MALCOLM PIRNIE

INDEPENDENT ENVIRONMENTAL
ENGINEERS, SCIENTISTS
AND CONSULTANTS

Tables

Table 1
UPCO Monitoring Well Information

Well ID	Latitude	Longitude	ADWR Number	Total Casing Depth (feet bgs)	Screened Interval (feet bgs)	Measuring Point Elevation (feet amsl)	Approximate Depth to Bedrock (feet bgs)
MW-1	112°04'13.76"W	33°42'47.61"N	55-201495	240	190-240	1557.22	100
MW-2	112°04'13.03"W	33°42'53.39"N	55-201494	250	200-250	1567.62	98
MW-3	112°04'20.91"W	33°43'03.49"N	55-204197	271	221-271	1583.59	Not Encountered
MW-4	112°04'01.27"W	33°43'06.49"N	55-204196	300	245-295	1620.34	10
MW-5	112°04'04.97"W	33°42'58.13"N	55-204195	285	230-280	1590.45	185
MW-6	112°04'25.09"W	33°42'50.47"N	55-204194	210	155-205	1548.22	Not Encountered
MW-7	112°04'26.79"W	33°42'42.34"N	55-205001	210	155-205	1541.35	213
MW-8	112°04'11.43"W	33°42'38.66"N	55-205002	235	180-230	1542.18	220
MW-9	112°04'00.37"W	33°42'38.46"N	55-901548	255	200-250	1565.60	50
MW-10	112°04'36.07"W	33°42'47.49"N	55-901549	205	150-200	1536.11	Not Encountered
MW-11	112°04'02.46"W	33°42'54.85"N	55-903736	315	260-310	1603.35	55
MW-12	112°04'13.93"W	33°42'88.09"N	55-903737	480	450-480	1557.46	114
Production Well (PW-1)	112°04'24.00"W	33°42'51.40"N	55-500290	500	420-480	N/A	Unknown

Note:
amsl = above mean sea level
N/A = not available, well not surveyed

Table 2
Private Well Information

Address / Well ID	ADWR Well Registraiton ID	Well Use	Date Installed	Well Depth (Feet)
16 E YEARLING	55-525999	Stock	9/19/1990	160
16 E YEARLING	55-578534	Domestic	1/26/2000	738
18 E YEARLING	NA	Domestic	unknown	unknown
104 E YEARLING	55-537512	Domestic	12/15/1992	200
204 E YEARLING	NA	Domestic	unknown	unknown
218 E YEARLING	55-550038	Domestic	8/17/1995	415
25825 N 1ST PLACE	55-557685	Domestic	7/22/1996	495
25903 N. 2ND ST	NA	Domestic	unknown	unknown
412 E YEARLING	unknown	Domestic	unknown	unknown
520 E YEARLING	NA	Domestic	unknown	unknown
604-616 E YEARLING	NA	Domestic	unknown	unknown

Note:
NA = not available, a corresponding ADWR registry number could not be identified with the current owner or address.

Table 3
UPCO Monitoring Wells Sampled and Analyses Performed

Sample ID	Date Collected	Laboratory ID	Analyses Performed
MW-1	11/13/2006	PPK0399-01	Perchlorate, VOCs
	8/28/2006	PPH0826-02	Perchlorate, VOCs
	5/22/2006	PPE0749-04	Perchlorate
	5/22/2006	PPE0749-03	VOCs
	10/24/2005	POJ0674-02	Perchlorate, Metals, VOCs, Nitrate
	7/18/2005	POG0416-03	Perchlorate, Metals
	7/18/2005	POG0418-01	VOCs, Nitrate
	4/25/2005	POD0769-01	VOCs, Nitrate
	4/25/2005	POD0687-01	Perchlorate, Metals
	1/17/2005	POA0373-01	Perchlorate, Metals, VOCs, Nitrate
	12/9/2004	PNK0360-10	Perchlorate, Metals, VOCs, Nitrate, Chloride, TDS
	11/4/2004	PNK0195-03	Perchlorate, Metals, VOCs, Chloride, TDS
	9/7/2004	PNI0202-01	Perchlorate, Metals, VOCs, Chloride, TDS, Water Quality Parameters
MW-2	11/13/2006	PPK0399-02	Perchlorate, VOCs
	8/28/2006	PPH0826-01	Perchlorate, VOCs
	5/23/2006	PPE0749-08	VOCs
	3/22/2006	PPC0694-03	Perchlorate, Metals, VOCs, Nitrate
	10/24/2005	POJ0674-01	Perchlorate, Metals, VOCs, Nitrate
	1/17/2005	POA0373-02	Perchlorate, Metals, VOCs, Nitrate
	12/9/2004	PNK0360-09	Perchlorate, Metals, VOCs, Nitrate, Chloride, TDS
	11/5/2004	PNK0195-09	Perchlorate, Metals, VOCs, Chloride, TDS
	9/7/2004	PNI0202-02	Perchlorate, Metals, VOCs, Chloride, TDS, Water Quality Parameters
MW-3	11/15/2006	PPK0557-01	Perchlorate (332)
	3/21/2006	PPC0623-01	Perchlorate, Metals, VOCs, Nitrate
	10/26/2005	POJ0731-04	Perchlorate, Metals, VOCs, Nitrate
	7/20/2005	POG0472-02	Perchlorate, Metals, VOCs, Nitrate
	4/26/2005	POD0700-04	Perchlorate, Metals, VOCs, Nitrate

Table 3
UPCO Monitoring Wells Sampled and Analyses Performed

Sample ID	Date Collected	Laboratory ID	Analyses Performed
MW-4	11/15/2006	PPK0557-04	Perchlorate (332)
	8/30/2006	PPH0888-07	Perchlorate, VOCs
	3/23/2006	PPC0694-04	Perchlorate, Metals, VOCs, Nitrate
	10/26/2005	POJ0731-05	Perchlorate, Metals, VOCs, Nitrate
	7/18/2005	POG0432-04	Perchlorate, Metals, VOCs, Nitrate
	4/26/2005	POD0700-03	Perchlorate, Metals, VOCs, Nitrate
	1/18/2005	POA0420-02	Perchlorate, Metals, VOCs, Nitrate
	12/9/2004	PNK0360-04	Perchlorate, Metals, VOCs, Nitrate, Chloride, TDS
	11/5/2004	PNK0195-08	Perchlorate, Metals, VOCs, Chloride, TDS
	9/8/2004	PNI0202-04	Perchlorate, Metals, VOCs, Chloride, TDS, Water Quality Parameters
MW-5	11/14/2006	PPK0447-02	Perchlorate
	8/30/2006	PPH0888-01	Perchlorate, VOCs
	5/23/2006	PPE0749-07	Perchlorate
	3/22/2006	PPC0661-03	Perchlorate, Metals, VOCs, Nitrate
	10/25/2005	POJ0707-04	Perchlorate, Metals, VOCs, Nitrate
	7/18/2005	POG0432-01	Perchlorate, Metals, VOCs, Nitrate
	4/26/2005	POD0792-02	Perchlorate, Metals, VOCs, Nitrate
	1/18/2005	POA0420-03	Perchlorate, Metals, VOCs, Nitrate
	12/8/2004	PNK0360-03	Perchlorate, Metals, VOCs, Nitrate, Chloride, TDS
	11/4/2004	PNK0195-02	Perchlorate, Metals, VOCs, Chloride, TDS
	9/8/2004	PNI0202-05	Perchlorate, Metals, VOCs, Chloride, TDS, Water Quality Parameters
MW-6	11/15/2006	PPK0556-01	Perchlorate
	8/30/2006	PPH0888-08	Perchlorate, VOCs
	5/23/2006	PPE0749-10	Perchlorate
	3/23/2006	PPC0694-08	Perchlorate, Metals, VOCs, Nitrate
	10/26/2005	POJ0723-04	Perchlorate, Metals, VOCs, Nitrate
	7/20/2005	POG0472-01	Perchlorate, Metals, VOCs, Nitrate
	4/27/2005	POD0792-05	Perchlorate, Metals, VOCs, Nitrate
	1/18/2005	POA0420-01	Perchlorate, Metals, VOCs, Nitrate
	12/9/2004	PNK0360-07	Perchlorate, Metals, VOCs, Nitrate, Chloride, TDS
	11/5/2004	PNK0195-04	Perchlorate, Metals, VOCs, Chloride, TDS
	9/8/2004	PNI0202-06	Perchlorate, Metals, VOCs, Chloride, TDS, Water Quality Parameters

Table 3
UPCO Monitoring Wells Sampled and Analyses Performed

Sample ID	Date Collected	Laboratory ID	Analyses Performed
MW-7	11/15/2006	PPK0557-05	Perchlorate (332)
	3/22/2006	PPC0694-01	Perchlorate, Metals, VOCs, Nitrate
	10/25/2005	POJ0723-03	Perchlorate, Metals, VOCs, Nitrate
	7/20/2005	POG0530-02	Perchlorate, Metals, VOCs, Nitrate
	4/26/2005	POD0792-03	Perchlorate, Metals, VOCs, Nitrate
	1/18/2005	POA0420-04	Perchlorate, Metals, VOCs, Nitrate
	12/8/2004	PNK0360-01	Perchlorate, Metals, VOCs, Nitrate, Chloride, TDS
	11/5/2004	PNK0195-07	Perchlorate, Metals, VOCs, Chloride, TDS, Water Quality Parameters
MW-8	11/15/2006	PPK0557-03	Perchlorate (332)
	8/30/2006	PPH0888-05	Perchlorate, VOCs
	3/22/2006	PPC0694-02	Perchlorate, Metals, VOCs, Nitrate
	10/26/2005	POJ0731-02	Perchlorate, Metals, VOCs, Nitrate
	7/20/2005	POG0472-04	Perchlorate, Metals, VOCs, Nitrate
	4/27/2005	POD0792-06	Perchlorate, Metals, VOCs, Nitrate
	1/19/2005	POA0420-07	Perchlorate, Metals, VOCs, Nitrate
	12/9/2004	PNK0360-12	Perchlorate, Metals, VOCs, Nitrate, Chloride, TDS
	11/5/2004	PNK0195-06	Perchlorate, Metals, VOCs, Chloride, TDS, Water Quality Parameters
MW-9	11/15/2006	PPK0557-06	Perchlorate (332)
	8/31/2006	PPH0933-01	Perchlorate, VOCs,
	3/23/2006	PPC0694-07	Perchlorate, Metals, VOCs, Nitrate
	10/26/2005	POJ0723-05	Perchlorate, Metals, VOCs, Nitrate
	7/20/2005	POG0530-01	Perchlorate, Metals, VOCs, Nitrate
	4/25/2005	POD0700-01	Perchlorate, Metals, VOCs, Nitrate, Chloride, TDS, Water Quality Parameters
	2/10/2005	POB0279-01	Perchlorate, Metals, VOCs, Nitrate
MW-10	11/15/2006	PPK0557-02	Perchlorate (332)
	8/30/2006	PPH0888-04	Perchlorate, VOCs
	3/23/2006	PPC0694-05	Perchlorate, Metals, VOCs, Nitrate
	10/26/2005	POJ0731-03	Perchlorate, Metals, VOCs, Nitrate
	7/20/2005	POG0472-03	Perchlorate, Metals, VOCs, Nitrate
	4/27/2005	POD0815-01	Perchlorate, Metals, VOCs, Nitrate, Chloride, TDS, Water Quality Parameters
	2/10/2005	POB0279-02	Perchlorate, Metals, VOCs, Nitrate

Table 3
UPCO Monitoring Wells Sampled and Analyses Performed

Sample ID	Date Collected	Laboratory ID	Analyses Performed
MW-11	11/14/2006	PPK0448-01	Perchlorate (332)
	11/14/2006	PPK0447-01	Perchlorate
	8/29/2006	PPH0853-01	Perchlorate, VOCs
	5/22/2006	PPE0749-01	Perchlorate
	3/21/2006	PPC0623-03	Perchlorate, Metals, VOCs, Nitrate
MW-12	11/14/2006	PPK0399-03	Perchlorate (332), Perchlorate
	8/28/2006	PPH0826-03	Perchlorate, VOCs
	5/22/2006	PPE0749-02	Perchlorate
	3/21/2006	PPC0623-02	Perchlorate, Metals, VOCs, Nitrate
	11/16/2006	PPK0570-02	Perchlorate, Metals, VOCs,
	11/16/2006	PPK0567-01	Perchlorate (332)
	8/31/2006	PPH0933-02	Perchlorate, Metals, VOCs,
	5/23/2006	PPE0749-11	Perchlorate, Metals, VOCs,
	3/23/2006	PPC0694-09	Perchlorate, Metals, VOCs, Nitrate
PW-1	10/25/2005	POJ0707-03	Perchlorate, Metals, VOCs, Nitrate
	7/18/2005	POG0416-01	Perchlorate, Metals, VOCs, Nitrate, Chloride, TDS, Water Quality Parameters
	4/25/2005	POD0687-03	Perchlorate, Metals, VOCs, Nitrate
	1/17/2005	POA0373-04	Perchlorate, Metals, VOCs, Nitrate
	12/9/2004	PNK0360-08	Perchlorate, Metals, VOCs, Nitrate, Chloride, TDS
	11/4/2004	PNK0195-01	Perchlorate, Metals, VOCs, Chloride, TDS
POE	11/16/2006	PPK0570-01	VOCs (by EPA Method 524), Perchlorate, Metals
	9/1/2006	PPI0007-01	VOCs (by EPA Method 524)
	8/31/2006	PPH0933-03	VOCs, Perchlorate, Metals
	5/23/2006	PPE0749-12	VOCs (by EPA Method 524)
	5/23/2006	PPE0749-13	Perchlorate, Metals
	3/23/2006	PPC0694-10	Perchlorate, Metals,VOCs (by EPA Method 524), Nitrate
	10/25/2005	POJ0707-02	Perchlorate, Metals, VOCs, Nitrate
	7/20/2005	POG0472-07	VOCs (by EPA Method 524)
	7/18/2005	POG0416-02	Perchlorate, Metals, Nitrate, Chloride, TDS, Spec. Cond., Water Quality Parameters
	4/25/2005	POD0687-04	Perchlorate, Metals, VOCs (by EPA Method 524), Nitrate

Notes:
lenium, silver (and calcium, magnesium, potassium, and sodium for PW-1 and POE)
;anic compounds, including 1,4-dioxane
; = total dissolved solids
ond. = specific conductance
ıitrate, sulfate, specific conductance, calcium, magnesium, potassium, sodium

Table 4
Private Wells Sampled and Analyses Performed

Sample ID	Date Collected	Laboratory ID	Analyses Performed
16 E YEARLING	11/14/2006	PPK0434-01	Perchlorate
	5/23/2006	PPE0742-01	Perchlorate
	10/28/2005	POJ0859-01	Perchlorate
	4/29/2005	POD0885-01	Perchlorate
	11/19/2004	PNK0631-01	Perchlorate
18 E YEARLING	11/14/2006	PPK0432-01	Perchlorate
	5/23/2006	PPE0747-01	Perchlorate
	10/27/2005	POJ0861-01	Perchlorate
204 E YEARLING	10/27/2005	POJ0860-01	Perchlorate
218 E YEARLING	11/14/2006	PPK0438-01	Perchlorate
	5/23/2006	PPE0746-01	Perchlorate
	10/28/2005	POJ0858-01	Perchlorate
	11/19/2004	PNK0632-01	Perchlorate
25825 N 1st PLACE	11/14/2006	PPK0436-01	Perchlorate
	5/23/2006	PPE0740-01	Perchlorate
	10/28/2005	POJ0864-01	Perchlorate
	4/28/2005	POD0888-01	Perchlorate
	11/17/2004	PNK0582-01	Perchlorate
25825 N 1st - TAP	4/28/2005	POD0888-02	Perchlorate
	11/17/2004	PNK0582-02	Perchlorate
25903 N 2ND ST	11/14/2006	PPK0437-01	Perchlorate
	5/23/2006	PPE0741-01	Perchlorate
	10/28/2005	POJ0865-01	Perchlorate
	11/19/2004	PNK0633-01	Perchlorate
412 E YEARLING	5/23/2006	PPE0745-01	Perchlorate
	10/28/2005	POJ0866-01	Perchlorate
	4/29/2005	POD0889-01	Perchlorate
	11/19/2004	PNK0630-01	Perchlorate
520 E YEARLING	11/14/2006	PPK0433-01	Perchlorate
	5/23/2006	PPE0743-01	Perchlorate
	4/28/2005	POD0887-01	Perchlorate
	11/17/2004	PNK0581-01	Perchlorate
604-616 E YEARLING	11/14/2006	PPK0435-01	Perchlorate
	5/23/2006	PPE0744-01	Perchlorate
	10/28/2005	POJ0862-01	Perchlorate
	4/29/2005	POD0886-01	Perchlorate
	11/17/2004	PNK0578-01	Perchlorate
104 E YEARLING	11/15/2006	PPK0555-01	Perchlorate

Table 5
UPCO Monitoring Well Perchlorate Results

Sample ID	March 2006	May 2006	August 2006	November 2006
MW-1	49	52	61	64
MW-2	69	75	77	78
MW-3	<2	NS	<2	NS
MW-4	<2	NS	<2	NS
MW-5	16	17	18	18
MW-6	16	17	17	16
MW-7	<2	NS	<2	NS
MW-8	<2	NS	<2	NS
MW-9	<2	NS	<2	NS
MW-10	<2	NS	<2	NS
MW-11	<2	2.1	2	<2
MW-12	<2	<2	<2	<2
PW-1	<2	2.3	<2	<2
POE	2.3	2.1	<2	2.1

Note:

Results reported in ug/L (microgram per liter)
NS = not sampled
< = Analyte was not detected above the listed reporting limit
Analysis by EPA method 314.0.

Table 6
Private Well Perchlorate Results

Sample ID (Address)	May 2006	November 2006
16 E YEARLING	<2	<2
18 E YEARLING	<2	<2
104 E YEARLING	NS	<2
204 E YEARLING	NS	NS
25825 N 1ST PLACE	<2	<2
25825 N 1ST PLACE - Tap	NS	NS
520 E YEARLING	<2	<2
604 and 616 E YEARLING	<2	<2
218 E YEARLING	<2	<2
25903 N. 2ND ST	<2	<2
412 E YEARLING	<2	NS

Note:
Results reported in ug/L (microgram per liter)
NS = not sampled, declined
< = Analyte was not detected above the listed reporting limit
Analysis by EPA method 314.0.

Table 7
UPCO Monitoring Well Perchlorate Comparison Results

Sample ID	Method of Analysis	
	314	332
MW-1	64	NS
MW-2	78	NS
MW-3	NS	0.59
MW-4	NS	0.61
MW-5	18	NS
MW-6	16	NS
MW-7	NS	0.60
MW-8	NS	0.99
MW-9	NS	0.77
MW-10	NS	0.78
MW-11	<2	2.2
MW-12	<2	0.76

Note:

Results reported in ug/L (microgram per liter)
NS = not sampled
< = Analyte was not detected above the listed reporting limit
Results are from November 2006 groundwater sampling event
Analysis by EPA Method 314.0 and 332.0

Table 8
Private Well Perchlorate Comparison Results

Sample ID	Method of Analysis	
(Address)	314	332
16 E YEARLING	<2	0.68
18 E YEARLING	<2	0.94
104 E YEARLING	<2	2.0
204 E YEARLING	NS	NS
25825 N 1ST PLACE	<2	1.0
520 E YEARLING	<2	1.5
604 and 616 E YEARLING	<2	1.1
218 E YEARLING	<2	0.68
25903 N. 2ND ST	<2	0.78
412 E YEARLING	NS	NS

Note:
Results reported in ug/L (microgram per liter)
NS = not sampled, owner declined
< = Analyte was not detected above the listed reporting limit
Results are from November 2006 groundwater sampling event
Analysis by EPA Method 314.0 and 332.0

Table 9
Proposed 2007 UPCO Monitoring Well Sampling and Analysis Schedule

Well ID	Quarter to be Sampled in 2006	Analyses to be Performed		
		Perchlorate	Metals	VOCs
MW-1	1	X	X	X
	2	X		X
	3	X		X
	4	X		X
MW-2	1	X	X	X
	2	X		X
	3	X		X
	4	X		X
MW-3	1	X	X	X
	2			
	3	X		X
	4			
MW-4	1	X	X	X
	2			
	3	X		X
	4			
MW-5	1	X	X	X
	2	X		
	3	X		X
	4	X		
MW-6	1	X	X	X
	2	X		
	3	X		X
	4	X		
MW-7	1	X	X	X
	2			
	3	X		X
	4			
MW-8	1	X	X	X
	2			
	3	X		X
	4			

Table 9
Proposed 2007 UPCO Monitoring Well Sampling and Analysis Schedule

Well ID	Quarter to be Sampled in 2006	Analyses to be Performed		
		Perchlorate	Metals	VOCs
MW-9	1	X	X	X
	2			
	3	X		X
	4			
MW-10	1	X	X	X
	2			
	3	X		X
	4			
MW-11	1	X	X	X
	2	X		
	3	X		X
	4	X		
MW-12	1	X	X	X
	2			
	3	X		X
	4			
PW-1	1	X	X	X
	2	X	X	X
	3	X	X	X
	4	X	X	X
POE	1	X	X	X
	2	X	X	X
	3	X	X	X
	4	X	X	X

Notes:
Metals = arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver (and calcium, magnesium, potassium, and sodium for PW-1 and POE)
VOCs = volatile organic compounds, including 1,4-dioxane