URS

Memorandum

Date: September 16, 2008

To: Amy Boley, IEPA Springfield

From: Bob Billman

Subject: **Roxana, Illinois—Dissolved Phase Groundwater Investigation**
Proposed Groundwater Monitoring Well Installation Plan

As discussed orally with you, and referenced in our correspondence to the agency of June 23, 2009, on behalf of Shell Oil Products US (SOPUS), URS Corporation (URS) is submitting this groundwater monitoring well installation plan for the work SOPUS is conducting in Roxana, Illinois.

Per the approved workplan (dated January 21, 2009 and approved May 12, 2009), groundwater quality in the study area has been delineated via groundwater profiling at locations throughout the area. Groundwater samples were collected from 21 profiling locations GWP-1 thru GWP-21 (**Figure 1**). These locations are mainly aligned along three north-south transects, identified as "primary", "secondary" and "tertiary". The sampling was conducted in accordance with the workplan and approval conditions. Grab groundwater samples (samples) were collected via sampling through a four-foot long, mill-slotted sampler advanced by a Geoprobe. Samples were collected after purging and monitoring field parameters for stabilization criteria. Two samples were collected at each location, the first from just below the water table at a depth which provided sufficient head for sampling (approximately 50 feet below ground surface (bgs)) and the second approximately eight-feet below that sample (approximately 58 feet bgs). These samples from each location were analyzed for volatile organic compounds (VOCs). Analysis of semivolatile organic compounds (SVOCs), including Polycyclic Aromatic Hydrocarbons (PAHs), was completed for each sample collected at each location on the primary transect. Samples from the secondary and tertiary transects were also collected and analyzed for SVOCs if the above-mentioned samples from the primary or secondary transects, respectively, exceeded the screening criteria.

The analytical results were loaded into an Access database, and an initial data screening was performed by comparing the concentrations of detected analytes to the Illinois Class I groundwater criteria (35 IAC Part 620 Class I Groundwater Quality Standards (GQS)[1]). **Table 1** provides the results of this screening, showing exceedances. **Table 2** provides a summary of the detected analytes. **Figure 1** shows the results of the groundwater profiling exercise, by color-coding locations with exceedances, and presents proposed groundwater monitoring well locations. Complete laboratory data packages from the profiling exercise are included on the attached CD[2].

The objective of the proposed monitoring well network is to encompass groundwater with concentrations of chemicals of concern that exceed GQS'. Per IEPA's November 25, 2008 comments (comment 2(b)), these boundary wells should monitor conditions outside the dissolved groundwater plume. The monitoring wells are proposed to be installed in two phases:

- Phase I – includes wells generally in the residential portion of the Village, e.g., the area generally bounded by First Street (to the north), Sixth Street (to the south), Highway 111 (to the west) and Chaffer Street (to the east). The monitoring wells proposed in this plan are in the Phase I area.

[1] A few analytes did not have GQS'; in these cases alternate screening values were used, including values from the September 2008 proposed TACO revisions, "Chemicals not in TACO Tier 1 Tables" and USEPA Regional Screening Level Table.
[2] Sample results from location GWP-21 have not yet been received from the laboratory.

- Phase II – includes wells in the area generally south of that described in Phase I (e.g., southern portion of residential area, Roxana public works property and near the Rand Avenue/Route 111 intersection). We are currently waiting on property access and/or data from a few locations (e.g., GWP-21, GP-3 and GP-5), and the results from this work will help shape any network for the southern portion of the area. Data collected from the 2008 investigation will also be used for this effort. Any monitoring wells proposed for the Phase II area will be described in a separate Memo to IEPA, similar to this Memo.

The Phase I well installation plan includes four monitoring wells, as shown on **Figure 1**. These wells are collocated with groundwater profile locations. As the results of the groundwater profile samples from these locations were below screening criteria, we would anticipate samples from these wells to be similar.

Per the workplan, monitoring wells will be screened across the groundwater table (maximum 10 foot long screens). Well construction procedures will be in accordance with those previously approved in the workplan.

We will implement the subject plan upon Agency approval. The Phase I monitoring wells will be installed within 45 days of approval. For the overall investigation schedule, the workplan specified one comprehensive groundwater sampling event after completion of the monitoring wells. This will be conducted after the Phase II wells have been installed. However, if after review of the data discussed in the second bullet above, Phase II wells are determined not to be needed, then the groundwater and vapor sampling will occur after installation of the Phase I groundwater wells.

As discussed in our June 8, 2009 conference call, we agreed to provide one report for the investigations associated with this workplan (e.g., soil sampling, soil vapor sampling, groundwater sampling, etc.). As was referenced in previous correspondence to the agency, the October 15, 2009 report date provided in IEPA's May 12, 2009 letter (condition 15) does not appear feasible at this time because of the additional work which has been added. The schedule for the overall report will be determined in consultation with the agency once Phase I and/or II well installations have been completed.

cc: Gina Search, IEPA Collinsville
Kevin Dyer, SOPUS
Lance Tolson, Shell Oil Company

TABLE 1

Groundwater Profiling Analytical Screening Exceedances

Location	Depth	Sample ID	Sample Date	Group	Chemical	Result	Units	Screening Criteria	Lab Qualifiers	URS Qualifiers
GWP-02	50 ft	GWP-2-50	7/28/2009	VOCs	Benzene	0.0293	mg/L	0.005		
GWP-03	50 ft	GWP-3-50	7/28/2009	VOCs	Benzene	0.175	mg/L	0.005		
GWP-03	50 ft	GWP-3-50	7/28/2009	VOCs	Ethylbenzene	1.29	mg/L	0.7		
GWP-03	50 ft	GWP-3-50	7/28/2009	VOCs	n-Propylbenzene	0.133	mg/L	0.061		
GWP-03	50 ft	GWP-3-50	7/28/2009	SVOCs	2-Methylnaphthalene	0.101	mg/L	0.028	D	
GWP-03	50 ft	GWP-3-50	7/28/2009	SVOCs	Naphthalene	0.186	mg/L	0.14	D	
GWP-03	58 ft	GWP-3-58	7/28/2009	VOCs	Benzene	0.0264	mg/L	0.005	J	
GWP-03	58 ft	GWP-3-58	7/28/2009	VOCs	Toluene	1.54	mg/L	1		
GWP-03	58 ft	GWP-3-58	7/28/2009	VOCs	Ethylbenzene	1.88	mg/L	0.7		
GWP-03	58 ft	GWP-3-58	7/28/2009	VOCs	n-Propylbenzene	0.118	mg/L	0.061		
GWP-03	58 ft	GWP-3-58	7/28/2009	SVOCs	2-Methylnaphthalene	0.321	mg/L	0.028	D	
GWP-03	58 ft	GWP-3-58	7/28/2009	SVOCs	Naphthalene	0.294	mg/L	0.14	D	
GWP-04	50 ft	GWP-4-50	7/29/2009	VOCs	Benzene	0.0258	mg/L	0.005	J	
GWP-04	50 ft	GWP-4-50	7/29/2009	VOCs	Ethylbenzene	1.02	mg/L	0.7		
GWP-04	50 ft	GWP-4-50	7/29/2009	VOCs	n-Propylbenzene	0.119	mg/L	0.061		
GWP-05	50 ft	GWP-5-50	7/30/2009	VOCs	Benzene	3.82	mg/L	0.005	D	
GWP-05	50 ft	GWP-5-50	7/30/2009	SVOCs	2-Methylnaphthalene	0.05	mg/L	0.028		
GWP-05	58 ft	GWP-5-58	7/30/2009	VOCs	Benzene	1.41	mg/L	0.005		
GWP-05	58 ft	GWP-5-58	7/30/2009	VOCs	Ethylbenzene	2.58	mg/L	0.7		
GWP-05	58 ft	GWP-5-58	7/30/2009	VOCs	n-Propylbenzene	0.127	mg/L	0.061		
GWP-05	58 ft	GWP-5-58	7/30/2009	SVOCs	2-Methylnaphthalene	0.048	mg/L	0.028		
GWP-05	58 ft	GWP-5-58	7/30/2009	SVOCs	Naphthalene	0.211	mg/L	0.14	D	
GWP-06	50 ft	GWP-6-50	7/29/2009	VOCs	Benzene	6.34	mg/L	0.005		
GWP-06	50 ft	GWP-6-50	7/29/2009	VOCs	Toluene	24.6	mg/L	1	D	
GWP-06	50 ft	GWP-6-50	7/29/2009	VOCs	Ethylbenzene	3.2	mg/L	0.7		
GWP-06	50 ft	GWP-6-50	7/29/09	VOCs	Xylenes (total) (Calculated)	10.89	mg/L	10		
GWP-06	50 ft	GWP-6-50	7/29/2009	VOCs	n-Propylbenzene	0.175	mg/L	0.061	J	
GWP-06	50 ft	GWP-6-50	7/29/2009	SVOCs	2-Methylnaphthalene	0.038	mg/L	0.028		
GWP-06	50 ft	GWP-6-50	7/29/2009	SVOCs	3-Methylphenol & 4-Methylphenol	0.02	mg/L	0.01		
GWP-06	50 ft	GWP-6-50	7/29/2009	SVOCs	Naphthalene	0.182	mg/L	0.14	D	
GWP-06	50 ft	GWP-6-50-D	7/29/2009	VOCs	Benzene	6.34	mg/L	0.005		
GWP-06	50 ft	GWP-6-50-D	7/29/2009	VOCs	Toluene	23.7	mg/L	1	D	
GWP-06	50 ft	GWP-6-50-D	7/29/2009	VOCs	Ethylbenzene	3.05	mg/L	0.7		
GWP-06	50 ft	GWP-6-50-D	7/29/09	VOCs	Xylenes (total) (Calculated)	10.3	mg/L	10		
GWP-06	50 ft	GWP-6-50-D	7/29/2009	VOCs	n-Propylbenzene	0.14	mg/L	0.061	J	
GWP-06	50 ft	GWP-6-50-D	7/29/2009	SVOCs	2-Methylnaphthalene	0.043	mg/L	0.028		
GWP-06	50 ft	GWP-6-50-D	7/29/2009	SVOCs	3-Methylphenol & 4-Methylphenol	0.021	mg/L	0.01		
GWP-06	50 ft	GWP-6-50-D	7/29/2009	SVOCs	Naphthalene	0.194	mg/L	0.14	D	
GWP-06	58 ft	GWP-6-58	7/29/2009	VOCs	Benzene	7.42	mg/L	0.005		
GWP-06	58 ft	GWP-6-58	7/29/2009	VOCs	Toluene	10	mg/L	1		
GWP-06	58 ft	GWP-6-58	7/29/2009	VOCs	Ethylbenzene	2.15	mg/L	0.7		
GWP-06	58 ft	GWP-6-58	7/29/2009	SVOCs	3-Methylphenol & 4-Methylphenol	0.018	mg/L	0.01		
GWP-07	50 ft	GWP-7-50	7/30/2009	VOCs	Benzene	10.1	mg/L	0.005		
GWP-07	50 ft	GWP-7-50	7/30/2009	VOCs	Toluene	17.2	mg/L	1		
GWP-07	50 ft	GWP-7-50	7/30/2009	VOCs	Ethylbenzene	2.98	mg/L	0.7		
GWP-07	50 ft	GWP-7-50	7/30/2009	VOCs	Methylene chloride	0.415	mg/L	0.005	J	
GWP-07	50 ft	GWP-7-50	7/30/2009	VOCs	n-Propylbenzene	0.132	mg/L	0.061	J	
GWP-07	50 ft	GWP-7-50	7/30/2009	SVOCs	2-Methylnaphthalene	0.04	mg/L	0.028		
GWP-07	50 ft	GWP-7-50	7/30/2009	SVOCs	3-Methylphenol & 4-Methylphenol	0.042	mg/L	0.01		
GWP-07	50 ft	GWP-7-50	7/30/2009	SVOCs	Naphthalene	0.225	mg/L	0.14	D	
GWP-07	58 ft	GWP-7-58	7/30/2009	VOCs	Benzene	16.3	mg/L	0.005		
GWP-07	58 ft	GWP-7-58	7/30/2009	VOCs	Toluene	12.2	mg/L	1		
GWP-07	58 ft	GWP-7-58	7/30/2009	VOCs	Ethylbenzene	2.34	mg/L	0.7		
GWP-07	58 ft	GWP-7-58	7/30/2009	VOCs	Methylene chloride	0.477	mg/L	0.005	J	
GWP-08	50 ft	GWP-8-50	7/31/2009	VOCs	Benzene	4.82	mg/L	0.005		
GWP-08	50 ft	GWP-8-50	7/31/2009	VOCs	Ethylbenzene	1.29	mg/L	0.7		
GWP-08	50 ft	GWP-8-50	7/31/2009	VOCs	n-Propylbenzene	0.138	mg/L	0.061		
GWP-08	50 ft	GWP-8-50	7/31/2009	SVOCs	2-Methylnaphthalene	0.055	mg/L	0.028		
GWP-08	50 ft	GWP-8-50	7/31/2009	SVOCs	Naphthalene	0.209	mg/L	0.14	D	
GWP-08	58 ft	GWP-8-58	7/31/2009	VOCs	Benzene	0.702	mg/L	0.005		
GWP-08	58 ft	GWP-8-58	7/31/2009	SVOCs	2-Methylnaphthalene	0.054	mg/L	0.028		
GWP-08	58 ft	GWP-8-58	7/31/2009	SVOCs	Naphthalene	0.184	mg/L	0.14	D	
GWP-09	50 ft	GWP-9-50	8/3/2009	VOCs	Benzene	0.164	mg/L	0.005		
GWP-09	58 ft	GWP-9-58	8/3/2009	SVOCs	2-Methylnaphthalene	0.035	mg/L	0.028		
GWP-10	50 ft	GWP-10-50	8/3/2009	VOCs	Benzene	0.0213	mg/L	0.005	J	
GWP-10	50 ft	GWP-10-50	8/3/2009	VOCs	Ethylbenzene	1.39	mg/L	0.7	D	
GWP-10	50 ft	GWP-10-50	8/3/2009	VOCs	n-Propylbenzene	0.068	mg/L	0.061		
GWP-10	58 ft	GWP-10-58	8/3/2009	VOCs	Benzene	0.0137	mg/L	0.005	J	
GWP-10	58 ft	GWP-10-58	8/3/2009	VOCs	Ethylbenzene	2.88	mg/L	0.7	D	
GWP-10	58 ft	GWP-10-58	8/3/2009	VOCs	sec-Butylbenzene	0.356	mg/L	0.061		
GWP-10	58 ft	GWP-10-58	8/3/2009	VOCs	n-Propylbenzene	0.067	mg/L	0.061		
GWP-10	58 ft	GWP-10-58	8/3/2009	SVOCs	Naphthalene	0.146	mg/L	0.14	D	
GWP-12	50 ft	GWP-12-50	8/4/2009	VOCs	Benzene	0.0221	mg/L	0.005		
GWP-13	50 ft	GWP-13-50	8/5/2009	VOCs	Benzene	0.0854	mg/L	0.005		
GWP-13	58 ft	GWP-13-58	8/5/2009	VOCs	Ethylbenzene	2.04	mg/L	0.7	D	
GWP-13	58 ft	GWP-13-58	8/5/2009	VOCs	n-Propylbenzene	0.116	mg/L	0.061		
GWP-13	58 ft	GWP-13-58	8/5/2009	SVOCs	2-Methylnaphthalene	0.052	mg/L	0.028		
GWP-13	58 ft	GWP-13-58	8/5/2009	SVOCs	Naphthalene	0.236	mg/L	0.14	D	

Notes:

1.) Xylenes (total) (Calculated) indicates total xylenes were calculated (or summed) for o-xylene, & m,p-xylene with NDs at half their reporting limit.

2.) Data have not yet been validated.

3.) Screening criteria sources: Illinois Class I Groundwater Quality Standards, "Chemicals not in TACO Tier 1 Tables" and USEPA Regional Screening Level table.

See last page of table for notes.

TABLE 2

Groundwater Profiling Summary of Detected Analytes

Location	Depth	Sample ID	Sample Date	Group	Chemical	Result	Units	Screening Criteria	Lab Qualifiers	URS Qualifiers
GWP-02	50 ft	GWP-2-50	7/28/2009	VOCs	Benzene	0.0293	mg/L	0.005		
GWP-02	50 ft	GWP-2-50	7/28/2009	VOCs	Toluene	0.00635	mg/L	1		
GWP-02	50 ft	GWP-2-50	7/28/2009	VOCs	m,p-Xylene	0.0182	mg/L			
GWP-02	50 ft	GWP-2-50	7/28/2009	VOCs	o-Xylene	0.0141	mg/L			
GWP-02	50 ft	GWP-2-50	7/28/2009	VOCs	Xylenes (total) (Calculated)	0.0323	mg/L	10		
GWP-02	50 ft	GWP-2-50	7/28/2009	VOCs	Isopropylbenzene	0.00227	mg/L	0.66	J	
GWP-02	50 ft	GWP-2-50	7/28/2009	VOCs	n-Propylbenzene	0.00169	mg/L	0.061	J	
GWP-02	50 ft	GWP-2-50	7/28/2009	VOCs	1,2,4-Trimethylbenzene	0.00267	mg/L		J	
GWP-02	50 ft	GWP-2-50	7/28/2009	VOCs	1,3,5-Trimethylbenzene	0.00167	mg/L	0.35	J	
GWP-03	50 ft	GWP-3-50	7/28/2009	VOCs	Benzene	0.175	mg/L	0.005		
GWP-03	50 ft	GWP-3-50	7/28/2009	VOCs	Toluene	0.14	mg/L	1		
GWP-03	50 ft	GWP-3-50	7/28/2009	VOCs	Ethylbenzene	1.29	mg/L	0.7		
GWP-03	50 ft	GWP-3-50	7/28/2009	VOCs	m,p-Xylene	1.97	mg/L			
GWP-03	50 ft	GWP-3-50	7/28/2009	VOCs	o-Xylene	0.244	mg/L			
GWP-03	50 ft	GWP-3-50	7/28/2009	VOCs	Xylenes (total) (Calculated)	2.214	mg/L	10		
GWP-03	50 ft	GWP-3-50	7/28/2009	VOCs	n-Butylbenzene	0.0219	mg/L	0.061	J	
GWP-03	50 ft	GWP-3-50	7/28/2009	VOCs	sec-Butylbenzene	0.0115	mg/L	0.061	J	
GWP-03	50 ft	GWP-3-50	7/28/2009	VOCs	Isopropylbenzene	0.0984	mg/L	0.66		
GWP-03	50 ft	GWP-3-50	7/28/2009	VOCs	n-Propylbenzene	0.133	mg/L	0.061		
GWP-03	50 ft	GWP-3-50	7/28/2009	VOCs	1,2,4-Trimethylbenzene	0.508	mg/L			
GWP-03	50 ft	GWP-3-50	7/28/2009	VOCs	1,3,5-Trimethylbenzene	0.172	mg/L	0.35		
GWP-03	50 ft	GWP-3-50	7/28/2009	SVOCs	Dibenzofuran	0.002	mg/L		J	
GWP-03	50 ft	GWP-3-50	7/28/2009	SVOCs	Fluorene	0.002	mg/L	0.28	J	
GWP-03	50 ft	GWP-3-50	7/28/2009	SVOCs	2-Methylnaphthalene	0.101	mg/L	0.028	D	
GWP-03	50 ft	GWP-3-50	7/28/2009	SVOCs	Naphthalene	0.186	mg/L	0.14	D	
GWP-03	58 ft	GWP-3-58	7/28/2009	VOCs	Benzene	0.0264	mg/L	0.005	J	
GWP-03	58 ft	GWP-3-58	7/28/2009	VOCs	Toluene	1.54	mg/L	1		
GWP-03	58 ft	GWP-3-58	7/28/2009	VOCs	Ethylbenzene	1.88	mg/L	0.7		
GWP-03	58 ft	GWP-3-58	7/28/2009	VOCs	m,p-Xylene	3.99	mg/L			
GWP-03	58 ft	GWP-3-58	7/28/2009	VOCs	o-Xylene	1.55	mg/L			
GWP-03	58 ft	GWP-3-58	7/28/2009	VOCs	Xylenes (total) (Calculated)	5.54	mg/L	10		
GWP-03	58 ft	GWP-3-58	7/28/2009	VOCs	Isopropylbenzene	0.0748	mg/L	0.66	J	
GWP-03	58 ft	GWP-3-58	7/28/2009	VOCs	n-Propylbenzene	0.118	mg/L	0.061		
GWP-03	58 ft	GWP-3-58	7/28/2009	VOCs	1,2,4-Trimethylbenzene	0.611	mg/L			
GWP-03	58 ft	GWP-3-58	7/28/2009	VOCs	1,3,5-Trimethylbenzene	0.152	mg/L	0.35		
GWP-03	58 ft	GWP-3-58	7/28/2009	SVOCs	Dibenzofuran	0.02	mg/L			
GWP-03	58 ft	GWP-3-58	7/28/2009	SVOCs	2-Methylnaphthalene	0.321	mg/L	0.028	D	
GWP-03	58 ft	GWP-3-58	7/28/2009	SVOCs	Naphthalene	0.294	mg/L	0.14	D	
GWP-03	58 ft	GWP-3-58	7/28/2009	SVOCs	Phenanthrene	0.029	mg/L	0.21		
GWP-04	50 ft	GWP-4-50	7/29/2009	VOCs	Benzene	0.0258	mg/L	0.005	J	
GWP-04	50 ft	GWP-4-50	7/29/2009	VOCs	Toluene	0.0169	mg/L	1	J	
GWP-04	50 ft	GWP-4-50	7/29/2009	VOCs	Ethylbenzene	1.02	mg/L	0.7		
GWP-04	50 ft	GWP-4-50	7/29/2009	VOCs	m,p-Xylene	2.33	mg/L			
GWP-04	50 ft	GWP-4-50	7/29/2009	VOCs	o-Xylene	0.351	mg/L			
GWP-04	50 ft	GWP-4-50	7/29/2009	VOCs	Xylenes (total) (Calculated)	2.681	mg/L	10		
GWP-04	50 ft	GWP-4-50	7/29/2009	VOCs	Isopropylbenzene	0.071	mg/L	0.66		
GWP-04	50 ft	GWP-4-50	7/29/2009	VOCs	n-Propylbenzene	0.119	mg/L	0.061		
GWP-04	50 ft	GWP-4-50	7/29/2009	VOCs	1,2,4-Trimethylbenzene	0.703	mg/L			
GWP-04	50 ft	GWP-4-50	7/29/2009	VOCs	1,3,5-Trimethylbenzene	0.158	mg/L	0.35		
GWP-04	50 ft	GWP-4-50	7/29/2009	SVOCs	2-Methylnaphthalene	0.028	mg/L	0.028		
GWP-04	50 ft	GWP-4-50	7/29/2009	SVOCs	Naphthalene	0.061	mg/L	0.14		
GWP-04	58 ft	GWP-4-58	7/29/2009	VOCs	Toluene	0.00117	mg/L	1	J	
GWP-04	58 ft	GWP-4-58	7/29/2009	VOCs	Ethylbenzene	0.0537	mg/L	0.7		
GWP-04	58 ft	GWP-4-58	7/29/2009	VOCs	m,p-Xylene	0.126	mg/L			
GWP-04	58 ft	GWP-4-58	7/29/2009	VOCs	o-Xylene	0.0413	mg/L			
GWP-04	58 ft	GWP-4-58	7/29/2009	VOCs	Xylenes (total) (Calculated)	0.1673	mg/L	10		
GWP-04	58 ft	GWP-4-58	7/29/2009	VOCs	Methyl tert-Butyl Ether	0.0016	mg/L	0.07	J	
GWP-04	58 ft	GWP-4-58	7/29/2009	VOCs	n-Butylbenzene	0.00153	mg/L	0.061	J	
GWP-04	58 ft	GWP-4-58	7/29/2009	VOCs	sec-Butylbenzene	0.00113	mg/L	0.061	J	
GWP-04	58 ft	GWP-4-58	7/29/2009	VOCs	Isopropylbenzene	0.00486	mg/L	0.66	J	
GWP-04	58 ft	GWP-4-58	7/29/2009	VOCs	n-Propylbenzene	0.0113	mg/L	0.061		
GWP-04	58 ft	GWP-4-58	7/29/2009	VOCs	1,2,4-Trimethylbenzene	0.0544	mg/L			
GWP-04	58 ft	GWP-4-58	7/29/2009	VOCs	1,3,5-Trimethylbenzene	0.0129	mg/L	0.35		
GWP-04	58 ft	GWP-4-58	7/29/2009	SVOCs	2-Methylnaphthalene	0.003	mg/L	0.028	J	
GWP-04	58 ft	GWP-4-58	7/29/2009	SVOCs	Naphthalene	0.004	mg/L	0.14	J	

See last page of table for notes.

TABLE 2

Groundwater Profiling Summary of Detected Analytes

Location	Depth	Sample ID	Sample Date	Group	Chemical	Result	Units	Screening Criteria	Lab Qualifiers	URS Qualifiers
GWP-05	50 ft	GWP-5-50	7/30/2009	VOCs	Benzene	3.82	mg/L	0.005	D	
GWP-05	50 ft	GWP-5-50	7/30/2009	VOCs	Toluene	0.0604	mg/L	1	J	
GWP-05	50 ft	GWP-5-50	7/30/2009	VOCs	Ethylbenzene	0.287	mg/L	0.7		
GWP-05	50 ft	GWP-5-50	7/30/2009	VOCs	m,p-Xylene	0.524	mg/L			
GWP-05	50 ft	GWP-5-50	7/30/2009	VOCs	o-Xylene	0.0368	mg/L		J	
GWP-05	50 ft	GWP-5-50	7/30/2009	VOCs	Xylenes (total) (Calculated)	0.5608	mg/L	10		
GWP-05	50 ft	GWP-5-50	7/30/2009	VOCs	1,2,4-Trimethylbenzene	0.0864	mg/L		J	
GWP-05	50 ft	GWP-5-50	7/30/2009	SVOCs	Acenaphthene	0.001	mg/L	0.42	J	
GWP-05	50 ft	GWP-5-50	7/30/2009	SVOCs	2,4-Dimethylphenol	0.003	mg/L	0.14	J	
GWP-05	50 ft	GWP-5-50	7/30/2009	SVOCs	2-Methylnaphthalene	0.05	mg/L	0.028		
GWP-05	50 ft	GWP-5-50	7/30/2009	SVOCs	Naphthalene	0.065	mg/L	0.14		
GWP-05	50 ft	GWP-5-50	7/30/2009	SVOCs	Phenanthrene	0.004	mg/L	0.21	J	
GWP-05	50 ft	GWP-5-50	7/30/2009	SVOCs	Phenol	0.014	mg/L	0.1		
GWP-05	58 ft	GWP-5-58	7/30/2009	VOCs	Benzene	1.41	mg/L	0.005		
GWP-05	58 ft	GWP-5-58	7/30/2009	VOCs	Toluene	0.217	mg/L	1		
GWP-05	58 ft	GWP-5-58	7/30/2009	VOCs	Ethylbenzene	2.58	mg/L	0.7		
GWP-05	58 ft	GWP-5-58	7/30/2009	VOCs	m,p-Xylene	5.81	mg/L			
GWP-05	58 ft	GWP-5-58	7/30/2009	VOCs	o-Xylene	2.88	mg/L			
GWP-05	58 ft	GWP-5-58	7/30/2009	VOCs	Xylenes (total) (Calculated)	8.69	mg/L	10		
GWP-05	58 ft	GWP-5-58	7/30/2009	VOCs	Isopropylbenzene	0.0603	mg/L	0.66	J	
GWP-05	58 ft	GWP-5-58	7/30/2009	VOCs	n-Propylbenzene	0.127	mg/L	0.061		
GWP-05	58 ft	GWP-5-58	7/30/2009	VOCs	1,2,4-Trimethylbenzene	0.836	mg/L			
GWP-05	58 ft	GWP-5-58	7/30/2009	VOCs	1,3,5-Trimethylbenzene	0.185	mg/L	0.35		
GWP-05	58 ft	GWP-5-58	7/30/2009	SVOCs	2,4-Dimethylphenol	0.008	mg/L	0.14	J	
GWP-05	58 ft	GWP-5-58	7/30/2009	SVOCs	2-Methylnaphthalene	0.048	mg/L	0.028		
GWP-05	58 ft	GWP-5-58	7/30/2009	SVOCs	3-Methylphenol & 4-Methylphenol	0.002	mg/L	0.01	J	
GWP-05	58 ft	GWP-5-58	7/30/2009	SVOCs	Naphthalene	0.211	mg/L	0.14	D	
GWP-05	58 ft	GWP-5-58	7/30/2009	SVOCs	Phenol	0.004	mg/L	0.1	J	
GWP-06	50 ft	GWP-6-50	7/29/2009	VOCs	Benzene	6.34	mg/L	0.005		
GWP-06	50 ft	GWP-6-50	7/29/2009	VOCs	Toluene	24.6	mg/L	1	D	
GWP-06	50 ft	GWP-6-50	7/29/2009	VOCs	Ethylbenzene	3.2	mg/L	0.7		
GWP-06	50 ft	GWP-6-50	7/29/2009	VOCs	m,p-Xylene	7.23	mg/L			
GWP-06	50 ft	GWP-6-50	7/29/2009	VOCs	o-Xylene	3.66	mg/L			
GWP-06	50 ft	GWP-6-50	7/29/2009	VOCs	Xylenes (total) (Calculated)	10.89	mg/L	10		
GWP-06	50 ft	GWP-6-50	7/29/2009	VOCs	n-Propylbenzene	0.175	mg/L	0.061	J	
GWP-06	50 ft	GWP-6-50	7/29/2009	VOCs	1,2,4-Trimethylbenzene	1.13	mg/L			
GWP-06	50 ft	GWP-6-50	7/29/2009	VOCs	1,3,5-Trimethylbenzene	0.258	mg/L	0.35	J	
GWP-06	50 ft	GWP-6-50	7/29/2009	SVOCs	2,4-Dimethylphenol	0.004	mg/L	0.14	J	
GWP-06	50 ft	GWP-6-50	7/29/2009	SVOCs	2-Methylnaphthalene	0.038	mg/L	0.028		
GWP-06	50 ft	GWP-6-50	7/29/2009	SVOCs	2-Methylphenol	0.012	mg/L	0.35		
GWP-06	50 ft	GWP-6-50	7/29/2009	SVOCs	3-Methylphenol & 4-Methylphenol	0.02	mg/L	0.01		
GWP-06	50 ft	GWP-6-50	7/29/2009	SVOCs	Naphthalene	0.182	mg/L	0.14	D	
GWP-06	50 ft	GWP-6-50	7/29/2009	SVOCs	Phenol	0.007	mg/L	0.1	J	
GWP-06	50 ft	GWP-6-50-D	7/29/2009	VOCs	Benzene	6.34	mg/L	0.005		
GWP-06	50 ft	GWP-6-50-D	7/29/2009	VOCs	Toluene	23.7	mg/L	1	D	
GWP-06	50 ft	GWP-6-50-D	7/29/2009	VOCs	Ethylbenzene	3.05	mg/L	0.7		
GWP-06	50 ft	GWP-6-50-D	7/29/2009	VOCs	m,p-Xylene	6.93	mg/L			
GWP-06	50 ft	GWP-6-50-D	7/29/2009	VOCs	o-Xylene	3.37	mg/L			
GWP-06	50 ft	GWP-6-50-D	7/29/2009	VOCs	Xylenes (total) (Calculated)	10.3	mg/L	10		
GWP-06	50 ft	GWP-6-50-D	7/29/2009	VOCs	n-Propylbenzene	0.14	mg/L	0.061	J	
GWP-06	50 ft	GWP-6-50-D	7/29/2009	VOCs	1,2,4-Trimethylbenzene	0.956	mg/L			
GWP-06	50 ft	GWP-6-50-D	7/29/2009	VOCs	1,3,5-Trimethylbenzene	0.214	mg/L	0.35	J	
GWP-06	50 ft	GWP-6-50-D	7/29/2009	SVOCs	2,4-Dimethylphenol	0.004	mg/L	0.14	J	
GWP-06	50 ft	GWP-6-50-D	7/29/2009	SVOCs	2-Methylnaphthalene	0.043	mg/L	0.028		
GWP-06	50 ft	GWP-6-50-D	7/29/2009	SVOCs	2-Methylphenol	0.013	mg/L	0.35		
GWP-06	50 ft	GWP-6-50-D	7/29/2009	SVOCs	3-Methylphenol & 4-Methylphenol	0.021	mg/L	0.01		
GWP-06	50 ft	GWP-6-50-D	7/29/2009	SVOCs	Naphthalene	0.194	mg/L	0.14	D	
GWP-06	50 ft	GWP-6-50-D	7/29/2009	SVOCs	Phenol	0.007	mg/L	0.1	J	
GWP-06	58 ft	GWP-6-58	7/29/2009	VOCs	Benzene	7.42	mg/L	0.005		
GWP-06	58 ft	GWP-6-58	7/29/2009	VOCs	Toluene	10	mg/L	1		
GWP-06	58 ft	GWP-6-58	7/29/2009	VOCs	Ethylbenzene	2.15	mg/L	0.7		
GWP-06	58 ft	GWP-6-58	7/29/2009	VOCs	m,p-Xylene	4.67	mg/L			
GWP-06	58 ft	GWP-6-58	7/29/2009	VOCs	o-Xylene	1.4	mg/L			
GWP-06	58 ft	GWP-6-58	7/29/2009	VOCs	Xylenes (total) (Calculated)	6.07	mg/L	10		
GWP-06	58 ft	GWP-6-58	7/29/2009	VOCs	1,2,4-Trimethylbenzene	0.557	mg/L			
GWP-06	58 ft	GWP-6-58	7/29/2009	VOCs	1,3,5-Trimethylbenzene	0.137	mg/L	0.35	J	
GWP-06	58 ft	GWP-6-58	7/29/2009	SVOCs	2,4-Dimethylphenol	0.005	mg/L	0.14	J	
GWP-06	58 ft	GWP-6-58	7/29/2009	SVOCs	2-Methylnaphthalene	0.015	mg/L	0.028		
GWP-06	58 ft	GWP-6-58	7/29/2009	SVOCs	2-Methylphenol	0.011	mg/L	0.35		
GWP-06	58 ft	GWP-6-58	7/29/2009	SVOCs	3-Methylphenol & 4-Methylphenol	0.018	mg/L	0.01		

See last page of table for notes.

TABLE 2

Groundwater Profiling Summary of Detected Analytes

Location	Depth	Sample ID	Sample Date	Group	Chemical	Result	Units	Screening Criteria	Lab Qualifiers	URS Qualifiers
GWP-06	58 ft	GWP-6-58	7/29/2009	SVOCs	Naphthalene	0.081	mg/L	0.14		
GWP-06	58 ft	GWP-6-58	7/29/2009	SVOCs	Phenol	0.012	mg/L	0.1		
GWP-07	50 ft	GWP-7-50	7/30/2009	VOCs	Benzene	10.1	mg/L	0.005		
GWP-07	50 ft	GWP-7-50	7/30/2009	VOCs	Toluene	17.2	mg/L	1		
GWP-07	50 ft	GWP-7-50	7/30/2009	VOCs	Ethylbenzene	2.98	mg/L	0.7		
GWP-07	50 ft	GWP-7-50	7/30/2009	VOCs	m,p-Xylene	6.13	mg/L			
GWP-07	50 ft	GWP-7-50	7/30/2009	VOCs	o-Xylene	3.16	mg/L			
GWP-07	50 ft	GWP-7-50	7/30/2009	VOCs	Xylenes (total) (Calculated)	9.29	mg/L	10		
GWP-07	50 ft	GWP-7-50	7/30/2009	VOCs	Methylene chloride	0.415	mg/L	0.005	J	
GWP-07	50 ft	GWP-7-50	7/30/2009	VOCs	n-Propylbenzene	0.132	mg/L	0.061	J	
GWP-07	50 ft	GWP-7-50	7/30/2009	VOCs	1,2,4-Trimethylbenzene	0.769	mg/L			
GWP-07	50 ft	GWP-7-50	7/30/2009	VOCs	1,3,5-Trimethylbenzene	0.177	mg/L	0.35	J	
GWP-07	50 ft	GWP-7-50	7/30/2009	SVOCs	2,4-Dimethylphenol	0.01	mg/L	0.14	J	
GWP-07	50 ft	GWP-7-50	7/30/2009	SVOCs	2-Methylnaphthalene	0.04	mg/L	0.028		
GWP-07	50 ft	GWP-7-50	7/30/2009	SVOCs	2-Methylphenol	0.018	mg/L	0.35		
GWP-07	50 ft	GWP-7-50	7/30/2009	SVOCs	3-Methylphenol & 4-Methylphenol	0.042	mg/L	0.01		
GWP-07	50 ft	GWP-7-50	7/30/2009	SVOCs	Naphthalene	0.225	mg/L	0.14	D	
GWP-07	50 ft	GWP-7-50	7/30/2009	SVOCs	Phenol	0.022	mg/L	0.1		
GWP-07	58 ft	GWP-7-58	7/30/2009	VOCs	Benzene	16.3	mg/L	0.005		
GWP-07	58 ft	GWP-7-58	7/30/2009	VOCs	Toluene	12.2	mg/L	1		
GWP-07	58 ft	GWP-7-58	7/30/2009	VOCs	Ethylbenzene	2.34	mg/L	0.7		
GWP-07	58 ft	GWP-7-58	7/30/2009	VOCs	m,p-Xylene	4.96	mg/L			
GWP-07	58 ft	GWP-7-58	7/30/2009	VOCs	o-Xylene	1.93	mg/L			
GWP-07	58 ft	GWP-7-58	7/30/2009	VOCs	Xylenes (total) (Calculated)	6.89	mg/L	10		
GWP-07	58 ft	GWP-7-58	7/30/2009	VOCs	Methylene chloride	0.477	mg/L	0.005	J	
GWP-07	58 ft	GWP-7-58	7/30/2009	VOCs	1,2,4-Trimethylbenzene	0.563	mg/L			
GWP-07	58 ft	GWP-7-58	7/30/2009	VOCs	1,3,5-Trimethylbenzene	0.131	mg/L	0.35	J	
GWP-07	58 ft	GWP-7-58	7/30/2009	SVOCs	Naphthalene	0.002	mg/L	0.14	J	
GWP-08	50 ft	GWP-8-50	7/31/2009	VOCs	Benzene	4.82	mg/L	0.005		
GWP-08	50 ft	GWP-8-50	7/31/2009	VOCs	Toluene	0.257	mg/L	1		
GWP-08	50 ft	GWP-8-50	7/31/2009	VOCs	Ethylbenzene	1.29	mg/L	0.7		
GWP-08	50 ft	GWP-8-50	7/31/2009	VOCs	m,p-Xylene	2.65	mg/L			
GWP-08	50 ft	GWP-8-50	7/31/2009	VOCs	o-Xylene	0.392	mg/L			
GWP-08	50 ft	GWP-8-50	7/31/2009	VOCs	Xylenes (total) (Calculated)	3.042	mg/L	10		
GWP-08	50 ft	GWP-8-50	7/31/2009	VOCs	Isopropylbenzene	0.0855	mg/L	0.66	J	
GWP-08	50 ft	GWP-8-50	7/31/2009	VOCs	n-Propylbenzene	0.138	mg/L	0.061		
GWP-08	50 ft	GWP-8-50	7/31/2009	VOCs	1,2,4-Trimethylbenzene	0.83	mg/L			
GWP-08	50 ft	GWP-8-50	7/31/2009	VOCs	1,3,5-Trimethylbenzene	0.216	mg/L	0.35		
GWP-08	50 ft	GWP-8-50	7/31/2009	SVOCs	Dibenzofuran	0.001	mg/L		J	
GWP-08	50 ft	GWP-8-50	7/31/2009	SVOCs	2,4-Dimethylphenol	0.005	mg/L	0.14	J	
GWP-08	50 ft	GWP-8-50	7/31/2009	SVOCs	Fluorene	0.002	mg/L	0.28	J	
GWP-08	50 ft	GWP-8-50	7/31/2009	SVOCs	2-Methylnaphthalene	0.055	mg/L	0.028		
GWP-08	50 ft	GWP-8-50	7/31/2009	SVOCs	3-Methylphenol & 4-Methylphenol	0.003	mg/L	0.01	J	
GWP-08	50 ft	GWP-8-50	7/31/2009	SVOCs	Naphthalene	0.209	mg/L	0.14	D	
GWP-08	50 ft	GWP-8-50	7/31/2009	SVOCs	Phenanthrene	0.003	mg/L	0.21	J	
GWP-08	50 ft	GWP-8-50	7/31/2009	SVOCs	Phenol	0.013	mg/L	0.1		
GWP-08	58 ft	GWP-8-58	7/31/2009	VOCs	Benzene	0.702	mg/L	0.005		
GWP-08	58 ft	GWP-8-58	7/31/2009	VOCs	Toluene	0.715	mg/L	1		
GWP-08	58 ft	GWP-8-58	7/31/2009	VOCs	Ethylbenzene	0.519	mg/L	0.7		
GWP-08	58 ft	GWP-8-58	7/31/2009	VOCs	m,p-Xylene	1.03	mg/L			
GWP-08	58 ft	GWP-8-58	7/31/2009	VOCs	o-Xylene	0.422	mg/L			
GWP-08	58 ft	GWP-8-58	7/31/2009	VOCs	Xylenes (total) (Calculated)	1.452	mg/L	10		
GWP-08	58 ft	GWP-8-58	7/31/2009	VOCs	Isopropylbenzene	0.0501	mg/L	0.66		
GWP-08	58 ft	GWP-8-58	7/31/2009	VOCs	p-Isopropyltoluene	0.00615	mg/L		J	
GWP-08	58 ft	GWP-8-58	7/31/2009	VOCs	n-Propylbenzene	0.0411	mg/L	0.061		
GWP-08	58 ft	GWP-8-58	7/31/2009	VOCs	Styrene	0.0128	mg/L	0.1	J	
GWP-08	58 ft	GWP-8-58	7/31/2009	VOCs	1,2,4-Trimethylbenzene	0.265	mg/L			
GWP-08	58 ft	GWP-8-58	7/31/2009	VOCs	1,3,5-Trimethylbenzene	0.0687	mg/L	0.35		
GWP-08	58 ft	GWP-8-58	7/31/2009	SVOCs	2,4-Dimethylphenol	0.002	mg/L	0.14	J	
GWP-08	58 ft	GWP-8-58	7/31/2009	SVOCs	Fluorene	0.001	mg/L	0.28	J	
GWP-08	58 ft	GWP-8-58	7/31/2009	SVOCs	2-Methylnaphthalene	0.054	mg/L	0.028		
GWP-08	58 ft	GWP-8-58	7/31/2009	SVOCs	3-Methylphenol & 4-Methylphenol	0.002	mg/L	0.01	J	
GWP-08	58 ft	GWP-8-58	7/31/2009	SVOCs	Naphthalene	0.184	mg/L	0.14	D	
GWP-08	58 ft	GWP-8-58	7/31/2009	SVOCs	Phenanthrene	0.002	mg/L	0.21	J	
GWP-08	58 ft	GWP-8-58	7/31/2009	SVOCs	Phenol	0.002	mg/L	0.1	J	
GWP-09	50 ft	GWP-9-50	8/3/2009	VOCs	Benzene	0.164	mg/L	0.005		
GWP-09	50 ft	GWP-9-50	8/3/2009	VOCs	Toluene	0.00647	mg/L	1		
GWP-09	50 ft	GWP-9-50	8/3/2009	VOCs	Ethylbenzene	0.00378	mg/L	0.7	J	
GWP-09	50 ft	GWP-9-50	8/3/2009	VOCs	m,p-Xylene	0.0178	mg/L			
GWP-09	50 ft	GWP-9-50	8/3/2009	VOCs	o-Xylene	0.00289	mg/L		J	
GWP-09	50 ft	GWP-9-50	8/3/2009	VOCs	Xylenes (total) (Calculated)	0.02069	mg/L	10		
GWP-09	50 ft	GWP-9-50	8/3/2009	VOCs	Acetone	0.0451	mg/L	6.3	J	

See last page of table for notes.

TABLE 2

Groundwater Profiling Summary of Detected Analytes

Location	Depth	Sample ID	Sample Date	Group	Chemical	Result	Units	Screening Criteria	Lab Qualifiers	URS Qualifiers
GWP-09	50 ft	GWP-9-50	8/3/2009	VOCs	n-Butylbenzene	0.00115	mg/L	0.061	J	
GWP-09	50 ft	GWP-9-50	8/3/2009	VOCs	sec-Butylbenzene	0.00116	mg/L	0.061	J	
GWP-09	50 ft	GWP-9-50	8/3/2009	VOCs	Isopropylbenzene	0.00423	mg/L	0.66	J	
GWP-09	50 ft	GWP-9-50	8/3/2009	VOCs	n-Propylbenzene	0.00431	mg/L	0.061	J	
GWP-09	50 ft	GWP-9-50	8/3/2009	VOCs	1,2,4-Trimethylbenzene	0.00144	mg/L		J	
GWP-09	50 ft	GWP-9-50	8/3/2009	VOCs	1,3,5-Trimethylbenzene	0.00191	mg/L	0.35	J	
GWP-09	50 ft	GWP-9-50	8/3/2009	SVOCs	Fluorene	0.001	mg/L	0.28	J	
GWP-09	50 ft	GWP-9-50	8/3/2009	SVOCs	2-Methylnaphthalene	0.003	mg/L	0.028	J	
GWP-09	50 ft	GWP-9-50	8/3/2009	SVOCs	Naphthalene	0.003	mg/L	0.14	J	
GWP-09	50 ft	GWP-9-50	8/3/2009	SVOCs	Phenanthrene	0.004	mg/L	0.21	J	
GWP-09	50 ft	GWP-9-50	8/3/2009	SVOCs	Phenol	0.002	mg/L	0.1	J	
GWP-09	58 ft	GWP-9-58	8/3/2009	VOCs	Benzene	0.00281	mg/L	0.005	J	
GWP-09	58 ft	GWP-9-58	8/3/2009	VOCs	Toluene	0.00104	mg/L	1	J	
GWP-09	58 ft	GWP-9-58	8/3/2009	VOCs	Ethylbenzene	0.0882	mg/L	0.7		
GWP-09	58 ft	GWP-9-58	8/3/2009	VOCs	m,p-Xylene	0.273	mg/L			
GWP-09	58 ft	GWP-9-58	8/3/2009	VOCs	o-Xylene	0.0265	mg/L			
GWP-09	58 ft	GWP-9-58	8/3/2009	VOCs	Xylenes (total) (Calculated)	0.2995	mg/L	10		
GWP-09	58 ft	GWP-9-58	8/3/2009	VOCs	Acetone	0.0656	mg/L	6.3	J	
GWP-09	58 ft	GWP-9-58	8/3/2009	VOCs	n-Butylbenzene	0.00258	mg/L	0.061	J	
GWP-09	58 ft	GWP-9-58	8/3/2009	VOCs	sec-Butylbenzene	0.00154	mg/L	0.061	J	
GWP-09	58 ft	GWP-9-58	8/3/2009	VOCs	Isopropylbenzene	0.0386	mg/L	0.66		
GWP-09	58 ft	GWP-9-58	8/3/2009	VOCs	p-Isopropyltoluene	0.00221	mg/L		J	
GWP-09	58 ft	GWP-9-58	8/3/2009	VOCs	n-Propylbenzene	0.0212	mg/L	0.061		
GWP-09	58 ft	GWP-9-58	8/3/2009	VOCs	1,2,4-Trimethylbenzene	0.0191	mg/L			
GWP-09	58 ft	GWP-9-58	8/3/2009	VOCs	1,3,5-Trimethylbenzene	0.0158	mg/L	0.35		
GWP-09	58 ft	GWP-9-58	8/3/2009	SVOCs	Acenaphthene	0.003	mg/L	0.42	J	
GWP-09	58 ft	GWP-9-58	8/3/2009	SVOCs	Dibenzofuran	0.003	mg/L		J	
GWP-09	58 ft	GWP-9-58	8/3/2009	SVOCs	Fluorene	0.003	mg/L	0.28	J	
GWP-09	58 ft	GWP-9-58	8/3/2009	SVOCs	2-Methylnaphthalene	0.035	mg/L	0.028		
GWP-09	58 ft	GWP-9-58	8/3/2009	SVOCs	Naphthalene	0.072	mg/L	0.14		
GWP-09	58 ft	GWP-9-58	8/3/2009	SVOCs	Phenanthrene	0.006	mg/L	0.21		
GWP-10	50 ft	GWP-10-50	8/3/2009	VOCs	Benzene	0.0213	mg/L	0.005	J	
GWP-10	50 ft	GWP-10-50	8/3/2009	VOCs	Toluene	0.0242	mg/L	1	J	
GWP-10	50 ft	GWP-10-50	8/3/2009	VOCs	Ethylbenzene	1.39	mg/L	0.7	D	
GWP-10	50 ft	GWP-10-50	8/3/2009	VOCs	m,p-Xylene	1.08	mg/L			
GWP-10	50 ft	GWP-10-50	8/3/2009	VOCs	o-Xylene	0.0943	mg/L			
GWP-10	50 ft	GWP-10-50	8/3/2009	VOCs	Xylenes (total) (Calculated)	1.1743	mg/L	10		
GWP-10	50 ft	GWP-10-50	8/3/2009	VOCs	n-Butylbenzene	0.0144	mg/L	0.061	J	
GWP-10	50 ft	GWP-10-50	8/3/2009	VOCs	sec-Butylbenzene	0.00565	mg/L	0.061	J	
GWP-10	50 ft	GWP-10-50	8/3/2009	VOCs	Chlorobenzene	0.00502	mg/L	0.1	J	
GWP-10	50 ft	GWP-10-50	8/3/2009	VOCs	Isopropylbenzene	0.0665	mg/L	0.66		
GWP-10	50 ft	GWP-10-50	8/3/2009	VOCs	p-Isopropyltoluene	0.00701	mg/L		J	
GWP-10	50 ft	GWP-10-50	8/3/2009	VOCs	n-Propylbenzene	0.068	mg/L	0.061		
GWP-10	50 ft	GWP-10-50	8/3/2009	VOCs	1,2,4-Trimethylbenzene	0.406	mg/L			
GWP-10	50 ft	GWP-10-50	8/3/2009	VOCs	1,3,5-Trimethylbenzene	0.0885	mg/L	0.35		
GWP-10	50 ft	GWP-10-50	8/3/2009	SVOCs	2,4-Dimethylphenol	0.009	mg/L	0.14	J	
GWP-10	50 ft	GWP-10-50	8/3/2009	SVOCs	2-Methylnaphthalene	0.025	mg/L	0.028		
GWP-10	50 ft	GWP-10-50	8/3/2009	SVOCs	Naphthalene	0.075	mg/L	0.14		
GWP-10	58 ft	GWP-10-58	8/3/2009	VOCs	Benzene	0.0137	mg/L	0.005	J	
GWP-10	58 ft	GWP-10-58	8/3/2009	VOCs	Toluene	0.482	mg/L	1		
GWP-10	58 ft	GWP-10-58	8/3/2009	VOCs	Ethylbenzene	2.88	mg/L	0.7	D	
GWP-10	58 ft	GWP-10-58	8/3/2009	VOCs	m,p-Xylene	3.55	mg/L			
GWP-10	58 ft	GWP-10-58	8/3/2009	VOCs	o-Xylene	1.12	mg/L			
GWP-10	58 ft	GWP-10-58	8/3/2009	VOCs	Xylenes (total) (Calculated)	4.67	mg/L	10		
GWP-10	58 ft	GWP-10-58	8/3/2009	VOCs	sec-Butylbenzene	0.356	mg/L	0.061		
GWP-10	58 ft	GWP-10-58	8/3/2009	VOCs	Isopropylbenzene	0.0578	mg/L	0.66		
GWP-10	58 ft	GWP-10-58	8/3/2009	VOCs	n-Propylbenzene	0.067	mg/L	0.061		
GWP-10	58 ft	GWP-10-58	8/3/2009	VOCs	1,2,4-Trimethylbenzene	0.429	mg/L			
GWP-10	58 ft	GWP-10-58	8/3/2009	VOCs	1,3,5-Trimethylbenzene	0.113	mg/L	0.35		
GWP-10	58 ft	GWP-10-58	8/3/2009	SVOCs	Diethyl phthalate	0.001	mg/L	5.6	J	
GWP-10	58 ft	GWP-10-58	8/3/2009	SVOCs	2,4-Dimethylphenol	0.005	mg/L	0.14	J	
GWP-10	58 ft	GWP-10-58	8/3/2009	SVOCs	2-Methylnaphthalene	0.027	mg/L	0.028		
GWP-10	58 ft	GWP-10-58	8/3/2009	SVOCs	3-Methylphenol & 4-Methylphenol	0.002	mg/L	0.01	J	
GWP-10	58 ft	GWP-10-58	8/3/2009	SVOCs	Naphthalene	0.146	mg/L	0.14	D	
GWP-12	50 ft	GWP-12-50	8/4/2009	VOCs	Benzene	0.0221	mg/L	0.005		
GWP-12	50 ft	GWP-12-50	8/4/2009	VOCs	Acetone	0.0458	mg/L	6.3	J	
GWP-12	50 ft	GWP-12-50	8/4/2009	VOCs	2-Butanone	0.0131	mg/L		J	
GWP-12	58 ft	GWP-12-58	8/4/2009	VOCs	Methylene chloride	0.00376	mg/L	0.005	J	
GWP-13	50 ft	GWP-13-50	8/5/2009	VOCs	Benzene	0.0854	mg/L	0.005		
GWP-13	50 ft	GWP-13-50	8/5/2009	VOCs	Toluene	0.124	mg/L	1		
GWP-13	50 ft	GWP-13-50	8/5/2009	VOCs	Ethylbenzene	0.0798	mg/L	0.7		
GWP-13	50 ft	GWP-13-50	8/5/2009	VOCs	m,p-Xylene	0.0923	mg/L			

See last page of table for notes.

TABLE 2

Groundwater Profiling Summary of Detected Analytes

Location	Depth	Sample ID	Sample Date	Group	Chemical	Result	Units	Screening Criteria	Lab Qualifiers	URS Qualifiers
GWP-13	50 ft	GWP-13-50	8/5/2009	VOCs	o-Xylene	0.036	mg/L			
GWP-13	50 ft	GWP-13-50	8/5/2009	VOCs	Xylenes (total) (Calculated)	0.1283	mg/L	10		
GWP-13	50 ft	GWP-13-50	8/5/2009	VOCs	n-Butylbenzene	0.00196	mg/L	0.061	J	
GWP-13	50 ft	GWP-13-50	8/5/2009	VOCs	sec-Butylbenzene	0.00114	mg/L	0.061	J	
GWP-13	50 ft	GWP-13-50	8/5/2009	VOCs	Isopropylbenzene	0.00426	mg/L	0.66	J	
GWP-13	50 ft	GWP-13-50	8/5/2009	VOCs	n-Propylbenzene	0.00932	mg/L	0.061		
GWP-13	50 ft	GWP-13-50	8/5/2009	VOCs	1,2,4-Trimethylbenzene	0.00462	mg/L		J	
GWP-13	50 ft	GWP-13-50	8/5/2009	VOCs	1,3,5-Trimethylbenzene	0.00343	mg/L	0.35	J	
GWP-13	58 ft	GWP-13-58	8/5/2009	VOCs	Toluene	0.33	mg/L	1		
GWP-13	58 ft	GWP-13-58	8/5/2009	VOCs	Ethylbenzene	2.04	mg/L	0.7	D	
GWP-13	58 ft	GWP-13-58	8/5/2009	VOCs	m,p-Xylene	4.19	mg/L		D	
GWP-13	58 ft	GWP-13-58	8/5/2009	VOCs	o-Xylene	1.81	mg/L		D	
GWP-13	58 ft	GWP-13-58	8/5/2009	VOCs	Xylenes (total) (Calculated)	6	mg/L	10		
GWP-13	58 ft	GWP-13-58	8/5/2009	VOCs	n-Butylbenzene	0.0171	mg/L	0.061		
GWP-13	58 ft	GWP-13-58	8/5/2009	VOCs	sec-Butylbenzene	0.00581	mg/L	0.061	J	
GWP-13	58 ft	GWP-13-58	8/5/2009	VOCs	Isopropylbenzene	0.0688	mg/L	0.66		
GWP-13	58 ft	GWP-13-58	8/5/2009	VOCs	p-Isopropyltoluene	0.00516	mg/L		J	
GWP-13	58 ft	GWP-13-58	8/5/2009	VOCs	n-Propylbenzene	0.116	mg/L	0.061		
GWP-13	58 ft	GWP-13-58	8/5/2009	VOCs	tert-Butylbenzene	0.00622	mg/L	0.061	J	
GWP-13	58 ft	GWP-13-58	8/5/2009	VOCs	1,2,4-Trimethylbenzene	0.737	mg/L		D	
GWP-13	58 ft	GWP-13-58	8/5/2009	VOCs	1,3,5-Trimethylbenzene	0.168	mg/L	0.35		
GWP-13	58 ft	GWP-13-58	8/5/2009	SVOCs	2,4-Dimethylphenol	0.005	mg/L	0.14	J	
GWP-13	58 ft	GWP-13-58	8/5/2009	SVOCs	2-Methylnaphthalene	0.052	mg/L	0.028		
GWP-13	58 ft	GWP-13-58	8/5/2009	SVOCs	Naphthalene	0.236	mg/L	0.14	D	
GWP-14	50 ft	GWP-14-50	8/5/2009	VOCs	Methylene chloride	0.00317	mg/L	0.005	J	
GWP-14	50 ft	GWP-14-58	8/5/2009	VOCs	Methylene chloride	0.00349	mg/L	0.005	J	
GWP-20	58 ft	GWP-20-58	8/12/2009	VOCs	Methyl tert-Butyl Ether	0.00237	mg/L	0.07	J	

Notes:

1.) Xylenes (total) (Calculated) indicates total xylenes were calculated (or summed) for o-xylene, & m,p-xylene with NDs at half their reporting limit.

2.) Data have not yet been validated.

3.) Screening Criteria- Illinois Class I Groundwater Quality Standards, "Chemicals not in TACO Tier 1 Tables" and USEPA Regional Screening Level table.

File: P:\ENVIRONMENTAL\SHELL OIL PRODUCT US\B-ROXANA-ROUTE 111\21562175-DISSOLVED PHASE INVESTIGATION\E-DRAWINGS\PROPOSED MONITORING WELL LOCATIONS.DWG Last edited: SEP. 10, 09 @ 1:33 p.m. by: david_deguire

LEGEND

- PROPOSED GROUNDWATER MONITORING WELL LOCATION
- GROUNDWATER PROFILING LOCATION WITH EXCEEDANCE OF SCREENING CRITERIA.
- GROUNDWATER PROFILING LOCATION WITHOUT EXCEEDANCE OF SCREENING CRITERIA.

NOTES:

1. GRAYSCALE LOCATIONS REPRESENT PREVIOUS SAMPLE LOCATIONS OR EXISTING WELLS.
2. LOCATIONS MAY BE ADJUSTED BASED ON ACCESSIBILITY.

TYDEMAN AVE
FIRST ST
SECOND ST
THIRD ST
FOURTH ST
FIFTH ST
SIXTH ST
SEVENTH ST
EIGHTH ST
RAND AVENUE
(S. CENTRAL AVE) HIGHWAY 111
CHAFFER ST
TERTIARY PROFILING TRANSECT
SECONDARY PROFILING TRANSECT
PRIMARY PROFILING TRANSECT
VILLAGE OF ROXANA
NORTH PROPERTY
WOOD RIVER REFINERY
BP
BP
1986 APPROXIMATE BENZENE RELEASE SITE

GWP-16 GWP-11 GWP-1 GWP-2
GWP-12 GWP-17 GWP-3
GWP-4
GWP-18 GWP-13 GWP-5
GWP-6
GWP-14 GWP-19 GWP-7
GWP-8
GWP-20 GWP-15 GWP-9
GWP-10
GWP-21

T-13 T-1 P-55 P-60-11 P-60-10 P-60 P-60-09 P-60-12 P-60-12S P-60-08 P-68 T-24 A-28 A-33 P-54 T-12 P-69 P-62 A-27 P-70 P-74 P-61 P-59 P-56 MW-2 (B-2) MW-1 (B-1) T-6 P-93-09 P-57 P-73 P-93B P-93C P-93D P-93A MW-3 (B-3) MW-4 (B-4) B-7 MW-5 (B-5) P-93-05 P-93-06 P-93-03 B-8 P-93-02 P-58 COP B-1 P-93-11 COP B-3 COP B-5 P-66 MW-6 (B-6)

N

Ø 200

SCALE FEET

REFERENCE:
SOPUS, WRB REFINING LLC 2008; RCRA PART B POST CLOSURE PERMIT APPLICATION; DATED JUNE 2008; PREPARED BY URS.

SHELL OIL PRODUCTS U.S DISSOLVED PHASE GROUNDWATER INVESTIGATION AND P-60 FREE PHASE PRODUCT DELINEATION ROXANA, ILLINOIS	PROJECT NO. 21562175
URS	
DRN. BY:dab 9/09/09 DSGN. BY:tja CHKD. BY:	Proposed Monitoring Well Locations
	FIG. NO. 1