



CON 12-15
Doc # 22795

June 29, 2010

Mr. Bob Drustrup
Iowa Department of Natural Resources
Contaminated Sites Section
5th Floor
502 East 8th Street
Des Moines, IA 50319-0034

Re: University of Iowa Power Plant Fuel Oil Release

Dear Mr. Drustrup:

Howard R. Green Company (HR Green) has prepared this letter on behalf of the University of Iowa to update the Iowa Department of Natural Resources on the status of the above reference project. The subject site is located along the Iowa River at the University of Iowa's Power Plant in Iowa City, Iowa. A subsurface fuel oil release was discovered in late 2002 (see attached figure). A product discrepancy of approximately 10,000 gallons of fuel oil was detected following transfer of product between above ground storage tanks (ASTs). Emergency product recovery and assessment activities occurred to prevent subsurface migration of product to the Iowa River located approximately 150 feet west of the release area.

In January 2009, HR Green submitted a letter on behalf of University of Iowa summarizing the project and requesting a pathway to closure for the site. As was discussed in the January 2009 letter, approximately 4,590 gallons of product were recovered with the bulk of the recovery occurring during the first year the system was operated. Diminishing recovery of product was documented over several years. Measureable product thicknesses had not been recorded in any of the monitoring wells since July 2005.

In light of the diminishing of free product recovery from the existing system, the large volume of water the system recovers and discharges during operation, and the impact of the floods in 2008, the University of Iowa proposed removing the pumping equipment from the recovery wells and evaluating the current status of product at the site under natural conditions.

It was proposed the monitoring and recovery wells be gauged for water level and free product thickness monthly for one year to assess the current thickness of product remaining at the site. In a letter dated February 4, 2009, you approved this approach.

The wells have been gauged for one year and copies of the field gauging sheets are included in Attachment 1. The gauging data is summarized in Table 1. No free product was detected in any of the wells during the monitoring period.

In light of the monitoring results, the University of Iowa is formally requesting closure of this site and permission to abandon the recovery and monitoring wells.



Howard R. Green Company

If you have any questions regarding the site, please feel free to call me at 319 841 4424, or Mark Maxwell of the U of I at 319 335 6185.

Sincerely,
Howard R. Green Company

Diane Pals
Project Hydrogeologist

Attachments

cc: Mark Maxwell, University of Iowa

TABLE AND FIGURE

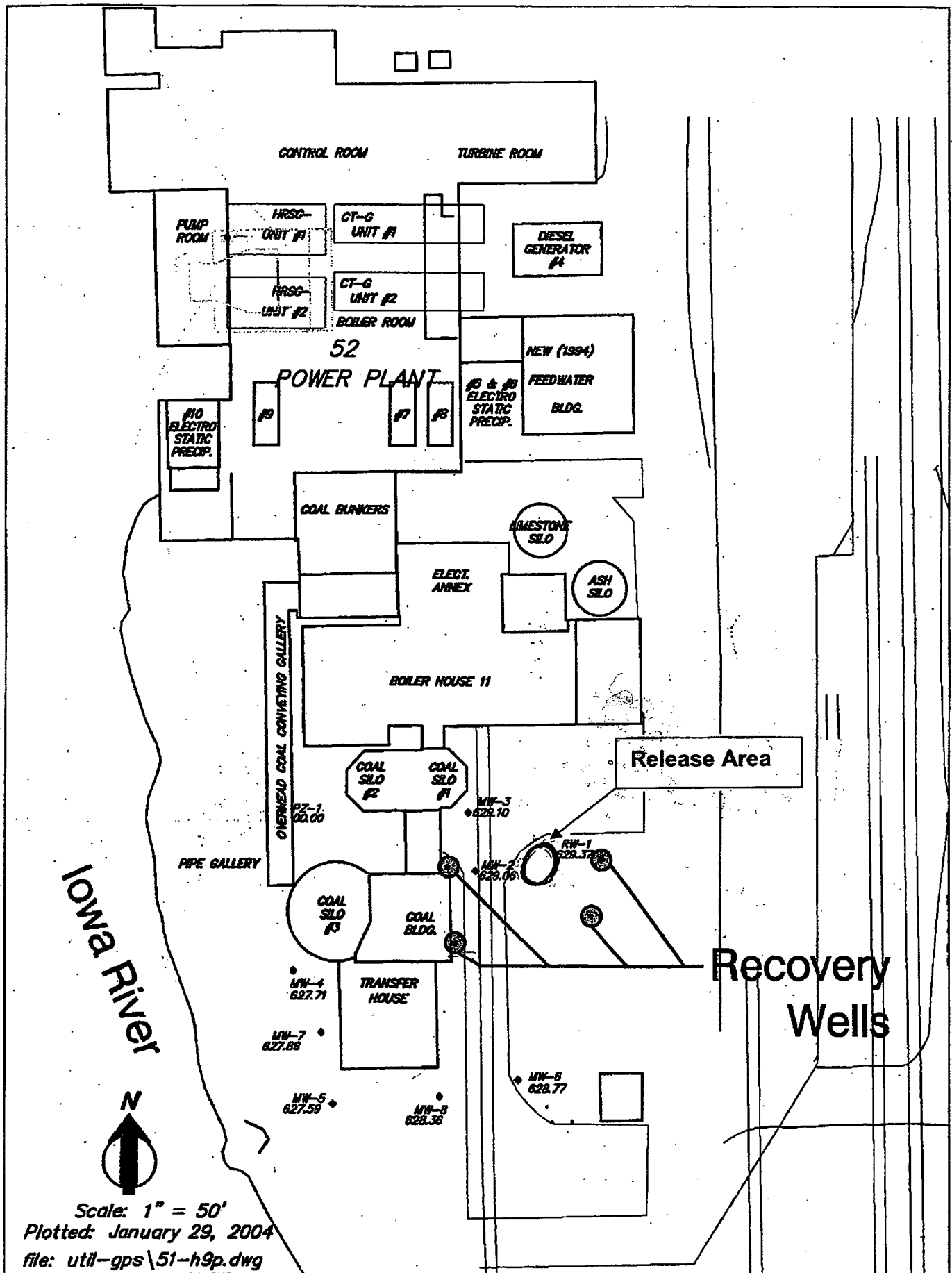
Table 1 - Monthly Gauging Data
University of Iowa
UI Power Plant
HRG Project # 726540.J02

Well	TOC	4/10/2009			5/8/2009			6/11/2009			7/16/2009		
		DTW	DTP	GW Elev	DTW	DTP	GW Elev	DTW	DTP	GW Elev	DTW	DTP	GW Elev
MW-2	647.36	15.2	-	632.16	12.85	-	634.51	13.3	-	634.06	13.2	-	634.16
MW-3	647.45	15.33	-	632.12	12.87	-	634.58	13.4	-	634.05	13.3	-	634.15
MW-4	646.76	15.45	-	631.31	12.47	-	634.29	13.05	-	633.71	12.92	-	633.84
MW-5	645.44	14.31	-	631.13	12.3	-	633.14	12.8	-	632.64	12.6	-	632.84
MW-6	647.27	16.35	-	630.92	11.2	-	636.07	13.06	-	634.21	13.2	-	634.07
MW-7	646.5	15.15	-	631.35	12.59	-	633.91	12.75	-	633.75	12.7	-	633.8
MW-8	646.89	15.35	-	631.54	13	-	633.89	13.1	-	633.79	12.95	-	633.94
RW-1	647.79	14.45	-	633.34	12.3	-	635.49	12.7	-	635.09	12.6	-	635.19
RW-2	647.21	15.05	-	632.16	12.65	-	634.56	13.1	-	634.11	12.92	-	634.29
RW-3	647.11	14.95	-	632.16	12.58	-	634.53	13	-	634.11	12.9	-	634.21

Well	TOC	8/25/2009			9/28/2009			10/28/2009			11/30/2009		
		DTW	DTP	GW Elev	DTW	DTP	GW Elev	DTW	DTP	GW Elev	DTW	DTP	GW Elev
MW-2	647.36	13.25	-	634.11	12.2	-	635.16	15	-	632.36	14.65	-	632.71
MW-3	647.45	13.35	-	634.1	15.33	-	632.12	15.15	-	632.3	14.8	-	632.65
MW-4	646.76	12.81	-	633.95	15.13	-	631.63	13.75	-	633.01	13.3	-	633.46
MW-5	645.44	11.45	-	633.99	13.95	-	631.49	12.3	-	633.14	12.3	-	633.14
MW-6	647.27	13.3	-	633.97	15.4	-	631.87	14.85	-	632.42	14.5	-	632.77
MW-7	646.5	12.65	-	633.85	14.92	-	631.58	13.55	-	632.95	13.5	-	633
MW-8	646.89	12.84	-	634.05	15.22	-	631.67	14.15	-	632.74	13.9	-	632.99
RW-1	647.79	12.49	-	635.3	14.95	-	632.84	14.35	-	633.44	14.2	-	633.59
RW-2	647.21	12.9	-	634.31	15	-	632.21	14.21	-	633.00	14.3	-	632.91
RW-3	647.11	12.81	-	634.30	15	-	632.11	14.55	-	632.56	14.3	-	632.81

Well	TOC	1/14/2010			2/18/2010			3/22/2010			4/22/2010		
		DTW	DTP	GW Elev	DTW	DTP	GW Elev	DTW	DTP	GW Elev	DTW	DTP	GW Elev
MW-2	647.36	Frozen	-		Frozen	-		15.3	-	632.06	12.6	-	634.76
MW-3	647.45	Frozen	-		Frozen	-		15.4	-	632.05	12.8	-	634.65
MW-4	646.76	16.95	-	629.81	17.5	-	629.26	15.3	-	631.46	11.3	-	635.46
MW-5	645.44	16.2	-	629.24	17.35	-	628.09	14.2	-	631.24	12.4	-	633.04
MW-6	647.27	17.25	-	630.02	18.35	-	628.92	15.2	-	632.07	12.7	-	634.57
MW-7	646.5	15.6	-	630.9	16.45	-	630.05	15.2	-	631.3	12.1	-	634.4
MW-8	646.89	16.9	-	629.99	17.55	-	629.34	15.4	-	631.49	12.5	-	634.39
RW-1	647.79	17.2	-	630.59	17.95	-	629.84	14.4	-	633.39	12.3	-	635.49
RW-2	647.21	17.35	-	629.86	18.25	-	628.96	15.1	-	632.11	12.6	-	634.61
RW-3	647.11	17.91	-	629.20	18.49	-	628.62	15.1	-	632.01	12.4	-	634.71

TOC= Top of casing elevation
DTW= Depth to water
DTP= Depth to product
GW Elev= Groundwater elevation



ATTACHMENT 1

**Field Gauging Sheet - UI Power Plant
Fuel Oil release Area**

Equipment:

Oil/Water Interface Probe
Latex gloves
Alconox or other phosphate-free detergent
De-ionized Water

General:

Gauge the wells at the Power Plant in the following order:

~~MW-9~~, MW-10, MW-4, MW-8, MW-3, MW-7, MW-5, MW-6, MW-2, RW-1, RW-2, RW-3

Procedure for gauging:

Put on a pair of clean latex/nitrile gloves, and open the well.

Using an interface probe, measure depth to water and/or free product from the reference point on the PVC pipe and record in the table below.

Measure the total depth of the well from the reference point and record.

Close well.

Decontaminate interface probe with Alconox/tap water solution or Simple Green and rinse with de-ionized water.

Date: 4-10-09

Weather Conditions: _____

Iowa River Stage: _____

Well	DTP	DTW	PT	TD	Notes
MW-3		15.33		24.00	
MW-2		15.20		21.60	
MW-6		15.35		23.40	
MW-4		15.45		28.85	
MW-7		15.15		28.50	
MW-5		14.31		26.65	
MW-8		15.35		27.95	
MW-10	Pulled well	out	for	construction	
RW-1		14.45		22.90	
RW-2		15.05		28.10	
RW-3		14.95		17.00	

DTW: Depth to water

DTP: Depth to product

PT: Product thickness

TD: Total depth

Notes: Include any odors, observations, and/or well condition/damage here.

Field Gauging Sheet - UI Power Plant

Fuel Oil release Area

Equipment:

Oil/Water Interface Probe
 Latex gloves
 Alconox or other phosphate-free detergent
 De-ionized Water

General:

Gauge the wells at the Power Plant in the following order:
 MW-9, MW-10, MW-4, MW-8, MW-3, MW-7, MW-5, MW-6, MW-2, RW-1, RW-2, RW-3

Procedure for gauging:

Put on a pair of clean latex/nitrile gloves, and open the well.
 Using an interface probe, measure depth to water and/or free product from the reference point on the PVC pipe and record in the table below.
 Measure the total depth of the well from the reference point and record.
 Close well.
 Decontaminate interface probe with Alconox/tap water solution or Simple Green and rinse with de-ionized water.

Date: 5-8-09

Weather Conditions:

Iowa River Stage:

Well	DTP	DTW	PT	TD	Notes
MW-3		12.87		29.00	
MW-2		12.85		21.80	
MW-6		11.2		26.55	
MW-4		12.47	28.75	28.75	
MW-7		12.59		28.05	
MW-5		12.30		28.45	
MW-8		13.00		29.00	
MW-10	Pulled	well	for	construction	
RW-1		12.30		22.92	
RW-2		12.65		23.15	
RW-3		12.58		26.89	

DTW: Depth to water

DTP: Depth to product

PT: Product thickness

TD: Total depth

Notes: Include any odors, observations, and/or well condition/damage here.

**Field Gauging Sheet - UI Power Plant
Fuel Oil release Area**

Equipment:

Oil/Water Interface Probe

Latex gloves

Alconox or other phosphate-free detergent

De-ionized Water

General:

Gauge the wells at the Power Plant in the following order:

MW-9, MW-10, MW-4, MW-8, MW-3, MW-7, MW-5, MW-6, MW-2, RW-1, RW-2, RW-3

Procedure for gauging:

Put on a pair of clean latex/nitrile gloves, and open the well.

Using an interface probe, measure depth to water and/or free product from the reference point on the PVC pipe and record in the table below.

Measure the total depth of the well from the reference point and record.

Close well.

Decontaminate interface probe with Alconox/tap water solution or Simple Green and rinse with de-ionized water.

Date: 6-11-09

Weather Conditions: cloudy 69°

Iowa River Stage: _____

Well	DTP	DTW	PT	TD	Notes
MW-3		13.40		24.00	
MW-2		13.30		21.90	
MW-6		13.00		29.00	
MW-4		12.05		28.70	
MW-7		12.75		28.45	
MW-5		11.80		28.60	
MW-8		13.10		27.90	
MW-10					
RW-1		12.70		32.80	
RW-2		13.10		28.10	
RW-3		13.00		26.80	

DTW: Depth to water

DTP: Depth to product

PT: Product thickness

TD: Total depth

Notes: Include any odors, observations, and/or well condition/damage here.

Field Gauging Sheet - UI Power Plant

Fuel Oil release Area

Equipment:

Oil/Water Interface Probe
 Latex gloves
 Alconox or other phosphate-free detergent
 De-ionized Water

General:

Gauge the wells at the Power Plant in the following order:

MW-9, MW-10, MW-4, MW-8, MW-3, MW-7, MW-5, MW-6, MW-2, RW-1, RW-2, RW-3

Procedure for gauging:

Put on a pair of clean latex/nitrile gloves, and open the well.

Using an interface probe, measure depth to water and/or free product from the reference point on the PVC pipe and record in the table below.

Measure the total depth of the well from the reference point and record.

Close well.

Decontaminate interface probe with Alconox/tap water solution or Simple Green and rinse with de-ionized water.

Date:

7-16-09

Weather Conditions:

cloudy 74°

Iowa River Stage:

Well	DTP	DTW	PT	TD	Notes
MW-3		13.30		24.05	
MW-2		13.20		22.00	
MW-6		13.20		29.00	
MW-4		12.92		29	
MW-7		12.70		28.50	
MW-5		11.60		36.65	
MW-8		12.95		28.00	
MW-10					
RW-1		12.60		32.90	
RW-2		12.45		28.10	
RW-3		12.90		26.90	

DTW: Depth to water

DTP: Depth to product

PT: Product thickness

TD: Total depth

Notes: Include any odors, observations, and/or well condition/damage here.

**Field Gauging Sheet - UI Power Plant
Fuel Oil release Area**

Equipment:

Oil/Water Interface Probe

Latex gloves

Alconox or other phosphate-free detergent

De-ionized Water

General:

Gauge the wells at the Power Plant in the following order:

MW-9, MW-10, MW-4, MW-8, MW-3, MW-7, MW-5, MW-6, MW-2, RW-1, RW-2, RW-3

Procedure for gauging:

Put on a pair of clean latex/nitrile gloves, and open the well.

Using an interface probe, measure depth to water and/or free product from the reference point on the PVC pipe and record in the table below.

Measure the total depth of the well from the reference point and record.

Close well.

Decontaminate interface probe with Alconox/tap water solution or Simple Green and rinse with de-ionized water.

Date : 8-25-09

Weather Conditions: Sunny 68°

Iowa River Stage: _____

Well	DTP	DTW	PT	TD	Notes
MW-3		13.35		24.10	
MW-2		13.25		22.05	
MW-6		13.30		29.00	
MW-4		12.81		28.61	
MW-7		12.65		28.60	
MW-5		11.45		26.55	
MW-8		12.84		28.00	
MW-10					
RW-1		12.49		32.89	
RW-2		12.90		25.15	
RW-3		12.81		26.80	

DTW: Depth to water

DTP: Depth to product

PT: Product thickness

TD: Total depth

Notes: Include any odors, observations, and/or well condition/damage here.

Field Gauging Sheet - UI Power Plant Fuel Oil release Area

Equipment:

Oil/Water Interface Probe
Latex gloves
Alconox or other phosphate-free detergent
De-ionized Water

General:

Gauge the wells at the Power Plant in the following order:
MW-9, MW-10, MW-4, MW-8, MW-3, MW-7, MW-5, MW-6, MW-2, RW-1, RW-2, RW-3

Procedure for gauging:

Put on a pair of clean latex/nitrile gloves, and open the well.
Using an interface probe, measure depth to water and/or free product from the reference point on the PVC pipe and record in the table below.
Measure the total depth of the well from the reference point and record.
Close well.
Decontaminate interface probe with Alconox/tap water solution or Simple Green and rinse with de-ionized water.

Date: 9-28-09
Weather Conditions: Sunny
Iowa River Stage: 650

Well	DTW	TD	PT	TD	Notes
MW-3	15.73	29.09			
MW-2	15.10	22.00			
MW-6	15.40	29.00			
MW-4	15.13	29.00			
MW-7	14.92	28.50			
MW-5	13.93	26.65			
MW-8	15.22	28.00			
MW-10					
RW-1	19.95	32.96			
RW-2	15.00	28.10			
RW-3	15.00	26.80			

DTW: Depth to water

DTP: Depth to product

PT: Product thickness

TD: Total depth

Notes: Include any odors, observations, and/or well condition/damage here.

**Field Gauging Sheet - UI Power Plant
Fuel Oil release Area**

Equipment:

Oil/Water Interface Probe

Latex gloves

Alconox or other phosphate-free detergent

De-ionized Water

General:

Gauge the wells at the Power Plant in the following order:

MW-9, MW-10, MW-4, MW-8, MW-3, MW-7, MW-5, MW-6, MW-2, RW-1, RW-2, RW-3

Procedure for gauging:

Put on a pair of clean latex/nitrile gloves, and open the well.

Using an interface probe, measure depth to water and/or free product from the reference point on the PVC pipe and record in the table below.

Measure the total depth of the well from the reference point and record.

Close well.

Decontaminate interface probe with Alconox/tap water solution or Simple Green and rinse with de-ionized water.

Date : 10-28-09

Weather Conditions: Cloudy 55°

Iowa River Stage: _____

Well	DTP	DTW	PT	TD	Notes
1 MW-3		15.15		24.10	
2 MW-2		15.00		22.05	
3 MW-6		14.85		29.00	
4 MW-4		13.75		29.00	
5 MW-7		13.55		28.50	
6 MW-5		12.30		26.65	
7 MW-8		14.15		28.00	
MW-10	~				
RW-1		14.35		32.89	
RW-2		14.61		28.10	
RW-3		14.55		26.80	

DTW: Depth to water

DTP: Depth to product

PT: Product thickness

TD: Total depth

Notes: Include any odors, observations, and/or well condition/damage here.

Field Gauging Sheet - UI Power Plant

Fuel Oil release Area

Equipment:
Oil/Water Interface Probe
Latex gloves
Alconox or other phosphate-free detergent
De-ionized Water

General:
Gauge the wells at the Power Plant in the following order:
MW-9, MW-10, MW-4, MW-8, MW-3, MW-7, MW-5, MW-6, MW-2, RW-1, RW-2, RW-3

Procedure for gauging:

Put on a pair of clean latex/nitrile gloves, and open the well.
Using an interface probe, measure depth to water and/or free product from the reference point on the PVC pipe and record in the table below.
Measure the total depth of the well from the reference point and record.
Close well.
Decontaminate interface probe with Alconox/tap water solution or Simple Green and rinse with de-ionized water.

Date: 11-30-09
Weather Conditions: sunny 50°
Iowa River Stage:

Well	DTW	PT	TD	Notes
MW-3	14.50		14.50	
MW-2	14.65		14.65	
MW-6	14.53		14.53	
MW-4	13.20		13.20	
MW-7	13.50		13.50	
MW-5	12.30		12.30	
MW-8	13.90		13.90	
MW-10				
RW-1	14.20		14.20	
RW-2	14.17		14.17	
RW-3	14.20		14.20	

DTW: Depth to water
DTP: Depth to product
PT: Product thickness
TD: Total depth

Notes: Include any odors, observations, and/or well condition/damage here.

**Field Gauging Sheet - UI Power Plant
Fuel Oil release Area**

Equipment:

Oil/Water Interface Probe

Latex gloves

Alconox or other phosphate-free detergent

De-ionized Water

General:

Gauge the wells at the Power Plant in the following order:

MW-9, MW-10, MW-4, MW-8, MW-3, MW-7, MW-5, MW-6, MW-2, RW-1, RW-2, RW-3

Procedure for gauging:

Put on a pair of clean latex/nitrile gloves, and open the well.

Using an interface probe, measure depth to water and/or free product from the reference point on the PVC pipe and record in the table below.

Measure the total depth of the well from the reference point and record.

Close well.

Decontaminate interface probe with Alconox/tap water solution or Simple Green and rinse with de-ionized water.

Date: 1-14-00

Weather Conditions: Cloudy

Iowa River Stage: _____

Well	DTP	DTW	PT TD	TD	Notes
MW-3					Frozen
MW-2					Frozen
MW-6		17.25	29		
MW-4		16.95	28		
MW-7		15.60	26.60		
MW-5		16.70	28.50		
MW-8		16.90	28.90		
MW-10					
RW-1		17.20	26.20		
RW-2		19.35	28.00		
RW-3		17.41	26.30		

DTW: Depth to water

DTP: Depth to product

PT: Product thickness

TD: Total depth

Notes: Include any odors, observations, and/or well condition/damage here.

Field Gauging Sheet - UI Power Plant

Fuel Oil release Area

- Equipment:**
- Oil/Water Interface Probe
 - Latex gloves
 - Alconox or other phosphate-free detergent
 - De-ionized Water

General:

Gauge the wells at the Power Plant in the following order:

MW-9, MW-10, MW-4, MW-8, MW-3, MW-7, MW-5, MW-6, MW-2, RW-1, RW-2, RW-3

Procedure for gauging:

Put on a pair of clean latex/nitrile gloves, and open the well.

Using an interface probe, measure depth to water and/or free product from the reference point on the PVC pipe and record in the table below.

Close well.

Decontaminate interface probe with Alconox/tap water solution or Simple Green and rinse with de-ionized water.

Date: 2-18-10

Weather Conditions: Sunny 70°

Iowa River Stage:

OTW

TD

Well	DTW	PT	TD	Notes
MW-3				Frozen
MW-2				Frozen
MW-6	18.35		29	
MW-4	17.50		29	
MW-7	16.45		26.40	
MW-5	17.35		28.50	
MW-8	17.55		28.70	
MW-10				
RW-1	17.95		26.40	
RW-2	18.25		28.00	
RW-3	18.49		26.30	

DTW: Depth to water

DTP: Depth to product

PT: Product thickness

TD: Total depth

Notes: Include any odors, observations, and/or well condition/damage here.

**Field Gauging Sheet - UI Power Plant
Fuel Oil release Area**

Equipment:

Oil/Water Interface Probe

Latex gloves

Alconox or other phosphate-free detergent

De-ionized Water

General:

Gauge the wells at the Power Plant in the following order:

MW-9, MW-10, MW-4, MW-8, MW-3, MW-7, MW-5, MW-6, MW-2, RW-1, RW-2, RW-3

Procedure for gauging:

Put on a pair of clean latex/nitrile gloves, and open the well.

Using an interface probe, measure depth to water and/or free product from the reference point on the PVC pipe and record in the table below.

Measure the total depth of the well from the reference point and record.

Close well.

Decontaminate interface probe with Alconox/tap water solution or Simple Green and rinse with de-ionized water.

Date : 3-22-10

Weather Conditions: Sunny 40°

Iowa River Stage: _____

Well	DTW	TD	PT	TD	Notes
MW-3	15.40	24.00			
MW-2	15.30	21.60			
MW-6	15.20	29.00			
MW-4	15.30	28.80			
MW-7	15.10	28.50			
MW-5	14.20	26.60			
MW-8	15.40	27.80			
MW-10					
RW-1	14.9	32.9			
RW-2	15.1	28.10			
RW-3	15.1	26.85			

DTW: Depth to water

DTP: Depth to product

PT: Product thickness

TD: Total depth

Notes: Include any odors, observations, and/or well condition/damage here.

Field Gauging Sheet - UI Power Plant
Fuel Oil release Area

- Equipment:**
Oil/Water Interface Probe
Latex gloves
Alconox or other phosphate-free detergent
De-ionized Water

General:
Gauge the wells at the Power Plant in the following order:
MW-9, MW-10, MW-4, MW-8, MW-3, MW-7, MW-5, MW-6, MW-2, RW-1, RW-2, RW-3

Procedure for gauging:
Put on a pair of clean latex/nitrile gloves, and open the well.
Using an interface probe, measure depth to water and/or free product from the reference point on the PVC pipe and record in the table below.
Measure the total depth of the well from the reference point and record.
Close well.
Decontaminate interface probe with Alconox/tap water solution or Simple Green and rinse with de-ionized water.

Date: 4-22-10
Weather Conditions: Sunny 70°
Iowa River Stage:

Well	DTP	DTW	PT	TD	Notes
MW-3		12.5		24.10	
MW-2		12.6		21.60	
MW-6		12.7		28.9	
MW-4		11.3		21.6	
MW-7		12.1		28.5	
MW-5		12.4		28.8	
MW-8		12.5		21.8	
MW-10					
RW-1		12.3		32.9	
RW-2		12.6		38.15	
RW-3		12.4		26.8	

DTW: Depth to water
DTP: Depth to product
PT: Product thickness
TD: Total depth

Notes: Include any odors, observations, and/or well condition/damage here.