	Finished: 5/19/08 09:00
By: ABIDDLE	By: ABIDDLE	By: ABIDDLE	By: ABIDDLE

Comments: _____

Reviewed By: _____ Date: _____

Chain of Custody

Relinquished By: _____	Date: _____	Extracts Examined Yes No
Received By: _____	Date: _____	

Preparation Information Benchsheet

Prep Run#: 67641
Team: Semivoia GCMS

Prep WorkFlow: OrgExtDioxS(30)
Prep Method: Method

Status: Prepped
Prep Date/Time: 06/02/2008 05:00

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Sample Description
1	EQ0800235-01	MB		8290/PCDD PCDF		Solid	10.000g	
2	EQ0800235-02	LCS		8290/PCDD PCDF		Solid	10.000g	
3	EQ0800235-03	DLCS		8290/PCDD PCDF		Solid	10.000g	
4	E0800456-024	B-13-15	.02	ScreenPCDD PCDF/ScreenPCDD PCDF		Soil	5.826g	Brown mud
5	E0800475-009RE	23-SB94-24-1	.01	8290/PCDD PCDF		Soil	5.065g	Brown soil
6	E0800496-010	23-SB81-68-1	.01	8290/PCDD PCDF		Soil	9.589g	Brown soil, clay-like
7	E0800499-001	23-SB70-02-1	.01	8290/PCDD PCDF		Soil	9.832g	Brown soil
8	E0800499-002	23-SB70-24-1	.01	8290/PCDD PCDF		Soil	9.659g	Brown sand

Spiking Solutions

Name:	8290 Matrix Working Standard	Inventory ID	4031	Logbook Ref:	D9-61-2A	Expires On:	05/16/2018
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EQ0800235-02 100.00uL EQ0800235-03 100.00uL

Name:	8290/1613B Cleanup Working Standard	Inventory ID	4155	Logbook Ref:	D9-63-5A/B	Expires On:	06/01/2018
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E0800456-024	100.00uL	E0800475-009	100.00uL	E0800496-010	100.00uL	E0800499-001	100.00uL	E0800499-002	100.00uL	EQ0800235-01	100.00uL
E08000235-02	100.00uL	EQ0800235-03	100.00uL								

Name:	8290 Internal Working Standard	Inventory ID	4157	Logbook Ref:	D9-62-5A	Expires On:	06/01/2018
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E0800456-024	100.00uL	E0800475-009	100.00uL	E0800496-010	100.00uL	E0800499-001	100.00uL	E0800499-002	100.00uL	EQ0800235-01	100.00uL
EQ0800235-02	100.00uL	EQ0800235-03	100.00uL								

Preparation Materials

Sand Reagent Grade	C1-99-1 (345)	Silica Gel Reagent Grade	C2-6-004 (3305)	Carbon, High Purity	C2-9-004 (3628)
Glass Wool	C2-1-004 (3060)	Acetone 99.5% Minimum	C1-124-004 (3063)	Nonane (n-Nonane) 99%	C2-4-003 (3304)
Sodium Chloride Reagent Grade I	C1-104-2 (3306)	Sodium Sulfate Anhydrous Reagent	C2-10-001 (3635)	Dichloromethane (Methylene Chloride)	C2-9-007 (3629)
Toluene 99.9% Minimum	C2-9-005 (3634)	Ethyl Acetate 99.9% Minimum	C2-1-005 (3059)	Hexane (n-Hexane) 98.5% Minimum	C2-9-006 (3631)
Tridecane (n-Tridecane)	C2-7-002 (3360)	Sulfuric Acid Reagent Grade	C2-7-005 (3357)	Extraction Thimbles 43 x123 mm	(1577)

Reviewed By: [Signature] Date: 7/24/08

Chain of Custody

Relinquished By: _____ Received By: _____	Date: _____ Date: _____	<u>Extracts Examined</u> Yes No
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Preparation Information Benchsheet

Prep Run#: 67641
Team: Semivoa GCMS

Prep WorkFlow: OrgExtDioxS(30)
Prep Method: Method

Status: Prepped
Prep Date/Time: 06/02/2008 05:00

Preparation Steps

Step:	Extraction	Step:	Acid Clean	Step:	Silica Gel Clean	Step:	Final Volume
Started:	6/2/08 17:00	Started:	6/4/08 11:00	Started:	6/4/08 13:11	Started:	6/5/08 08:00
Finished:	6/3/08 09:00	Finished:	6/4/08 12:30	Finished:	6/4/08 16:00	Finished:	6/5/08 09:00
By:	NBROWN	By:	NBROWN	By:	NBROWN	By:	NBROWN

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Comments: _____

Reviewed By: _____ Date: _____

Chain of Custody

Relinquished By: _____	Date: _____	<u>Extracts Examined</u>
Received By: _____	Date: _____	Yes No

COLUMBIA ANALYTICAL SERVICES, INC.

Total Solids, (Gravimetric, Dried at 110 Deg C)

Group ID: 67210
Analyst: ABIDDLE
Date Acquired: 05/14/2008

Reviewed By: _____
Date Reviewed: _____

Lab Code	Client Sample Name	Test	Tare Weight	Wet Weight + Tare	Dry Weight + Tare	Percent Solids
E0800453-001	B1-0.5	8290/Total Solids	12.8970g	24.3130g	22.9560g	88.1
E0800453-002	B3-0.5	8290/Total Solids	12.9840g	22.5380g	21.6850g	91.1
E0800456-001	B-8-0-2	8290/Total Solids	13.0260g	21.0880g	19.4080g	79.2
E0800456-005	B-9-0-2	8290/Total Solids	12.8960g	21.2370g	19.5520g	79.8
E0800456-009	B-10-0-2	8290/Total Solids	13.0330g	22.5740g	20.7380g	80.8
E0800456-013	B-11-0-2	8290/Total Solids	13.0070g	22.4850g	20.7430g	81.6
E0800456-017	B-12-0-2	8290/Total Solids	12.9830g	22.6980g	20.9920g	82.4
E0800456-021	B-13-3	8290/Total Solids	13.0010g	22.7070g	20.4850g	77.1
E0800458-001	08E0191	8290/Total Solids	12.9900g	19.3820g	17.4890g	70.4
E0800460-001	9448-264-SI-1	8290/Total Solids	12.9750g	22.0100g	21.6690g	96.2
E0800464-001	23-SB124-02-1	8290/Total Solids	13.0430g	23.3610g	21.6390g	83.3
E0800464-002	23-SB124-24-1	8290/Total Solids	13.0020g	21.0280g	19.6800g	83.2
E0800464-003	23-SB124-68-1	8290/Total Solids	13.0140g	20.5130g	19.8370g	91.0
E0800464-004	23-SB103-02-1	8290/Total Solids	13.0400g	18.9750g	18.4320g	90.9
E0800464-005	23-SB103-24-1	8290/Total Solids	13.0080g	22.6230g	22.0030g	93.6
E0800464-006	23-SB103-68-1	8290/Total Solids	12.9720g	19.4550g	19.2060g	96.2
E0800464-007	23-SB91-02-1	8290/Total Solids	13.0730g	22.0890g	21.5050g	93.5

COLUMBIA ANALYTICAL SERVICES, INC.

Total Solids, (Gravimetric, Dried at 110 Deg C)

Group ID:	68154	Reviewed By:	
Analyst:	ABIDDLE	Date Reviewed:	
Date Acquired:	06/02/2008		

Lab Code	Client Sample Name	Test	Tare Weight	Wet Weight + Tare	Dry Weight + Tare	Percent Solids
E0800456-024	B-13-15	8290/Total Solids	13.0610g	20.6800g	18.6410g	73.2
E0800496-010	23-SB81-68-1	8290/Total Solids	13.0970g	20.8630g	19.3290g	80.2
E0800499-001	23-SB70-02-1	8290/Total Solids	13.1250g	20.6710g	19.9300g	90.2
E0800499-002	23-SB70-24-1	8290/Total Solids	12.9920g	18.1590g	17.8450g	93.9
E0800499-003	23-SB70-24-2	8290/Total Solids	13.0480g	20.2630g	19.9160g	95.2
E0800499-004	23-SB70-68-1	8290/Total Solids	13.0170g	17.7660g	16.8900g	81.6
E0800501-001	23-SB59-02-1	8290/Total Solids	13.0660g	22.9690g	21.3740g	83.9
E0800501-002	23-SB59-24-1	8290/Total Solids	13.0460g	18.9350g	17.9460g	83.2
E0800501-003	23-SB47-02-1	8290/Total Solids	13.0140g	22.9940g	20.9850g	79.9
E0800501-004	23-SB47-24-1	8290/Total Solids	12.9730g	27.4390g	24.2680g	78.1
E0800501-005	23-SB47-24-2	8290/Total Solids	13.0220g	21.0690g	19.6810g	82.8
E0800501-006	23-SB47-68-1	8290/Total Solids	13.0050g	22.7990g	21.0590g	82.2
E0800501-007	23-SB26-02-1	8290/Total Solids	12.9930g	23.4800g	21.1770g	78.0
E0800501-008	23-SB26-24-1	8290/Total Solids	13.0220g	20.9710g	19.9770g	87.5
E0800503-001	9448-123-DPO1	8290/Total Solids	13.0770g	14.4830g	14.3560g	91.0
E0800503-002	9448-123-DPO2	8290/Total Solids	13.0880g	16.6800g	16.6240g	98.4
E0800503-003	9448-123-DPO3	8290/Total Solids	13.0930g	16.4930g	16.1340g	89.4
E0800507-001	23-SB68A-02-1	8290/Total Solids	13.0130g	24.2630g	23.4000g	92.3
E0800507-002	23-SB68A-24-1	8290/Total Solids	13.1200g	24.5920g	23.4470g	90.0

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Nonconformity and Corrective Action Report

NONCONFORMITY

PROCEDURE (SOP or METHOD): 8290

EVENT: ☐ Missed Holding Time ☐ QC Failure ☐ Lab Error (spilled sample, spiking error, etc.)
☐ Method Blank Contamination ☐ Login Error ☐ Project Management Error
☐ Equipment Failure ☐ Unacceptable PT Sample Result
☐ SOP Deviation ☒ Other (describe):

SAMPLES / PROJECTS / CUSTOMERS / SYSTEMS AFFECTED: E0800456-021 EQ0800207

DETAILED DESCRIPTION

Some analyte concentration over calibration range.

Need 1:100x Dil

ORIGINATOR: Gnanapoompavai Shanmugam

DATE: 05/21/08

CORRECTIVE ACTION AND OUTCOME

Re-establishment of conformity must be demonstrated and documented. Describe the steps that were taken, or are planned to be taken, to correct the particular Nonconformity and prevent its reoccurrence. Include any Project Manager instructions here.

Dilute with Internal Standard.

Is the data to be flagged in the Analytical Report with an appropriate qualifier? ☐ No ☒ Yes

APPROVAL AND NOTIFICATION

Supervisor Verification and Approval of Corrective Action ✓

Date: 5/22/08

Comments:

QA PM Verification and Approval of Corrective Action _____

Date: _____

Comments:

Customer Notified by ☐ Telephone ☐ Fax ☐ E-mail ☐ Narrative ☐ Not notified

Project Manager Verification and Approval of Corrective Action _____

Date: _____

Comments:

(Attach record or cite reference where record is located.) Project folder archives