

Parameters	Units	Pre-Pumping		Example Deep Wells			target for Larkin Deep ³	Pumping		Larkin Deep 11/15/07	Larkin Deep 11/21/07 ⁽¹⁾	Larkin Deep 12/06/07	Larkin Deep 12/13/07	Larkin Deep 12/20/07	Larkin Deep 12/27/07	Larkin Deep 1/3/08	Larkin Deep 1/10/08	Larkin Deep 1/17/08
		Larkin Shallow 9/6/07	Larkin Deep 9/6/07	UW28 2007	UW30 2007	UW29 1/8/07		Larkin Deep 10/25/07	Larkin Deep 11/9/07									
Inorganics/Metals																		
Alkalinity	mg/L	340		286	275	330		NA	NA	NA	NA	290	NA	300	NA	NA	NA	NA
Chloride	mg/L	31	14	2.5	4.1	1.4	<5	20	27	27	25	25	25	23	23	23	22	NA
Nitrate	mg/L	3	1.7	ND	ND	0.16	<0.5	NA	NA	NA	NA	1.5	NA	1.3	NA	1.3	NA	NA
Sulfate	mg/L	19	9.5	17.91	16.67	3.9		NA	NA	NA	NA	31	NA	29	NA	NA	NA	NA
TDS	mg/L	400	350	320	314	210		NA	NA	NA	NA	410	NA	450	NA	NA	NA	NA
Potassium	mg/L	0.989		NA	NA	1.185		NA	NA	NA	NA	1.5	NA	1.1 B	NA	NA	NA	NA
Sodium	mg/L	5.7		2.4	3.8	2.1		NA	NA	NA	NA	8.31	NA	5.4	NA	NA	NA	NA
Calcium	mg/L	78.4		65	59	74.4		NA	NA	NA	NA	77	NA	70	NA	NA	NA	NA
Magnesium	mg/L	40.6		35	35	36.1		NA	NA	NA	NA	41	NA	37.8	NA	NA	NA	NA
Iron	mg/L	0.075		0.202	0.196	0.516		<0.013	<0.013	<0.013	<0.013	<0.014	<0.013	<0.013	<0.013	<0.013	<0.013	
Manganese	mg/L	<0.0005		0.024	0.014	0.226		0.0062	0.017	0.018	0.017	0.018	0.02	0.022	0.022	0.021	0.018	
Tritium	TU	5.55		NA	NA	<1		NA	NA	NA	NA	NA	NA	NA	NA	4.72	NA	NA
VOCs																		
Chloromethane	ug/L	0.064	<0.05			ND		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all other VOCs	ug/L	ND	ND			ND		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Parameters (stabilized results)																		
pH	Units	7.38	7.25	NA	7.25	7.19		9.05	8.08	8.36	8.4	6.87	6.99	7.26	6.98	7.15	7.11	7.1
ORP	mV	5	14	NA	-67	-71	<0	-3	6	-26	-57	155	145	81	76	79	84	95
DO	mg/L	8.26	9.78	NA	0.14	0.15	<0.3	2.6	1.07	1.65	-9.73	0.53	0.54	0.4	0.48	0.26	0.83	0.59
Conductivity	mS/cm	0.67	0.555	NA	0.52	0.587		0.64	0.672	0.668	1.056	0.465	0.666	0.669	0.669	0.658	0.666	0.673
Temperature	degrees C	17.27	11.79	NA	10.81	10.48		11.87	10.82	10.55	-42.75	10.4	10.5	10.3	11.0	10.8	10.3	10.8

Drill		Aug-2006	Sept. 2006	May-2007	Sep-2007	9/6/2007	9/25/2007	10/4/2007	10/4/2007	10/16/2007	10/25/2007
Initial Pumping Test		Driller installs packer ^{a)} intended to stop flow from shallow to deep aquifer		Estimate volume moved to lower aquifer (17mg/L) and model volume needed to remove (27 mg/L).		Sample upper and lower aquifer, without removing existing packer.		Notice to residents of resumed pumping of Larkin Pilot Well in Reservoir Park.		Remove packer. Packer found to be installed in a higher shale layer, which unknowingly may have resulted in up to 8 mgal more water flow	
Install new packer in Eau Claire Shale, with recording water level probes and initiate pumping.		Install packer in Eau Claire Shale		Initiate sampling.							

Timeline for Larkin Pilot Well

Drill		Aug-2006	Sept. 2006	May-2007	Sep-2007	9/6/2007	9/25/2007	10/4/2007	10/4/2007	10/16/2007	10/25/2007
Initial Pumping Test		Driller installs packer ^{a)} intended to stop flow from shallow to deep aquifer		Estimate volume moved to lower aquifer (17mg/L) and model volume needed to remove (27 mg/L).		Sample upper and lower aquifer, without removing existing packer.		Notice to residents of resumed pumping of Larkin Pilot Well in Reservoir Park.		Remove packer. Packer found to be installed in a higher shale layer, which unknowingly may have resulted in up to 8 mgal more water flow	
Install new packer in Eau Claire Shale, with recording water level probes and initiate pumping.		Install packer in Eau Claire Shale		Initiate sampling.							

a. Packer is an inflatable rubber plug used as a seal in a well to prevent vertical flow in the well