



August 9, 2013

W. Russell Kestle, Jr. PG
Remedial Project Manager
Superfund Division, Region 4
U. S. Environmental Protection Agency
61 Forsyth Street SW
Atlanta GA 30303-8909

VIA EMAIL

Subject: **July 2013 Monthly Progress Report**

Dear Mr. Kestle:

On behalf of Beazer East, Inc. (Beazer), attached is the July 2013 Monthly Progress Report for the Cabot/Koppers Superfund Site in Gainesville, Florida. If you have any questions or comments, please contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Gregory W. Council'.

Gregory W. Council, P.E.
Principal Engineer

cc: Scott Miller, EPA
Kelsey Helton, FDEP
John Mousa, ACEPD
Rick Hutton, GRU
Carrie McCoy, Black & Veatch
John Herbert, GeoHydro Consultants
Patricia Cline, Community Technical Advisor
Linda Paul, Koppers, Inc.
Mitchell Brouman, TRMI
Mike Slenska, TRMI
Donna Kopach, TRMI
Jim Erickson, Tetra Tech
Kim O'Day, Tetra Tech

**July 2013
MONTHLY PROGRESS REPORT
Cabot/Koppers Superfund Site
Gainesville, Florida**

1. Compliance Actions:

- Beazer's Operation and Maintenance (O&M) Contractor performed routine treatment plant O&M services for the groundwater extraction and pretreatment system.
- Remedial Design and Remedial Action (RD/RA) activities are presently being planned and scheduled.

2. Sampling/Test Results and Data:

- Instantaneous flow rates and totalizer volumes were measured in each extraction well.
- The bi-weekly passive NAPL recovery program continues at Upper Hawthorn monitoring wells: 3.35 gallons of NAPL were removed from Upper Hawthorn wells during the past month (3 recovery events). A total of 545.21 gallons have been bailed or pumped since the start of the NAPL recovery program on June 19, 2004. The attached table provides details of the NAPL recovery volumes by well and date.
- In addition, NAPL was removed from 11 temporary injection points installed in the Former Process Area as part of the In-Situ Geochemical Stabilization (ISGS) program. This is a pilot demonstration for full scale design. Two NAPL recovery events were conducted during the month, resulting in 118.8 gallons removed.
- In addition, NAPL was removed from six newly-installed recovery wells installed in the Former Process Area as part of the In-Situ Geochemical Stabilization (ISGS) program (one in the surficial aquifer and five in the Upper Hawthorn). One NAPL recovery event was conducted during the month, resulting in 64.9 gallons removed.
- A total of 4,007,432 gallons of groundwater were recovered by the Surficial Aquifer drains and extraction well system during the past month (system run time of 743.2 hours). The average recovery rate for the month was approximately 89.9 gallons per minute (gpm). The recovery for each component is listed below.
 - Surficial Aquifer
 - Perimeter Extraction Wells: 580,499 gallons
 - Former North Lagoon Drain: 312,270 gallons
 - Former Drip Track Drain: 526,530 gallons
 - Former Process Area Drain: 514,050 gallons
 - Former South Lagoon Drain: 471,430 gallons
 - Upper Floridan Extraction Wells
 - FW-6: 25,721 gallons
 - FW-21B: 119,945 gallons
 - FW-31BE: 954,580 gallons
 - FW-32BE: 502,407 gallons

Approximately 324 million gallons have been recovered from the Surficial Aquifer extraction wells and four drains since the start of the Surficial Aquifer containment system in January 1995.

For the month, the total volume of water treated and discharged to the GRU wastewater system was 2,217,000 gallons. The remaining portion of the water, from Upper Floridan Aquifer wells, was treated and used for irrigation.

The Former South Lagoon and Former Process Area groundwater drain pumps were turned off for approximately 7 hours to pump and clean clarifiers and to treat backwash water. All drain pumps are set at the lowest possible positions in sumps.

3. Plans, Reports, Deliverables and Procedures Completed:

- Periodic maintenance checks and inspections.
- Treatment-plant component maintenance and repair as needed.
- Irrigation-system carbon breakthrough sample collection for VOCs and SVOCs.
- Storm water sampling was performed July 1-2, 2013.
- Treatment system influent/effluent sampling was performed July 2nd and 23rd, 2013.
- Repaired filter press diaphragm pump.
- Repaired flow meter at EW-16
- On-property irrigation using treated groundwater from FW-6, FW-21B, FW-31BE, and FW-32BE.
- Off-property soil sampling was conducted on July 30-31, 2013.

4. Upcoming Actions:

- NAPL collection at Upper Hawthorn monitoring wells: bi-weekly.
- NAPL collection at temporary Upper Hawthorn ISGS injection points: bi-weekly.
- Third quarter groundwater sampling event is planned for August 5-17, 2013.
- An Institutional Control Implementation and Assessment Plan will be submitted by August 23, 2013.
- A Remedial Design Work Plan will be submitted by September 22, 2013.
- Routine inspection, operation, maintenance, and monitoring.
- Coordination with EPA for access agreements at nearby properties in need of surveying or soil sampling.

5. Schedule Status:

- Remedial design and remedial action planning activities are underway. A schedule is being developed as part of the Remedial Design Work Plan.
- No delays were encountered during the reporting period.

6. Plan/Schedule Modifications:

- None this reporting period.

7. Community Involvement:

- Future community involvement activities will be coordinated with EPA.

Hawthorn Group Passive NAPL Recovery (Page 1 of 5)

Well Date	HG-9S		HG-10S		HG-10D		HG-11S		HG-12S		HG-12D		HG-15S		HG-16S		HG-16D		FW-6		Total Vol. removed (gal)
	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	
6/19/2004	0.25		2.42		0.17		2.74		1.04		1.13		NM		1.08		NM		NM		-
7/7/2004	0.4		3.25		Stain		2.44		Stain		Stain		ND		0.75		ND		ND		-
7/20/2004	NM	0.1	3.24	0.8	ND	0	3.08	0.8	1.74	0.2	NM	Trace	NM	NM	1.74	0.1	NM	NM	NM	NM	2
8/3/2004	ND	0	3.29	0.3	ND	0	2.78	0.3	2.39	Trace	ND	0	ND	0	1.38	0.65	ND	0	ND	0	1.25
8/10/2004	ND	Trace	1.2	0.3	ND	0	2.69	0.4	2.25	0.5	NM	0	ND	0	0.5	0.2	ND	0	ND	0	1.4
8/17/2004	NM	0	3.03	0.7	NM	0	3.16	0.8	2.37	0.6	NM	0	ND	0	1.4	0.6	ND	0	ND	0	2.7
8/24/2004	NM	0	3.01	0.6	NM	Trace	1.27	0.4	0.39	0.3	NM	Trace	ND	0	1.24	0.3	ND	0	ND	0	1.6
8/31/2004	ND	0	2.87	0.2	ND	0	1.36	0.1	1.32	0.1	ND	0	ND	0	NM	0.1	ND	0	ND	0	0.5
9/8/2004	NM	0	2.09	0.6	NM	0	2.03	0.5	1.38	0.5	NM	0	ND	0	NM	0	ND	0	ND	0	1.6
9/14/2004	ND	0	3.21	0.5	NM	0	0.61	0.1	2.49	0.4	MN	0	1.94	0.3	1.9	0.3	ND	0	ND	0	1.6
9/21/2004	NM	0	2.76	0.6	NM	0	0.5	0.1	0.68	0.1	ND	0	NM	0	2.24	0.1	ND	0	ND	0	0.9
9/28/2004	ND	0	2.64	0.5	ND	0	1.88	0.2	1.15	0.2	NM	0	0.82	0.1	NM	0	ND	0	ND	0	1
10/5/2004	ND	0	4.85	0.8	Stain	0	1.3	0.25	1.6	0.3	ND	0	0.37	0.06	2.09	0.3	ND	0	ND	0	1.71
10/12/2004	ND	0	3.46	0.4	ND	0	3.12	0.4	1.88	0.3	ND	0	1.97	0.1	Stain	0.1	ND	0	ND	0	1.3
10/20/2004	ND	0	2.33	0.4	ND	0	2.58	0.4	1.27	0.2	ND	0	1.4	0.2	Stain	0.1	ND	0	ND	0	1.3
10/26/2004	ND	0	3.65	0.6	ND	0	3.94	0.6	1.89	0.3	ND	0	2.37	0.4	3.48	0.6	ND	0	ND	0	2.5
11/2/2004	ND	0	2.8	0.5	ND	0	3	0.5	2.4	0.4	ND	0	1.07	0.2	2.15	0.3	ND	0	ND	0	1.9
11/9/2004	ND	0	2.74	0.5	ND	0	2.16	0.4	2.51	0.4	ND	0	1.69	0.3	1.26	0.2	ND	0	ND	0	1.8
11/16/2004	ND	0	2.57	0.4	ND	0	2.38	0.4	1.37	0.2	ND	0	0.5	0.1	1.11	0.2	ND	0	ND	0	1.3
11/23/2004	Stain	0	3.16	0.5	Slit. Stain	0	3.23	0.5	1.86	0.3	ND	0	1.4	0.2	1.85	0.3	ND	0	ND	0	1.8
11/30/2004	ND	0	2.21	0.4	ND	0	3.77	0.6	2.2	0.4	ND	0	1.74	0.3	2.35	0.4	ND	0	ND	0	2.1
12/8/2004	ND	0	3.08	0.5	ND	0	3.24	0.5	1.8	0.3	ND	0	1.23	0.2	1.84	0.3	ND	0	ND	0	1.8
12/14/2004	ND	0	3.34	0.5	ND	0	3.92	0.6	2.16	0.3	ND	0	1.48	0.2	2.33	0.4	ND	0	ND	0	2
1/5/2005	ND	0	3.57	0.6	ND	0	5.51	0.9	2.8	0.4	ND	0	2.37	0.4	3.59	0.6	ND	0	ND	0	2.9
1/11/2005	ND	0	2.68	0.4	ND	0	3.41	0.6	1.82	0.3	ND	0	1.77	0.3	1.89	0.3	ND	0	ND	0	1.9
1/20/2005	ND	0	2.82	0.5	ND	0	3.03	0.5	1.63	0.3	ND	0	1.46	0.2	1.62	0.2	ND	0	ND	0	1.7
1/27/2005	ND	0	3.14	0.5	ND	0	3.73	0.6	2.04	0.3	ND	0	1.9	0.3	2.12	0.4	ND	0	ND	0	2.1
2/8/2005	ND	0	3.44	0.5	ND	0	4.77	0.8	2.57	0.4	ND	0	2.35	0.4	3.42	0.6	ND	0	ND	0	2.7
2/15/2005	ND	0	3.5	0.6	ND	0	5.38	0.9	2.85	0.5	ND	0	2.56	0.4	3.21	0.5	ND	0	ND	0	2.9
2/22/2005	ND	0	2.67	0.4	ND	0	3.69	0.6	2.05	0.3	ND	0	1.8	0.3	1.49	0.2	ND	0	ND	0	1.8
3/1/2005	ND	0	3.12	0.5	ND	0	4.43	0.7	2.45	0.4	ND	0	2.16	0.3	2.69	0.4	ND	0	ND	0	2.3
3/11/2005	ND	0	2.67	0.4	ND	0	3.48	0.6	1.9	0.3	ND	0	1.5	0.2	1.95	0.3	ND	0	ND	0	1.8
3/15/2005	ND	0	2.6	0.4	ND	0	3.57	0.6	1.87	0.3	ND	0	1.39	0.2	1.82	0.3	ND	0	ND	0	1.8
3/22/2005	ND	0	2.26	0.4	ND	0	3.5	0.6	2.06	0.3	ND	0	2.05	0.3	1.29	0.2	ND	0	ND	0	1.8
3/29/2005	ND	0	2	0.3	ND	0	2.38	0.4	2.1	0.3	ND	0	2.33	0.4	2.91	0.5	ND	0	ND	0	1.9
4/6/2005	ND	0	2.61	0.4	ND	0	2.74	0.4	1.4	0.2	ND	0	1.92	0.3	1.38	0.2	ND	0	ND	0	1.5
4/14/2005	ND	0	3.24	0.5	ND	0	3.29	0.5	1.37	0.2	ND	0	1.92	0.3	1.33	0.2	ND	0	ND	0	1.7
4/19/2005	ND	0	2.64	0.4	ND	0	3.34	0.5	1.75	0.3	ND	0	1.66	0.3	1.84	0.3	ND	0	ND	0	1.8
4/27/2005	ND	0	1.76	0.3	ND	0	1.98	0.3	1.59	0.3	ND	0	2.13	0.4	1.42	0.2	ND	0	ND	0	1.5
5/3/2005	ND	0	2.3	0.4	ND	0	2.77	0.4	1.32	0.2	ND	0	1.69	0.3	1.04	0.2	ND	0	ND	0	1.5
5/12/2005	ND	0	2.61	0.4	ND	0	3.22	0.5	1.86	0.3	ND	0	1.71	0.3	1.85	0.3	ND	0	ND	0	1.8
5/17/2005	ND	0	2.3	0.4	ND	0	2.75	0.4	1.61	0.3	ND	0	0.83	0.1	1.63	0.3	ND	0	ND	0	1.5
5/24/2005	ND	0	2.15	0.4	ND	0	1.58	0.3	2.33	0.4	ND	0	1.34	0.2	1.89	0.3	ND	0	ND	0	1.6
6/1/2005	ND	0	2.62	0.4	ND	0	2.36	0.4	1.04	0.2	ND	0	1.91	0.3	1.02	0.2	ND	0	ND	0	1.5
6/9/2005	ND	0	1.6	0.3	ND	0	1.97	0.3	1.11	0.2	ND	0	1.31	0.2	1.43	0.2	ND	0	ND	0	1.2
6/15/2005	ND	0	1.3	0.2	ND	0	1.57	0.3	1.17	0.2	ND	0	1.54	0.2	1.42	0.2	ND	0	ND	0	1.1
6/22/2005	ND	0	1.81	0.3	ND	0	1.62	0.3	1.65	0.3	ND	0	1.64	0.3	1.6	0.3	ND	0	ND	0	1.5
6/28/2005	ND	0	3.01	0.5	ND	0	3.21	0.5	1.12	0.2	ND	0	1.93	0.3	1.33	0.2	ND	0	ND	0	1.7
7/7/2005	ND	0	3.06	0.5	ND	0	0.87	0.1	2	0.3	ND	0	1.73	0.3	1.63	0.3	ND	0	ND	0	1.5
7/13/2005	ND	0	2.37	0.4	ND	0	1.98	0.3	1.2	0.2	ND	0	0.79	0.1	1.3	0.2	ND	0	ND	0	1.2
7/19/2005	ND	0	2.12	0.3	ND	0	1.71	0.3	1.02	0.2	ND	0	0.64	0.1	1.02	0.2	ND	0	ND	0	1.1
7/26/2005	ND	0	1.43	0.2	ND	0	0.87	0.1	0.76	0.1	ND	0	1.84	0.3	1.23	0.2	ND	0	ND	0	0.9
8/2/2005	ND	0	1.37	0.2	ND	0	0.76	0.1	0.62	0.1	ND	0	1.85	0.3	1.2	0.2	ND	0	ND	0	0.9
8/9/2005	ND	0	1.52	0.2	ND	0	0.65	0.1	0.98	0.2	ND	0	1.9	0.3	1.59	0.3	ND	0	ND	0	1.1
8/16/2005	ND	0	1.55	0.2	ND	0	0.62	0.1	0.86	0.1	ND	0	2.04	0.3	1.46	0.2	ND	0	ND	0	0.9
8/23/2005	ND	0	1.57	0.3	ND	0	0.83	0.1	1.06	0.2	ND	0	2.14	0.4	1.68	0.3	ND	0	ND	0	1.3
8/30/2005	ND	0	1.71	0.3	ND	0	1.17	0.2	1.11	0.2	ND	0	1.83	0.3	1.93	0.3	ND	0	ND	0	1.3
9/7/2005	ND	0	1.57	0.3	ND	0	1.1	0.2	1.03	0.2	ND	0	1.85	0.3	1.94	0.3	ND	0	ND	0	1.3
9/13/2005	ND	0	1.2	0.2	ND	0	1.02	0.2	0.76	0.1	ND	0	1.64	0.3	1.67	0.3	ND	0	ND	0	1.1
9/20/2005	ND	0	1.05	0.2	ND	0	0.96	0.2	0.61	0.1	ND	0	1.49	0.2	1.63	0.3	ND	0	ND	0	1
9/27/2005	ND	0	0.92	0.1	ND	0	1.17	0.2	1.22	0.2	ND	0	1.34	0.2	1.23	0.2	ND	0	ND	0	0.9

Hawthorn Group Passive NAPL Recovery (Page 2 of 5)

Well Date	HG-9S		HG-10S		HG-10D		HG-11S		HG-12S		HG-12D		HG-15S		HG-16S		HG-16D		FW-6		Total Vol. removed (gal)
	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	
10/4/2005	ND	0	0.97	0.2	ND	0	1.06	0.2	1.16	0.2	ND	0	1.24	0.2	1.14	0.2	ND	0	ND	0	1
10/11/2005	ND	0	1.17	0.2	ND	0	0.99	0.2	1.06	0.2	ND	0	1.14	0.2	1.22	0.2	ND	0	ND	0	1
10/25/2005	ND	0	1.21	0.2	ND	0	1.17	0.2	1.1	0.2	ND	0	1.32	0.2	1.34	0.2	ND	0	ND	0	1
11/8/2005	ND	0	1.4	0.2	ND	0	1.24	0.2	1.22	0.2	ND	0	1.34	0.2	1.37	0.2	ND	0	ND	0	1
11/30/2005	ND	0	1.42	0.2	ND	0	1.28	0.2	1.17	0.2	ND	0	1.4	0.2	1.45	0.2	ND	0	ND	0	1
12/14/2005	ND	0	1.43	0.2	ND	0	1.33	0.2	2.95	0.5	ND	0	1.53	0.2	1.39	0.2	ND	0	ND	0	1.3
1/3/2006	ND	0	1.59	0.3	ND	0	1.57	0.3	3.15	0.5	ND	0	1.7	0.3	1.5	0.2	ND	0	ND	0	1.6
1/19/2006	ND	0	3.76	0.6	stain	0	3.25	0.5	3.98	0.6	ND	0	3.01	0.5	2.85	0.5	ND	0	ND	0	2.7
2/10/2006	ND	0	3.01	0.5	ND	0	2.68	0.4	3.65	0.6	ND	0	2.8	0.5	2.59	0.4	ND	0	ND	0	2.4
2/23/2006	ND	0	3.08	0.5	ND	0	2.73	0.4	3.2	0.5	ND	0	2.84	0.5	2.68	0.4	ND	0	ND	0	2.3
3/7/2006	ND	0	2.61	0.4	ND	0	2.68	0.4	3.46	0.6	ND	0	2.02	0.3	2.49	0.4	ND	0	ND	0	2.1
3/21/2006	ND	0	2.46	0.4	ND	0	2.55	0.4	3.35	0.5	ND	0	1.74	0.3	2.22	0.4	ND	0	ND	0	2
4/4/2006	ND	0	2.26	0.4	ND	0	1.67	0.3	1.87	0.3	ND	0	2.3	0.4	2.23	0.4	ND	0	ND	0	1.8
4/18/2006	ND	0	2.15	0.4	ND	0	2.38	0.4	2.74	0.4	ND	0	2.34	0.4	2.48	0.4	ND	0	ND	0	2
5/3/2006	ND	0	2.01	0.3	ND	0	2.46	0.4	2.5	0.4	ND	0	2.34	0.4	2.99	0.5	ND	0	ND	0	2
5/17/2006	ND	0	5.64	0.9	ND	0	5.64	0.9	6	1	ND	0	6.74	1.1	5.82	0.9	ND	0	ND	0	4.8
5/30/2006	ND	0	3.12	0.5	ND	0	2.75	0.4	3.06	0.5	ND	0	2.43	0.4	2.45	0.4	ND	0	ND	0	2.2
6/15/2006	ND	0	3.27	0.5	ND	0	2.87	0.5	3.12	0.5	ND	0	2.58	0.4	2.59	0.4	ND	0	ND	0	2.3
6/27/2006	ND	0	2.8	0.5	ND	0	1.87	0.3	2.55	0.4	ND	0	2.34	0.4	1.99	0.3	ND	0	ND	0	1.9
7/13/2006	ND	0	2.96	0.5	ND	0	2.08	0.3	2.67	0.4	ND	0	2.5	0.4	2.23	0.4	ND	0	ND	0	2
7/25/2006	ND	0	3.07	0.5	ND	0	1.98	0.3	2.73	0.4	ND	0	2.6	0.4	2	0.3	ND	0	ND	0	1.9
8/8/2006	ND	0	2.26	0.4	ND	0	1.98	0.3	2.31	0.4	ND	0	2.01	0.3	2.05	0.3	ND	0	ND	0	1.7
8/22/2006	ND	0	2.11	0.3	ND	0	2.18	0.4	2.36	0.4	ND	0	2.28	0.4	2.31	0.4	ND	0	ND	0	1.9
9/5/2006	ND	0	2.26	0.4	ND	0	2.14	0.3	2.56	0.4	ND	0	2.46	0.4	2.43	0.4	ND	0	ND	0	1.9
9/19/2006	ND	0	2.47	0.4	ND	0	2.28	0.4	2.62	0.4	ND	0	2.66	0.4	2.49	0.4	ND	0	ND	0	2
10/3/2006	ND	0	2.51	0.4	ND	0	2.31	0.4	2.59	0.4	ND	0	2.7	0.4	2.62	0.4	ND	0	ND	0	2
10/17/2006	ND	0	2.56	0.4	ND	0	2.33	0.4	2.62	0.4	ND	0	2.71	0.4	2.54	0.4	ND	0	ND	0	2
10/31/2006	ND	0	2.41	0.4	ND	0	2.24	0.4	2.56	0.4	ND	0	2.64	0.4	2.49	0.4	ND	0	ND	0	2
11/14/2006	ND	0	2.57	0.4	ND	0	2.29	0.4	2.67	0.4	ND	0	2.7	0.4	2.54	0.4	ND	0	ND	0	2
11/28/2006	ND	0	1.92	0.3	ND	0	2.19	0.4	2.12	0.4	ND	0	2.52	0.4	2.23	0.4	ND	0	ND	0	1.9
12/12/2006	ND	0	1.97	0.3	ND	0	2.24	0.4	2.16	0.4	ND	0	2.54	0.4	2.26	0.4	ND	0	ND	0	1.9
12/27/2006	ND	0	2.1	0.3	ND	0	2.38	0.4	2.22	0.4	ND	0	2.6	0.4	2.24	0.4	ND	0	ND	0	1.9
1/10/2007	ND	0	2.31	0.4	ND	0	2.64	0.4	2.36	0.4	ND	0	2.75	0.4	2.34	0.4	ND	0	ND	0	2
1/23/2007	ND	0	2.37	0.4	ND	0	2.79	0.4	2.42	0.4	ND	0	2.71	0.4	2.4	0.4	ND	0	ND	0	2
2/6/2007	ND	0	2.42	0.4	ND	0	2.74	0.4	2.46	0.4	ND	0	2.65	0.4	2.46	0.4	ND	0	ND	0	2
2/20/2007	ND	0	2.48	0.4	ND	0	2.67	0.4	2.47	0.4	ND	0	2.56	0.4	2.49	0.4	ND	0	ND	0	2
3/6/2007	ND	0	2.52	0.4	ND	0	2.61	0.4	2.45	0.4	ND	0	2.65	0.4	2.54	0.4	ND	0	ND	0	2
3/20/2007	ND	0	2.31	0.4	ND	0	2.6	0.4	2.45	0.4	ND	0	2.53	0.4	2.47	0.4	ND	0	ND	0	2
4/3/2007	ND	0	2.42	0.4	ND	0	2.55	0.4	2.5	0.4	ND	0	2.5	0.4	2.49	0.4	ND	0	ND	0	2
4/17/2007	ND	0	2.52	0.4	ND	0	2.61	0.4	2.45	0.4	ND	0	2.56	0.4	2.43	0.4	ND	0	ND	0	2
5/9/2007	ND	0	3.51	0.6	ND	0	4.14	0.7	3.65	0.6	ND	0	3.64	0.6	3.92	0.6	ND	0	ND	0	3.1
5/31/2007	ND	0	2.11	0.3	ND	0	3.63	0.6	3.2	0.5	ND	0	2.83	0.5	2.47	0.4	ND	0	ND	0	2.3
6/12/2007	ND	0	1.97	0.3	ND	0	2.77	0.4	2.62	0.4	ND	0	2.3	0.4	2.03	0.3	ND	0	ND	0	1.8
6/26/2007	stain	0	2.07	0.3	stain	0	3.63	0.6	4.05	0.7	ND	0	2.8	0.4	2.49	0.4	ND	0	ND	0	2.4
7/10/2007	Trace	0	1.81	0.5	ND	0	11.64	1	7.04	1.25	ND	0	8.87	1.25	4.73	0.5	ND	0	ND	0	4.5
7/26/2007	stain	0	1.95	0.25	stain	0	12.45	2.75	7.45	1	ND	0	7.58	0.6	3.98	0.25	ND	0	ND	0	4.85
8/8/2007	stain	0	1.13	0.25	stain	0	12.38	2.5	7.05	1	ND	0	10.14	0.75	3.68	0.25	ND	0	ND	0	4.75
8/21/2007	stain	0	2.23	0.25	stain	0	10.34	2.25	5.98	1.25	ND	0	11.51	0.75	2.27	0.25	ND	0	ND	0	4.75
9/5/2007	stain	0	2	1.25	stain	0	7.7	1.5	5.31	1	ND	0	12.54	1	4.64	0.5	ND	0	ND	0	5.25
9/19/2007	stain	0	0.42	0.2	stain	0	2.98	0.4	2.97	0.3	ND	0	2.5	0.4	0.54	0.1	ND	0	ND	0	1.4
10/3/2007	stain	0	1.02	0.1	stain	0	7.6	1.5	4.53	0.75	ND	0	15.75	0.75	6.07	1.5	ND	0	ND	0	4.6
10/16/2007	stain	0	1.45	0.25	stain	0	6.46	0.5	4.61	0.25	ND	0	14.36	2	3.39	1	ND	0	ND	0	4
10/30/2007	stain	0	1.05	0.25	stain	0	5.18	0.6	3.12	0.5	ND	0	9.26	1.75	1.65	0.6	ND	0	ND	0	3.7
11/13/2007	stain	0	1.61	0.3	stain	0	5.04	0.8	3.01	0.4	ND	0	8.84	1.5	1.74	0.65	ND	0	ND	0	3.65
11/28/2007	stain	0	1.16	0.2	stain	0	5.24	0.85	2.95	0.4	ND	0	8.59	1.5	1.44	0.4	ND	0	ND	0	3.35
12/11/2007	stain	0	1.82	0.25	stain	0	4.88	0.65	2.98	0.4	ND	0	8.75	1.7	1.22	0.3	ND	0	ND	0	3.3
12/28/2007	stain	0	2.14	0.3	stain	0	5.4	0.8	3.39	0.5	ND	0	8.8	1.6	2.44	0.3	ND	0	ND	0	3.5
1/9/2008	stain	0	2.07	0.3	stain	0	4.81	0.8	3.76	0.5	ND	0	8.75	1.4	1.33	0.3	ND	0	ND	0	3.3
1/21/2008	stain	0	1.91	0.2	stain	0	4.64	0.6	2.86	0.4	ND	0	8.77	1.4	2.36	0.4	ND	0	ND	0	3
2/5/2008	stain	0	2.06	0.25	stain	0	5	1	3.18	0.5	ND	0	8.7	1.3	2.34	0.3	ND	0	ND	0	3.35
2/19/2008	ND	0	2.26	0.2	stain	0	4.45	0.9	3.26	0.5	ND	0	8.76	1.3	2.62	0.4	ND	0	ND	0	3.3

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Well Date	HG-9S		HG-10S		HG-10D		HG-11S		HG-12S		HG-12D		HG-15S		HG-16S		HG-16D		FW-6		Total Vol. removed (gal)
	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	
3/4/2008	stain	0	NM	0	NM	0	4.27	0.7	3.24	0.5	ND	0	8.24	1.25	2.53	0.3	ND	0	ND	0	2.75
3/20/2008	stain	0	NM	0	NM	0	4.5	0.9	3.16	0.4	ND	0	8.51	1.25	2.35	0.4	ND	0	ND	0	2.95
4/1/2008	stain	0	NM	0	NM	0	4.04	0.6	2.93	0.5	ND	0	7.95	1.2	2.42	0.4	ND	0	ND	0	2.7
4/16/2008	stain	0	NM	0	NM	0	4.43	0.7	2.72	0.4	ND	0	8.04	1.2	1.95	0.4	ND	0	ND	0	2.7
4/29/2008	stain	0	NM	0	NM	0	4.27	0.75	2.57	0.4	ND	0	8.29	1.1	1.56	0.4	ND	0	ND	0	2.65
5/13/2008	stain	0	NM	0	NM	0	4	0.75	2.79	0.5	ND	0	8.1	1.2	1.79	0.3	ND	0	ND	0	2.75
5/27/2008	stain	0	NM	0	NM	0	3.98	0.9	2.58	0.4	ND	0	7.9	1.2	1.57	0.3	ND	0	ND	0	2.8
6/10/2008	stain	0	NM	0	NM	0	3.84	0.7	2.72	0.4	ND	0	7.94	1.2	1.43	0.4	ND	0	ND	0	2.7
6/24/2008	stain	0	NM	0	NM	0	3.91	0.6	2.52	0.4	ND	0	7.76	1.1	1.42	0.3	ND	0	ND	0	2.4
7/10/2008	stain	0	NM	0	NM	0	3.99	0.7	3.15	0.4	ND	0	7.73	1	1.89	0.4	ND	0	ND	0	2.5
7/24/2008	stain	0	NM	0	NM	0	5.39	0.9	3.26	0.5	ND	0	8.38	1.1	1.83	0.3	ND	0	ND	0	2.8
8/7/2008	stain	0	NM	0	NM	0	4.38	0.75	2.85	0.3	ND	0	8.38	1.1	1.44	0.4	ND	0	ND	0	2.55
8/19/2008	stain	0	NM	0	NM	0	3.76	0.7	2.83	0.4	ND	0	8.27	1.1	1.16	0.3	ND	0	ND	0	2.5
9/3/2008	stain	0	stain	0	stain	0	4.34	0.7	2.83	0.4	ND	0	8.35	1.1	1.26	0.25	ND	0	ND	0	2.45
9/16/2008	stain	0	stain	0	stain	0	3.98	0.75	2.79	0.4	ND	0	8.6	1	1.32	0.25	ND	0	ND	0	2.4
9/30/2008	stain	0	0.59	0.1	stain	0	3.9	0.7	3.03	0.3	ND	0	7.97	1.1	1.39	0.3	ND	0	ND	0	2.5
10/14/2008	stain	0	1.17	0.1	stain	0	4.04	0.75	2.68	0.4	ND	0	7.96	1.1	1.52	0.3	ND	0	ND	0	2.65
10/28/2008	stain	0	1.37	0.2	stain	0	3.92	0.7	2.73	0.35	ND	0	7.88	1	1.4	0.3	ND	0	ND	0	2.55
11/11/2008	stain	0	1.48	0.2	stain	0	3.9	0.7	2.78	0.35	ND	0	8.15	1	1.33	0.25	ND	0	ND	0	2.5
11/25/2008	stain	0	1.35	0.2	stain	0	3.79	0.75	2.37	0.4	ND	0	7.84	1.1	1.04	0.25	ND	0	ND	0	2.7
12/13/2008	stain	0	1.43	0.2	stain	0	3.99	0.7	2.66	0.4	ND	0	7.97	1.2	1.13	0.2	ND	0	ND	0	2.7
12/23/2008	stain	0	1.38	0.2	stain	0	3.68	0.7	2.17	0.4	ND	0	8.34	0.8	1.12	0.2	ND	0	ND	0	2.3
1/6/2009	stain	0	1.18	0.2	stain	0	3.94	0.7	2.56	0.4	ND	0	8.11	1	1.29	0.2	ND	0	ND	0	2.5
1/20/2009	stain	0	1.44	0.25	stain	0	4.2	0.75	2.72	0.4	ND	0	8.07	0.9	0.94	0.2	ND	0	ND	0	2.5
2/3/2009	stain	0	3.77	0.2	stain	0	5.33	0.7	3.89	0.4	ND	0	9.33	0.9	3.29	0.25	ND	0	ND	0	2.45
2/18/2009	stain	0	1.49	0.25	stain	0	3.63	0.75	2.46	0.45	ND	0	7.96	0.9	1.32	0.2	ND	0	ND	0	2.55
3/4/2009	stain	0	1.99	0.25	stain	0	3.59	0.6	2.6	0.4	ND	0	7.74	1	1.03	0.2	ND	0	ND	0	2.45
3/17/2009	NM	0	NM	0	NM	0	NM	0	NM	0	NM	0	7.55	1	NM	0	NM	0	NM	0	1
3/18/2009	stain	0	1.89	0.25	stain	0	3.77	0.7	2.47	0.4	ND	0	6.18	0.65	0.97	0.15	ND	0	ND	0	2.15
3/31/2009	stain	0	1.81	0.2	stain	0	3.89	0.7	2.38	0.4	ND	0	6.94	0.9	0.94	0.1	ND	0	ND	0	2.3
4/14/2009	stain	0	1.5	0.3	stain	0	3.74	0.8	2.22	0.3	ND	0	6.6	0.9	1.09	0.1	ND	0	ND	0	2.4
5/1/2009	stain	0	1.54	0.3	stain	0	4.03	0.6	2.1	0.3	ND	0	6.74	0.75	1.27	0.2	ND	0	ND	0	2.15
5/15/2009	stain	0	1.6	0.25	stain	0	3.77	0.7	2.16	0.4	ND	0	7.2	0.75	1.02	0.2	ND	0	ND	0	2.3
5/27/2009	stain	0	1.41	0.3	stain	0	3.54	0.65	2.02	0.4	ND	0	6.75	0.95	0.82	0.3	ND	0	ND	0	2.6
6/9/2009	stain	0	1.5	0.3	stain	0	4	0.7	2.12	0.4	ND	0	6.99	1	0.86	0.3	ND	0	ND	0	2.7
6/25/2009	stain	0	1.54	0.3	stain	0	3.96	0.75	1.96	0.5	ND	0	7.43	0.8	0.63	0.25	ND	0	ND	0	2.6
7/9/2009	stain	0	1.71	0.3	stain	0	3.82	0.7	2.39	0.4	ND	0	7.13	0.9	0.91	0.1	ND	0	ND	0	2.4
7/24/2009	stain	0	1.95	0.25	stain	0	3.98	0.7	3.25	0.3	ND	0	6.78	1	0.97	0.1	ND	0	ND	0	2.35
8/6/2009	stain	0	1.83	0.25	stain	0	3.42	0.8	2.95	0.5	ND	0	7.36	1.1	1.03	0.2	ND	0	ND	0	2.85
8/20/2009	stain	0	1.87	0.3	stain	0	3.43	0.8	2.42	0.5	ND	0	7.93	1.1	1.07	0.2	stain	0	ND	0	2.9
9/3/2009	stain	0	1.81	0.3	stain	0	2.84	0.8	2.06	0.3	ND	0	7.04	1	0.92	0.1	stain	0	ND	0	2.5
9/16/2009	stain	0	1.53	0.3	stain	0	2.7	0.7	2.23	0.35	ND	0	6.73	0.8	1.05	0.15	stain	0	ND	0	2.3
9/30/2009	stain	0	2.1	0.3	stain	0	2.66	0.6	2.51	0.4	ND	0	6.69	0.9	1.13	0.2	stain	0	ND	0	2.4
10/21/2009	stain	0	2.83	0.3	stain	0	2.69	0.65	2.96	0.5	ND	0	6.94	1.05	1.21	0.2	stain	0	NM	0	2.7
11/5/2009	stain	0	3.01	0.3	stain	0	2.91	0.6	2.86	0.6	ND	0	6.75	2.1	1.33	0.2	stain	0	NM	0	3.8
11/18/2009	stain	0	1.88	0.3	stain	0	2.78	0.6	2.78	0.4	ND	0	5.15	1.6	1.57	0.2	stain	0	NM	0	3.1
12/1/2009	stain	0	1.7	0.2	stain	0	2.54	0.6	2.92	0.45	ND	0	4	1	1.03	0.1	stain	0	NM	0	2.35
12/17/2009	stain	0	1.59	0.2	stain	0	2.69	0.5	2.79	0.5	ND	0	3.9	1	1.55	0.2	stain	0	NM	0	2.4
12/31/2009	stain	0	2.08	0.3	stain	0	2.54	0.6	2.74	0.4	ND	0	3.6	0.9	0.93	0.1	stain	0	NM	0	2.3
1/14/2010	stain	0	1.98	0.25	stain	0	2.38	0.6	3.03	0.4	ND	0	3.57	0.9	1.2	0.2	stain	0	NM	0	2.35
1/26/2010	stain	0	1.55	0.2	stain	0	2.39	0.5	2.06	0.3	ND	0	NA	0.65	1.06	0.1	stain	0	NM	0	1.75
2/10/2010	stain	0	1.51	0.1	stain	0	2.45	0.4	2.93	0.3	ND	0	3.33	0.65	1.15	0.1	stain	0	NM	0	1.55
2/25/2010	stain	0	1.8	0.25	stain	0	2.54	0.4	2.73	0.3	ND	0	3.13	0.4	0.95	0.1	stain	0	NM	0	1.45
3/10/2010	stain	0	1.97	0.25	stain	0	2.32	0.4	2.43	0.4	ND	0	4.14	0.5	1.26	0.2	stain	0	NM	0	1.75
3/29/2010	stain	0	2.35	0.3	stain	0	2.74	0.6	2.93	0.4	ND	0	5.17	0.75	0.93	0.1	stain	0	NM	0	2.15
4/14/2010	stain	0	1.6	0.2	stain	0	2.69	0.6	2.15	0.45	ND	0	5.29	0.9	0.97	0.1	stain	0	NM	0	2.25
4/29/2010	stain	0	2.06	0.3	stain	0	2.61	0.45	2.98	0.5	ND	0	5.65	1	1.53	0.2	stain	0	NM	0	2.45
5/14/2010	stain	0	1.36	0.2	stain	0	2.54	0.4	3.03	0.4	ND	0	5.43	0.8	1.05	0.1	stain	0	NM	0	1.9
5/26/2010	stain	0	1.82	0.15	stain	0	2.38	0.5	3.15	0.5	ND	0	5.2	0.75	1.87	0.2	stain	0	NM	0	2.1
6/10/2010	stain	0	2.01	0.25	stain	0	2.33	0.45	3.05	0.45	ND	0	5.1	0.8	1.47	0.15	stain	0	NM	0	2.1
6/24/2010	stain	0	1.18	0.15	stain	0	2.27	0.45	2.83	0.4	ND	0	5.14	0.8	1.5	0.2	stain	0	NM	0	2

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Well Date	HG-9S		HG-10S		HG-10D		HG-11S		HG-12S		HG-12D		HG-15S		HG-16S		HG-16D		FW-6		Total Vol. removed (gal)
	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	
7/8/2010	stain	0	1.32	0.25	stain	0	2.28	0.4	2.9	0.4	ND	0	4.9	0.75	1.88	0.1	stain	0	NM	0	1.9
7/21/2010	stain	0	1.5	0.2	stain	0	2.14	0.4	3.06	0.5	ND	0	4.8	0.8	1.05	0.15	stain	0	NM	0	2.05
8/5/2010	stain	0	1.56	0.2	stain	0	2.31	0.4	3.06	0.5	ND	0	4.7	0.8	1.47	0.15	stain	0	NM	0	2.05
8/19/2010	stain	0	1.96	0.1	stain	0	2.28	0.4	2.9	0.55	ND	0	4.99	0.8	1.06	0.2	stain	0	NM	0	2.05
9/2/2010	stain	0	2.01	0.25	stain	0	2.21	0.4	3.03	0.5	ND	0	4.95	0.65	1.37	0.2	stain	0	NM	0	2
9/15/2010	stain	0	2.08	0.25	stain	0	2.14	0.35	2.98	0.45	ND	0	5.04	0.75	1.07	0.1	stain	0	NM	0	1.9
9/29/2010	stain	0	2.07	0.3	stain	0	2.14	0.4	2.9	0.4	ND	0	4.95	0.65	1.77	0.15	stain	0	NM	0	1.9
10/13/2010	stain	0	2.53	0.4	stain	0	2.19	0.4	2.86	0.45	ND	0	5.2	0.7	1.27	0.15	stain	0	NM	0	2.1
10/28/2010	stain	0	2.51	0.25	stain	0	2.24	0.4	2.95	0.4	ND	0	5.34	0.8	1.05	0.1	stain	0	NM	0	1.95
11/10/2010	stain	0	1.97	0.3	stain	0	2.21	0.4	3.06	0.4	ND	0	5.15	0.75	1.09	0.15	stain	0	NM	0	2
11/24/2010	stain	0	1.9	0.3	stain	0	NM	0.4	2.92	0.4	ND	0	NM	0.75	1.48	0.15	stain	0	NM	0	2
12/9/2010	stain	0	NM	0.4	stain	0	NM	0.4	NM	0.45	ND	0	NM	0.65	NM	0.1	stain	0	NM	0	2
12/21/2010	stain	0	3.05	0.3	stain	0	1.93	0.5	3.02	0.5	ND	0	5.1	0.8	1.1	0.2	stain	0	NM	0	2.3
1/6/2011	stain	0	2.7	0.35	stain	0	2.37	0.4	2.88	0.45	ND	0	4.5	0.6	1.37	0.2	stain	0	NM	0	2
1/19/2011	stain	0	2.9	0.3	stain	0	2.11	0.4	3.11	0.4	ND	0	5.35	0.8	1.91	0.25	stain	0	NM	0	2.15
2/2/2011	stain	0	2.49	0.25	stain	0	2.19	0.4	3.03	0.4	ND	0	5.34	0.65	1.47	0.15	stain	0	NM	0	1.85
2/17/2011	stain	0	2.43	0.2	stain	0	2.18	0.4	3.05	0.4	ND	0	5.54	0.65	1.48	0.15	stain	0	NM	0	1.8
3/3/2011	stain	0	2.56	0.35	stain	0	2.14	0.4	3.12	0.45	ND	0	5.53	0.8	0.63	0.1	stain	0	NM	0	2.1
3/16/2011	stain	0	2.05	0.3	stain	0	1.94	0.4	2.96	0.4	ND	0	5.4	0.7	1.4	0.15	stain	0	NM	0	1.95
3/30/2011	stain	0	1.88	0.25	stain	0	2.08	0.4	3.03	0.4	ND	0	5.53	0.75	1.03	0.1	stain	0	NM	0	1.9
4/13/2011	stain	0	2.23	0.35	stain	0	1.67	0.35	2.94	0.4	ND	0	5.53	0.75	1.03	0.15	stain	0	NM	0	2
4/28/2011	stain	0	2.89	0.3	stain	0	2.09	0.4	3.02	0.4	ND	0	5.64	0.75	0.7	0.1	stain	0	NM	0	1.95
5/11/2011	stain	0	2.55	0.35	stain	0	1.98	0.4	2.92	0.4	ND	0	5.46	0.65	0.85	0.15	stain	0	NM	0	1.95
5/26/2011	stain	0	1.9	0.3	stain	0	1.98	0.4	3.05	0.4	ND	0	5.13	0.65	1.53	0.25	stain	0	NM	0	2
6/8/2011	stain	0	2.56	0.3	stain	0	2.03	0.4	2.89	0.4	ND	0	4.96	0.75	0.7	0.15	stain	0	NM	0	2
6/23/2011	stain	0	2.1	0.4	stain	0	2.19	0.4	3.05	0.45	ND	0	4.70	0.5	1.55	0.2	stain	0	NM	0	1.95
7/7/2011	stain	0	1.71	0.25	stain	0	2.14	0.4	3.05	0.4	ND	0	5.5	0.7	1.37	0.15	stain	0	NM	0	1.9
7/20/2011	stain	0	2.08	0.25	stain	0	1.94	0.4	2.86	0.35	ND	0	5.13	0.75	0.77	0.1	stain	0	NM	0	1.85
8/4/2011	stain	0	2.55	0.4	stain	0	2.19	0.45	2.66	0.4	ND	0	5.45	0.7	0.54	0.1	stain	0	NM	0	2.05
8/17/2011	stain	0	1.81	0.25	stain	0	2.11	0.4	2.91	0.4	ND	0	5.40	0.75	1.25	0.15	stain	0	NM	0	1.95
9/1/2011	stain	0	2.06	0.35	stain	0	2.18	0.4	2.92	0.35	ND	0	5.13	0.7	1.03	0.15	stain	0	NM	0	1.95
9/15/2011	stain	0	2.35	0.35	stain	0	2.04	0.4	2.46	0.4	ND	0	5.37	0.55	1.33	0.25	stain	0	NM	0	1.95
9/29/2011	stain	0	2.28	0.4	stain	0	1.98	0.4	2.86	0.4	ND	0	5.50	0.6	1.21	0.25	stain	0	NM	0	2.05
10/13/2011	stain	0	2.51	0.35	stain	0	1.97	0.4	2.84	0.35	ND	0	5.37	0.75	0.52	0.15	stain	0	NM	0	2
10/26/2011	stain	0	2.08	0.35	stain	0	1.68	0.35	3.04	0.4	ND	0	5.10	0.7	1.14	0.2	stain	0	NM	0	2
11/9/2011	stain	0	2.02	0.3	stain	0	1.61	0.3	2.95	0.4	ND	0	5.13	0.75	1.74	0.15	stain	0	NM	0	1.9
11/27/2011	stain	0	1.91	0.35	stain	0	2.24	0.4	2.92	0.45	ND	0	5.51	0.7	1.05	0.1	stain	0	NM	0	2
12/8/2011	stain	0	1.88	0.3	stain	0	1.64	0.3	3.12	0.35	ND	0	4.83	0.65	1.02	0.15	stain	0	NM	0	1.75
12/22/2011	stain	0	2	0.2	stain	0	1.94	0.35	2.36	0.4	ND	0	5.89	0.7	0.76	0.1	stain	0	NM	0	1.75
1/5/2012	stain	0	2.91	0.35	stain	0	1.97	0.3	2.87	0.3	ND	0	5.10	0.5	1.47	0.2	stain	0	NM	0	1.65
1/19/2012	stain	0	2.21	0.35	stain	0	2.38	0.4	2.87	0.4	ND	0	5.30	0.55	1.74	0.25	stain	0	NM	0	1.95
2/2/2012	stain	0	2.39	0.25	stain	0	2.19	0.5	2.86	0.4	ND	0	5.90	0.85	1.43	0.15	stain	0	NM	0	2.15
2/16/2012	stain	0	2.54	0.4	stain	0	2.29	0.45	2.75	0.4	ND	0	5.90	0.75	1.53	0.25	stain	0	NM	0	2.25
2/29/2012	stain	0	2.05	0.35	stain	0	2.39	0.45	2.76	0.35	ND	0	5.80	0.8	1.07	0.15	stain	0	NM	0	2.1
3/14/2012	stain	0	1.99	0.25	stain	0	2.27	0.45	2.63	0.4	ND	0	5.99	0.75	1.05	0.1	stain	0	NM	0	1.95
3/29/2012	stain	0	1.93	0.25	stain	0	2.47	0.45	2.57	0.4	ND	0	5.73	0.75	0.95	0.1	stain	0	NM	0	1.95
4/11/2012	stain	0	1.83	0.4	stain	0	2.5	0.4	2.6	0.4	ND	0	4.54	0.8	0.93	0.1	stain	0	NM	0	2.1
4/25/2012	stain	0	2.48	0.4	stain	0	2.68	0.45	2.46	0.3	ND	0	5.90	0.8	0.65	0.1	stain	0	NM	0	2.05
5/10/2012	stain	0	1.96	0.3	stain	0	2.62	0.5	2.95	0.35	ND	0	4.73	1	0.53	0.1	stain	0	NM	0	2.25
5/23/2012	stain	0	1.9	0.3	stain	0	2.74	0.5	2.16	0.35	ND	0	4.93	0.9	0.64	0.1	stain	0	NM	0	2.15
6/6/2012	stain	0	1.98	0.25	stain	0	2.98	0.45	2.55	0.3	ND	0	4.85	0.7	1.05	0.15	stain	0	NM	0	1.85
6/21/2012	stain	0	1.87	0.4	stain	0	2.9	0.5	2.85	0.4	ND	0	6.11	0.85	0.83	0.1	stain	0	NM	0	2.25
7/8/2012	stain	0	1.64	0.4	stain	0	2.95	0.45	2.46	0.4	ND	0	4.78	0.9	0.73	0.1	stain	0	NM	0	2.25
7/18/2012	stain	0	1.57	0.35	stain	0	2.97	0.45	2.25	0.45	ND	0	5.73	0.7	0.83	0.1	stain	0	NM	0	2.05
8/2/2012	stain	0	1.83	0.3	stain	0	2.68	0.4	2.58	0.3	ND	0	5.64	0.75	1.04	0.15	stain	0	NM	0	1.9
8/16/2012	stain	0	2.1	0.25	stain	0	2.77	0.35	2.65	0.3	ND	0	5.85	0.9	1.05	0.15	stain	0	NM	0	1.95
9/2/2012	stain	0	2.18	0.3	stain	0	2.96	0.4	2.78	0.4	ND	0	5.3	0.75	0.83	0.1	stain	0	NM	0	1.95
9/13/2012	stain	0	1.61	0.3	stain	0	2.97	0.4	2.54	0.3	ND	0	5.74	0.8	0.33	0.1	stain	0	NM	0	1.9
9/26/2012	stain	0	2.9	0.3	stain	0	2.38	0.4	2.97	0.4	ND	0	5.85	0.8	0.53	0.1	stain	0	NM	0	2
10/10/2012	stain	0	1.5	0.25	stain	0	1.88	0.4	2.91	0.45	ND	0	5.46	0.8	0.54	0.1	stain	0	NM	0	2
10/25/2012	stain	0	1.42	0.3	stain	0	1.79	0.4	2.51	0.4	ND	0	4.63	0.75	0.79	0.1	stain	0	NM	0	1.95

Hawthorn Group Passive NAPL Recovery (Page 5 of 5)

Well Date	HG-9S		HG-10S		HG-10D		HG-11S		HG-12S		HG-12D		HG-15S		HG-16S		HG-16D		FW-6		Total Vol. removed (gal)
	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	Thickness (ft)	Vol. Removed (gal)	
11/8/2012	stain	0	1.5	0.3	stain	0	1.82	0.35	2.33	0.4	ND	0	4.44	0.75	1.23	0.15	stain	0	NM	0	1.95
11/21/2012	stain	0	1.58	0.4	stain	0	1.77	0.3	2.25	0.3	ND	0	3.88	0.6	1.03	0.1	stain	0	NM	0	1.7
12/5/2012	stain	0	1.47	0.3	stain	0	1.84	0.35	2.22	0.3	ND	0	3.96	0.65	1.12	0.1	stain	0	NM	0	1.7
12/18/2012	stain	0	1.53	0.4	stain	0	1.76	0.4	2.3	0.25	ND	0	4.04	0.6	1.09	0.2	stain	0	NM	0	1.85
1/2/2013	stain	0	1.61	0.3	stain	0	1.87	0.3	2.36	0.3	ND	0	4.23	0.5	1.12	0.1	stain	0	NM	0	1.5
1/16/2013	stain	0	1.6	0.5	stain	0	1.85	0.4	2.36	0.4	ND	0	4.08	0.5	1.07	0.25	stain	0	NM	0	2.05
1/30/2013	stain	0	1.53	0.35	stain	0	1.78	0.4	2.23	0.4	ND	0	4.31	0.5	0.96	0.2	stain	0	NM	0	1.85
2/14/2013	stain	0	1.53	0.35	stain	0	1.8	0.35	2.49	0.4	ND	0	4.17	0.5	0.94	0.1	stain	0	NM	0	1.7
2/27/2013	stain	0	1.3	0.2	stain	0	1.74	0.25	1.85	0.3	ND	0	3.95	0.45	0.83	0.1	stain	0	NM	0	1.3
3/13/2013	stain	0	1.48	0.4	stain	0	1.81	0.4	1.99	0.3	ND	0	3.84	0.6	0.73	0.1	stain	0	NM	0	1.8
3/27/2013	stain	0	1.48	0.45	stain	0	1.82	0.35	1.6	0.4	ND	0	3.95	0.45	0.83	0.15	stain	0	NM	0	1.8
4/10/2013	stain	0	stain	0	stain	0	1.47	0.35	1.63	0.3	ND	0	3.54	0.45	0.77	0.15	stain	0	NM	0	1.25
4/24/2013	stain	0	stain	0	stain	0	1.77	0.35	1.86	0.4	ND	0	3.92	0.5	stain	0	stain	0	NM	0	1.25
5/8/2013	stain	0	stain	0	stain	0	1.7	0.35	1.83	0.4	ND	0	3.78	0.45	stain	0	stain	0	NM	0	1.2
5/22/2013	stain	0	stain	0	stain	0	1.64	0.35	1.83	0.4	ND	0	3.51	0.4	stain	0	stain	0	NM	0	1.15
6/5/2013	stain	0	stain	0	stain	0	1.81	0.4	1.85	0.3	ND	0	3.57	0.4	1.02	0.2	stain	0	NM	0	1.3
6/18/2013	stain	0	stain	0	stain	0	1.47	0.3	1.58	0.3	ND	0	3.43	0.4	stain	0	stain	0	NM	0	1
7/4/2013	stain	0	stain	0	stain	0	1.77	0.4	1.76	0.3	ND	0	3.57	0.5	stain	0	stain	0	NM	0	1.2
7/17/2013	stain	0	stain	0	stain	0	1.67	0.3	1.78	0.3	ND	0	3.19	0.4	0.94	0.15	stain	0	NM	0	1.15
7/31/2013	stain	0	stain	0	stain	0	1.04	0.25	1.65	0.25	ND	0	2.88	0.5	stain	0	stain	0	NM	0	1
Total Removed		0.1		74.15		0.0		122.10		92.05		0.0		150.91		62.55		0.0		0.0	545.21

Notes:
 6/19/04 measured with bailer
 7/07/04 measured with weighted cotton string
 Other dates used Bailer & Interface Probe
 ND indicates NAPL not detected
 NM indicates measurement not taken
 Stain indicates that NAPL stained measurement probe, but thickness was unmeasurable
 Blank indicated no measured DNAPL removal
 10/25/05 began two-week schedule
 5/17/06 used low-flow pump (as opposed to the bailer)
 7/10/07 RH performed bailing
 11/13/07 New Heron Oil/Water Interface Probe (H01L/SM01L) now in use
 3/4/08 through 8/25/08 Key Environmental pumping well running 8 ft away from HG-10S and HG-10D
 12/23/08 Michael Toundas performed DNAPL recovery
 2/3/2009 difficulties with obtaining DNAPL/water interface with new tape
 3/18/09 - only performed DNAPL recovery at HG-15S
 starting on 8/20/09 - used peristaltic pump at HG-11S & HG-15S; stain observed at HG-16D and M-22B
 10/21/2009 - FW-6 no longer measured due to Upper Floridan IRM