FRITO LAY
Vancouver Washington

Hydraulic Lift Area Petroleum Release

Ground Water Monitoring Report
Project Number 13007
Document Number 13007-R

4808 NW Fruit Valley Road
Vancouver, Washington 98660

Submitted To:

Washington Department of Ecology
Olympia, Washington

February 11, 2013

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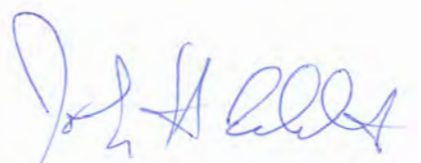
CERTIFICATIONS

This Report has been prepared in accordance with accepted environmental practice.



John H. Ruddick. Ph.D, CHMM

SECTION 1. INTRODUCTION

This report describes the installation and sampling results of three monitoring wells located at Frito Lay's Vancouver, Washington plant site. The wells were located to monitor for potential ground water contamination from a release of petroleum hydrocarbons at the plant's hydraulic lift area. The work was based on a workplan prepared by Environmental Health Management (EHM) and previously submitted to the Washington Department of Ecology (Ecology). The work is being performed under Ecology's Voluntary Cleanup Program (Project # SW1024).

1.1 Site Description

The site location is shown in **Figure 1**. The hydraulic lift area is shown in **Figure 2**. Details regarding the release have been previously reported.

The hydraulic lift is located immediately adjacent to the west side of Frito Lay's manufacturing plant. A pocket of Diesel- and oil-range petroleum was observed in silt beneath the lift to depths less than 5 feet bgs.

Regional ground water flow is reportedly to the west northwest.

1.2 Purpose

The purpose of this work is to monitor ground water for potential migration of contaminants from the residual contaminated soil beneath the hydraulic lift. Additional monitoring events will occur at least once every 18 months.

SECTION 2. Monitoring Wells

2.1 Well Locations

Well MW-1 and MW-2 have been previously described. A third monitoring well (MW-3) was installed on September 12, 2012 and is located west of the initial wells. The well locations are shown in **Figure 2**.

2.2 Well Construction

Well MW-3 was installed using a push probe method. It consisted of 15 feet of 2-inch pre-packed 0.010 slot well casing from 30 to 45 feet bgs. Solid casing was used from the top of the well screen to the surface. A 2.5 foot foam bentonite bridge sleeve was installed to minimize vertical migration. The sleeve was placed immediately above the top of the screened interval, lowered into the bore hole, saturated with water and the bentonite allowed to swell. The remaining annular space in the well bore was filled with granulated bentonite that was then hydrated from the surface to complete the water tight well seal. MW-3 was completed at the surface with a flush mount monument and locking cap.

2.3 Lithology

Below the surface gravel layer, well MW-3 encountered a sandy silt from 1-6 feet below grade. Below the silt, the formation transitioned into very fine sand from 6-20 feet, becoming medium to coarse sand to 24 feet. The lower portion of the boring (from 24 feet to the bottom at 40 feet) consisted of a medium volcanic sand.

A copy of the MW-3 boring log is presented in the **Appendix**.

2.4 Development

Wells were developed using a submersible pump. Approximately 6 bore volumes of ground water were removed and stored on site in a sealed drum pending receipt of analytical results.

2.5 Survey

Wells were surveyed by Andy Paris Associates. Elevations were reported to NAVD88 datum. The survey data is shown in **Figure 3**.

SECTION 3. SAMPLING AND ANALYSIS

3.1 Depth to Water Measurement

Wells were opened and allowed to relax for 30 minutes. Depth to water was measured every 15 minutes using a Solinst P6 meter until consecutive measurements differed by less than 0.01 feet. The depth was measured from the rim of the casing at a mark on its north side. After measurement, a clean disposable 0.5" OD bailer was slowly lowered slightly through the water surface to collect approximately 25 ml of water for inspection for free petroleum (LNAPL).

3.2 Purging

A low flow sampling method was used to collect water samples. Water was withdrawn using a QED MP-SP bladder pump and controller. The pump inlet was adjusted to remain approximately 1 foot below the drawdown surface. The flow rate was adjusted to approximately 3.25 gallons/hr.

3.3 Sample Collection

Samples were collected directly from the pump discharge tube. The tube was positioned to minimize splashing and turbulence in the sample containers. Particular care was taken during the collection of samples for volatile organic analyses.

The following sample containers were filled with water at each location:
3 unpreserved, one-liter amber glass bottles;
3 HCl-preserved, one-liter amber glass bottles;
9 HCl-preserved, 40-ml VOA vials (filled to zero headspace);
1 HNO_3-preserved, 250 ml plastic bottle.

Between wells, the pump was immersed in distilled water and run for 10 minutes to purge ground water. Then it was disassembled, cleaned, fitted with a new bladder and the discharge tubing replaced prior to lowering it into the next well.

Samples were refrigerated immediately and transported under routine chain of custody.

3.4 Analysis

3.4.1 Field Parameters

Field parameters were monitored prior to sample collection. The following equipment was used:

Turbidity - Lamotte model 2020e calibrated against 0 and 10 NTU NIST standards.
pH - Cambridge model 9110 calibrated against pH 4.0 and 7.0 buffer solutions.
Temperature - Cambridge model 9110 calibrated against an ASTM liquid thermometer.
Specific Conductance - Cambridge model 9110.
Dissolved Oxygen - Cole Parmer model 5946-75 calibrated against saturated air at ambient temperature.
Oxidation/Reduction Potential - Oakton model 35650-10, internal calibration
Headspace Volatile Organics - RAE model PGM 7320 PID calibrated against zero air and 100 ppm isobutylene.

Parameters were recorded approximately every 15 minutes. Stable readings are shown in **Table 1**.

3.4.2 Chemical Analyses

Samples were analyzed at Specialty Analytical, Inc. in Clackamas, Oregon. Petroleum hydrocarbon fractions were quantified using Ecology method NWTPH-Gx and NWTPH-Dx. Total metals concentrations were determined using EPA method 6010A (ICP) for barium, cadmium, chromium and silver, EPA method 6020 (ICP/MS) for arsenic, lead and selenium and EPA method 7470A for mercury. Polycyclic aromatic hydrocarbons (PAH) were quantified using EPA method 8270SIM. Volatile organics were determined by EPA method 8260B. Ethylene Dibromide (EDB) was quantified using EPA method 8011.

3.5 Quality Assurance

One field blank, consisting of distilled, de-ionized water, was submitted for analysis.

SECTION 4. RESULTS

4.1 Water Table Measurements

Depth to water measurements were converted to elevations and the water table plotted on a site plan. The results are shown in **Figure 3**. Groundwater was flowing to the northeast. The gradient was 0.0100 ft/ft. Calculations are shown in **Table 3**.

4.2 Field Parameters

Field parameter stabilized after approximately 1.5 hours of purging. No evidence of contamination (hydrocarbon odor, visible sheen) was observed in the bailed sample or purge water. Stable field parameters are shown in **Table 1**. Results from MW-1 and MW-2 are comparable. MW-3 was slightly less turbid than the other wells.

4.3 Chemical Analysis

4.3.1 Data Quality

All samples were extracted and analyzed within method holding limits. Analytical quality control was consistent with method requirements.

Unpreserved VOA vials for Method 8011 EDB analysis were broken during transit. HCl preserved vials were used as replacements. This resulted in a dilution of spiked surrogates added to the sample vials to evaluate the recovery of analytes. As a result, both the method spike and the method spike duplicate failed quality control. Other controls were within method limits. The adjusted reporting limit for EDB was 0.0228 µg/L, slightly above the MTCA Method A cleanup level (0.01 µg/L) for this analyte.

Diesel was reported in the trip blank at 0.0799 mg/L, slightly above the reporting limit of 0.0759 mg/L. This detection affects the Diesel results for sample FL-MW2 which showed a comparable level of Diesel (0.0878 mg/L).

4.3.2 Results

Analytical results are presented in **Table 2**.

4.3.2.1 PAHs

Polycyclic aromatic hydrocarbons (PAHs) were not detected in any sample.

4.3.2.2 Petroleum

Gasoline- and oil-range petroleum organics were not detected in any sample.

Diesel was detected in MW-2 at a concentration similar to that seen in the trip blank. The concentration was slightly above the reporting limit in these samples. MW-1 and MW-3 did not detect Diesel.

4.3.2.3 Metals

Barium and chromium were detected in unfiltered samples at concentrations below MTCA Method A levels. Other metals were not detected.

4.3.2.4 Volatile Organics

One volatile organic was detected. Tetrachloroethene was reported in MW-3 at 1.01 µg/L. The reporting limit for this chemical was 1.00 µg/L. The MTCA Method A cleanup level for this analyte is 5 µg/L.

SECTION 5. DISCUSSION

5.1 Deviations from Plan

Analysis for EDB was performed according to EPA Method 8088 which has a lower detection limit for this chemical than EPA Method 8260B.

During transit, a box containing unpreserved VOA vials was crushed and an insufficient number of intact vials were recovered to accomplish sampling. HCl-preserved VOAs were drained and triple rinsed in the field with distilled deionized water (as used for field blank preparation). These were substituted for method 8088 unpreserved sample collection containers. EHM believes that this may have resulted in a slight dilution of sample due to the retainage of some of the rinseate. Furthermore, while we believe that triple rinsing removed most of the preservative, containers were not air dried. Therefore it is unclear if residual HCl was present at concentrations sufficient to affect the stability of any EDB present.

5.2 Data Quality

The EDB method detection limit (0.0288 µg/L) exceeded the MTCA Level A cleanup level of 0.01 µg/L. Otherwise, all data met the project objectives.

5.3 Ground Water Flow

The current results were compared with measurements made on two wells on 6/29/11. At that time, the apparent flow direction was to the south with an apparent gradient of 0.0075 ft/ft. While the data are not directly comparable, the flow direction appears to have reversed between the two sample periods. The gradient is slightly steeper than previously reported.

5.4 Comparison to MTCA Method A

Comparisons of the analytical results to MTCA Method A cleanup levels are shown in **Table 2**.

The MTCA A cPAH concentration was calculated by multiplying the reported concentration (or 50% of the limit of detection for undetected cPAHs) by Ecology's toxicity equivalency factor (TEF) and totaling the results of all 7 Ecology cPAHs. The results are shown in **Table 3**. The calculated value (0.0357 µ/L) is less than the cleanup value of 0.1.

SECTION 6. CONCLUSIONS & RECOMMENDATIONS

The results of this work do not show conclusive evidence of ground water contamination. Although EDB was not detected, the reported method detection limit (0.0228 µg/L) was above the MTCA A limit of 0.01 µg/L and the results are subject to the field sampling modifications as discussed above. Although Diesel-range petroleum organics were detected in one sample, they were also detected at a similar concentration in the field blank. All other detections (total barium, total chromium and PCE) are below MTCA Method A cleanup levels.

Ground water flow is to the northeast. This is roughly a reversal in flow direction from the 2011 monitoring event. Both observations suggest that the source (the hydraulic lift) was lateral to the ground water flow direction at the time of measurement. Because of this, it remains unclear whether the monitoring well field intercepts ground water flow from the source.

EHM recommends that the gradient and flow direction be determined at least quarterly for one year to evaluate variations in groundwater flow. This information can then be used for scheduling sampling or modifying the monitoring well network.

SECTION 7. TABLES

TABLE 1:
Frito-Lay Vancouver
Sample Information

Sample Number	Collection		Sample Type	Description	Stable Field Parameters (units)						
	Date	Time			Turbity	pH	Temp	SC	DO	PID	ORP
					(ntu)	(SU)	(^{o}F)	(µS/cm)	(ppm)	(ppm)	(mV)
FL-MW1	12/13/2012	11:45	Low Flow GW	Monitoring well 1 (South)	1.30	5.99	55.5	391	4.9	0	220
FL-MW2	12/13/2012	15:15	Low Flow GW	Monitoring well 2 (North)	1.32	5.92	54.6	436	5.0	0	251
FL-MW3	12/13/2012	18:35	Low Flow GW	Monitoring well 3 (West)	0.96	6.01	56.6	431	5.1	0	239
FL-MW0	12/13/2012	21:00	Field Blank	DDI water trip blank	-	-	-	-	-	-	-

TABLE 2:
Frito-Lay Vancouver
Groundwater Analytical Results

Sample ID:	FL-MW1		FL-MW2		FL-MW3		FL-MW0		MTCA - A
Sample Date:	12/13/2012		12/13/2012		12/13/2012		12/13/2012		Cleanup Level
Petroleum Hydrocarbons (mg/L)									
Gasoline	0.100	U	0.100	U	0.100	U	0.100	U	1.0
Diesel	0.0758	U	**0.0878**		0.0755	U	**0.0799**		0.5
Lube Oil	0.189	U	0.189	U	0.1890	U	0.190	U	0.5
Volatile Organics (µg/L)									
1,1,1,2-Tetrachloroethane	1.00	U	1.00	U	1.00	U	1.00	U	
1,1,1-Trichloroethane	1.00	U	1.00	U	1.00	U	1.00	U	200
1,1,2,2-Tetrachloroethane	1.00	U	1.00	U	1.00	U	1.00	U	
1,1,2-Trichloroethane	1.00	U	1.00	U	1.00	U	1.00	U	
1,1-Dichloroethane	1.00	U	1.00	U	1.00	U	1.00	U	
1,1-Dichloroethene	1.00	U	1.00	U	1.00	U	1.00	U	
1,1-Dichloropropene	1.00	U	1.00	U	1.00	U	1.00	U	
1,2,3-Trichlorobenzene	1.00	U	1.00	U	1.00	U	1.00	U	
1,2,3-Trichloropropane	1.00	U	1.00	U	1.00	U	1.00	U	
1,2,4-Trimethylbenzene	1.00	U	1.00	U	1.00	U	1.00	U	
1,2-Dibromo-3-chloropropane	1.00	U	1.00	U	1.00	U	1.00	U	
1,2-Dibromoethane (EDB)	1.00	U	1.00	U	1.00	U	1.00	U	*0.01*
1,2-Dichlorobenzene	1.00	U	1.00	U	1.00	U	1.00	U	
1,2-Dichloroethane (EDC)	0.300	U	0.300	U	0.300	U	0.300	U	5
1,2-Dichloropropane	1.00	U	1.00	U	1.00	U	1.00	U	
1,3,5-Trimethylbenzene	1.00	U	1.00	U	1.00	U	1.00	U	
1,3-Dichlorobenzene	1.00	U	1.00	U	1.00	U	1.00	U	
1,3-Dichloropropane	1.00	U	1.00	U	1.00	U	1.00	U	
1,4-Dichlorobenzene	1.00	U	1.00	U	1.00	U	1.00	U	
2,2-Dichloropropane	1.00	U	1.00	U	1.00	U	1.00	U	
2-Butanone (MEK)	10.0	U	10.0	U	10.0	U	10.0	U	
2-Chlorotoluene (ortho)	1.00	U	1.00	U	1.00	U	1.00	U	
2-Hexanone	10.0	U	10.0	U	10.0	U	10.0	U	
4-Chlorotoluene (para)	1.00	U	1.00	U	1.00	U	1.00	U	
4-Isopropyltoluene (Cymene)	1.00	U	1.00	U	1.00	U	1.00	U	
4-Methyl-2-pentanone (MIBK)	20.0	U	20.0	U	20.0	U	20.0	U	
Acetone	50.0	U	50.0	U	50.0	U	50.0	U	
Acrylonitrile	5.00	U	5.00	U	5.00	U	5.00	U	
Benzene	0.300	U	0.300	U	0.300	U	0.300	U	5
Bromobenzene	1.00	U	1.00	U	1.00	U	1.00	U	
Bromochloromethane	1.00	U	1.00	U	1.00	U	1.00	U	
Bromodichloromethane	1.00	U	1.00	U	1.00	U	1.00	U	
Bromoform (Tribromomethane)	1.00	U	1.00	U	1.00	U	1.00	U	
Bromomethane	1.00	U	1.00	U	1.00	U	1.00	U	
Carbon disulfide	2.00	U	2.00	U	2.00	U	2.00	U	
Carbon tetrachloride	1.00	U	1.00	U	1.00	U	1.00	U	
Chlorobenzene	1.00	U	1.00	U	1.00	U	1.00	U	
Chloroethane (Ethyl Chloride)	1.00	U	1.00	U	1.00	U	1.00	U	
Chloroform	1.00	U	1.00	U	1.00	U	1.00	U	
Chloromethane	1.00	U	1.00	U	1.00	U	1.00	U	
cis-1,2-Dichloroethene	1.00	U	1.00	U	1.00	U	1.00	U	
cis-1,3-Dichloropropene	1.00	U	1.00	U	1.00	U	1.00	U	
Dibromochloromethane	1.00	U	1.00	U	1.00	U	1.00	U	
Dibromomethane (Methylene Bromide)	1.00	U	1.00	U	1.00	U	1.00	U	
Dichlorodifluoromethane	1.00	U	1.00	U	1.00	U	1.00	U	
Ethylbenzene	1.00	U	1.00	U	1.00	U	1.00	U	700
Hexachlorobutadiene	1.00	U	1.00	U	1.00	U	1.00	U	
Isopropylbenzene (Cumene)	1.00	U	1.00	U	1.00	U	1.00	U	

TABLE 2:
Frito-Lay Vancouver
Groundwater Analytical Results

Sample ID:	FL-MW1		FL-MW2		FL-MW3		FL-MW0		MTCA - A	
Sample Date:	12/13/2012		12/13/2012		12/13/2012		12/13/2012		Cleanup Level	
m,p-Xylene	2.00	U	2.00	U	2.00	U	2.00	U	1000	a
Methyl tert-butyl ether (MTBE)	1.00	U	1.00	U	1.00	U	1.00	U	20	
Methylene Chloride (Dichloromethane)	20.0	U	20.0	U	20.0	U	20.0	U	5	
Naphthalene	1.00	U	1.00	U	1.00	U	1.00	U	160	
n-Butylbenzene	1.00	U	1.00	U	1.00	U	1.00	U		
n-Propylbenzene	1.00	U	1.00	U	1.00	U	1.00	U		
o-Xylene	1.00	U	1.00	U	1.00	U	1.00	U	1000	a
sec-Butylbenzene	1.00	U	1.00	U	1.00	U	1.00	U		
Styrene	1.00	U	1.00	U	1.00	U	1.00	U		
tert-Butylbenzene	1.00	U	1.00	U	1.00	U	1.00	U		
Tetrachloroethene (PCE)	1.00	U	1.00	U	**1.01**		1.00	U	5	
Toluene	1.00	U	1.00	U	1.00	U	1.00	U	1000	
trans-1,2-Dichloroethene	1.00	U	1.00	U	1.00	U	1.00	U		
trans-1,3-Dichloropropene	1.00	U	1.00	U	1.00	U	1.00	U		
Trichloroethene	1.00	U	1.00	U	1.00	U	1.00	U	5	
Trichlorofluoromethane (Freon 11)	1.00	U	1.00	U	1.00	U	1.00	U		
Vinyl Chloride	1.00	U	1.00	U	1.00	U	1.00	U	0.2	
EDB (by 8011) (µg/L)										
EDB	0.0228	U	0.0228	U	0.0228	U	0.0228	U	*0.01*	
Metals (total) (µg/L)										
Arsenic	20.00	U	20.00	U	20.00	U	20.00	U	5	
Barium	**45.80**		**81.40**		**46.60**		10.00	U	N/E	
Cadmium	1.000	U	1.000	U	1.000	U	1.000	U	5	
Chromium (total)	**9.400**		**9.400**		**9.100**		5.000	U	50	
Lead	20.00	U	20.00	U	20.00	U	20.00	U	15	
Selenium	20.00	U	20.00	U	20.00	U	20.00	U	N/E	
Silver	10.00	U	10.00	U	10.00	U	10.00	U	N/E	
Mercury	0.100	U	0.100	U	0.100	U	0.100	U	2	
Polycyclic Aromatics (µg/L)										
1-Methylnaphthalene	0.0472	U	0.0473	U	0.0472	U	0.0474	U	160.0	b
2-Methylnaphthalene	0.0472	U	0.0473	U	0.0472	U	0.0474	U	160.0	b
Acenaphthene	0.0472	U	0.0473	U	0.0472	U	0.0474	U		
Acenaphthylene	0.0472	U	0.0473	U	0.0472	U	0.0474	U		
Anthracene	0.0472	U	0.0473	U	0.0472	U	0.0474	U		
Benzo(a)anthracene	0.0472	U	0.0473	U	0.0472	U	0.0474	U		
Benzo(a)pyrene	0.0472	U	0.0473	U	0.0472	U	0.0474	U	0.1	c
Benzo(b)fluoranthene	0.0472	U	0.0473	U	0.0472	U	0.0474	U		
Benzo(g,h,i)perylene	0.0472	U	0.0473	U	0.0472	U	0.0474	U		
Benzo(k)fluoranthene	0.0472	U	0.0473	U	0.0472	U	0.0474	U		
Chrysene	0.0472	U	0.0473	U	0.0472	U	0.0474	U		
Dibenzo(a,h)anthracene	0.0472	U	0.0473	U	0.0472	U	0.0474	U		
Fluoranthene	0.0472	U	0.0473	U	0.0472	U	0.0474	U		
Fluorene	0.0472	U	0.0473	U	0.0472	U	0.0474	U		
Indeno(1,2,3-cd)pyrene	0.0472	U	0.0473	U	0.0472	U	0.0474	U		
Naphthalene	0.0472	U	0.0473	U	0.0472	U	0.0474	U	160.0	b
Phenanthrene	0.0472	U	0.0473	U	0.0472	U	0.0474	U		
Pyrene	0.0472	U	0.0473	U	0.0472	U	0.0474	U		

U = Not found at the limit of detection shown N/E = Not Established

Italics = Detected in Laboratory Method Blank & concentration is < 3x method blank.

Red = Carcinogenic PAH (naphthalene also carcinogenic but not used in TEF calculations)

a = total of m,p and o-xylenes

b = total of 1-methylnaphthalene, 2-methylnaphthalene and naphthalene (PAH analyses)

c = total concentration of all carcinogenic PAHs adjusted by individual toxicity equivalency factors (see Table 3)

TABLE 3:
Frito-Lay Vancouver
Water Table Elevation Data

Property:	Frito Lay Vancouver
Address:	4808 Fruit Valley Road, Vancouver, WA
Date:	12/13/2012
Time:	10:49 - 10:56

Well ID	**MW-1**	**MW-2**	**MW-3**
Well Head Elevation (ft)	41.81	43.45	43.53
DTW (ft)	28.83	30.98	30.55
Water Table Elevation (ft)	12.98	12.47	12.98

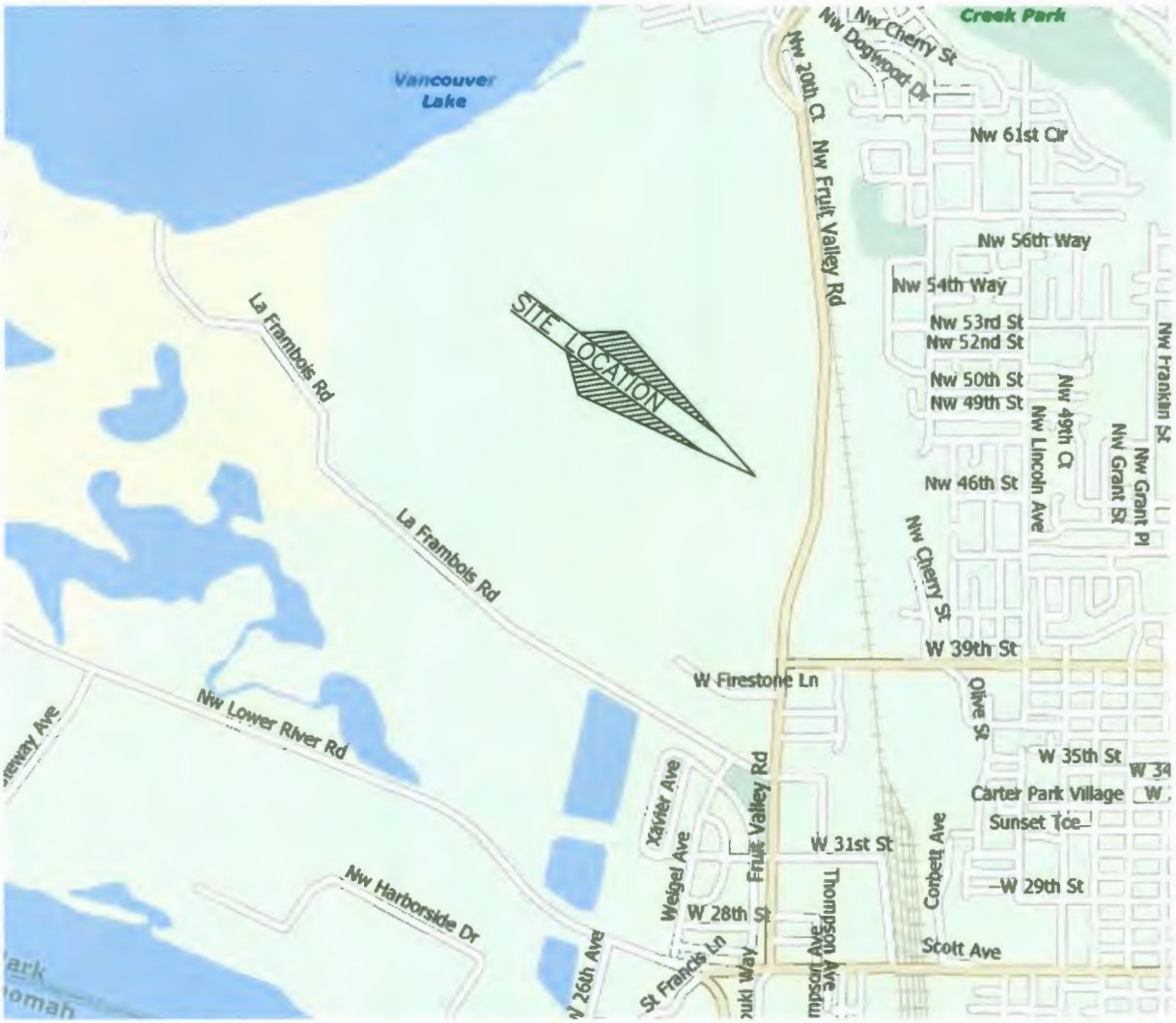
Flow Direction: NE
Gradient (ft/ft): 0.0100

Property:	Frito Lay Vancouver
Address:	4808 Fruit Valley Road, Vancouver, WA
Date:	6/29/2011
Time:	7:40 - 7:50

Well ID	**MW-1**	**MW-2**
Well Head Elevation (ft)	41.81	43.45
DTW (ft)	23.87	25.05
Water Table Elevation (ft)	17.94	18.40

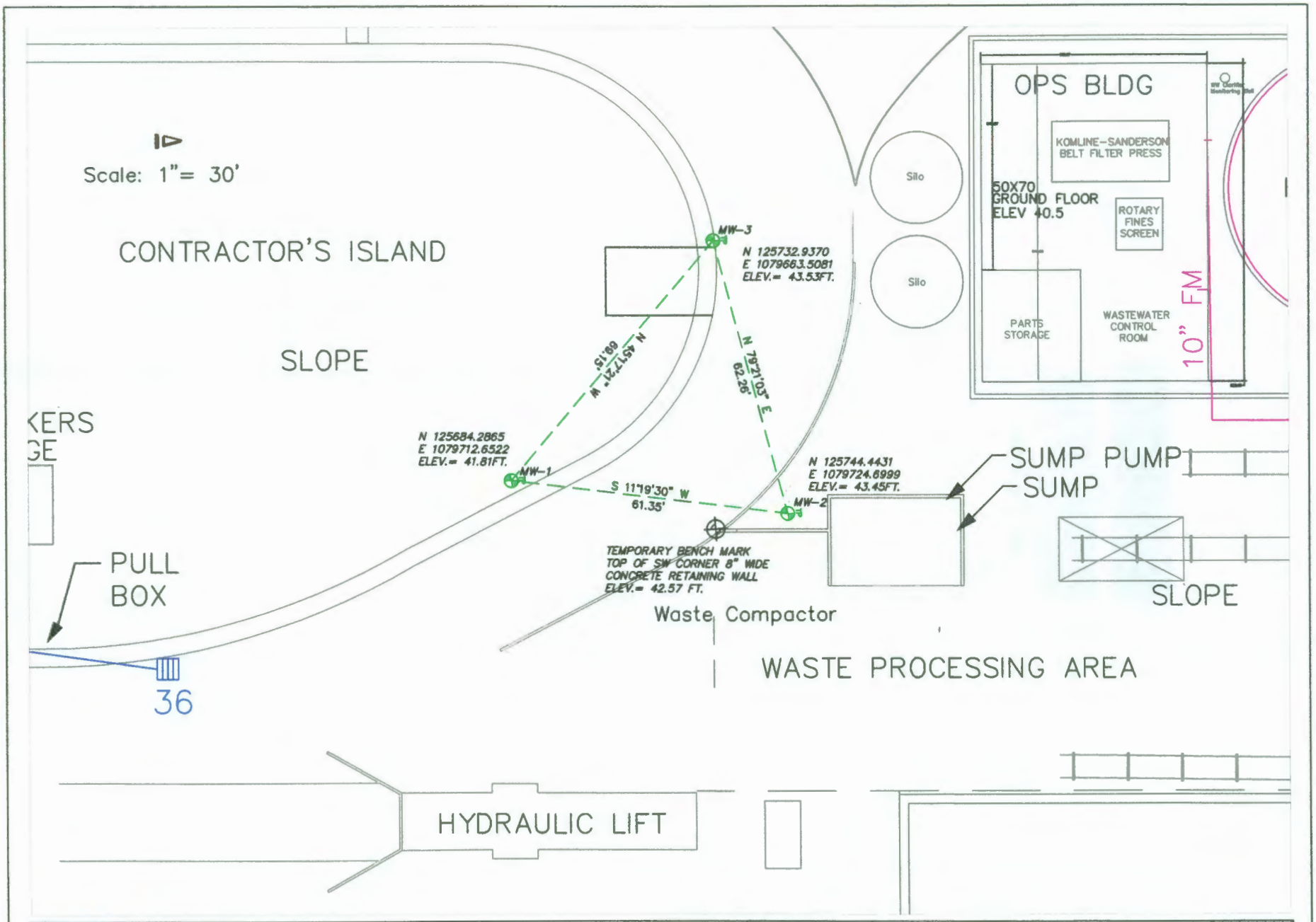
Apparent Flow Direction: S ?
Gradient (ft/ft): 0.0075

SECTION 8. FIGURES

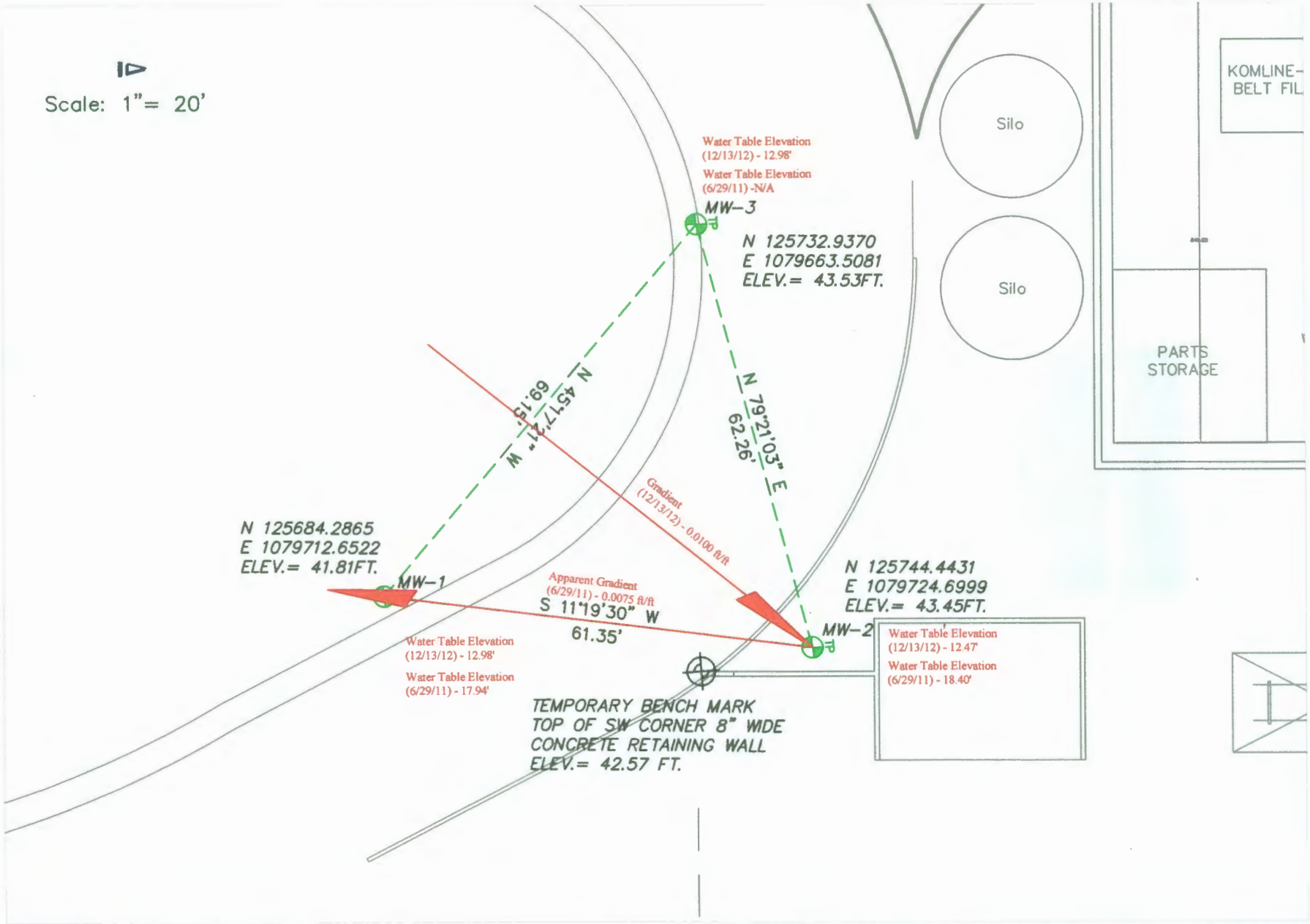


ENVIRONMENTAL HEALTH MANAGEMENT, Inc PO BOX 1746 Lake Oswego, Oregon 97035 (503) 287-4620	DRAWN BY: KIM APPROVED BY: JHR DATE: 12/27/12 JOB NO.: 13007	FRITO LAY – Vancouver Groundwater Monitoring Location Map

FIGURE 1



ENVIRONMENTAL HEALTH MANAGEMENT, Inc. PO BOX 1746 Lake Oswego, Oregon 97035 (503) 287-4620	Hydraulic Lift Area & Monitoring Well Locations	DRAWN BY: KMC APPROVED BY: JHR DATE: 12/27/12 PROJECT NO.: 13007	Frito Lay Vancouver, Washington Groundwater Monitoring	FIGURE 2



EHM Environmental Health Management, Inc. PO BOX 1748 Lake Oswego, Oregon 97035 (503) 287-4620	Water Table Elevation & Gradient	DRAWN BY: KMC APPROVED BY: JHR DATE: 12/27/2012 PROJECT NO.: 13007	Frito Lay Vancouver, Washington Groundwater Monitoring Plan	FIGURE 3

SECTION 9. LABORATORY REPORT

Specialty Analytical

11711 SE Capps Road, Ste B
Clackamas, Oregon 97015
TEL: 503-607-1331 FAX: 503-607-1336
Website: www.specialtyanalytical.com

December 20, 2012

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Lake Oswego, Oregon 97035

TEL: (503) 287-4620
FAX (503) 287-4620
RE: Frito Lay GW Monitoring / 13007

Dear John Ruddick: Order No.: 1212143

Specialty Analytical received 4 sample(s) on 12/14/2012 for the analyses presented in the following report.

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications, except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,

Marty French
Lab Director

Case Narrative

WO#: 1212143
Date: 12/20/2012

Specialty Analytical

CLIENT: Environmental Health Management
Project: Frito Lay GW Monitoring / 13007

Specialty Analytical received only preserved VOAs to run EPA method 8011. Method states that the samples should be unpreserved. This resulted in the surrogate to fail low for the samples and low spike recovery for the MS and MSD. The Method Blank surrogate recovery and the LCS and LCSDspike recovery are within limits, which were not preserved.

Specialty Analytical

Date Reported: 20-Dec-12

CLIENT: Environmental Health Management
Collection Date: 12/13/2012 11:45:00 AM
Project: Frito Lay GW Monitoring / 13007
Lab ID: 1212143-001
Client Sample ID: MW-1
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NWTPH-DX - RBC		**NWTPH-DX**				Analyst: **kbh**
Diesel	ND	0.0758		mg/L	1	12/18/2012 4:15:00 PM
Lube Oil	ND	0.189		mg/L	1	12/18/2012 4:15:00 PM
Surr: o-Terphenyl	74.4	50-150		%REC	1	12/18/2012 4:15:00 PM
NWTPH-GX		**NWTPH-GX**				Analyst: **kbh**
Gasoline	ND	100		µg/L	1	12/17/2012 12:31:00 PM
Surr: 4-Bromofluorobenzene	105	50-150		%REC	1	12/17/2012 12:31:00 PM
RCRA 8 AQUEOUS ICP METALS- TOTAL		**SW6010C**				Analyst: **CT**
Arsenic	ND	0.02000		mg/L	1	12/18/2012 11:58:57 AM
Barium	0.04580	0.01000		mg/L	1	12/18/2012 11:58:57 AM
Cadmium	ND	0.001000		mg/L	1	12/18/2012 11:58:57 AM
Chromium	0.009400	0.005000		mg/L	1	12/18/2012 11:58:57 AM
Lead	ND	0.02000		mg/L	1	12/18/2012 11:58:57 AM
Selenium	ND	0.02000		mg/L	1	12/18/2012 11:58:57 AM
Silver	ND	0.01000		mg/L	1	12/18/2012 11:58:57 AM
RCRA 8 AQUEOUS TOTAL MERCURY		**E7470A**				Analyst: **CT**
Mercury	ND	0.000100		mg/L	1	12/17/2012 9:57:00 AM
PAH'S BY GC/MS - LOW LEVEL		**SW8270D**				Analyst: **bda**
1-Methylnaphthalene	ND	0.0472		µg/L	1	12/17/2012 3:33:00 PM
2-Methylnaphthalene	ND	0.0472		µg/L	1	12/17/2012 3:33:00 PM
Acenaphthene	ND	0.0472		µg/L	1	12/17/2012 3:33:00 PM
Acenaphthylene	ND	0.0472		µg/L	1	12/17/2012 3:33:00 PM
Anthracene	ND	0.0472		µg/L	1	12/17/2012 3:33:00 PM
Benz(a)anthracene	ND	0.0472		µg/L	1	12/17/2012 3:33:00 PM
Benzo(a)pyrene	ND	0.0472		µg/L	1	12/17/2012 3:33:00 PM
Benzo(b)fluoranthene	ND	0.0472		µg/L	1	12/17/2012 3:33:00 PM
Benzo(g,h,i)perylene	ND	0.0472		µg/L	1	12/17/2012 3:33:00 PM
Benzo(k)fluoranthene	ND	0.0472		µg/L	1	12/17/2012 3:33:00 PM
Chrysene	ND	0.0472		µg/L	1	12/17/2012 3:33:00 PM
Dibenz(a,h)anthracene	ND	0.0472		µg/L	1	12/17/2012 3:33:00 PM
Fluoranthene	ND	0.0472		µg/L	1	12/17/2012 3:33:00 PM
Fluorene	ND	0.0472		µg/L	1	12/17/2012 3:33:00 PM
Indeno(1,2,3-cd)pyrene	ND	0.0472		µg/L	1	12/17/2012 3:33:00 PM
Naphthalene	ND	0.0472		µg/L	1	12/17/2012 3:33:00 PM
Phenanthrene	ND	0.0472		µg/L	1	12/17/2012 3:33:00 PM
Pyrene	ND	0.0472		µg/L	1	12/17/2012 3:33:00 PM

Specialty Analytical

Date Reported: 20-Dec-12

CLIENT: Environmental Health Management
Collection Date: 12/13/2012 11:45:00 AM
Project: Frito Lay GW Monitoring / 13007
Lab ID: 1212143-001
Client Sample ID: MW-1
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PAH'S BY GC/MS - LOW LEVEL		**SW8270D**				Analyst: **bda**
Surr: 2-Fluorobiphenyl	52.6	18.6-106		%REC	1	12/17/2012 3:33:00 PM
Surr: Nitrobenzene-d5	60.2	17-130		%REC	1	12/17/2012 3:33:00 PM
Surr: Terphenyl-d14	59.8	39.6-131		%REC	1	12/17/2012 3:33:00 PM
VOLATILE ORGANICS BY GC/MS		**SW8260B**				Analyst: **ep**
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
1,1,1-Trichloroethane	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
1,2,3-Trichlorobenzene	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
1,2,4-Trichlorobenzene	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
1,2-Dibromoethane	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
1,2-Dichloroethane	ND	0.300		µg/L	1	12/17/2012 1:06:00 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
2,2-Dichloropropane	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
2-Butanone	ND	10.0		µg/L	1	12/17/2012 1:06:00 PM
2-Chlorotoluene	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
2-Hexanone	ND	10.0		µg/L	1	12/17/2012 1:06:00 PM
4-Chlorotoluene	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
4-Methyl-2-pentanone	ND	20.0		µg/L	1	12/17/2012 1:06:00 PM
Acetone	ND	50.0		µg/L	1	12/17/2012 1:06:00 PM
Acrylonitrile	ND	5.00		µg/L	1	12/17/2012 1:06:00 PM
Benzene	ND	0.300		µg/L	1	12/17/2012 1:06:00 PM
Bromobenzene	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
Bromochloromethane	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
Bromodichloromethane	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM

Specialty Analytical

Date Reported: 20-Dec-12

CLIENT: Environmental Health Management
Collection Date: 12/13/2012 11:45:00 AM
Project: Frito Lay GW Monitoring / 13007
Lab ID: 1212143-001
Client Sample ID: MW-1
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC/MS		**SW8260B**				Analyst: **ep**
Bromoform	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
Bromomethane	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
Carbon disulfide	ND	2.00		µg/L	1	12/17/2012 1:06:00 PM
Carbon tetrachloride	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
Chlorobenzene	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
Chloroethane	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
Chloroform	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
Chloromethane	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
Dibromomethane	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
Dichlorodifluoromethane	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
Ethylbenzene	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
Hexachlorobutadiene	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
Isopropylbenzene	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
m,p-Xylene	ND	2.00		µg/L	1	12/17/2012 1:06:00 PM
Methyl tert-butyl ether	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
Methylene chloride	ND	20.0		µg/L	1	12/17/2012 1:06:00 PM
Naphthalene	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
n-Butylbenzene	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
n-Propylbenzene	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
o-Xylene	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
sec-Butylbenzene	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
Styrene	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
tert-Butylbenzene	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
Tetrachloroethene	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
Toluene	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
Trichloroethene	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
Trichlorofluoromethane	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
Vinyl chloride	ND	1.00		µg/L	1	12/17/2012 1:06:00 PM
Surr: 1,2-Dichloroethane-d4	107	85.3-116		%REC	1	12/17/2012 1:06:00 PM
Surr: 4-Bromofluorobenzene	102	88.1-120		%REC	1	12/17/2012 1:06:00 PM
Surr: Dibromofluoromethane	99.4	94.2-122		%REC	1	12/17/2012 1:06:00 PM
Surr: Toluene-d8	120	86.2-135		%REC	1	12/17/2012 1:06:00 PM
EDB/EDC/DBCP BY MICROEXTRACTION		**8011 MOD.**				Analyst: **jrp**

Specialty Analytical

Date Reported: 20-Dec-12

CLIENT:	Environmental Health Management	**Collection Date:**	12/13/2012 11:45:00 AM
Project:	Frito Lay GW Monitoring / 13007		
Lab ID:	1212143-001		
Client Sample ID:	MW-1	**Matrix:**	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EDB/EDC/DBCP BY MICROEXTRACTION		**8011 MOD.**				Analyst: **jrp**
1,2-Dibromoethane (EDB)	ND	0.0228		µg/L	1	12/18/2012 11:50:00 AM
Surr: DBCP	50.2	50-150		%REC	1	12/18/2012 11:50:00 AM

Specialty Analytical

Date Reported: 20-Dec-12

CLIENT: Environmental Health Management
Collection Date: 12/13/2012 3:15:00 PM
Project: Frito Lay GW Monitoring / 13007
Lab ID: 1212143-002
Client Sample ID: MW-2
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NWTPH-DX - RBC		**NWTPH-DX**				Analyst: **kbh**
Diesel	0.0878	0.0755		mg/L	1	12/18/2012 4:37:00 PM
Lube Oil	ND	0.189		mg/L	1	12/18/2012 4:37:00 PM
Surr: o-Terphenyl	67.6	50-150		%REC	1	12/18/2012 4:37:00 PM
NWTPH-GX		**NWTPH-GX**				Analyst: **kbh**
Gasoline	ND	100		µg/L	1	12/17/2012 1:19:00 PM
Surr: 4-Bromofluorobenzene	104	50-150		%REC	1	12/17/2012 1:19:00 PM
RCRA 8 AQUEOUS ICP METALS- TOTAL		**SW6010C**				Analyst: **CT**
Arsenic	ND	0.02000		mg/L	1	12/18/2012 12:04:01 PM
Barium	0.08140	0.01000		mg/L	1	12/18/2012 12:04:01 PM
Cadmium	ND	0.001000		mg/L	1	12/18/2012 12:04:01 PM
Chromium	0.009400	0.005000		mg/L	1	12/18/2012 12:04:01 PM
Lead	ND	0.02000		mg/L	1	12/18/2012 12:04:01 PM
Selenium	ND	0.02000		mg/L	1	12/18/2012 12:04:01 PM
Silver	ND	0.01000		mg/L	1	12/18/2012 12:04:01 PM
RCRA 8 AQUEOUS TOTAL MERCURY		**E7470A**				Analyst: **CT**
Mercury	ND	0.000100		mg/L	1	12/17/2012 9:59:00 AM
PAH'S BY GC/MS - LOW LEVEL		**SW8270D**				Analyst: **bda**
1-Methylnaphthalene	ND	0.0473		µg/L	1	12/17/2012 3:59:00 PM
2-Methylnaphthalene	ND	0.0473		µg/L	1	12/17/2012 3:59:00 PM
Acenaphthene	ND	0.0473		µg/L	1	12/17/2012 3:59:00 PM
Acenaphthylene	ND	0.0473		µg/L	1	12/17/2012 3:59:00 PM
Anthracene	ND	0.0473		µg/L	1	12/17/2012 3:59:00 PM
Benz(a)anthracene	ND	0.0473		µg/L	1	12/17/2012 3:59:00 PM
Benzo(a)pyrene	ND	0.0473		µg/L	1	12/17/2012 3:59:00 PM
Benzo(b)fluoranthene	ND	0.0473		µg/L	1	12/17/2012 3:59:00 PM
Benzo(g,h,i)perylene	ND	0.0473		µg/L	1	12/17/2012 3:59:00 PM
Benzo(k)fluoranthene	ND	0.0473		µg/L	1	12/17/2012 3:59:00 PM
Chrysene	ND	0.0473		µg/L	1	12/17/2012 3:59:00 PM
Dibenz(a,h)anthracene	ND	0.0473		µg/L	1	12/17/2012 3:59:00 PM
Fluoranthene	ND	0.0473		µg/L	1	12/17/2012 3:59:00 PM
Fluorene	ND	0.0473		µg/L	1	12/17/2012 3:59:00 PM
Indeno(1,2,3-cd)pyrene	ND	0.0473		µg/L	1	12/17/2012 3:59:00 PM
Naphthalene	ND	0.0473		µg/L	1	12/17/2012 3:59:00 PM
Phenanthrene	ND	0.0473		µg/L	1	12/17/2012 3:59:00 PM
Pyrene	ND	0.0473		µg/L	1	12/17/2012 3:59:00 PM

Specialty Analytical

Date Reported: 20-Dec-12

CLIENT: Environmental Health Management
Collection Date: 12/13/2012 3:15:00 PM
Project: Frito Lay GW Monitoring / 13007
Lab ID: 1212143-002
Client Sample ID: MW-2
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PAH'S BY GC/MS - LOW LEVEL		**SW8270D**				Analyst: **bda**
Surr: 2-Fluorobiphenyl	48.6	18.6-106		%REC	1	12/17/2012 3:59:00 PM
Surr: Nitrobenzene-d5	55.2	17-130		%REC	1	12/17/2012 3:59:00 PM
Surr: Terphenyl-d14	57.3	39.6-131		%REC	1	12/17/2012 3:59:00 PM
VOLATILE ORGANICS BY GC/MS		**SW8260B**				Analyst: **ep**
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
1,1,1-Trichloroethane	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
1,2,3-Trichlorobenzene	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
1,2,4-Trichlorobenzene	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
1,2-Dibromoethane	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
1,2-Dichloroethane	ND	0.300		µg/L	1	12/17/2012 1:40:00 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
2,2-Dichloropropane	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
2-Butanone	ND	10.0		µg/L	1	12/17/2012 1:40:00 PM
2-Chlorotoluene	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
2-Hexanone	ND	10.0		µg/L	1	12/17/2012 1:40:00 PM
4-Chlorotoluene	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
4-Methyl-2-pentanone	ND	20.0		µg/L	1	12/17/2012 1:40:00 PM
Acetone	ND	50.0		µg/L	1	12/17/2012 1:40:00 PM
Acrylonitrile	ND	5.00		µg/L	1	12/17/2012 1:40:00 PM
Benzene	ND	0.300		µg/L	1	12/17/2012 1:40:00 PM
Bromobenzene	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
Bromochloromethane	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
Bromodichloromethane	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM

Specialty Analytical

Date Reported: 20-Dec-12

CLIENT: Environmental Health Management
Collection Date: 12/13/2012 3:15:00 PM
Project: Frito Lay GW Monitoring / 13007
Lab ID: 1212143-002
Client Sample ID: MW-2
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC/MS		**SW8260B**				Analyst: **ep**
Bromoform	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
Bromomethane	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
Carbon disulfide	ND	2.00		µg/L	1	12/17/2012 1:40:00 PM
Carbon tetrachloride	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
Chlorobenzene	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
Chloroethane	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
Chloroform	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
Chloromethane	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
Dibromomethane	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
Dichlorodifluoromethane	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
Ethylbenzene	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
Hexachlorobutadiene	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
Isopropylbenzene	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
m,p-Xylene	ND	2.00		µg/L	1	12/17/2012 1:40:00 PM
Methyl tert-butyl ether	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
Methylene chloride	ND	20.0		µg/L	1	12/17/2012 1:40:00 PM
Naphthalene	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
n-Butylbenzene	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
n-Propylbenzene	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
o-Xylene	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
sec-Butylbenzene	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
Styrene	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
tert-Butylbenzene	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
Tetrachloroethene	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
Toluene	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
Trichloroethene	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
Trichlorofluoromethane	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
Vinyl chloride	ND	1.00		µg/L	1	12/17/2012 1:40:00 PM
Surr: 1,2-Dichloroethane-d4	103	85.3-116		%REC	1	12/17/2012 1:40:00 PM
Surr: 4-Bromofluorobenzene	92.4	88.1-120		%REC	1	12/17/2012 1:40:00 PM
Surr: Dibromofluoromethane	95.4	94.2-122		%REC	1	12/17/2012 1:40:00 PM
Surr: Toluene-d8	122	86.2-135		%REC	1	12/17/2012 1:40:00 PM
EDB/EDC/DBCP BY MICROEXTRACTION		**8011 MOD.**				Analyst: **jrp**

Specialty Analytical

Date Reported: 20-Dec-12

CLIENT:	Environmental Health Management	**Collection Date:**	12/13/2012 3:15:00 PM
Project:	Frito Lay GW Monitoring / 13007		
Lab ID:	1212143-002		
Client Sample ID:	MW-2	**Matrix:**	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EDB/EDC/DBCP BY MICROEXTRACTION		**8011 MOD.**				Analyst: **jrp**
1,2-Dibromoethane (EDB)	ND	0.0228		µg/L	1	12/18/2012 12:15:00 PM
Surr: DBCP	20.0	50-150	SCN	%REC	1	12/18/2012 12:15:00 PM

Specialty Analytical

Date Reported: 20-Dec-12

CLIENT: Environmental Health Management
Collection Date: 12/13/2012 7:00:00 PM
Project: Frito Lay GW Monitoring / 13007
Lab ID: 1212143-003
Client Sample ID: MW-3
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NWTPH-DX - RBC		**NWTPH-DX**				Analyst: **kbh**
Diesel	ND	0.0755		mg/L	1	12/18/2012 4:59:00 PM
Lube Oil	ND	0.189		mg/L	1	12/18/2012 4:59:00 PM
Surr: o-Terphenyl	78.7	50-150		%REC	1	12/18/2012 4:59:00 PM
NWTPH-GX		**NWTPH-GX**				Analyst: **kbh**
Gasoline	ND	100		µg/L	1	12/17/2012 1:43:00 PM
Surr: 4-Bromofluorobenzene	105	50-150		%REC	1	12/17/2012 1:43:00 PM
RCRA 8 AQUEOUS ICP METALS- TOTAL		**SW6010C**				Analyst: **CT**
Arsenic	ND	0.02000		mg/L	1	12/18/2012 12:29:29 PM
Barium	0.04660	0.01000		mg/L	1	12/18/2012 12:29:29 PM
Cadmium	ND	0.001000		mg/L	1	12/18/2012 12:29:29 PM
Chromium	0.009100	0.005000		mg/L	1	12/18/2012 12:29:29 PM
Lead	ND	0.02000		mg/L	1	12/18/2012 12:29:29 PM
Selenium	ND	0.02000		mg/L	1	12/18/2012 12:29:29 PM
Silver	ND	0.01000		mg/L	1	12/18/2012 12:29:29 PM
RCRA 8 AQUEOUS TOTAL MERCURY		**E7470A**				Analyst: **CT**
Mercury	ND	0.000100		mg/L	1	12/17/2012 10:01:00 AM
PAH'S BY GC/MS - LOW LEVEL		**SW8270D**				Analyst: **bda**
1-Methylnaphthalene	ND	0.0474		µg/L	1	12/17/2012 4:26:00 PM
2-Methylnaphthalene	ND	0.0474		µg/L	1	12/17/2012 4:26:00 PM
Acenaphthene	ND	0.0474		µg/L	1	12/17/2012 4:26:00 PM
Acenaphthylene	ND	0.0474		µg/L	1	12/17/2012 4:26:00 PM
Anthracene	ND	0.0474		µg/L	1	12/17/2012 4:26:00 PM
Benz(a)anthracene	ND	0.0474		µg/L	1	12/17/2012 4:26:00 PM
Benzo(a)pyrene	ND	0.0474		µg/L	1	12/17/2012 4:26:00 PM
Benzo(b)fluoranthene	ND	0.0474		µg/L	1	12/17/2012 4:26:00 PM
Benzo(g,h,i)perylene	ND	0.0474		µg/L	1	12/17/2012 4:26:00 PM
Benzo(k)fluoranthene	ND	0.0474		µg/L	1	12/17/2012 4:26:00 PM
Chrysene	ND	0.0474		µg/L	1	12/17/2012 4:26:00 PM
Dibenz(a,h)anthracene	ND	0.0474		µg/L	1	12/17/2012 4:26:00 PM
Fluoranthene	ND	0.0474		µg/L	1	12/17/2012 4:26:00 PM
Fluorene	ND	0.0474		µg/L	1	12/17/2012 4:26:00 PM
Indeno(1,2,3-cd)pyrene	ND	0.0474		µg/L	1	12/17/2012 4:26:00 PM
Naphthalene	ND	0.0474		µg/L	1	12/17/2012 4:26:00 PM
Phenanthrene	ND	0.0474		µg/L	1	12/17/2012 4:26:00 PM
Pyrene	ND	0.0474		µg/L	1	12/17/2012 4:26:00 PM

Specialty Analytical

Date Reported: 20-Dec-12

CLIENT: Environmental Health Management
Collection Date: 12/13/2012 7:00:00 PM
Project: Frito Lay GW Monitoring / 13007
Lab ID: 1212143-003
Client Sample ID: MW-3
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PAH'S BY GC/MS - LOW LEVEL		**SW8270D**				Analyst: **bda**
Surr: 2-Fluorobiphenyl	42.2	18.6-106		%REC	1	12/17/2012 4:26:00 PM
Surr: Nitrobenzene-d5	47.4	17-130		%REC	1	12/17/2012 4:26:00 PM
Surr: Terphenyl-d14	52.6	39.6-131		%REC	1	12/17/2012 4:26:00 PM
VOLATILE ORGANICS BY GC/MS		**SW8260B**				Analyst: **ep**
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
1,1,1-Trichloroethane	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
1,2,3-Trichlorobenzene	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
1,2,4-Trichlorobenzene	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
1,2-Dibromoethane	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
1,2-Dichloroethane	ND	0.300		µg/L	1	12/17/2012 2:14:00 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
2,2-Dichloropropane	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
2-Butanone	ND	10.0		µg/L	1	12/17/2012 2:14:00 PM
2-Chlorotoluene	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
2-Hexanone	ND	10.0		µg/L	1	12/17/2012 2:14:00 PM
4-Chlorotoluene	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
4-Methyl-2-pentanone	ND	20.0		µg/L	1	12/17/2012 2:14:00 PM
Acetone	ND	50.0		µg/L	1	12/17/2012 2:14:00 PM
Acrylonitrile	ND	5.00		µg/L	1	12/17/2012 2:14:00 PM
Benzene	ND	0.300		µg/L	1	12/17/2012 2:14:00 PM
Bromobenzene	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
Bromochloromethane	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
Bromodichloromethane	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM

Specialty Analytical

Date Reported: 20-Dec-12

CLIENT: Environmental Health Management
Collection Date: 12/13/2012 7:00:00 PM
Project: Frito Lay GW Monitoring / 13007
Lab ID: 1212143-003
Client Sample ID: MW-3
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC/MS		**SW8260B**				Analyst: **ep**
Bromoform	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
Bromomethane	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
Carbon disulfide	ND	2.00		µg/L	1	12/17/2012 2:14:00 PM
Carbon tetrachloride	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
Chlorobenzene	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
Chloroethane	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
Chloroform	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
Chloromethane	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
Dibromomethane	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
Dichlorodifluoromethane	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
Ethylbenzene	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
Hexachlorobutadiene	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
Isopropylbenzene	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
m,p-Xylene	ND	2.00		µg/L	1	12/17/2012 2:14:00 PM
Methyl tert-butyl ether	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
Methylene chloride	ND	20.0		µg/L	1	12/17/2012 2:14:00 PM
Naphthalene	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
n-Butylbenzene	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
n-Propylbenzene	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
o-Xylene	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
sec-Butylbenzene	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
Styrene	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
tert-Butylbenzene	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
Tetrachloroethene	1.01	1.00		µg/L	1	12/17/2012 2:14:00 PM
Toluene	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
Trichloroethene	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
Trichlorofluoromethane	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
Vinyl chloride	ND	1.00		µg/L	1	12/17/2012 2:14:00 PM
Surr: 1,2-Dichloroethane-d4	107	85.3-116		%REC	1	12/17/2012 2:14:00 PM
Surr: 4-Bromofluorobenzene	109	88.1-120		%REC	1	12/17/2012 2:14:00 PM
Surr: Dibromofluoromethane	96.7	94.2-122		%REC	1	12/17/2012 2:14:00 PM
Surr: Toluene-d8	109	86.2-135		%REC	1	12/17/2012 2:14:00 PM
EDB/EDC/DBCP BY MICROEXTRACTION		**8011 MOD.**				Analyst: **jrp**

Specialty Analytical

Date Reported: 20-Dec-12

CLIENT:	Environmental Health Management	**Collection Date:**	12/13/2012 7:00:00 PM
Project:	Frito Lay GW Monitoring / 13007		
Lab ID:	1212143-003		
Client Sample ID:	MW-3	**Matrix:**	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EDB/EDC/DBCP BY MICROEXTRACTION		**8011 MOD.**				Analyst: **jrp**
1,2-Dibromoethane (EDB)	ND	0.0228		µg/L	1	12/18/2012 12:40:00 PM
Surr: DBCP	50.2	50-150		%REC	1	12/18/2012 12:40:00 PM

Specialty Analytical

Date Reported: 20-Dec-12

CLIENT: Environmental Health Management
Collection Date: 12/13/2012 9:00:00 PM
Project: Frito Lay GW Monitoring / 13007
Lab ID: 1212143-004
Client Sample ID: MW-0
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NWTPH-DX - RBC		**NWTPH-DX**				Analyst: **kbh**
Diesel	0.0799	0.0759		mg/L	1	12/18/2012 5:21:00 PM
Lube Oil	ND	0.190		mg/L	1	12/18/2012 5:21:00 PM
Surr: o-Terphenyl	93.9	50-150		%REC	1	12/18/2012 5:21:00 PM
NWTPH-GX		**NWTPH-GX**				Analyst: **kbh**
Gasoline	ND	100		µg/L	1	12/17/2012 2:07:00 PM
Surr: 4-Bromofluorobenzene	105	50-150		%REC	1	12/17/2012 2:07:00 PM
RCRA 8 AQUEOUS ICP METALS- TOTAL		**SW6010C**				Analyst: **CT**
Arsenic	ND	0.02000		mg/L	1	12/18/2012 12:34:33 PM
Barium	ND	0.01000		mg/L	1	12/18/2012 12:34:33 PM
Cadmium	ND	0.001000		mg/L	1	12/18/2012 12:34:33 PM
Chromium	ND	0.005000		mg/L	1	12/18/2012 12:34:33 PM
Lead	ND	0.02000		mg/L	1	12/18/2012 12:34:33 PM
Selenium	ND	0.02000		mg/L	1	12/18/2012 12:34:33 PM
Silver	ND	0.01000		mg/L	1	12/18/2012 12:34:33 PM
RCRA 8 AQUEOUS TOTAL MERCURY		**E7470A**				Analyst: **CT**
Mercury	ND	0.000100		mg/L	1	12/17/2012 10:03:00 AM
PAH'S BY GC/MS - LOW LEVEL		**SW8270D**				Analyst: **bda**
1-Methylnaphthalene	ND	0.0473		µg/L	1	12/17/2012 4:52:00 PM
2-Methylnaphthalene	ND	0.0473		µg/L	1	12/17/2012 4:52:00 PM
Acenaphthene	ND	0.0473		µg/L	1	12/17/2012 4:52:00 PM
Acenaphthylene	ND	0.0473		µg/L	1	12/17/2012 4:52:00 PM
Anthracene	ND	0.0473		µg/L	1	12/17/2012 4:52:00 PM
Benz(a)anthracene	ND	0.0473		µg/L	1	12/17/2012 4:52:00 PM
Benzo(a)pyrene	ND	0.0473		µg/L	1	12/17/2012 4:52:00 PM
Benzo(b)fluoranthene	ND	0.0473		µg/L	1	12/17/2012 4:52:00 PM
Benzo(g,h,i)perylene	ND	0.0473		µg/L	1	12/17/2012 4:52:00 PM
Benzo(k)fluoranthene	ND	0.0473		µg/L	1	12/17/2012 4:52:00 PM
Chrysene	ND	0.0473		µg/L	1	12/17/2012 4:52:00 PM
Dibenz(a,h)anthracene	ND	0.0473		µg/L	1	12/17/2012 4:52:00 PM
Fluoranthene	ND	0.0473		µg/L	1	12/17/2012 4:52:00 PM
Fluorene	ND	0.0473		µg/L	1	12/17/2012 4:52:00 PM
Indeno(1,2,3-cd)pyrene	ND	0.0473		µg/L	1	12/17/2012 4:52:00 PM
Naphthalene	ND	0.0473		µg/L	1	12/17/2012 4:52:00 PM
Phenanthrene	ND	0.0473		µg/L	1	12/17/2012 4:52:00 PM
Pyrene	ND	0.0473		µg/L	1	12/17/2012 4:52:00 PM

Specialty Analytical

Date Reported: 20-Dec-12

CLIENT: Environmental Health Management
Collection Date: 12/13/2012 9:00:00 PM
Project: Frito Lay GW Monitoring / 13007
Lab ID: 1212143-004
Client Sample ID: MW-0
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PAH'S BY GC/MS - LOW LEVEL		**SW8270D**				Analyst: **bda**
Surr: 2-Fluorobiphenyl	47.5	18.6-106		%REC	1	12/17/2012 4:52:00 PM
Surr: Nitrobenzene-d5	54.4	17-130		%REC	1	12/17/2012 4:52:00 PM
Surr: Terphenyl-d14	60.8	39.6-131		%REC	1	12/17/2012 4:52:00 PM
VOLATILE ORGANICS BY GC/MS		**SW8260B**				Analyst: **ep**
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
1,1,1-Trichloroethane	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
1,2,3-Trichlorobenzene	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
1,2,4-Trichlorobenzene	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
1,2-Dibromoethane	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
1,2-Dichloroethane	ND	0.300		µg/L	1	12/17/2012 2:47:00 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
2,2-Dichloropropane	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
2-Butanone	ND	10.0		µg/L	1	12/17/2012 2:47:00 PM
2-Chlorotoluene	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
2-Hexanone	ND	10.0		µg/L	1	12/17/2012 2:47:00 PM
4-Chlorotoluene	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
4-Methyl-2-pentanone	ND	20.0		µg/L	1	12/17/2012 2:47:00 PM
Acetone	ND	50.0		µg/L	1	12/17/2012 2:47:00 PM
Acrylonitrile	ND	5.00		µg/L	1	12/17/2012 2:47:00 PM
Benzene	ND	0.300		µg/L	1	12/17/2012 2:47:00 PM
Bromobenzene	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
Bromochloromethane	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
Bromodichloromethane	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM

Specialty Analytical

Date Reported: 20-Dec-12

CLIENT: Environmental Health Management
Collection Date: 12/13/2012 9:00:00 PM
Project: Frito Lay GW Monitoring / 13007
Lab ID: 1212143-004
Client Sample ID: MW-0
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC/MS		**SW8260B**				Analyst: **ep**
Bromoform	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
Bromomethane	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
Carbon disulfide	ND	2.00		µg/L	1	12/17/2012 2:47:00 PM
Carbon tetrachloride	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
Chlorobenzene	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
Chloroethane	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
Chloroform	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
Chloromethane	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
Dibromomethane	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
Dichlorodifluoromethane	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
Ethylbenzene	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
Hexachlorobutadiene	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
Isopropylbenzene	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
m,p-Xylene	ND	2.00		µg/L	1	12/17/2012 2:47:00 PM
Methyl tert-butyl ether	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
Methylene chloride	ND	20.0		µg/L	1	12/17/2012 2:47:00 PM
Naphthalene	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
n-Butylbenzene	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
n-Propylbenzene	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
o-Xylene	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
sec-Butylbenzene	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
Styrene	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
tert-Butylbenzene	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
Tetrachloroethene	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
Toluene	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
Trichloroethene	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
Trichlorofluoromethane	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
Vinyl chloride	ND	1.00		µg/L	1	12/17/2012 2:47:00 PM
Surr: 1,2-Dichloroethane-d4	104	85.3-116		%REC	1	12/17/2012 2:47:00 PM
Surr: 4-Bromofluorobenzene	108	88.1-120		%REC	1	12/17/2012 2:47:00 PM
Surr: Dibromofluoromethane	95.8	94.2-122		%REC	1	12/17/2012 2:47:00 PM
Surr: Toluene-d8	109	86.2-135		%REC	1	12/17/2012 2:47:00 PM
EDB/EDC/DBCP BY MICROEXTRACTION		**8011 MOD.**				Analyst: **jrp**

Specialty Analytical

Date Reported: 20-Dec-12

CLIENT: Environmental Health Management
Collection Date: 12/13/2012 9:00:00 PM
Project: Frito Lay GW Monitoring / 13007
Lab ID: 1212143-004
Client Sample ID: MW-0
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EDB/EDC/DBCP BY MICROEXTRACTION		**8011 MOD.**				Analyst: **jrp**
1,2-Dibromoethane (EDB)	ND	0.0228		µg/L	1	12/18/2012 1:05:00 PM
Surr: DBCP	32.7	50-150	SCN	%REC	1	12/18/2012 1:05:00 PM

QC SUMMARY REPORT

WO#: 1212143

20-Dec-12

Specialty Analytical

Client: Environmental Health Management
Project: Frito Lay GW Monitoring / 13007 **TestCode:** 6010_W

Sample ID: ICV	SampType: ICV	TestCode: 6010_W	Units: mg/L	Prep Date:	RunNo: 7675
Client ID: ICV	Batch ID: 4200	TestNo: SW6010C	SW3010A	Analysis Date: 12/18/2012	SeqNo: 97405

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.9818	0.02000	1.000	0	98.2	90	110				
Barium	0.5037	0.01000	0.5000	0	101	90	110				
Cadmium	0.04940	0.001000	0.05000	0	98.8	90	110				
Chromium	0.2532	0.005000	0.2500	0	101	90	110				
Lead	1.015	0.02000	1.000	0	102	90	110				
Selenium	0.9748	0.02000	1.000	0	97.5	90	110				
Silver	0.5024	0.01000	0.5000	0	100	90	110				

Sample ID: MB-4200	SampType: MBLK	TestCode: 6010_W	Units: mg/L	Prep Date: 12/18/2012	RunNo: 7675
Client ID: PBW	Batch ID: 4200	TestNo: SW6010C	SW3010A	Analysis Date: 12/18/2012	SeqNo: 97406

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02000									
Barium	ND	0.01000									
Cadmium	ND	0.001000									
Chromium	ND	0.005000									
Lead	ND	0.02000									
Selenium	ND	0.02000									
Silver	ND	0.01000									

Sample ID: LCS-4200	SampType: LCS	TestCode: 6010_W	Units: mg/L	Prep Date: 12/18/2012	RunNo: 7675
Client ID: LCSW	Batch ID: 4200	TestNo: SW6010C	SW3010A	Analysis Date: 12/18/2012	SeqNo: 97407

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.9906	0.02000	1.000	0	99.1	93.8	107				

Qualifiers:

QC SUMMARY REPORT

WO#: 1212143

20-Dec-12

Specialty Analytical

Client: Environmental Health Management
Project: Frito Lay GW Monitoring / 13007 **TestCode:** 6010_W

Sample ID: LCS-4200	SampType: LCS	TestCode: 6010_W	Units: mg/L	Prep Date: 12/18/2012	RunNo: 7675
Client ID: LCSW	Batch ID: 4200	TestNo: SW6010C	SW3010A	Analysis Date: 12/18/2012	SeqNo: 97407

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.5027	0.01000	0.5000	0	101	95	111				
Cadmium	0.05000	0.001000	0.05000	0	100	91.8	110				
Chromium	0.2434	0.005000	0.2500	0	97.4	93.9	113				
Lead	1.002	0.02000	1.000	0	100	93.1	112				
Selenium	0.9702	0.02000	1.000	0	97.0	93.9	111				
Silver	0.5003	0.01000	0.5000	0	100	87.1	113				

Sample ID: A1212165-002DDUP	SampType: DUP	TestCode: 6010_W	Units: mg/L	Prep Date: 12/18/2012	RunNo: 7675
Client ID: ZZZZZZ	Batch ID: 4200	TestNo: SW6010C	SW3010A	Analysis Date: 12/18/2012	SeqNo: 97409

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02000						0	200	20	
Barium	ND	0.01000						0	0	20	
Cadmium	ND	0.001000						0	0	20	
Chromium	ND	0.005000						0	0	20	
Lead	ND	0.02000						0	0	20	
Selenium	ND	0.02000						0	0	20	
Silver	ND	0.01000						0	0	20	

Sample ID: A1212165-002DMS	SampType: MS	TestCode: 6010_W	Units: mg/L	Prep Date: 12/18/2012	RunNo: 7675
Client ID: ZZZZZZ	Batch ID: 4200	TestNo: SW6010C	SW3010A	Analysis Date: 12/18/2012	SeqNo: 97410

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	1.009	0.02000	1.000	0.01140	99.8	90.1	110				
Barium	0.5359	0.01000	0.5000	0.008800	105	90.7	112				

Qualifiers:

QC SUMMARY REPORT

WO#: 1212143

20-Dec-12

Specialty Analytical

Client: Environmental Health Management
Project: Frito Lay GW Monitoring / 13007

TestCode: 6010_W

Sample ID: A1212165-002DMS	SampType: MS	TestCode: 6010_W	Units: mg/L	Prep Date: 12/18/2012	RunNo: 7675
Client ID: ZZZZZZ	Batch ID: 4200	TestNo: SW6010C	SW3010A	Analysis Date: 12/18/2012	SeqNo: 97410

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	0.05420	0.001000	0.05000	0	108	93.4	115				
Chromium	0.2560	0.005000	0.2500	0	102	93.4	112				
Lead	1.039	0.02000	1.000	0	104	91.9	112				
Selenium	0.9892	0.02000	1.000	0	98.9	93.5	113				
Silver	0.5191	0.01000	0.5000	0	104	90.1	113				

Sample ID: A1212165-002DMSD	SampType: MSD	TestCode: 6010_W	Units: mg/L	Prep Date: 12/18/2012	RunNo: 7675
Client ID: ZZZZZZ	Batch ID: 4200	TestNo: SW6010C	SW3010A	Analysis Date: 12/18/2012	SeqNo: 97411

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	1.050	0.02000	1.000	0.01140	104	90.1	110	1.009	3.98	20	
Barium	0.5536	0.01000	0.5000	0.008800	109	90.7	112	0.5359	3.25	20	
Cadmium	0.05660	0.001000	0.05000	0	113	93.4	115	0.05420	4.33	20	
Chromium	0.2720	0.005000	0.2500	0	109	93.4	112	0.2560	6.06	20	
Lead	1.082	0.02000	1.000	0	108	91.9	112	1.039	4.05	20	
Selenium	1.015	0.02000	1.000	0	102	93.5	113	0.9892	2.57	20	
Silver	0.5380	0.01000	0.5000	0	108	90.1	113	0.5191	3.58	20	

Sample ID: CCV	SampType: CCV	TestCode: 6010_W	Units: mg/L	Prep Date:	RunNo: 7675
Client ID: CCV	Batch ID: 4200	TestNo: SW6010C	SW3010A	Analysis Date: 12/18/2012	SeqNo: 97415

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	1.013	0.02000	1.000	0	101	90	110				
Barium	0.5088	0.01000	0.5000	0	102	90	110				
Cadmium	0.04870	0.001000	0.05000	0	97.4	90	110				

Qualifiers:

QC SUMMARY REPORT

WO#: 1212143

Specialty Analytical

20-Dec-12

Client: Environmental Health Management
Project: Frito Lay GW Monitoring / 13007 **TestCode:** 6010_W

Sample ID: CCV	SampType: CCV	TestCode: 6010_W	Units: mg/L	Prep Date:	RunNo: 7675
Client ID: CCV	Batch ID: 4200	TestNo: SW6010C	SW3010A	Analysis Date: 12/18/2012	SeqNo: 97415

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.2588	0.005000	0.2500	0	104	90	110				
Lead	1.020	0.02000	1.000	0	102	90	110				
Selenium	0.9836	0.02000	1.000	0	98.4	90	110				
Silver	0.5160	0.01000	0.5000	0	103	90	110				

Sample ID: CCV	SampType: CCV	TestCode: 6010_W	Units: mg/L	Prep Date:	RunNo: 7675
Client ID: CCV	Batch ID: 4200	TestNo: SW6010C	SW3010A	Analysis Date: 12/18/2012	SeqNo: 97423

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	1.024	0.02000	1.000	0	102	90	110				
Barium	0.5158	0.01000	0.5000	0	103	90	110				
Cadmium	0.05040	0.001000	0.05000	0	101	90	110				
Chromium	0.2587	0.005000	0.2500	0	103	90	110				
Lead	1.036	0.02000	1.000	0	104	90	110				
Selenium	0.9997	0.02000	1.000	0	100	90	110				
Silver	0.5357	0.01000	0.5000	0	107	90	110				

Sample ID: CCV	SampType: CCV	TestCode: 6010_W	Units: mg/L	Prep Date:	RunNo: 7675
Client ID: CCV	Batch ID: 4200	TestNo: SW6010C	SW3010A	Analysis Date: 12/18/2012	SeqNo: 97426

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	1.038	0.02000	1.000	0	104	90	110				
Barium	0.5152	0.01000	0.5000	0	103	90	110				
Cadmium	0.05110	0.001000	0.05000	0	102	90	110				
Chromium	0.2588	0.005000	0.2500	0	104	90	110				

Qualifiers:

QC SUMMARY REPORT

WO#: **1212143**

20-Dec-12

Specialty Analytical

Client: Environmental Health Management
Project: Frito Lay GW Monitoring / 13007 **TestCode:** **6010_W**

Sample ID: **CCV**	SampType: **CCV**	TestCode: **6010_W**	Units: **mg/L**	Prep Date:	RunNo: **7675**
Client ID: **CCV**	Batch ID: **4200**	TestNo: **SW6010C**	**SW3010A**	Analysis Date: **12/18/2012**	SeqNo: **97426**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.048	0.02000	1.000	0	105	90	110				
Selenium	1.008	0.02000	1.000	0	101	90	110				
Silver	0.5305	0.01000	0.5000	0	106	90	110				

Qualifiers:

QC SUMMARY REPORT

WO#: **1212143**

Specialty Analytical

20-Dec-12

Client: Environmental Health Management
Project: Frito Lay GW Monitoring / 13007

TestCode: **8011_W**

Sample ID: CCV	SampType: CCV	TestCode: 8011_W	Units: µg/L	Prep Date:	RunNo: 7686
Client ID: CCV	Batch ID: R7686	TestNo: 8011 Mod.		Analysis Date: 12/18/2012	SeqNo: 97564

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane (EDB)	3.22	0.0228	2.850	0	113	80	120				

Sample ID: MBLK	SampType: MBLK	TestCode: 8011_W	Units: µg/L	Prep Date:	RunNo: 7686
Client ID: PBW	Batch ID: R7686	TestNo: 8011 Mod.		Analysis Date: 12/18/2012	SeqNo: 97565

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane (EDB)	ND	0.0228									
Surr: DBCP	2.57		2.280		113	50	150				

Sample ID: 1212143-004EMS	SampType: MS	TestCode: 8011_W	Units: µg/L	Prep Date:	RunNo: 7686
Client ID: MW-0	Batch ID: R7686	TestNo: 8011 Mod.		Analysis Date: 12/18/2012	SeqNo: 97570

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane (EDB)	0.288	0.0228	1.425	0	20.2	70	130				SCN

Sample ID: 1212143-004EMSD	SampType: MSD	TestCode: 8011_W	Units: µg/L	Prep Date:	RunNo: 7686
Client ID: MW-0	Batch ID: R7686	TestNo: 8011 Mod.		Analysis Date: 12/18/2012	SeqNo: 97571

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane (EDB)	0.325	0.0228	1.425	0	22.8	70	130	0.2877	12.3	20	SCN

Sample ID: LCS	SampType: LCS	TestCode: 8011_W	Units: µg/L	Prep Date:	RunNo: 7686
Client ID: LCSW	Batch ID: R7686	TestNo: 8011 Mod.		Analysis Date: 12/18/2012	SeqNo: 97572

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

QC SUMMARY REPORT

WO#: 1212143

20-Dec-12

Specialty Analytical

Client: Environmental Health Management
Project: Frito Lay GW Monitoring / 13007

TestCode: 8011_W

Sample ID: LCS	SampType: LCS	TestCode: 8011_W	Units: µg/L	Prep Date:	RunNo: 7686
Client ID: LCSW	Batch ID: R7686	TestNo: 8011 Mod.		Analysis Date: 12/18/2012	SeqNo: 97572

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane (EDB)	1.58	0.0228	1.425	0	111	80	120				

Sample ID: LCSD	SampType: LCSD	TestCode: 8011_W	Units: µg/L	Prep Date:	RunNo: 7686
Client ID: LCSS02	Batch ID: R7686	TestNo: 8011 Mod.		Analysis Date: 12/18/2012	SeqNo: 97573

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane (EDB)	1.65	0.0228	1.425	0	116	80	120	1.581	4.21	20	

Sample ID: CCV	SampType: CCV	TestCode: 8011_W	Units: µg/L	Prep Date:	RunNo: 7686
Client ID: CCV	Batch ID: R7686	TestNo: 8011 Mod.		Analysis Date: 12/18/2012	SeqNo: 97574

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane (EDB)	2.77	0.0228	2.850	0	97.0	80	120				

Qualifiers:

QC SUMMARY REPORT

WO#: 1212143

20-Dec-12

Specialty Analytical

Client: Environmental Health Management
Project: Frito Lay GW Monitoring / 13007

TestCode: 8260_W

Sample ID: CCV	SampType: CCV	TestCode: 8260_W	Units: µg/L	Prep Date:	RunNo: 7646
Client ID: CCV	Batch ID: R7646	TestNo: SW8260B		Analysis Date: 12/17/2012	SeqNo: 97060

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	39.9	1.00	40.00	0	99.7	80	120				
1,2-Dichloropropane	40.9	1.00	40.00	0	102	80	120				
Chloroform	40.1	1.00	40.00	0	100	80	120				
Ethylbenzene	36.2	1.00	40.00	0	90.4	80	120				
Toluene	42.6	1.00	40.00	0	107	80	120				
Vinyl chloride	42.7	1.00	40.00	0	107	80	120				

Sample ID: LCS	SampType: LCS	TestCode: 8260_W	Units: µg/L	Prep Date:	RunNo: 7646
Client ID: LCSW	Batch ID: R7646	TestNo: SW8260B		Analysis Date: 12/17/2012	SeqNo: 97061

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	44.4	1.00	40.00	0	111	61.2	135				
Benzene	42.0	0.300	40.00	0	105	76.8	125				
Chlorobenzene	36.7	1.00	40.00	0	91.8	84.1	116				
Toluene	47.1	1.00	40.00	0	118	82	122				
Trichloroethene	39.1	1.00	40.00	0	97.8	68.5	124				

Sample ID: MB	SampType: MBLK	TestCode: 8260_W	Units: µg/L	Prep Date:	RunNo: 7646
Client ID: PBW	Batch ID: R7646	TestNo: SW8260B		Analysis Date: 12/17/2012	SeqNo: 97062

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	1.00									
1,1,1-Trichloroethane	ND	1.00									
1,1,2,2-Tetrachloroethane	ND	1.00									
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.00									

Qualifiers:

QC SUMMARY REPORT

WO#: **1212143**

Specialty Analytical

20-Dec-12

Client: Environmental Health Management
Project: Frito Lay GW Monitoring / 13007

TestCode: **8260_W**

Sample ID: **MB** SampType: **MBLK** TestCode: **8260_W** Units: **µg/L** Prep Date: RunNo: **7646**
Client ID: **PBW** Batch ID: **R7646** TestNo: **SW8260B** Analysis Date: **12/17/2012** SeqNo: **97062**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,2-Trichloroethane	ND	1.00									
1,1-Dichloroethane	ND	1.00									
1,1-Dichloroethene	ND	1.00									
1,1-Dichloropropene	ND	1.00									
1,2,3-Trichlorobenzene	ND	1.00									
1,2,3-Trichloropropane	ND	1.00									
1,2,4-Trichlorobenzene	ND	1.00									
1,2,4-Trimethylbenzene	ND	1.00									
1,2-Dibromo-3-chloropropane	ND	1.00									
1,2-Dibromoethane	ND	1.00									
1,2-Dichlorobenzene	ND	1.00									
1,2-Dichloroethane	ND	1.00									
1,2-Dichloropropane	ND	1.00									
1,3,5-Trimethylbenzene	ND	1.00									
1,3-Dichlorobenzene	ND	1.00									
1,3-Dichloropropane	ND	1.00									
1,4-Dichlorobenzene	ND	1.00									
2,2-Dichloropropane	ND	1.00									
2-Butanone	ND	10.0									
2-Chlorotoluene	ND	1.00									
2-Hexanone	ND	10.0									
4-Chlorotoluene	ND	1.00									
4-Isopropyltoluene	ND	1.00									
4-Methyl-2-pentanone	ND	20.0									
Acetone	ND	50.0									
Acrylonitrile	ND	5.00									

Qualifiers:

QC SUMMARY REPORT

WO#: **1212143**

20-Dec-12

Specialty Analytical

Client: Environmental Health Management
Project: Frito Lay GW Monitoring / 13007 **TestCode:** **8260_W**

Sample ID: **MB**	SampType: **MBLK**	TestCode: **8260_W**	Units: **µg/L**	Prep Date:	RunNo: **7646**
Client ID: **PBW**	Batch ID: **R7646**	TestNo: **SW8260B**		Analysis Date: **12/17/2012**	SeqNo: **97062**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.300									
Bromobenzene	ND	1.00									
Bromochloromethane	ND	1.00									
Bromodichloromethane	ND	1.00									
Bromoform	ND	1.00									
Bromomethane	ND	1.00									
Carbon disulfide	ND	2.00									
Carbon tetrachloride	ND	1.00									
Chlorobenzene	ND	1.00									
Chloroethane	ND	1.00									
Chloroform	ND	1.00									
Chloromethane	ND	1.00									
cis-1,2-Dichloroethene	ND	1.00									
cis-1,3-Dichloropropene	ND	1.00									
Dibromochloromethane	ND	1.00									
Dibromomethane	ND	1.00									
Dichlorodifluoromethane	ND	1.00									
Ethylbenzene	ND	1.00									
Hexachlorobutadiene	ND	1.00									
Isopropylbenzene	ND	1.00									
m,p-Xylene	ND	2.00									
Methyl tert-butyl ether	ND	1.00									
Methylene chloride	ND	20.0									
Naphthalene	ND	1.00									
n-Butylbenzene	ND	1.00									
n-Propylbenzene	ND	1.00									

Qualifiers:

QC SUMMARY REPORT

WO#: **1212143**

Specialty Analytical

20-Dec-12

Client: Environmental Health Management
Project: Frito Lay GW Monitoring / 13007

TestCode: **8260_W**

Sample ID: **MB**	SampType: **MBLK**	TestCode: **8260_W**	Units: **µg/L**	Prep Date:	RunNo: **7646**
Client ID: **PBW**	Batch ID: **R7646**	TestNo: **SW8260B**		Analysis Date: **12/17/2012**	SeqNo: **97062**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	ND	1.00									
sec-Butylbenzene	ND	1.00									
Styrene	ND	1.00									
tert-Butylbenzene	ND	1.00									
Tetrachloroethene	ND	1.00									
Toluene	ND	1.00									
trans-1,2-Dichloroethene	ND	1.00									
trans-1,3-Dichloropropene	ND	1.00									
Trichloroethene	ND	1.00									
Trichlorofluoromethane	ND	1.00									
Vinyl chloride	ND	1.00									
Surr: 1,2-Dichloroethane-d4	110		100.0		110	85.3	116				
Surr: 4-Bromofluorobenzene	97.0		100.0		97.0	88.1	120				
Surr: Dibromofluoromethane	101		100.0		101	94.2	122				
Surr: Toluene-d8	120		100.0		120	86.2	135				

Sample ID: **1212143-002CMSD**	SampType: **MSD**	TestCode: **8260_W**	Units: **µg/L**	Prep Date:	RunNo: **7646**
Client ID: **MW-2**	Batch ID: **R7646**	TestNo: **SW8260B**		Analysis Date: **12/17/2012**	SeqNo: **97201**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	43.3	1.00	40.00	0	108	57.3	165	44.33	2.35	20	
Benzene	46.0	0.300	40.00	0	115	74.1	136	45.94	0.196	20	
Chlorobenzene	38.3	1.00	40.00	0	95.9	70.7	133	38.22	0.313	20	
Toluene	46.3	1.00	40.00	0	116	68.4	135	48.44	4.52	20	
Trichloroethene	40.7	1.00	40.00	0.3200	101	50.8	164	40.05	1.59	20	

Qualifiers:

QC SUMMARY REPORT

WO#: 1212143

20-Dec-12

Specialty Analytical

Client: Environmental Health Management
Project: Frito Lay GW Monitoring / 13007 **TestCode:** 8260_W

Sample ID: 1212143-002CMS	SampType: MS	TestCode: 8260_W	Units: µg/L	Prep Date:	RunNo: 7646
Client ID: MW-2	Batch ID: R7646	TestNo: SW8260B		Analysis Date: 12/17/2012	SeqNo: 97202

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	44.3	1.00	40.00	0	111	57.3	165				
Benzene	45.9	0.300	40.00	0	115	74.1	136				
Chlorobenzene	38.2	1.00	40.00	0	95.6	70.7	133				
Toluene	48.4	1.00	40.00	0	121	68.4	135				
Trichloroethene	40.0	1.00	40.00	0.3200	99.3	50.8	164				

Qualifiers:

QC SUMMARY REPORT

WO#: 1212143

20-Dec-12

Specialty Analytical

Client: Environmental Health Management
Project: Frito Lay GW Monitoring / 13007 **TestCode:** HG_CT

Sample ID: MB-4183	SampType: MBLK	TestCode: HG_CT	Units: mg/L	Prep Date: 12/17/2012	RunNo: 7640
Client ID: PBW	Batch ID: 4183	TestNo: E7470A	E245.1	Analysis Date: 12/17/2012	SeqNo: 97000

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.000100									

Sample ID: LCS-4183	SampType: LCS	TestCode: HG_CT	Units: mg/L	Prep Date: 12/17/2012	RunNo: 7640
Client ID: LCSW	Batch ID: 4183	TestNo: E7470A	E245.1	Analysis Date: 12/17/2012	SeqNo: 97001

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00397	0.000100	0.004000	0	99.3	85.4	116				

Sample ID: A1212130-001CDUP	SampType: DUP	TestCode: HG_CT	Units: mg/L	Prep Date:	RunNo: 7640
Client ID: ZZZZZZ	Batch ID: 4183	TestNo: E7470A	E245.1	Analysis Date: 12/17/2012	SeqNo: 97003

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.000100						0	0	20	

Sample ID: A1212130-001CMS	SampType: MS	TestCode: HG_CT	Units: mg/L	Prep Date:	RunNo: 7640
Client ID: ZZZZZZ	Batch ID: 4183	TestNo: E7470A	E245.1	Analysis Date: 12/17/2012	SeqNo: 97004

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00412	0.000100	0.004000	0	103	69.5	125				

Sample ID: A1212130-001CMSD	SampType: MSD	TestCode: HG_CT	Units: mg/L	Prep Date:	RunNo: 7640
Client ID: ZZZZZZ	Batch ID: 4183	TestNo: E7470A	E245.1	Analysis Date: 12/17/2012	SeqNo: 97005

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00402	0.000100	0.004000	0	101	69.5	125	0.004124	2.43	20	

Qualifiers:

QC SUMMARY REPORT

WO#: **1212143**

20-Dec-12

Specialty Analytical

Client: Environmental Health Management
Project: Frito Lay GW Monitoring / 13007 **TestCode:** HG_CT

Sample ID: CCV	SampType: CCV	TestCode: HG_CT	Units: mg/L	Prep Date:	RunNo: 7640
Client ID: CCV	Batch ID: 4183	TestNo: E7470A	E245.1	Analysis Date: 12/17/2012	SeqNo: 97012

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00405	0.000100	0.004000	0	101	90	110				

Qualifiers:

QC SUMMARY REPORT

WO#: **1212143**

20-Dec-12

Specialty Analytical

Client: Environmental Health Management
Project: Frito Lay GW Monitoring / 13007 **TestCode:** **NWTPHDXLL_W**

Sample ID: **MB-4204**	SampType: **MBLK**	TestCode: **NWTPHDXLL**	Units: **mg/L**	Prep Date: **12/18/2012**	RunNo: **7693**
Client ID: **PBW**	Batch ID: **4204**	TestNo: **NWTPH-Dx**	**SW3510B**	Analysis Date: **12/18/2012**	SeqNo: **97679**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	ND	0.0800									
Lube Oil	ND	0.200									
Surr: o-Terphenyl	0.202		0.2000		101	50	150				

Sample ID: **LCS-4204**	SampType: **LCS**	TestCode: **NWTPHDXLL**	Units: **mg/L**	Prep Date: **12/18/2012**	RunNo: **7693**
Client ID: **LCSW**	Batch ID: **4204**	TestNo: **NWTPH-Dx**	**SW3510B**	Analysis Date: **12/18/2012**	SeqNo: **97680**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	1.02	0.0800	1.000	0	102	60.7	121				
Lube Oil	1.12	0.200	1.000	0	112	64	126				

Sample ID: **LCSD-4204**	SampType: **LCSD**	TestCode: **NWTPHDXLL**	Units: **mg/L**	Prep Date: **12/18/2012**	RunNo: **7693**
Client ID: **LCSS02**	Batch ID: **4204**	TestNo: **NWTPH-Dx**	**SW3510B**	Analysis Date: **12/18/2012**	SeqNo: **97681**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	0.885	0.0800	1.000	0	88.5	60.7	121	1.024	14.6	20	
Lube Oil	1.12	0.200	1.000	0	112	64	126	1.117	0.552	20	

Sample ID: **CCV**	SampType: **CCV**	TestCode: **NWTPHDXLL**	Units: **mg/L**	Prep Date:	RunNo: **7693**
Client ID: **CCV**	Batch ID: **4204**	TestNo: **NWTPH-Dx**	**SW3510B**	Analysis Date: **12/18/2012**	SeqNo: **97692**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	8.54	0.0800	6.083	0	106	85	115				
Lube Oil	5.09	0.200	4.118	0	124	85	115				SC

Qualifiers:

QC SUMMARY REPORT

WO#: **1212143**

20-Dec-12

Specialty Analytical

Client: Environmental Health Management
Project: Frito Lay GW Monitoring / 13007 **TestCode:** **NWTPHDXLL_W**

Sample ID: **CCV**	SampType: **CCV**	TestCode: **NWTPHDXLL**	Units: **mg/L**	Prep Date:	RunNo: **7693**
Client ID: **CCV**	Batch ID: **4204**	TestNo: **NWTPH-Dx**	**SW3510B**	Analysis Date: **12/19/2012**	SeqNo: **97697**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hydraulic Oil	4.71	0.200	4.173	0	113	85	115				
Lube Oil	4.67	0.200	4.118	0	113	85	115				

Qualifiers:

QC SUMMARY REPORT

WO#: **1212143**

20-Dec-12

Specialty Analytical

Client: Environmental Health Management
Project: Frito Lay GW Monitoring / 13007 **TestCode:** **NWTPHGX_W**

Sample ID: **LCS-R7656**	SampType: **LCS**	TestCode: **NWTPHGX_**	Units: **µg/L**	Prep Date:	RunNo: **7656**
Client ID: **LCSW**	Batch ID: **R7656**	TestNo: **NWTPH-Gx**		Analysis Date: **12/17/2012**	SeqNo: **97167**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	1950	100	2000	0	97.3	74.4	128				

Sample ID: **MB-R7656**	SampType: **MBLK**	TestCode: **NWTPHGX_**	Units: **µg/L**	Prep Date:	RunNo: **7656**
Client ID: **PBW**	Batch ID: **R7656**	TestNo: **NWTPH-Gx**		Analysis Date: **12/17/2012**	SeqNo: **97168**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	100									
Surr: 4-Bromofluorobenzene	105		100.0		105	50	150				

Sample ID: **1212154-001ADUP**	SampType: **DUP**	TestCode: **NWTPHGX_**	Units: **µg/L**	Prep Date:	RunNo: **7656**
Client ID: **ZZZZZZ**	Batch ID: **R7656**	TestNo: **NWTPH-Gx**		Analysis Date: **12/17/2012**	SeqNo: **97170**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	100						0	0	20	

Sample ID: **1212143-001CDUP**	SampType: **DUP**	TestCode: **NWTPHGX_**	Units: **µg/L**	Prep Date:	RunNo: **7656**
Client ID: **MW-1**	Batch ID: **R7656**	TestNo: **NWTPH-Gx**		Analysis Date: **12/17/2012**	SeqNo: **97177**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	100						0	0	20	

Sample ID: **CCV**	SampType: **CCV**	TestCode: **NWTPHGX_**	Units: **µg/L**	Prep Date:	RunNo: **7656**
Client ID: **CCV**	Batch ID: **R7656**	TestNo: **NWTPH-Gx**		Analysis Date: **12/17/2012**	SeqNo: **97198**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

QC SUMMARY REPORT

WO#: **1212143**

20-Dec-12

Specialty Analytical

Client: Environmental Health Management
Project: Frito Lay GW Monitoring / 13007 **TestCode:** **NWTPHGX_W**

Sample ID: **CCV**	SampType: **CCV**	TestCode: **NWTPHGX_**	Units: **µg/L**	Prep Date:	RunNo: **7656**
Client ID: **CCV**	Batch ID: **R7656**	TestNo: **NWTPH-Gx**		Analysis Date: **12/17/2012**	SeqNo: **97198**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	2970	100	3000	0	99.0	80	120				

Qualifiers:

QC SUMMARY REPORT

WO#: 1212143

20-Dec-12

Specialty Analytical

Client: Environmental Health Management
Project: Frito Lay GW Monitoring / 13007 **TestCode:** PAHLL_W

Sample ID: CCV-4191	SampType: CCV	TestCode: PAHLL_W	Units: µg/L	Prep Date:	RunNo: 7654
Client ID: CCV	Batch ID: 4191	TestNo: SW8270D	SW 3510C	Analysis Date: 12/17/2012	SeqNo: 97140

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1-Methylnaphthalene	1.94	0.0500	2.000	0	97.0	80	120				
2-Methylnaphthalene	1.92	0.0500	2.000	0	96.0	80	120				
Acenaphthene	1.91	0.0500	2.000	0	95.5	80	120				
Acenaphthylene	1.97	0.0500	2.000	0	98.5	80	120				
Anthracene	1.83	0.0500	2.000	0	91.5	80	120				
Benz(a)anthracene	1.87	0.0500	2.000	0	93.5	80	120				
Benzo(a)pyrene	1.95	0.0500	2.000	0	97.5	80	120				
Benzo(b)fluoranthene	1.86	0.0500	2.000	0	93.0	80	120				
Benzo(g,h,i)perylene	1.88	0.0500	2.000	0	94.0	80	120				
Benzo(k)fluoranthene	2.01	0.0500	2.000	0	101	80	120				
Chrysene	1.96	0.0500	2.000	0	98.0	80	120				
Dibenz(a,h)anthracene	2.00	0.0500	2.000	0	100	80	120				
Fluoranthene	1.90	0.0500	2.000	0	95.0	80	120				
Fluorene	1.86	0.0500	2.000	0	93.0	80	120				
Indeno(1,2,3-cd)pyrene	1.96	0.0500	2.000	0	98.0	80	120				
Naphthalene	1.98	0.0500	2.000	0	99.0	80	120				
Phenanthrene	1.91	0.0500	2.000	0	95.5	80	120				
Pyrene	1.90	0.0500	2.000	0	95.0	80	120				

Sample ID: LCSD-4191	SampType: LCSD	TestCode: PAHLL_W	Units: µg/L	Prep Date: 12/17/2012	RunNo: 7654
Client ID: LCSS02	Batch ID: 4191	TestNo: SW8270D	SW 3510C	Analysis Date: 12/17/2012	SeqNo: 97141

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	2.73	0.0500	5.000	0	54.6	35.1	100	3.140	14.0	20	
Benzo(a)pyrene	3.23	0.0500	5.000	0	64.6	23.4	103	3.660	12.5	20	

Qualifiers:

QC SUMMARY REPORT

WO#: **1212143**

20-Dec-12

Specialty Analytical

Client: Environmental Health Management
Project: Frito Lay GW Monitoring / 13007 **TestCode:** **PAHLL_W**

Sample ID: **LCSD-4191**	SampType: **LCSD**	TestCode: **PAHLL_W**	Units: **µg/L**	Prep Date: **12/17/2012**	RunNo: **7654**
Client ID: **LCSS02**	Batch ID: **4191**	TestNo: **SW8270D**	**SW 3510C**	Analysis Date: **12/17/2012**	SeqNo: **97141**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzo(g,h,i)perylene	2.98	0.0500	5.000	0	59.6	20.8	120	3.310	10.5	20	
Chrysene	3.30	0.0500	5.000	0	66.0	39.1	119	3.660	10.3	20	
Naphthalene	2.35	0.0500	5.000	0	47.0	25.6	106	2.630	11.2	20	
Phenanthrene	3.08	0.0500	5.000	0	61.6	38.1	106	3.400	9.88	20	
Pyrene	3.59	0.0500	5.000	0	71.8	41.3	118	3.870	7.51	20	

Sample ID: **LCS-4191**	SampType: **LCS**	TestCode: **PAHLL_W**	Units: **µg/L**	Prep Date: **12/17/2012**	RunNo: **7654**
Client ID: **LCSW**	Batch ID: **4191**	TestNo: **SW8270D**	**SW 3510C**	Analysis Date: **12/17/2012**	SeqNo: **97142**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	3.14	0.0500	5.000	0	62.8	35.1	100				
Benzo(a)pyrene	3.66	0.0500	5.000	0	73.2	23.4	103				
Benzo(g,h,i)perylene	3.31	0.0500	5.000	0	66.2	20.8	120				
Chrysene	3.66	0.0500	5.000	0	73.2	39.1	119				
Naphthalene	2.63	0.0500	5.000	0	52.6	25.6	106				
Phenanthrene	3.40	0.0500	5.000	0	68.0	38.1	106				
Pyrene	3.67	0.0500	5.000	0	77.4	41.3	118				

Sample ID: **MB-4191**	SampType: **MBLK**	TestCode: **PAHLL_W**	Units: **µg/L**	Prep Date: **12/17/2012**	RunNo: **7654**
Client ID: **PBW**	Batch ID: **4191**	TestNo: **SW8270D**	**SW 3510C**	Analysis Date: **12/17/2012**	SeqNo: **97143**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1-Methylnaphthalene	ND	0.0500									
2-Methylnaphthalene	ND	0.0500									
Acenaphthene	ND	0.0500									

Qualifiers:

QC SUMMARY REPORT

WO#: **1212143**

Specialty Analytical

20-Dec-12

Client: Environmental Health Management
Project: Frito Lay GW Monitoring / 13007

TestCode: **PAHLL_W**

Sample ID: **MB-4191**	SampType: **MBLK**	TestCode: **PAHLL_W**	Units: **µg/L**	Prep Date: **12/17/2012**	RunNo: **7654**
Client ID: **PBW**	Batch ID: **4191**	TestNo: **SW8270D**	**SW 3510C**	Analysis Date: **12/17/2012**	SeqNo: **97143**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthylene	ND	0.0500									
Anthracene	ND	0.0500									
Benz(a)anthracene	ND	0.0500									
Benzo(a)pyrene	ND	0.0500									
Benzo(b)fluoranthene	ND	0.0500									
Benzo(g,h,i)perylene	ND	0.0500									
Benzo(k)fluoranthene	ND	0.0500									
Chrysene	ND	0.0500									
Dibenz(a,h)anthracene	ND	0.0500									
Fluoranthene	ND	0.0500									
Fluorene	ND	0.0500									
Indeno(1,2,3-cd)pyrene	ND	0.0500									
Naphthalene	ND	0.0500									
Phenanthrene	ND	0.0500									
Pyrene	ND	0.0500									
Surr: 2-Fluorobiphenyl	57.0		100.0		57.0	18.6	106				
Surr: Nitrobenzene-d5	66.2		100.0		66.2	17	130				
Surr: Terphenyl-d14	66.2		100.0		66.2	39.6	131				

Qualifiers:

KEY TO FLAGS

Rev. May 12, 2010

A	This sample contains a Gasoline Range Organic not identified as a specific hydrocarbon product. The result was quantified against gasoline calibration standards
A1	This sample contains a Diesel Range Organic not identified as a specific hydrocarbon product. The result was quantified against diesel calibration standards.
A2	This sample contains a Lube Oil Range Organic not identified as a specific hydrocarbon product. The result was quantified against a lube oil calibration standard.
A3	The result was determined to be Non-Detect based on hydrocarbon pattern recognition. The product was carry-over from another hydrocarbon type.
A4	The product appears to be aged or degraded diesel.
B	The blank exhibited a positive result great than the reporting limit for this compound.
CN	See Case Narrative.
D	Result is based from a dilution.
E	Result exceeds the calibration range for this compound. The result should be considered as estimate.
F	The positive result for this hydrocarbon is due to single component contamination. The product does not match any hydrocarbon in the fuels library.
G	Result may be biased high due to biogenic interferences. Clean up is recommended.
H	Sample was analyzed outside recommended holding time.
HT	At clients request, samples was analyzed outside of recommended holding time.
J	The result for this analyte is between the MDL and the PQL and should be considered as estimated concentration.
K	Diesel result is biased high due to amount of Oil contained in the sample.
L	Diesel result is biased high due to amount of Gasoline contained in the sample.
M	Oil result is biased high due to amount of Diesel contained in the sample.
MC	Sample concentration is greater than 4x the spiked value, the spiked value is considered insignificant.
MI	Result is outside control limits due to matrix interference.
MSA	Value determined by Method of Standard Addition.
O	Laboratory Control Standard (LCS) exceeded laboratory control limits, but meets CCV criteria. Data meets EPA requirements.
Q	Detection levels elevated due to sample matrix.
R	RPD control limits were exceeded.
RF	Duplicate failed due to result being at or near the method-reporting limit.
RP	Matrix spike values exceed established QC limits; post digestion spike is in control.
S	Recovery is outside control limits.
SC	Closing CCV or LCS exceeded high recovery control limits, but associated samples are non-detect. Data meets EPA requirements.
*	The result for this parameter was greater that the maximum contaminant level of the TCLP regulatory limit.

CHAIN OF CUSTODY RECORD

Page 1 of 1

Specialty Analytical
11711 SE Capps Road
Clackamas, OR 97015
Phone: 503-607-1331
Fax: 503-607-1336

Contact Person/Project Manager: John Ruddick
Company: EHM
Address: PO B 1746
4 OSWEGO OR 97035
Phone: 503 804 9236 Fax: 503 287 4620
Project No. 13007 Project Name: FRITO LAY EW MON
Project Site Location OR ____ WA X Other ____
Invoice To ____ P.O. No. ____

Collected By:
Signature: [signature]
Printed: John Ruddick
Signature: Kathleen McCormick
Printed: Kathleen McCormick

Turn Around Time
☒ Normal 5-7 Business Days
☐ Rush ____
Specify
Rush Analyses Must Be Scheduled With The Lab In Advance

For Laboratory Use
Lab Job No. 121143
Shipped Via: client
Air Bill No. ____
Temperature On Receipt 4 °C
Specialty Analytical Containers? Y / N
Specialty Analytical Trip Blanks? Y / N

Date	Time	Sample I.D.	Matrix	No. of Containers	Analyses: NWTPH Dx	NWTPH-Gx	PAH	Vol. Organics	RCRA 8 Metals (Total)	6011 Low Level					Comments	Lab I.D.
12/13/12	1145	MW-1	WATER	16	X	X	X	X	X	X						
	1515	MW-2		16	X	X	X	X	X	X						
	1900	MW-3		16	X	X	X	X	X	X						
↓	2100	MW-D	↓	16	X	X	X	X	X	X						

Relinquished By:	Date	Time	Received By:	Relinquished By:	Date	Time
Company: EHM	12/14/12	1055	Company:	Company:		

Unless Reclaimed, Samples Will Be Disposed of 60 Days After Receipt.
Samples held beyond 60 days subject to storage fee(s)

Received For Lab By: [signature] Date 12/14/12 Time 1055

Copies: White-Original Yellow-Project File Pink-Customer Copy

SECTION 10. APPENDIX

BORING LOG

Drill Rig:		Date Drilled: 9-13-12	Logged By:
Boring Dia:	Inches	Boring Number: MW-3	Tim O'Gara, LG,LHG

Sample	Blow Counts	Completion	Depth Feet	Lithology	Description
					Gravel and fill
					ML - Sandy Silt, tan
			5		
					SW - Sand, very fine
			10		
			15		
			20		SP - Sand, medium to coarse
			25		SW - Sand, medium
			30		
			35		

Completion Notes:

Built as usual, but used foam bentonite bridge sleeve from top of screen @ 30 feet to 27.5 feet before bentonite grout was installed

Site:

Frito Lay - Vancouver

Project No.:

Page: 1

BORING LOG

Drill Rig:	Date Drilled: 9-13-12	Logged By:
Boring Dia: Inches	Boring Number: MW-3	Tim O'Gara, LG,LH

Sample	Blow Counts	Completion	Depth Feet	Lithology	Description
			45		
			50		
			55		
			60		
			65		
			70		
			75		

Completion Notes

Built as usual, but used foam bentonite bridge sleeve from top of screen @ 30 feet to 27.5 feet before bentonite grout was installed

Site

Frito Lay - Vancouver

Project No.: