



MEMORANDUM

Project No.: 110207-004-08

February 18, 2014

To: Andy Kallus, Department of Ecology

cc: Cindy Jernigan and Bryan Lust, K-C

From: Carla Brock, LG
Senior Project Geologist

Steve Germiat, LHG
Senior Associate Hydrogeologist

Re: **RI/FS Work Plan Addendum for Warehouse Vapor Intrusion Assessment
K-C Worldwide Site Upland Area RI/FS**

This addendum to the RI/FS Work Plan (Aspect, 2013) presents the sampling and analysis details for a vapor intrusion assessment of the Distribution Warehouse at the Upland Area of the Kimberly-Clark Worldwide Site (Site) in Everett, Washington. Petroleum-contaminated soil exists beneath the Warehouse, which is planned to be retained for future use. The Warehouse is constructed with a concrete floor slab on pile-supported grade beams, creating a sub-slab void space. The sub-slab void space depth is less than 1 foot in the northern and eastern areas of the Warehouse, and greater than 5 feet in the southwestern area.

As stipulated in Aspect (2013), samples of sub-slab vapor will be collected and analyzed to evaluate the potential for intrusion of petroleum vapors into the Warehouse. To facilitate and expedite evaluation of the potential vapor intrusion risk in consideration of the pending property transaction, corresponding samples of indoor air will be collected and analyzed to empirically evaluate attenuation across the slab and the potential risk to human health via the inhalation pathway. Because airborne petroleum hydrocarbons are present in urban areas, a sample of outdoor air will also be collected from outside the Warehouse to document ambient conditions.

The sampling will be completed in accordance with Section A2.5 of the Sampling and Analysis Plan (SAP; Appendix A to the RI/FS Work Plan), which includes details pertaining to sampling equipment, materials, and collection methods for the sub-slab vapor sampling. This addendum presents additional details including sample locations, collection methods for indoor and outdoor air samples, and analytes and screening levels to be used for data evaluation.

Sample Locations

The sampling will include collection of three sub-slab vapor samples, three indoor air samples, and one ambient air sample from outside of the Warehouse. The sampling locations within the Warehouse are intended to assess air quality above and below the concrete floor slab in areas where highest concentrations of petroleum hydrocarbons have been detected in soil and groundwater. Petroleum-contaminated soils, associated with historical Standard Oil and Associated Oil bulk fuel facilities, exist beneath the Warehouse; however, concentrations of petroleum-related volatile



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organic compounds have not been detected in groundwater beneath the Warehouse. Figure 1 depicts the monitoring well and soil boring locations within the Warehouse footprint, and the interim action excavation located immediately north of the Warehouse. Tables 1 and 2 present the soil and groundwater quality data, respectively, for explorations completed beneath the Warehouse.

The data suggest different types of petroleum are present in soils beneath the Warehouse. Occurrences of heavy-oil-range petroleum include soils around boring REC2-B-10 on the north edge of the Warehouse¹, and soils around boring REC1-MW-6 on the south end of the Warehouse. The data also indicate releases of lighter-range petroleum – including large proportions of gasoline-range petroleum hydrocarbons – in the following two areas:

- At the former Associated Oil facilities beneath the northwestern portion of the Warehouse (borings REC1-MW-3, REC1-MW-14, REC2-B-13, and REC2-B-14); and
- At the former Standard Oil facilities beneath the eastern portion of the Warehouse (borings REC1-MW-1, REC2-B-15, and REC2-B-22²).

Because the lighter-range petroleum hydrocarbons are of primary concern with respect to vapor intrusion, the three collocated sub-slab vapor and indoor air sampling locations are proposed in these areas: two samples in the northwestern release area and one in the eastern release area (Figure 1).

The integrity of the concrete floor slab was evaluated to ensure that the sub-slab sampling locations are not located near cracks, holes, breaks, gaps, drains or sumps in the slab, which could result in dilution of sub-slab air by indoor air. Because the ground surface on the north side of the Warehouse is currently unpaved, which could result in potential dilution of adjacent crawlspace air from outdoor ambient air, samples will not be collected in the vicinity of the north wall of the Warehouse. While there is a heating system within the Warehouse, the power to the building is currently shut off and there is no active heating or ventilation, so air pressure within the Warehouse is assumed to be at equilibrium with outdoor, ambient air pressure. The samples will be collected during a period of falling barometric pressure, when the pressure gradient from the soil to sub-slab and indoor air is greatest, which represents a reasonable worst case vapor intrusion scenario.

The reference outdoor ambient air sample will be collected from an accessible location on K-C property upwind of the Warehouse as observed at the start of sampling. Additionally, operation of on-site construction equipment and motor vehicles will not occur within a distance of 500 feet of any of the sampling stations during sample collection.

Indoor and Ambient Air Sampling Methods

The indoor and reference ambient air samples will be collected following the same general methods described in the SAP for sub-slab vapor sample collection. Each air sample will be an 8-hour, time-integrated sample, collected using a 6-liter (L) laboratory-certified evacuated Summa canister from the breathing zone (between 5 and 6 feet off of the ground surface). Each Summa canister will be set-up following the laboratory sampling instructions and using the laboratory-supplied fittings and flow controller. The reference air sample will also be collected during approximately the same 8-

¹ Associated with former Bunker C above-ground storage tanks (ASTs) north of the Warehouse, from where large quantities of Bunker C-contaminated have been removed during the interim action (Figure 1).

² This location was proposed in RI/FS Work Plan as REC1-MW-13. During drilling, refusal was encountered which prevented construction of a monitoring well, but soil sampling was completed.

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hour period as the indoor air samples. The SAP describes the sampling methodology details for sample collection, labeling, shipping, sample custody, and field documentation.

Sub-Slab Vapor Sampling Methods

The sub-slab vapor samples will be collected in general accordance with the methods described in the SAP, except that the samples will be collected as 1-hour time integrated samples and leak testing will be performed to ensure the integrity of the vapor samples. It is not practical to conduct 8-hour samples with leak testing. Installation of vapor points and sample collection will not be performed until indoor air sampling is complete to avoid the potential for introduction of sub-slab vapors into the building, which could bias indoor sample results.

Important: Notify the laboratory of plans to use helium as a tracer gas when ordering sampling media. Some laboratories use helium as an inert gas to clean their Summa canisters, which could result in a skewed leak test result.

Additional equipment required for leak testing includes:

- Leak test shroud of sufficient size to cover vapor point and sampling train (including Summa canister and flow controller);
- A soft gasket, or otherwise inert material, to provide a seal between the shroud and floor to minimize loss of tracer gas;
- Helium tracer gas cylinder with a flow regulator; and
- A helium meter suitable for measuring concentrations inside the shroud as a field screening tool.

Prior to purging the sampling train or beginning sample collection, the sub-slab vapor sampling train (including the vapor point) will be enclosed in the leak test shroud and a known concentration of tracer gas (between 10 and 50 percent) will be added to the shroud. The selected concentration of tracer gas will be maintained for the duration of the sampling period.

Prior to beginning sample collection, the sub-slab vapor sampling train will be purged in accordance with the SAP. Purged vapor will be collected in Tedlar® bags and field screened using the helium meter to ensure the concentration of the tracer gas in the bag is less than 5 percent of the shroud concentration. Sample collection will begin after confirming there is no significant leakage (greater than 5 percent of the shroud concentration) in the sampling train.

Laboratory Analysis

The seven samples collected will be submitted to ALS Environmental for laboratory analysis using a combined Massachusetts Department of Environmental Protection (MassDEP) Air Phase Petroleum Hydrocarbons (APH) method for petroleum fractions and EPA Method TO-15 method for the volatile organic compounds, as described in the MassDEP APH Method standard. The target compound list for the analyses will consist of benzene, toluene, ethylbenzene, xylanes, naphthalene, aliphatic hydrocarbons in the C₅-C₈ and C₉₋₁₂ ranges and aromatic hydrocarbons in the C₉-C₁₀ range. The sub-slab vapor samples will also be analyzed for helium to confirm there was no dilution (above 5 percent of shroud concentration) of the sample from indoor air.

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Screening Levels

The indoor air data will be screened against Washington State Model Toxics Control Act (MTCA) Method C industrial air cleanup levels, and the sub-slab vapor data will be screened against industrial sub-slab vapor screening levels (10 times air cleanup levels), which are presented below.

Constituent	Industrial Indoor Air Cleanup Level (ug/m ³)	Industrial Sub-Slab Vapor Screening Level (ug/m ³)
Benzene	3.2	32
Ethylbenzene	1,000	10,000
Toluene	5,000	50,000
Total Xylenes	100	1,000
Naphthalene	3	30
APH (C5-8 aliphatics) fraction	6,000	60,000
APH (C9-12 aliphatics) fraction	300	3,000
APH (C9-10 aromatics) fraction	400	4,000

Notes:

APH = Air-Phase Petroleum Hydrocarbons, as quantified by the Massachusetts Department of Environmental Protection APH method

ug/m³ = microgram per cubic meter

Data Interpretation and Reporting

Multiple lines of evidence will be used to assess the potential threat to human health posed by vapor intrusion. The indoor air data, sub-slab vapor data, and ambient outdoor air data will be compared to evaluate the relative distribution of petroleum hydrocarbons and the source(s) of likely contribution to indoor air. Additional sampling and/or other evaluation of the human health risk posed by vapor intrusion into the Warehouse will be conducted, in accordance with decision criteria in Appendix E of Ecology (2009). The data will be reported as part of the Upland Area RI.

References

Aspect Consulting, 2013, Work Plan for Remedial Investigation/Feasibility Study, Kimberly-Clark Worldwide Site Upland Area, Everett, Washington, November 22, 2013, Final.

Ecology, 2009, Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action, Review Draft, October 2009.

Attachments

Table 1 – Draft Soil Quality Data from Explorations Inside the Warehouse

Table 2 – Draft Groundwater Quality Data from Explorations Inside the Warehouse

Figure 1 – Proposed Soil Vapor Sampling Locations

Table 1 - Draft Soil Quality Data from Explorations Inside the Warehouse

K-C Worldwide Site Upland Area 110207

Chemical Name	Saturated Soil - Industrial Land Use Screening Level	REC1-MW-1 9/4/12 (5-6 ft)	REC1-MW-1 9/4/12 (11-12 ft)	REC1-MW-1 FD 9/4/12 (11-12 ft)	REC1-MW-1 9/4/12 (13-14 ft)	REC1-MW-2 9/4/12 (6-7 ft)	REC1-MW-3 9/4/12 (5.5-6.5 ft)	REC1-MW-3 9/4/12 (12-13 ft)	REC1-MW-3 FD 9/4/12 (24-25 ft)	REC1-MW-3 9/4/12 (12-13 ft)	REC1-MW-6 9/10/12 (12.5-13.5 ft)	REC1-MW-6 9/10/12 (7.5-8.5 ft)	REC1-MW-6 9/10/12 (17-18 ft)	REC1-MW-7 9/10/12 (16.5-17.5 ft)	REC1-MW-7 9/10/12 (7-8 ft)	REC1-MW-7 9/10/12 (13-14 ft)	REC1-MW-7 11/1/13 (2 ft)	REC1-MW-10 11/1/13 (5 ft)	REC1-MW-10 11/1/13 (2 ft)	REC1-MW-10 11/1/13 (7 ft)	REC1-MW-11 11/1/13 (5 ft)	REC1-MW-11 11/1/13 (7 ft)	REC1-MW-12 10/31/13 (3 ft)
Total Petroleum Hydrocarbons (TPH)																							
Gasoline Range Hydrocarbons in mg/kg	100	2 U	59		2 U	2 U	2 U	4,000		2 U	2 U	10	10 U	2 U	6 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	
Diesel Range Hydrocarbons in mg/kg	2,000	50 U	10,000		50 U	50 U	50 U	2,600	2,800	50 U	50 U	1,500	290	50 U	150 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	
Oil Range Hydrocarbons in mg/kg	2,000	250 U	250 U		250 U	250 U	250 U	250 U	250 U	250 U	2,000	1,250 U	250 U	750 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	
Metals																							
Arsenic in mg/kg	20																		5.07	2.26	1 U		
Copper in mg/kg	36																		12.8	11.2	6.95		
Lead in mg/kg	81																		3.65	8.5	5.2		
Mercury in mg/kg	5.5																		0.1 U	0.1 U	0.16		
Nickel in mg/kg	48																		11.4	22.9	11.8		
Zinc in mg/kg	360																		23.6	18	31.1		
Polycyclic Aromatic Hydrocarbons (PAHs)																							
Acenaphthene in mg/kg	210,000	0.01 U	0.17 J	0.048 J	0.01 U	0.01 U	0.01 U	0.82		0.01 U	0.01 U	0.24	0.05 U	0.01 U	0.03 U	0.012	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	
Acenaphthylene in mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U	0.05 U	0.033	0.03 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	
Anthracene in mg/kg	1,100,000	0.01 U	0.01 UJ	0.01 U	0.01 U	0.01 U	0.01 U	0.013		0.01 U	0.01 U	0.097	0.05 U	0.01 U	0.03 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(g,h,i)perylene in mg/kg		0.011	0.01 UJ	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.032	0.15	0.05 U	0.071	0.03 U	0.01 U	0.01 U	0.01 U	0.011	0.01 U	0.01 U	0.01 U	0.01 U
Dibenzofuran in mg/kg	3,500																						
Fluoranthene in mg/kg	140,000	0.017	0.020 J	0.01 U	0.01 U	0.011	0.01 U	0.01 U		0.01 U	0.055	0.31	0.05 U	0.095	0.03 U	0.01 U	0.01 U	0.01 U	0.026	0.01 U	0.01 U	0.01 U	0.01 U
Fluorene in mg/kg	140,000	0.01 U	0.35 J	0.079 J	0.01 U	0.01 U	0.01 U	0.26		0.01 U	0.01 U	0.21	0.05 U	0.01 U	0.03 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Phenanthrene in mg/kg		0.011	0.76 J	0.28 J	0.01 U	0.01	0.011	0.19		0.01 U	0.037	0.43	0.05 U	0.059	0.03 U	0.01 U	0.01 U	0.01 U	0.044	0.01 U	0.01 U	0.01 U	0.01 U
Pyrene in mg/kg	110,000	0.021	0.087 J	0.018 J	0.01 U	0.015	0.01 U	0.01 U		0.01 U	0.069	0.52	0.05 U	0.13	0.03 U	0.01 U	0.01 U	0.01 U	0.021	0.01 U	0.01 U	0.01 U	0.01 U
2-Methylnaphthalene in mg/kg	14,000																						
Naphthalene in mg/kg	70,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.16	0.05 U	0.01 U	0.03 U	0.01 U	0.01 U	0.025	0.01 U	0.01 U	0.01 U	0.01 U	
Benz(a)anthracene in mg/kg		0.011	0.01 UJ	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.03	0.16	0.05 U	0.074	0.03 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(a)pyrene in mg/kg		0.012	0.01 UJ	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.04	0.15	0.05 U	0.12	0.03 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(b)fluoranthene in mg/kg		0.016	0.01 UJ	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.048	0.18	0.05 U	0.12	0.03 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(k)fluoranthene in mg/kg		0.01 U	0.01 UJ	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.012	0.044	0.05 U	0.041	0.03 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chrysene in mg/kg		0.014	0.01 UJ	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.042	0.22	0.05 U	0.13	0.03 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Dibenzo(a,h)anthracene in mg/kg		0.01 U	0.01 UJ	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.029	0.05 U	0.022	0.03 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Indeno(1,2,3-cd)pyrene in mg/kg		0.011	0.01 UJ	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.034	0.12	0.05 U	0.079	0.03 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Total cPAHs TEQ in mg/kg	0.4	0.0169	ND	ND	ND	ND	ND	ND		ND	0.0533	0.206	ND	0.155	ND	ND	ND	ND	ND	ND	ND	ND	ND
Other Semivolatiles																							

Table 1 - Draft Soil Quality Data from Explorations Inside the Warehouse

K-C Worldwide Site Upland Area 110207

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Benzyl alcohol in mg/kg	350,000																						
Benzyl butyl phthalate in mg/kg	69,000																						
Bis(2-chloro-1-methylethyl) ether in mg/kg	1,900																						
Bis(2-chloroethoxy)methane in mg/kg																							
Bis(2-chloroethyl) ether in mg/kg	120																						
Bis(2-ethylhexyl) phthalate in mg/kg	9,400																						
Carbazole in mg/kg																							
Diethyl phthalate in mg/kg	2,800,000																						
Dimethyl phthalate in mg/kg																							
Di-n-butyl phthalate in mg/kg	350,000																						
Di-n-octyl phthalate in mg/kg																							
Hexachlorobenzene in mg/kg	17																						
Hexachlorobutadiene in mg/kg	1,700																						
Hexachlorocyclopentadiene in mg/kg	21,000																						
Hexachloroethane in mg/kg	3,500																						
Isophorone in mg/kg	140,000																						
Nitrobenzene in mg/kg	7,000																						
N-Nitroso-di-n-propylamine in mg/kg	19																						
N-Nitrosodiphenylamine in mg/kg	27,000																						
Pentachlorophenol in mg/kg	4.5																						
Phenol in mg/kg	1,100,000																						
2,4-Dinitrotoluene in mg/kg	7,000																						
2,6-Dinitrotoluene in mg/kg	3,500																						
Volatile Organic Compounds (VOC)																							
1,1,1,2-Tetrachloroethane in mg/kg	5,000	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U							
1,1,1-Trichloroethane in mg/kg	7,000,000	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U							
1,1,2,2-Tetrachloroethane in mg/kg	660	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U							
1,1,2-Trichloroethane in mg/kg	2,300	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U							
1,1-Dichloroethane in mg/kg	700,000	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U							
1,1-Dichloroethene in mg/kg	180,000	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U							
1,1-Dichloropropene in mg/kg		0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U							
1,2,3-Trichlorobenzene in mg/kg		0.25 U	0.25 U		0.25 U	0.25 U	0.25 U	0.25 U		0.25 U	0.25 U	0.5 U	1.2 U	0.25 U	0.75 U	0.25 U							
1,2,3-Trichloropropane in mg/kg	4.4	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U							
1,2,4-Trichlorobenzene in mg/kg	4,500	0.25 U	0.25 U		0.25 U	0.25 U	0.25 U	0.25 U		0.25 U	0.25 U	0.5 U	1.2 U	0.25 U	0.75 U	0.25 U							
1,2,4-Trimethylbenzene in mg/kg		0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U							
1,2-Dibromo-3-chloropropane in mg/kg	160	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	1 U	2.5 U	0.5 U	1.5 U	0.5 U							
1,2-Dibromoethane (EDB) in mg/kg	66	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U							
1,2-Dichlorobenzene in mg/kg	320,000	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U							
1,2-Dichloroethane (EDC) in mg/kg	1,400	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U							
1,2-Dichloropropane in mg/kg		0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U							
1,3,5-Trimethylbenzene in mg/kg	35,000	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U							
1,3-Dichlorobenzene in mg/kg		0.05 U	0.05 U		0.05 U	0.05 U</td																	

Table 1 - Draft Soil Quality Data from Explorations Inside the Warehouse

K-C Worldwide Site Upland Area 110207

Chemical Name	Saturated Soil - Industrial Land Use Screening Level	REC1-MW-1 9/4/12 (5-6 ft)	REC1-MW-1 9/4/12 (11-12 ft)	REC1-MW-1 FD 9/4/12 (11-12 ft)	REC1-MW-1 9/4/12 (13-14 ft)	REC1-MW-2 9/4/12 (6-7 ft)	REC1-MW-3 9/4/12 (5.5-6.5 ft)	REC1-MW-3 9/4/12 (12-13 ft)	REC1-MW-3 FD 9/4/12 (12-13 ft)	REC1-MW-6 9/10/12 (24-25 ft)	REC1-MW-3 9/4/12 (7.5-8.5 ft)	REC1-MW-6 9/10/12 (12.5-13.5 ft)	REC1-MW-6 9/10/12 (7-8.5 ft)	REC1-MW-7 9/10/12 (17-18 ft)	REC1-MW-7 9/10/12 (7-8 ft)	REC1-MW-7 9/10/12 (13-14 ft)	REC1-MW-7 9/10/12 (16.5-17.5 ft)	REC1-MW-10 11/1/13 (2 ft)	REC1-MW-10 11/1/13 (5 ft)	REC1-MW-10 11/1/13 (7 ft)	REC1-MW-11 11/1/13 (2 ft)	REC1-MW-11 11/1/13 (5 ft)	REC1-MW-11 11/1/13 (7 ft)	REC1-MW-12 10/31/13 (3 ft)
Chlorobenzene in mg/kg	70,000	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U								
Chloroethane in mg/kg		0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	1 U	2.5 U	0.5 U	1.5 U	0.5 U								
Chloroform in mg/kg	35,000	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U								
Chloromethane in mg/kg		0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	1 U	2.5 U	0.5 U	1.5 U	0.5 U								
cis-1,2-Dichloroethene (DCE) in mg/kg	7,000	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U								
cis-1,3-Dichloropropene in mg/kg		0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U								
Dibromochloromethane in mg/kg	1,600	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U								
Dibromomethane in mg/kg	35,000	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U								
Dichlorodifluoromethane in mg/kg	700,000	0.5 U	0.5 U			0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	1 U	2.5 U	0.5 U	1.5 U	0.5 U								
Ethylbenzene in mg/kg	350,000	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U								
Hexachlorobutadiene in mg/kg	1,700	0.25 U	0.25 U		0.25 U	0.25 U	0.25 U	0.25 U		0.25 U	0.25 U	0.5 U	1.2 U	0.25 U	0.75 U	0.25 U								
Isopropylbenzene in mg/kg	350,000	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.32		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U								
Methyl tert-butyl ether (MTBE) in mg/kg		0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U								
Methylene chloride in mg/kg	18,000	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	1 U	2.5 U	0.5 U	1.5 U	0.5 U								
n-Propylbenzene in mg/kg	350,000	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	1.1		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U								
p-Isopropyltoluene in mg/kg		0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.72		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U								
sec-Butylbenzene in mg/kg		0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	1.9		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U								
Styrene in mg/kg	700,000	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U								
tert-Butylbenzene in mg/kg		0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U								
Tetrachloroethene (PCE) in mg/kg	240	0.025 U	0.025 U		0.025 U	0.025 U	0.025 U	0.025 U		0.025 U	0.025 U	0.05 U	0.12 U	0.025 U	0.075 U	0.025 U								
Toluene in mg/kg	280,000	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U								
trans-1,2-Dichloroethene in mg/kg	70,000	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U								
trans-1,3-Dichloropropene in mg/kg		0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U								
Trichloroethene (TCE) in mg/kg	1,100	0.03 U	0.03 U		0.03 U	0.03 U	0.03 U	0.03 U		0.03 U	0.03 U	0.06 U	0.15 U	0.03 U	0.09 U	0.03 U								
Trichlorofluoromethane in mg/kg	1,100,000	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	1 U	2.5 U	0.5 U	1.5 U	0.5 U								
Vinyl chloride in mg/kg	88	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U								
m,p-Xylenes in mg/kg		0.1 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U		0.1 U	0.1 U	0.2 U	0.5 U	0.1 U	0.3 U	0.1 U								
o-Xylene in mg/kg	700,000	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.1 U	0.25 U	0.05 U	0.15 U	0.05 U								
Total Xylenes in mg/kg	700,000	ND	ND		ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND								

Notes

Data are unvalidated and thus are considered draft.

Soil sample depths are relative to floor grade inside the Warehouse, not the underlying soil grade.

Concentrations in shaded cells indicate value exceeds Saturated Soil - Industrial Land Use Screening Level.

J - Analyte was positively identified. The reported result is an estimate.

U - Analyte was not detected at or above the reported result.

UU - Analyte was not detected at or above the reported estimate

x - The sample chromatographic pattern does not resemble the standard used for quantitation.

Table 1 - Draft Soil Quality Data from Explorations Inside the Warehouse

K-C Worldwide Site Upland Area 110207

Chemical Name	Saturated Soil - Industrial Land Use Screening Level	REC1-MW-12 FD 10/31/13 (3 ft)	REC1-MW-12 10/31/13 (7 ft)	REC1-MW-12 FD 10/31/13 (7 ft)	REC1-MW-12 10/31/13 (11 ft)	REC1-MW-14 10/31/13 (7 ft)	REC1-MW-14 10/31/13 (11 ft)	REC2-B-1 6/28/12 (3.5-4.5 ft)	REC2-B-1 6/28/12 (5.5-6.5 ft)	REC2-B-1 6/28/12 (7.5-8.5 ft)	REC2-B-2 6/28/12 (3-4 ft)	REC2-B-2 6/28/12 (4.5-5.5 ft)	REC2-B-2 6/28/12 (4.5-5.5 ft)	REC2-B-3 6/28/12 (4.5-5.5 ft)	REC2-B-3 6/28/12 (5.5-6.5 ft)	REC2-B-3 6/28/12 (6.5-7.5 ft)	REC2-B-6 6/28/12 (7.5-8.5 ft)	REC2-B-6 6/28/12 (8.5-9.5 ft)	REC2-B-10 6/28/12 (3.5-4.5 ft)	REC2-B-10 6/28/12 (5.5-6.5 ft)
Total Petroleum Hydrocarbons (TPH)																				
Gasoline Range Hydrocarbons in mg/kg	100	2 U	2 U	2 U	15	14	2 U	3,600	2 U											
Diesel Range Hydrocarbons in mg/kg	2,000	50 U	50 U	50 U	50 U	85	50 U	2,900	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	10,000 J	
Oil Range Hydrocarbons in mg/kg	2,000	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	19,000 J	
Metals																				
Arsenic in mg/kg	20																			
Copper in mg/kg	36																			
Lead in mg/kg	81																			
Mercury in mg/kg	5.5																			
Nickel in mg/kg	48																			
Zinc in mg/kg	360																			
Polycyclic Aromatic Hydrocarbons (PAHs)																				
Acenaphthene in mg/kg	210,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.5 UJ	
Acenaphthylene in mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	
Anthracene in mg/kg	1,100,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.042	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.5 UJ	
Benzo(g,h,i)perylene in mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	0.014	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.016	0.01 U	0.01 U	0.023	0.81 J	
Dibenzofuran in mg/kg	3,500																			
Fluoranthene in mg/kg	140,000	0.01 U	0.01 U	0.01	0.01 U	0.035	0.01 U	0.021	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.036	0.01 U	0.01 U	0.01 U	0.049 J	
Fluorene in mg/kg	140,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	
Phenanthrene in mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	0.018	0.01 U	0.044	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.019	0.01 U	0.01 U	0.01 U	0.5 UJ	
Pyrene in mg/kg	110,000	0.01 U	0.01 U	0.012	0.01 U	0.034	0.01 U	0.032	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.039	0.01 U	0.01 U	0.016	0.1 J	
2-Methylnaphthalene in mg/kg	14,000																			
Naphthalene in mg/kg	70,000	0.01 U	0.01 U	0.01 U	0.01 U	0.027	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.5 UJ	
Benz(a)anthracene in mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	0.016	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02	0.01 U	0.01 U	0.012	0.061 J	
Benzo(a)pyrene in mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	0.016	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02	0.01 U	0.01 U	0.01 U	0.26 J	
Benzo(b)fluoranthene in mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	0.024	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.026	0.01 U	0.01 U	0.01 U	0.049 J	
Benzo(k)fluoranthene in mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	
Chrysene in mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	0.022	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02	0.01 U	0.01 U	0.013	0.087 J	
Dibenzo(a,h)anthracene in mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	
Indeno(1,2,3-cd)pyrene in mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	0.012	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.018	0.01 U	0.01 U	0.024	0.5 UJ	
Total cPAHs TEQ in mg/kg	0.4	ND	ND	ND	ND	0.0224	ND	ND	ND	ND	ND	ND	ND	ND	0.0276	ND	ND	ND	0.00883 J	
Other Semivolatiles																				
1,2,4-Trichlorobenzene in mg/kg	4,500																			
1,2-Dichlorobenzene in mg/kg	320,000																			
1,3-Dichlorobenzene in mg/kg																				
1,4-Dichlorobenzene in mg/kg																				
2,4,5-Trichlorophenol in mg/kg	350,000																			
2,4,6-Trichlorophenol in mg/kg	3,500																			
2,4-Dichlorophenol in mg/kg	11,000																			
2,4-Dimethylphenol in mg/kg	70,000																			
2,4-Dinitrophenol in mg/kg	7,000																			
2-Chloronaphthalene in mg/kg	280,000																			
2-Chlorophenol in mg/kg	18,000																			
2-Methylphenol in mg/kg	180,000																			
2-Nitroaniline in mg/kg	35,000																			
2-Nitrophenol in mg/kg																				
3 & 4 Methylphenol in mg/kg																				
3-Nitroaniline in mg/kg																				
4,6-Dinitro-2-methylphenol in mg/kg																				
4-Bromophenyl phenyl ether in mg/kg																				
4-Chloro-3-methylphenol in mg/kg																				
4-Chloroaniline in mg/kg	660	</																		

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Table 1

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Table 1 - Draft Soil Quality Data from Explorations Inside the Warehouse

K-C Worldwide Site Upland Area 110207

Chemical Name	Saturated Soil - Industrial Land Use Screening Level	REC1-MW-12 FD 10/31/13 (3 ft)	REC1-MW-12 10/31/13 (7 ft)	REC1-MW-12 FD 10/31/13 (7 ft)	REC1-MW-12 10/31/13 (11 ft)	REC1-MW-12 FD 10/31/13 (11 ft)	REC1-MW-14 10/31/13 (7 ft)	REC1-MW-14 10/31/13 (11 ft)	REC1-MW-14 10/31/13 (17 ft)	REC2-B-1 6/28/12 (3.5-4.5 ft)	REC2-B-1 6/28/12 (5.5-6.5 ft)	REC2-B-1 6/28/12 (7.5-8.5 ft)	REC2-B-2 6/28/12 (3-4 ft)	REC2-B-2 6/28/12 (4.5-5.5 ft)	REC2-B-2 6/28/12 (6.5-7.5 ft)	REC2-B-3 6/28/12 (4-5 ft)	REC2-B-3 6/28/12 (5.5-6.5 ft)	REC2-B-3 6/28/12 (7.5-8.5 ft)	REC2-B-6 6/28/12 (4.5-5.5 ft)	REC2-B-6 6/28/12 (6.5-7.5 ft)	REC2-B-6 6/28/12 (8.5-9.5 ft)	REC2-B-10 6/28/12 (3.5-4.5 ft)	REC2-B-10 6/28/12 (5.5-6.5 ft)
Benzyl alcohol in mg/kg	350,000																						
Benzyl butyl phthalate in mg/kg	69,000																						
Bis(2-chloro-1-methylethyl) ether in mg/kg	1,900																						
Bis(2-chloroethoxy)methane in mg/kg																							
Bis(2-chloroethyl) ether in mg/kg	120																						
Bis(2-ethylhexyl) phthalate in mg/kg	9,400																						
Carbazole in mg/kg																							
Diethyl phthalate in mg/kg	2,800,000																						
Dimethyl phthalate in mg/kg																							
Di-n-butyl phthalate in mg/kg	350,000																						
Di-n-octyl phthalate in mg/kg																							
Hexachlorobenzene in mg/kg	17																						
Hexachlorobutadiene in mg/kg	1,700																						
Hexachlorocyclopentadiene in mg/kg	21,000																						
Hexachloroethane in mg/kg	3,500																						
Isophorone in mg/kg	140,000																						
Nitrobenzene in mg/kg	7,000																						
N-Nitroso-di-n-propylamine in mg/kg	19																						
N-Nitrosodiphenylamine in mg/kg	27,000																						
Pentachlorophenol in mg/kg	4.5																						
Phenol in mg/kg	1,100,000																						
2,4-Dinitrotoluene in mg/kg	7,000																						
2,6-Dinitrotoluene in mg/kg	3,500																						
Volatile Organic Compounds (VOC)																							
1,1,1,2-Tetrachloroethane in mg/kg	5,000																						
1,1,1-Trichloroethane in mg/kg	7,000,000																						
1,1,2,2-Tetrachloroethane in mg/kg	660																						
1,1,2-Trichloroethane in mg/kg	2,300																						
1,1-Dichloroethane in mg/kg	700,000																						
1,1-Dichloroethene in mg/kg	180,000																						
1,1-Dichloropropene in mg/kg																							
1,2,3-Trichlorobenzene in mg/kg																							
1,2,3-Trichloropropane in mg/kg	4.4																						
1,2,4-Trichlorobenzene in mg/kg	4,500																						
1,2,4-Trimethylbenzene in mg/kg																							
1,2-Dibromo-3-chloropropane in mg/kg	160																						
1,2-Dibromoethane (EDB) in mg/kg	66																						
1,2-Dichlorobenzene in mg/kg	320,000																						
1,2-Dichloroethane (EDC) in mg/kg	1,400																						
1,2-Dichloropropane in mg/kg																							
1,3,5-Trimethylbenzene in mg/kg	35,000																						
1,3-Dichlorobenzene in mg/kg																							
1,3-Dichloropropane in mg/kg																							
1,4-Dichlorobenzene in mg/kg																							
2,2-Dichloropropane in mg/kg																							
2-Butanone in mg/kg	2,100,000																						
2-Chlorotoluene in mg/kg	70,000																						
2-Hexanone in mg/kg																							
4-Chlorotoluene in mg/kg																							
4-Methyl-2-pentanone in mg/kg	280,000																						
Acetone in mg/kg	3,200,000																						
Benzene in mg/kg	2,400																						
Bromobenzene in mg/kg																							
Bromodichloromethane in mg/kg	2,100																						
Bromoform in mg/kg	17,000																						
Bromomethane in mg/kg	4,900																						
Carbon tetrachloride in mg/kg	1,900																						

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Table 1

Table 1 - Draft Soil Quality Data from Explorations Inside the Warehouse

K-C Worldwide Site Upland Area 110207

Chemical Name	Saturated Soil - Industrial Land Use Screening Level	REC1-MW-12 FD 10/31/13 (3 ft)	REC1-MW-12 10/31/13 (7 ft)	REC1-MW-12 FD 10/31/13 (7 ft)	REC1-MW-12 10/31/13 (11 ft)	REC1-MW-12 FD 10/31/13 (11 ft)	REC1-MW-14 10/31/13 (7 ft)	REC1-MW-14 10/31/13 (11 ft)	REC1-MW-14 10/31/13 (17 ft)	REC2-B-1 6/28/12 (3.5-4.5 ft)	REC2-B-1 6/28/12 (5.5-6.5 ft)	REC2-B-1 6/28/12 (7.5-8.5 ft)	REC2-B-2 6/28/12 (3-4 ft)	REC2-B-2 6/28/12 (4.5-5.5 ft)	REC2-B-2 6/28/12 (6.5-7.5 ft)	REC2-B-3 6/28/12 (4-5 ft)	REC2-B-3 6/28/12 (5.5-6.5 ft)	REC2-B-3 6/28/12 (7.5-8.5 ft)	REC2-B-6 6/28/12 (4.5-5.5 ft)	REC2-B-6 6/28/12 (6.5-7.5 ft)	REC2-B-6 6/28/12 (8.5-9.5 ft)	REC2-B-10 6/28/12 (3.5-4.5 ft)	REC2-B-10 6/28/12 (5.5-6.5 ft)
Chlorobenzene in mg/kg	70,000																						
Chloroethane in mg/kg																							
Chloroform in mg/kg	35,000																						
Chloromethane in mg/kg																							
cis-1,2-Dichloroethene (DCE) in mg/kg	7,000																						
cis-1,3-Dichloropropene in mg/kg																							
Dibromochloromethane in mg/kg	1,600																						
Dibromomethane in mg/kg	35,000																						
Dichlorodifluoromethane in mg/kg	700,000																						
Ethylbenzene in mg/kg	350,000																						
Hexachlorobutadiene in mg/kg	1,700																						
Isopropylbenzene in mg/kg	350,000																						
Methyl tert-butyl ether (MTBE) in mg/kg																							
Methylene chloride in mg/kg	18,000																						
n-Propylbenzene in mg/kg	350,000																						
p-Isopropyltoluene in mg/kg																							
sec-Butylbenzene in mg/kg																							
Styrene in mg/kg	700,000																						
tert-Butylbenzene in mg/kg																							
Tetrachloroethene (PCE) in mg/kg	240																						
Toluene in mg/kg	280,000																						
trans-1,2-Dichloroethene in mg/kg	70,000																						
trans-1,3-Dichloropropene in mg/kg																							
Trichloroethene (TCE) in mg/kg	1,100																						
Trichlorofluoromethane in mg/kg	1,100,000																						
Vinyl chloride in mg/kg	88																						
m,p-Xylenes in mg/kg																							
o-Xylene in mg/kg	700,000																						
Total Xylenes in mg/kg	700,000																						

Notes**Data are unvalidated and thus are considered draft.**

Soil sample depths are relative to floor grade inside the Warehouse

Concentrations in shaded cells indicate value exceeds Saturate

J - Analyte was positively identified. The reported result is an estimate

U - Analyte was not detected at or above the reported result.

UJ - Analyte was not detected at or above the reported estimated result.

x - The sample chromatographic pattern does not resemble the

Table 1 - Draft Soil Quality Data from Explorations Inside the Warehouse

K-C Worldwide Site Upland Area 110207

Chemical Name	Saturated Soil - Industrial Land Use Screening Level	REC2-B-10 FD 6/28/12 (5.5-6.5 ft)	REC2-B-10 FD 6/28/12 (8.5-9.5 ft)	REC2-B-13 11/14/13 (5 ft)	REC2-B-13 FD 11/14/13 (5 ft)	REC2-B-13 FD 11/14/13 (12 ft)	REC2-B-13 FD 11/14/13 (12 ft)	REC2-B-13 11/14/13 (14 ft)	REC2-B-14 11/14/13 (6.5 ft)	REC2-B-14 11/14/13 (9 ft)	REC2-B-14 11/14/13 (13 ft)	REC2-B-15 11/15/13 (2 ft)	REC2-B-15 11/15/13 (6.5 ft)	REC2-B-15 11/15/13 (11 ft)	REC2-B-16 11/15/13 (5 ft)	REC2-B-16 11/15/13 (6 ft)	REC2-B-16 11/15/13 (7 ft)	REC2-B-17 11/15/13 (5.5 ft)	REC2-B-17 11/15/13 (6 ft)	REC2-B-17 11/15/13 (7 ft)	REC2-B-17 11/14/13 (11 ft)	REC2-B-17 11/14/13 (6.5 ft)	REC2-B-18 11/14/13 (11 ft)	REC2-B-18 11/14/13 (2 ft)	REC2-B-18 11/14/13 (6 ft)
Total Petroleum Hydrocarbons (TPH)																									
Gasoline Range Hydrocarbons in mg/kg	100			7.7	5.7	1,000	1,000	3.2	2 U	1,100	2 U	2 U	170	2 U	2 U	2 U	23	2 U	2 U	2 U	2 U	6.5	2 U	2 U	
Diesel Range Hydrocarbons in mg/kg	2,000	540 J	50 U	210 x	50 U	1,800	1,800	50 U	50 U	1,400	50 U	50 U	11,000	790	50 U	200	1,100	50 U	50 U	50 U	1,800	50 U	50 U	50 U	
Oil Range Hydrocarbons in mg/kg	2,000	1,800 J	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	680 x	250 U	250 U	250 U	440 x	250 U	250 U	250 U	250 U	250 U	250 U	250 U	
Metals																									
Arsenic in mg/kg	20			3.88	1.5	2.33		1.86					2.28	1 U	12.7					2.16	1.96	2.84	2.14	6.67	1 U
Copper in mg/kg	36			29.2	7.01	4.17		4.37					10.2	6.24	6.09					8.28	8.15	15.3	8.16	11.2	4.36
Lead in mg/kg	81			179	25.2	3.07		1.46					2.71	9.29	2.74					3.58	11.7	2.11	7.53	11.8	1.33
Mercury in mg/kg	5.5			0.1 U	0.1 U	0.1 U		0.1 U					0.1 U	0.1 U	0.1 U					0.1 U	0.1 U	0.1 U	0.1 U	0.17	0.1 U
Nickel in mg/kg	48			15.1	12	10.5		8.31					26.6	15.4	7.98					13.6	11.8	17.2	11.6	18	6.22
Zinc in mg/kg	360			326	48.6	8.39		10.1					18.1	21.9	13.6					15.1	25.5	19.7	112	28.3	7.17
Polycyclic Aromatic Hydrocarbons (PAHs)																									
Acenaphthene in mg/kg	210,000	0.1 UJ	0.01 U	0.01 U	0.01 U	0.01 U	0.25	0.25	0.01 U	0.01 U	0.13	0.016	0.01 U	0.49	0.01 U	0.01 U	0.011	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	
Acenaphthylene in mg/kg		0.1 UJ	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	
Anthracene in mg/kg	1,100,000	0.1 UJ	0.01 U	0.01 U	0.01 U	0.01 U	0.046	0.055	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	
Benzo(g,h,i)perylene in mg/kg		0.41 J	0.01 U	0.037	0.013	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.017	0.01 U	0.01 U	0.014	0.024	0.012	0.01 U	0.01 U	0.018	0.01 U	0.01 U	
Dibenzofuran in mg/kg	3,500																						0.01 U	0.01 U	0.01 U
Fluoranthene in mg/kg	140,000	0.1 UJ	0.01 U	0.057	0.02	0.083	0.1	0.01 U	0.01 U	0.016	0.029	0.01 U	0.17	0.01 U	0.01 U	0.021	0.014	0.01 U	0.021	0.01 U	0.01 U	0.082	0.01 U	0.01 U	
Fluorene in mg/kg	140,000	0.1 UJ	0.01 U	0.01 U	0.01 U	0.01 U	0.096	0.12	0.01 U	0.01 U	0.1	0.01 U	0.01 U	2	0.01 U	0.01 U	0.011	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	
Phenanthrene in mg/kg		0.1 UJ	0.01 U	0.06	0.017	0.074	0.086	0.01 U	0.01 U	0.17	0.017	0.01 U	0.68	0.01 U	0.01 U	0.033	0.01 U	0.01 U	0.013	0.01 U	0.15	0.046	0.01 U	0.01 U	
Pyrene in mg/kg	110,000	0.27 J	0.01 U	0.073	0.024	0.1	0.11	0.01 U	0.01 U	0.067	0.037	0.01 U	0.25	0.01 U	0.01 U	0.026	0.025	0.01 U	0.041	0.01 U	0.02	0.1	0.01 U	0.01 U	
2-Methylnaphthalene in mg/kg	14,000																					0.57	0.01 U	0.01 U	
Naphthalene in mg/kg	70,000	0.1 U	0.01 U	0.53	0.057	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.021	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	
Benz(a)anthracene in mg/kg		0.1 UJ	0.01 U	0.02	0.01 U	0.03	0.035	0.01 U	0.01 U	0.015	0.014	0.01 U	0.061	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.017	0.01 U	0.01 U	0.023	0.01 U
Benzo(a)pyrene in mg/kg		0.26 J	0.01 U	0.025	0.01 U	0.014	0.016	0.01 U	0.01 U	0.01 U	0.014	0.01 U	0.023	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.022	0.01 U	0.01 U	0.017	0.01 U
Benzo(b)fluoranthene in mg/kg		0.11 J	0.01 U	0.047	0.02	0.017	0.021	0.01 U	0.01 U	0.016	0.01 U	0.01 U	0.043	0.01 U	0.01 U	0.013	0.01 U	0.023	0.01 U	0.01 U	0.026	0.01 U	0.01 U	0.01 U	
Benzo(k)fluoranthene in mg/kg		0.1 UJ	0.01 U	0.013	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	
Chrysene in mg/kg		0.21 J	0.01 U	0.033	0.015	0.03	0.03	0.01 U	0.01 U	0.015	0.014	0.01 U	0.097	0.01 U	0.01 U	0.015	0.01 U	0.01 U	0.019	0.01					

Table 1 - Draft Soil Quality Data from Explorations Inside the Warehouse

K-C Worldwide Site Upland Area 110207

Aspect Consulting

2/18/2014

V:\110207 KC Everett Mill\Deliverables\Work Plan for RI FS\Vapor Sampling Addendum\T1 - Soil Data from Warehouse Locs.xlsx

Table 1

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Table 1 - Draft Soil Quality Data from Explorations Inside the Warehouse

K-C Worldwide Site Upland Area 110207

Chemical Name	Saturated Soil - Industrial Land Use Screening Level	REC2-B-10 FD 6/28/12 (5.5-6.5 ft)	REC2-B-10 FD 6/28/12 (8.5-9.5 ft)	REC2-B-13 11/14/13 (5 ft)	REC2-B-13 FD 11/14/13 (5 ft)	REC2-B-13 FD 11/14/13 (12 ft)	REC2-B-13 FD 11/14/13 (12 ft)	REC2-B-13 11/14/13 (14 ft)	REC2-B-14 11/14/13 (6.5 ft)	REC2-B-14 11/14/13 (9 ft)	REC2-B-14 11/14/13 (13 ft)	REC2-B-15 11/15/13 (2 ft)	REC2-B-15 11/15/13 (6.5 ft)	REC2-B-15 11/15/13 (11 ft)	REC2-B-16 11/15/13 (5 ft)	REC2-B-16 11/15/13 (6 ft)	REC2-B-16 11/15/13 (7 ft)	REC2-B-17 11/14/13 (5.5 ft)	REC2-B-17 11/14/13 (6.5 ft)	REC2-B-17 11/14/13 (7 ft)	REC2-B-17 11/14/13 (11 ft)	REC2-B-18 11/14/13 (1 ft)	REC2-B-18 11/14/13 (2 ft)	REC2-B-18 11/14/13 (6 ft)
Chlorobenzene in mg/kg	70,000																							
Chloroethane in mg/kg																								
Chloroform in mg/kg	35,000																							
Chloromethane in mg/kg																								
cis-1,2-Dichloroethene (DCE) in mg/kg	7,000																							
cis-1,3-Dichloropropene in mg/kg																								
Dibromochloromethane in mg/kg	1,600																							
Dibromomethane in mg/kg	35,000																							
Dichlorodifluoromethane in mg/kg	700,000																							
Ethylbenzene in mg/kg	350,000																							
Hexachlorobutadiene in mg/kg	1,700																							
Isopropylbenzene in mg/kg	350,000																							
Methyl tert-butyl ether (MTBE) in mg/kg																								
Methylene chloride in mg/kg	18,000																							
n-Propylbenzene in mg/kg	350,000																							
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sec-Butylbenzene in mg/kg																								
Styrene in mg/kg	700,000																							
tert-Butylbenzene in mg/kg																								
Tetrachloroethene (PCE) in mg/kg	240																							
Toluene in mg/kg	280,000																							
trans-1,2-Dichloroethene in mg/kg	70,000																							
trans-1,3-Dichloropropene in mg/kg																								
Trichloroethene (TCE) in mg/kg	1,100																							
Trichlorofluoromethane in mg/kg	1,100,000																							
Vinyl chloride in mg/kg	88																							
m,p-Xylenes in mg/kg																								
o-Xylene in mg/kg	700,000																							
Total Xylenes in mg/kg	700,000																							

Notes**Data are unvalidated and thus are considered draft.**

Soil sample depths are relative to floor grade inside the Warehouse

Concentrations in shaded cells indicate value exceeds Saturate

J - Analyte was positively identified. The reported result is an estimate

U - Analyte was not detected at or above the reported result.

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Table 1 - Draft Soil Quality Data from Explorations Inside the Warehouse

K-C Worldwide Site Upland Area 110207

Chemical Name	Saturated Soil - Industrial Land Use Screening Level	REC2-B-19 11/14/13 (5 ft)	REC2-B-19 11/14/13 (7 ft)	REC2-B-19 11/14/13 (8.5 ft)	REC2-B-20 11/14/13 (1 ft)	REC2-B-20 11/14/13 (6 ft)	REC2-B-20 11/14/13 (12 ft)	REC2-B-21 11/14/13 (7 ft)	REC2-B-21 11/14/13 (9 ft)	REC2-B-21 11/14/13 (11 ft)	REC2-B-22 11/1/13 (1.5 ft)	REC2-B-22 FD 11/1/13 (2 ft)	REC2-B-22 FD 11/1/13 (2 ft)	REC2-B-22 FD 11/1/13 (6 ft)	REC2-B-22 FD 11/1/13 (6 ft)	
Total Petroleum Hydrocarbons (TPH)																
Gasoline Range Hydrocarbons in mg/kg	100	2 U	2 U	2 U	2 U	2.7	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	79	97
Diesel Range Hydrocarbons in mg/kg	2,000	50 U	100 X	50 U	50 U	81 X	50 U	50 U	130 X	950 X	50 U	50 U	50 U	50 U	610	760
Oil Range Hydrocarbons in mg/kg	2,000	250 U	250 U	250 U	250 U	250 U	250 U	250 U	830	770	250 U	250 U	250 U	250 U	250 U	250 U
Metals																
Arsenic in mg/kg	20				4.68	11.3	1.27									
Copper in mg/kg	36				27.3	30.7	7.14									
Lead in mg/kg	81				7	924	1.37									
Mercury in mg/kg	5.5				0.1 U	0.4	0.1 U									
Nickel in mg/kg	48				16.3	12	7.45									
Zinc in mg/kg	360				30.9	163	9.14									
Polycyclic Aromatic Hydrocarbons (PAHs)																
Acenaphthene in mg/kg	210,000	0.01 U	0.01 U	0.01 U	0.01 U	0.058	0.01 U	0.01 U	0.02 U	0.051	0.01 U	0.01 U	0.01 U	0.01 U	0.083	
Acenaphthylene in mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	0.045	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	
Anthracene in mg/kg	1,100,000	0.01 U	0.01 U	0.01 U	0.01 U	0.22	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	
Benzo(g,h,i)perylene in mg/kg		0.023	0.01 U	0.01 U	0.01 U	0.18	0.01 U	0.01 U	0.02 UJ	0.031	0.01 U	0.01 U	0.01 U	0.01 U	0.027	0.015
Dibenzofuran in mg/kg	3,500															
Fluoranthene in mg/kg	140,000	0.052	0.01 U	0.01 U	0.018	1	0.01 U	0.012	0.17	1.5	0.01 U	0.01 U	0.01 U	0.01 U	0.11	0.11
Fluorene in mg/kg	140,000	0.01 U	0.01 U	0.01 U	0.01 U	0.063	0.01 U	0.01 U	0.02 U	0.12	0.01 U	0.01 U	0.01 U	0.01 U	0.37	0.35
Phenanthrene in mg/kg		0.078	0.01 U	0.01 U	0.012	1.1	0.011	0.01 U	0.13	1.8	0.01 U	0.01 U	0.01 U	0.01 U	0.47	0.43
Pyrene in mg/kg	110,000	0.063	0.01 U	0.01 U	0.02	0.91	0.01 U	0.016	0.2	1.2	0.01 U	0.01 U	0.01 U	0.01 U	0.12	0.11
2-Methylnaphthalene in mg/kg	14,000															
Naphthalene in mg/kg	70,000	0.023	0.01 U	0.01 U	0.01 U	0.047	0.01 U	0.01 U	0.061	0.014	0.01 U	0.01 U	0.01 U	0.01 U	0.41	0.29
Benz(a)anthracene in mg/kg		0.024	0.01 U	0.01 U	0.01 U	0.24	0.01 U	0.01 U	0.068	0.15	0.01 U	0.01 U	0.01 U	0.01 U	0.036	0.034
Benzo(a)pyrene in mg/kg		0.018	0.01 U	0.01 U	0.01 U	0.24	0.01 U	0.01 U	0.041 J	0.037	0.01 U	0.01 U	0.01 U	0.01 U	0.022	0.02
Benzo(b)fluoranthene in mg/kg		0.025	0.01 U	0.01 U	0.01 U	0.36	0.01 U	0.01 U	0.091 J	0.12	0.01 U	0.01 U	0.01 U	0.01 U	0.043	0.034
Benzo(k)fluoranthene in mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	0.098	0.01 U	0.01 U	0.02 UJ	0.035	0.01 U	0.01 U	0.01 U	0.01 U	0.013	0.01 U
Chrysene in mg/kg		0.031	0.01 U	0.01 U	0.01 U	0.38	0.01 U	0.01 U	0.17	0.3	0.01 U	0.01 U	0.01 U	0.01 U	0.074	0.055
Dibenzo(a,h)anthracene in mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	0.035	0.01 U	0.01 U	0.022 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Indeno(1,2,3-cd)pyrene in mg/kg		0.017	0.01 U	0.01 U	0.01 U	0.17	0.01 U	0.01 U	0.039 J	0.035	0.01 U	0.01 U	0.01 U	0.01 U	0.022	0.014
Total cPAHs TEQ in mg/kg	0.4	0.0259	ND	ND	ND	0.334	ND	ND	0.0657	0.0745	ND	ND	ND	ND	0.0346	0.0298
Other Semivolatiles																
1,2,4-Trichlorobenzene in mg/kg	4,500															
1,2-Dichlorobenzene in mg/kg	320,000															
1,3-Dichlorobenzene in mg/kg																
1,4-Dichlorobenzene in mg/kg																
2,4,5-Trichlorophenol in mg/kg	350,000															
2,4,6-Trichlorophenol in mg/kg	3,500															
2,4-Dichlorophenol in mg/kg	11,000															
2,4-Dimethylphenol in mg/kg	70,000															
2,4-Dinitrophenol in mg/kg	7,000															
2-Chloronaphthalene in mg/kg	280,000															
2-Chlorophenol in mg/kg	18,000															
2-Methylphenol in mg/kg	180,000															
2-Nitroaniline in mg/kg	35,000															
2-Nitrophenol in mg/kg																
3 & 4 Methylphenol in mg/kg																
3-Nitroaniline in mg/kg																
4,6-Dinitro-2-methylphenol in mg/kg																
4-Bromophenyl phenyl ether in mg/kg																
4-Chloro-3-methylphenol in mg/kg																
4-Chloroaniline in mg/kg	660															
4-Chlorophenyl phenyl ether in mg/kg																
4-Nitroaniline in mg/kg																
4-Nitrophenol in mg/kg		</														

Table 1 - Draft Soil Quality Data from Explorations Inside the Warehouse

K-C Worldwide Site Upland Area 110207

Chemical Name	Saturated Soil - Industrial Land Use Screening Level	REC2-B-19 11/14/13 (5 ft)	REC2-B-19 11/14/13 (7 ft)	REC2-B-19 11/14/13 (8.5 ft)	REC2-B-20 11/14/13 (1 ft)	REC2-B-20 11/14/13 (6 ft)	REC2-B-20 11/14/13 (12 ft)	REC2-B-21 11/14/13 (7 ft)	REC2-B-21 11/14/13 (9 ft)	REC2-B-21 11/14/13 (11 ft)	REC2-B-22 11/1/13 (1.5 ft)	REC2-B-22 11/1/13 (2 ft)	REC2-B-22 11/1/13 (2 ft)	REC2-B-22 11/1/13 (6 ft)	REC2-B-22 11/1/13 (6 ft)
Benzyl alcohol in mg/kg	350,000														
Benzyl butyl phthalate in mg/kg	69,000														
Bis(2-chloro-1-methylethyl) ether in mg/kg	1,900														
Bis(2-chloroethoxy)methane in mg/kg															
Bis(2-chloroethyl) ether in mg/kg	120														
Bis(2-ethylhexyl) phthalate in mg/kg	9,400														
Carbazole in mg/kg															
Diethyl phthalate in mg/kg	2,800,000														
Dimethyl phthalate in mg/kg															
Di-n-butyl phthalate in mg/kg	350,000														
Di-n-octyl phthalate in mg/kg															
Hexachlorobenzene in mg/kg	17														
Hexachlorobutadiene in mg/kg	1,700														
Hexachlorocyclopentadiene in mg/kg	21,000														
Hexachloroethane in mg/kg	3,500														
Isophorone in mg/kg	140,000														
Nitrobenzene in mg/kg	7,000														
N-Nitroso-di-n-propylamine in mg/kg	19														
N-Nitrosodiphenylamine in mg/kg	27,000														
Pentachlorophenol in mg/kg	4.5														
Phenol in mg/kg	1,100,000														
2,4-Dinitrotoluene in mg/kg	7,000														
2,6-Dinitrotoluene in mg/kg	3,500														
Volatile Organic Compounds (VOC)															
1,1,1,2-Tetrachloroethane in mg/kg	5,000														
1,1,1-Trichloroethane in mg/kg	7,000,000														
1,1,2,2-Tetrachloroethane in mg/kg	660														
1,1,2-Trichloroethane in mg/kg	2,300														
1,1-Dichloroethane in mg/kg	700,000														
1,1-Dichloroethene in mg/kg	180,000														
1,1-Dichloropropene in mg/kg															
1,2,3-Trichlorobenzene in mg/kg															
1,2,3-Trichloropropane in mg/kg	4.4														
1,2,4-Trichlorobenzene in mg/kg	4,500														
1,2,4-Trimethylbenzene in mg/kg															
1,2-Dibromo-3-chloropropane in mg/kg	160														
1,2-Dibromoethane (EDB) in mg/kg	66														
1,2-Dichlorobenzene in mg/kg	320,000														
1,2-Dichloroethane (EDC) in mg/kg	1,400														
1,2-Dichloropropane in mg/kg															
1,3,5-Trimethylbenzene in mg/kg	35,000														
1,3-Dichlorobenzene in mg/kg															
1,3-Dichloropropane in mg/kg															
1,4-Dichlorobenzene in mg/kg															
2,2-Dichloropropane in mg/kg															
2-Butanone in mg/kg	2,100,000														
2-Chlorotoluene in mg/kg	70,000														
2-Hexanone in mg/kg															
4-Chlorotoluene in mg/kg															
4-Methyl-2-pentanone in mg/kg	280,000														
Acetone in mg/kg	3,200,000														
Benzene in mg/kg	2,400														
Bromobenzene in mg/kg															
Bromodichloromethane in mg/kg	2,100														
Bromoform in mg/kg	17,000														
Bromomethane in mg/kg	4,900														
Carbon tetrachloride in mg/kg	1,900														

Aspect Consulting

2/18/2014

V:\110207 KC Everett Mill\Deliverables\Work Plan for RI FS\Vapor Sampling Addendum\T1 - Soil Data from Warehouse Locs.xlsx

Table 1

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Table 1 - Draft Soil Quality Data from Explorations Inside the Warehouse

K-C Worldwide Site Upland Area 110207

Chemical Name	Saturated Soil - Industrial Land Use Screening Level	REC2-B-19 11/14/13 (5 ft)	REC2-B-19 11/14/13 (7 ft)	REC2-B-19 11/14/13 (8.5 ft)	REC2-B-20 11/14/13 (1 ft)	REC2-B-20 11/14/13 (6 ft)	REC2-B-20 11/14/13 (12 ft)	REC2-B-21 11/14/13 (7 ft)	REC2-B-21 11/14/13 (9 ft)	REC2-B-21 11/14/13 (11 ft)	REC2-B-22 11/1/13 (1.5 ft)	REC2-B-22 FD 11/1/13 (2 ft)	REC2-B-22 FD 11/1/13 (2 ft)	REC2-B-22 FD 11/1/13 (6 ft)	REC2-B-22 FD 11/1/13 (6 ft)
Chlorobenzene in mg/kg	70,000														
Chloroethane in mg/kg															
Chloroform in mg/kg	35,000														
Chloromethane in mg/kg															
cis-1,2-Dichloroethene (DCE) in mg/kg	7,000														
cis-1,3-Dichloropropene in mg/kg															
Dibromochloromethane in mg/kg	1,600														
Dibromomethane in mg/kg	35,000														
Dichlorodifluoromethane in mg/kg	700,000														
Ethylbenzene in mg/kg	350,000														
Hexachlorobutadiene in mg/kg	1,700														
Isopropylbenzene in mg/kg	350,000														
Methyl tert-butyl ether (MTBE) in mg/kg															
Methylene chloride in mg/kg	18,000														
n-Propylbenzene in mg/kg	350,000														
p-Isopropyltoluene in mg/kg															
sec-Butylbenzene in mg/kg															
Styrene in mg/kg	700,000														
tert-Butylbenzene in mg/kg															
Tetrachloroethene (PCE) in mg/kg	240														
Toluene in mg/kg	280,000														
trans-1,2-Dichloroethene in mg/kg	70,000														
trans-1,3-Dichloropropene in mg/kg															
Trichloroethene (TCE) in mg/kg	1,100														
Trichlorofluoromethane in mg/kg	1,100,000														
Vinyl chloride in mg/kg	88														
m,p-Xylenes in mg/kg															
o-Xylene in mg/kg	700,000														
Total Xylenes in mg/kg	700,000														

Notes**Data are unvalidated and thus are considered draft.**

Soil sample depths are relative to floor grade inside the Warehouse

Concentrations in shaded cells indicate value exceeds Saturate

J - Analyte was positively identified. The reported result is an estimate

U - Analyte was not detected at or above the reported result.

UJ - Analyte was not detected at or above the reported estimated result

x - The sample chromatographic pattern does not resemble the

Table 2 - Draft Groundwater Quality Data from Explorations Inside Warehouse

K-C Worldwide Site Upland Area 110207

Chemical Name	Groundwater Screening Level (Industrial Land Use)	REC1-MW-01 09/13/12	REC1-MW-01 11/14/13	REC1-MW-02 09/13/12	REC1-MW-02 11/14/13	REC1-MW-03 09/13/12	REC1-MW-03 FD	REC1-MW-03 11/14/13	REC1-MW-06 09/13/12	REC1-MW-06 11/14/13	REC1-MW-07 09/13/12	REC1-MW-07 11/14/13	REC1-MW-10 11/14/13	REC1-MW-10 FD	REC1-MW-11 11/14/13	REC1-MW-12 11/14/13	REC1-MW-14 11/14/13
Total Petroleum Hydrocarbons (TPH)																	
Gasoline Range Hydrocarbons in ug/L	800	100 U	100 U	100 U	100 U	390	360	120	100 U	100 U	100 U	100 U	310				
Diesel Range Hydrocarbons in ug/L	500	50 U	55 U	50 U	55 U	300		55 U	50 U	55 U	50 U	55 U	50 U	50 U	55 U	230	
Oil Range Hydrocarbons in ug/L	500	250 U	275 U	250 U	275 U	250 U		275 U	250 U	275 U	250 U	275 U	250 U	275 U	250 U	250 U	
Total TPHs in ug/L		ND		ND		425			ND		ND						
Metals																	
Total Arsenic in ug/L	5								2.5								0.2 J
Total Copper in ug/L	3.1								0.32								0.21
Total Lead in ug/L	8.1								0.812								0.506
Total Mercury in ug/L	0.025								0.00305								0.00094 J
Total Nickel in ug/L	8.2								0.54								0.57
Total Zinc in ug/L	81								1.3								0.8
Conventional Chemistry Parameters																	
Total Suspended Solids in mg/L		10 U	10 U	41	10 U	140		10 U	32	14	29	120	10 U	10 U	12	12	10 U
Polycyclic Aromatic Hydrocarbons (PAHs)																	
Acenaphthene in ug/L	640	0.075	0.069	0.05 U	0.012 U	0.16		0.21	0.05 U	0.046	0.07	0.076	0.024	0.021	0.012 U	0.017	0.031
Acenaphthylene in ug/L	960	0.05 U	0.012 U	0.05 U	0.012 U	0.05 U		0.012 U	0.05 U	0.012 U	0.05 U	0.013	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U
Anthracene in ug/L	26,000	0.05 U	0.012 U	0.05 U	0.012 U	0.05 U		0.012 U	0.05 U	0.012 U	0.05 U	0.024	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U
Benz(g,h,i)perylene in ug/L		0.05 U	0.012 U	0.05 U	0.012 U	0.05 U		0.012 U	0.05 U	0.012 U	0.05 U	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U
Dibenzofuran in ug/L															0.2 U	0.2 U	
Fluoranthene in ug/L	90	0.05 U	0.012 U	0.05 U	0.012 U	0.05 U		0.012 U	0.05 U	0.012 U	0.065	0.053	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U
Fluorene in ug/L	3,500	0.069	0.034	0.05 U	0.012 U	0.05 U		0.022	0.05 U	0.017	0.058	0.027	0.012 U	0.012 U	0.012 U	0.018	0.037
Phenanthrene in ug/L		0.17	0.049	0.05 U	0.012 U	0.05 U		0.012 U	0.05 U	0.012 U	0.13	0.1	0.012 U	0.012 U	0.016	0.012 U	0.012 U
Pyrene in ug/L	2,600	0.05 U	0.012 U	0.05 U	0.012 U	0.05 U		0.014	0.05 U	0.012 U	0.05 U	0.034	0.012 U	0.012 U	0.012 U	0.012 U	0.014
2-Methylnaphthalene in ug/L															0.2 U	0.2 U	
Naphthalene in ug/L	360	0.05 U	0.012 U	0.05 U	0.012 U	0.05 U		0.012 U	0.05 U	0.012 U	0.05 U	0.012 U	0.012 U	0.012 U	0.02	0.012 U	0.012 U
Benz(a)anthracene in ug/L	0.031	0.01 U	0.012 U	0.01 U	0.012 U	0.01 U		0.012 U	0.01 U	0.012 U	0.01 U	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U
Benzo(a)pyrene in ug/L	0.031	0.01 U	0.012 U	0.01 U	0.012 U	0.01 U		0.012 U	0.01 U	0.012 U	0.01 U	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U
Benzo(b)fluoranthene in ug/L	0.031	0.01 U	0.012 U	0.01 U	0.012 U	0.01 U		0.012 U	0.01 U	0.012 U	0.01 U	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U
Benzo(k)fluoranthene in ug/L	0.031	0.01 U	0.012 U	0.01 U	0.012 U	0.01 U		0.012 U	0.01 U	0.012 U	0.01 U	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U
Chrysene in ug/L	0.031	0.01 U	0.012 U	0.01 U	0.012 U	0.01 U		0.012 U	0.01 U	0.012 U	0.01 U	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U
Dibenzo(a,h)anthracene in ug/L	0.031	0.01 U	0.012 U	0.01 U	0.012 U	0.01 U		0.012 U	0.01 U	0.012 U	0.01 U	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U
Indeno(1,2,3-cd)pyrene in ug/L	0.031	0.01 U	0.012 U	0.01 U	0.012 U	0.01 U		0.012 U	0.01 U	0.012 U	0.01 U	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U
Total cPAHs TEQ in ug/L	0.031	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Other Semivolatiles																	
1,2,4-Trichlorobenzene in ug/L	2												0.2 U	0.2 U			
1,2-Dichlorobenzene in ug/L	1,300												0.2 U	0.2 U			
1,3-Dichlorobenzene in ug/L	960												0.2 U	0.2 U			
1,4-Dichlorobenzene in ug/L	190												0.2 U	0.2 U			
2,4,5-Trichlorophenol in ug/L	3,600												2 U	2 U			
2,4,6-Trichlorophenol in ug/L	10												2 U	2 U			
2,4-Dichlorophenol in ug/L	190												2 U	2 U			
2,4-Dimethylphenol in ug/L	550												2 U	2 U			
2,4-Dinitrophenol in ug/L	3,500												6 U	6 U			
2-Chloronaphthalene in ug/L	1,000												0.2 U	0.2 U			
2-Chlorophenol in ug/L	97												2 U	2 U			
2-Methylphenol in ug/L													2 U	2 U			
2-Nitroaniline in ug/L													1 U	1 U			
2-Nitrophenol in ug/L</td																	

Table 2 - Draft Groundwater Quality Data from Explorations Inside Warehouse

K-C Worldwide Site Upland Area 110207

Chemical Name	Groundwater Screening Level (Industrial Land Use)	REC1-MW-01 09/13/12	REC1-MW-01 11/14/13	REC1-MW-02 09/13/12	REC1-MW-02 11/14/13	REC1-MW-03 09/13/12	REC1-MW-03 09/13/12 FD	REC1-MW-03 11/14/13	REC1-MW-06 09/13/12	REC1-MW-06 11/14/13	REC1-MW-07 09/13/12	REC1-MW-07 11/14/13	REC1-MW-10 11/14/13 FD	REC1-MW-10 11/14/13	REC1-MW-11 11/14/13	REC1-MW-12 11/14/13	REC1-MW-14 11/14/13
4-Nitroaniline in ug/L														20 U	20 U		
4-Nitrophenol in ug/L														6 U	6 U		
Benzoic acid in ug/L														10 U	10 U		
Benzyl alcohol in ug/L														2 U	2 U		
Benzyl butyl phthalate in ug/L	8.2													2 U	2 U		
Bis(2-chloro-1-methylethyl) ether in ug/L	37													0.2 U	0.2 U		
Bis(2-chloroethoxy)methane in ug/L														0.2 U	0.2 U		
Bis(2-chloroethyl) ether in ug/L	1.4													0.2 U	0.2 U		
Bis(2-ethylhexyl) phthalate in ug/L	5.9													3.2 U	3.2 U		
Carbazole in ug/L														2 U	2 U		
Diethyl phthalate in ug/L	28,000													2 U	2 U		
Dimethyl phthalate in ug/L	1,100,000													2 U	2 U		
Di-n-butyl phthalate in ug/L	2,900													2 U	2 U		
Di-n-octyl phthalate in ug/L														2 U	2 U		
Hexachlorobenzene in ug/L	1													0.2 U	0.2 U		
Hexachlorobutadiene in ug/L	8.1													0.2 U	0.2 U		
Hexachlorocyclopentadiene in ug/L	1,100													0.6 U	0.6 U		
Hexachloroethane in ug/L	8.9													0.2 U	0.2 U		
Isophorone in ug/L	960													0.2 U	0.2 U		
Nitrobenzene in ug/L	690													0.2 U	0.2 U		
N-Nitroso-di-n-propylamine in ug/L	1													0.2 U	0.2 U		
N-Nitrosodiphenylamine in ug/L	6													0.2 U	0.2 U		
Pentachlorophenol in ug/L	10													2 U	2 U		
Phenol in ug/L	560,000													2 U	2 U		
2,4-Dinitrotoluene in ug/L	9.1													1 U	1 U		
2,6-Dinitrotoluene in ug/L														1 U	1 U		
Volatile Organic Compounds (VOC)																	
1,1,1,2-Tetrachloroethane in ug/L	1.7	1 U		1 U		1 U		1 U		1 U		1 U					
1,1,1-Trichloroethane in ug/L	12,000	1 U		1 U		1 U		1 U		1 U		1 U		1 U			
1,1,2,2-Tetrachloroethane in ug/L	11	1 U		1 U		1 U		1 U		1 U		1 U		1 U			
1,1,2-Trichloroethane in ug/L	42	1 U		1 U		1 U		1 U		1 U		1 U		1 U			
1,1-Dichloroethane in ug/L	1,600	1 U		1 U		1 U		1 U		1 U		1 U		1 U			
1,1-Dichloroethene in ug/L	280	1 U		1 U		1 U		1 U		1 U		1 U		1 U			
1,1-Dichloropropene in ug/L		1 U		1 U		1 U		1 U		1 U		1 U		1 U			
1,2,3-Trichlorobenzene in ug/L		1 U		1 U		1 U		1 U		1 U		1 U		1 U			
1,2,3-Trichloropropane in ug/L	0.5	1 U		1 U		1 U		1 U		1 U		1 U		1 U			
1,2,4-Trichlorobenzene in ug/L	2	1 U		1 U		1 U		1 U		1 U		1 U		1 U			
1,2,4-Trimethylbenzene in ug/L	61	1 U		1 U		1 U		1 U		1 U		1 U		1 U			
1,2-Dibromo-3-chloropropane in ug/L	2	10 U		10 U		10 U		10 U		10 U		10 U		10 U			
1,2-Dibromoethane (EDB) in ug/L	2	1 U		1 U		1 U		1 U		1 U		1 U		1 U			
1,2-Dichlorobenzene in ug/L	1,300	1 U		1 U		1 U		1 U		1 U		1 U		1 U			
1,2-Dichloroethane (EDC) in ug/L	42	1 U		1 U		1 U		1 U		1 U		1 U		1 U			
1,2-Dichloropropane in ug/L	15	1 U		1 U		1 U		1 U		1 U		1 U		1 U			
1,3,5-Trimethylbenzene in ug/L	80	1 U		1 U		1 U		1 U		1 U		1 U		1 U			
1,3-Dichlorobenzene in ug/L	960	1 U		1 U		1 U		1 U		1 U		1 U		1 U			
1,3-Dichloropropane in ug/L		1 U		1 U		1 U		1 U		1 U		1 U		1 U			
1,4-Dichlorobenzene in ug/L	190	1 U		1 U		1 U		1 U		1 U		1 U		1 U			
2,2-Dichloropropane in ug/L		1 U		1 U		1 U		1 U		1 U		1 U		1 U			
2-Butanone in ug/L		10 U		10 U		10 U		10 U		10 U		10 U		10 U			
2-Chlorotoluene in ug/L	160	1 U		1 U		1 U		1 U		1 U		1 U		1 U			
2-Hexanone in ug/L		10 U		10 U		10 U		10 U		10 U		10 U		10 U			
4-Chlorotoluene in ug/L		1 U		1 U		1 U		1 U		1 U		1 U		1 U			
4-Methyl-2-pentanone in ug/L		10 U		10 U		10 U		10 U		10 U		10 U		10 U			
Acetone in ug/L		10 U		10 U		10 U		10 U		10 U		10 U		10 U			
Benzene in ug/L	24	0.35 U		0.35 U		0.35 U		0.35 U		0.35 U		0.35 U		0.35 U			
Bromobenzene in ug/L		1 U		1 U		1 U		1 U		1 U		1 U		1 U			

Table 2 - Draft Groundwater Quality Data from Explorations Inside Warehouse

K-C Worldwide Site Upland Area 110207

Chemical Name	Groundwater Screening Level (Industrial Land Use)	REC1-MW-01 09/13/12	REC1-MW-01 11/14/13	REC1-MW-02 09/13/12	REC1-MW-02 11/14/13	REC1-MW-03 09/13/12	REC1-MW-03 09/13/12 FD	REC1-MW-03 11/14/13	REC1-MW-06 09/13/12	REC1-MW-06 11/14/13	REC1-MW-07 09/13/12	REC1-MW-07 11/14/13	REC1-MW-10 11/14/13 FD	REC1-MW-10 11/14/13	REC1-MW-11 11/14/13	REC1-MW-12 11/14/13	REC1-MW-14 11/14/13
Bromodichloromethane in ug/L	0.9	1 U		1 U		1 U		1 U	1 U	1 U	1 U		1 U				
Bromoform in ug/L	360	1 U		1 U		1 U		1 U	1 U	1 U	1 U		1 U				
Bromomethane in ug/L	28	1 U		1 U		1 U		1 U	1 U	1 U	1 U		1 U				
Carbon tetrachloride in ug/L	4.4	1 U		1 U		1 U		1 U	1 U	1 U	1 U		1 U				
Chlorobenzene in ug/L	640	1 U		1 U		1 U		1 U	1 U	1 U	1 U		1 U				
Chloroethane in ug/L		1 U		1 U		1 U		1 U	1 U	1 U	1 U		1 U				
Chloroform in ug/L	12	1 U		1 U		1 U		1 U	1 U	1 U	1 U		1 U				
Chloromethane in ug/L	340	10 U		10 U		10 U		10 U	10 U	10 U	10 U		10 U				
cis-1,2-Dichloroethene (DCE) in ug/L		1 U		1 U		1 U		1 U	1 U	1 U	1 U		1 U				
cis-1,3-Dichloropropene in ug/L		1 U		1 U		1 U		1 U	1 U	1 U	1 U		1 U				
Dibromochloromethane in ug/L	2.2	1 U		1 U		1 U		1 U	1 U	1 U	1 U		1 U				
Dibromomethane in ug/L		1 U		1 U		1 U		1 U	1 U	1 U	1 U		1 U				
Dichlorodifluoromethane in ug/L	25	1 U		1 U		1 U		1 U	1 U	1 U	1 U		1 U				
Ethylbenzene in ug/L	2,100	1 U		1 U		1 U		1 U	1 U	1 U	1 U		1 U				
Hexachlorobutadiene in ug/L	8.1	1 U		1 U		1 U		1 U	1 U	1 U	1 U		1 U				
Isopropylbenzene in ug/L		1 U		1 U		1 U		1 U	1 U	1 U	1 U		1 U				
Methyl tert-butyl ether (MTBE) in ug/L		1 U		1 U		1 U		1 U	1 U	1 U	1 U		1 U				
Methylene chloride in ug/L	940	5 U		5 U		5 U		5 U	5 U	5 U	5 U		5 U				
n-Propylbenzene in ug/L		1 U		1 U		1 U		1 U	1 U	1 U	1 U		1 U				
p-Isopropyltoluene in ug/L	1,600	1 U		1 U		1 U		1 U	1 U	1 U	1 U		1 U				
sec-Butylbenzene in ug/L		1 U		1 U		1 U		1 U	1 U	1 U	1 U		1 U				
Styrene in ug/L	100	1 U		1 U		1 U		1 U	1 U	1 U	1 U		1 U				
tert-Butylbenzene in ug/L		1 U		1 U		1 U		1 U	1 U	1 U	1 U		1 U				
Tetrachloroethene (PCE) in ug/L	8.9	1 U		1 U		1 U		1 U	1 U	1 U	1 U		1 U				
Toluene in ug/L	15,000	1 U		1 U		1 U		1 U	1 U	1 U	1 U		1 U				
trans-1,2-Dichloroethene in ug/L	250	1 U		1 U		1 U		1 U	1 U	1 U	1 U		1 U				
trans-1,3-Dichloropropene in ug/L		1 U		1 U		1 U		1 U	1 U	1 U	1 U		1 U				
Trichloroethene (TCE) in ug/L	8.4	1 U		1 U		1 U		1 U	1 U	1 U	1 U		1 U				
Trichlorofluoromethane in ug/L	260	1 U		1 U		1 U		1 U	1 U	1 U	1 U		1 U				
Vinyl chloride in ug/L	2.4	0.2 U		0.2 U		0.2 U		0.2 U	0.2 U	0.2 U	0.2 U		0.2 U				
m,p-Xylenes in ug/L	1,000	2 U		2 U		2 U		2 U	2 U	2 U	2 U		2 U				
o-Xylene in ug/L	1,600	1 U		1 U		1 U		1 U	1 U	1 U	1 U		1 U				
Total Xylenes in ug/L		ND		ND		ND		ND	ND	ND	ND		ND				
Naphthalene in ug/L	360							1 U	1 U								

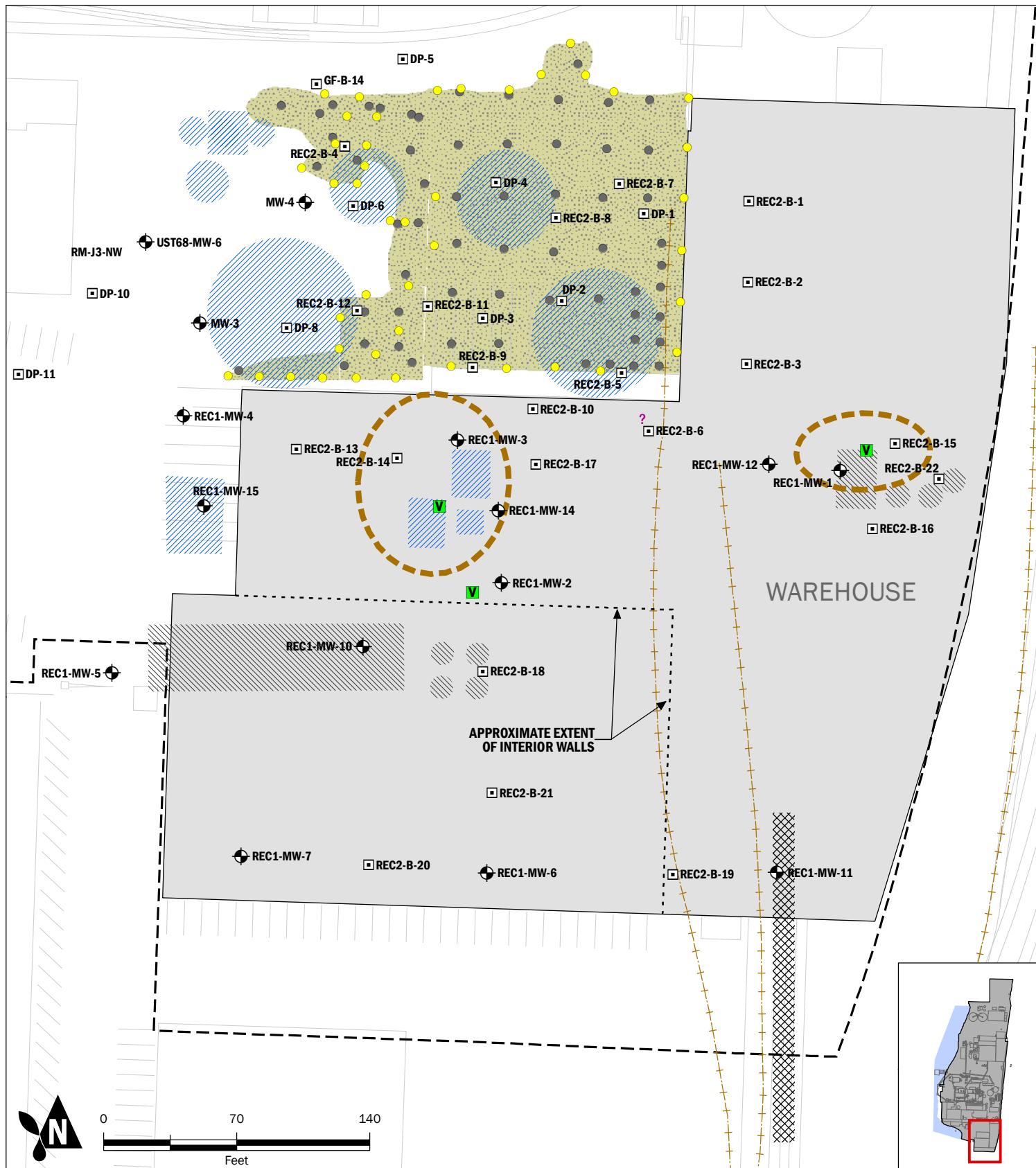
Notes

Concentrations in shaded cells indicate value exceeds Groundwater Screening Level (Industrial Land Use).

J - Analyte was positively identified. The reported result is an estimate.

U - Analyte was not detected at or above the reported result.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



<ul style="list-style-type: none"> Proposed Sub-Slab Vapor and Indoor Air Sampling Location Existing Soil Boring Existing Monitoring Well Excavation Verification Sidewall Sample Excavation Verification Bottom Sample Area of Highest Gasoline-Range TPH in Soil 	<ul style="list-style-type: none"> Apprximate Excavation Extent Upland Area Boundary Approximate Location of Former Associated Oil Co. Facilities Approximate Location of Former Standard Oil Facilities Former Associated Oil Co. Railroad Spur Former Associated Oil Co. Railroad Loading Dock
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Proposed Soil Vapor Sampling Locations

RI/FS Work Plan Addendum for
Warehouse Vapor Intrusion Assessment
K-C Worldwide Site Upland Area
Everett, Washington



FEB-2014
PROJECT NO.
110207

BY:
CB / PPW
REV BY:

FIGURE NO.
1