TABLE 17

Laboratory Results of Groundwater Samples Collected in June 2011 - Inorganic Constituents

PAPA Data Gaps Study

SITE	Sample Type	Electrical Conductivity (µmhos/cm)	Total Dissolved Solids (TDS) (mg/L)	pH (s.u.)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Fluoride (mg/L)	Alkalinity, Total as $CaCO_3$ (mg/L)	Bicarbonate as HCO_3 (mg/L)	Carbonate as CO_3 (mg/L)	Sodium Adsorption Ratio (SAR)
Class I Groundwater Std.		NE	500	6.5 - 8.5	NE	NE	NE	NE	250	250	4	NE	NE	NE	NE
Class II Groundwater Std.		NE	2,000	4.5 - 9.0	NE	NE	NE	NE	100	200	NE	NE	NE	NE	8
Class III Groundwater Std.		NE	5,000	6.5 - 8.5	NE	NE	NE	NE	2000	3000	NE	NE	NE	NE	NE
T-1-RW	N	643	396	9	2	< 1	< 1	151	4	121	0.5	201	171	36	17.2
T-1-SW	N	1070	739	7.9	34	9	1	183	8	300	0.8	258	314	< 4	5.95
T-2-RW	N	500	279	9.3	< 1	< 1	3	127	20	15	2	209	165	44	30.1
T-3-RW	N	1380	767	8.8	4	3	< 1	275	418	2	3.8	76	63	13	22.4
T-3-SW	N	424	287	8.9	1	1	< 1	105	10	3	4.5	195	168	34	16.7
T-4-RW-a	N	422	362	9.5	< 1	3	< 1	96	22	5	7	159	111	45	25.5
T-4-RW-b	N	526	298	9.6	2	2	2	122	38	2	12	177	106	54	35.3
T-4-SW	N	2100	1430	8.2	11	< 1	< 1	479	19	954	1	84	98	< 4	40.8
T-5-RW	N	558	308	9.3	4	2	2	144	12	7	11	246	199	54	34.9
T-6-RW	N	590	357	9.1	< 1	< 1	< 1	138	4	38	1.3	268	208	57	40.1
T-6-SW	N	2770	1760	9.1	14	1	2	606	397	802	1.8	52	44	10	41.8
T-7-RW	N	571	360	9.1	1	< 1	< 1	129	3	36	1.9	254	209	48	27.4
T-7-SW	N	2970	1910	8.7	28	2	2	642	420	902	1.8	38	56	< 4	31.7
T-8-A	N	156	84	6.7	17	3	1	8	2 JM%	10 JM%	0.3	61	75	< 4	0.49
T-8-SW	D	604	336	9.4	1	< 1	< 1	131	34 JM%	104 JM%	6.4	111	86	24	32.6
T-8-SW	N	601	328	9.4	1	< 1	< 1	132	34 JM%	103 JM%	6.6	112	86	25	32
T-9-RW	N	503	315	9.4	3	< 1	< 1	105	12 JM%	114 JM%	2.2	83	56	22	17.6
X-1-A	N	577	345	7.2	78	22	3	9	2	7	0.2	318	388	< 4	0.22
X-1-SW	N	335	185	8.8	2	< 1	< 1	76	1	11	2	163	153	21	16
X-1-SW	D	337	204	8.8	2	< 1	< 1	75	< 1	11	2	162	157	22	15.5
X-2-A	N	297	178	7	39	7	2	10	2	7	0.2	149	182	< 4	0.39
X-2-SW	N	385	209	9.2	< 1	< 1	< 1	85	4	34	0.7	151	111	36	30.5
X-3-A	N	397	219	7.4	45	9	2	27	8 JM%	32 JM%	0.2	166	193	< 4	0.95
X-3-SW	N	755	436	9.1	1	< 1	< 1	169	8 JM%	196 JM%	0.4	153	143	23	38.5
X-4-A	N	791	489	7.2	65	13	2	122	20 JM%	121 JM%	0.9	318	420	< 4	3.6
X-4-RW	N	607	344	8.9	1	< 1	< 1	153	2 JM%	23 JM%	4	293	286	32	34.4
X-4-SW	N	569	310	9.2	1	< 1	< 1	139	3 JM%	23 JM%	3.1	258	232	46	33.9
X-5-A	N	568	369	7.1	60	24	4	34	3	99	0.6	235	280	< 4	0.94
X-5-SW	N	630	378	9.1	< 1	< 1	< 1	144	3	47	1	275	231	56	38.9

Notes:

N = natural sample; D = duplicate sample; mg/L = milligrams per liter; µmhos/cm = micromhos per centimeter; s.u. = standard units; NE = not established.

J = Associated parameter value is an estimated quantity; M% = Laboratory Matrix spike recovery has parameter concentration outside acceptable range.

For any parameters that do not meet this criterion, all same parameters for all samples in the analytical batch are flagged as estimated "JM%";

All groundwater samples were collected by AMEC in June 2011.

Source for Groundwater Standards: Wyoming Department of Environmental Quality, Water Quality Rules and Regulations, Chapter 8 - Quality Standards for Wyoming Groundwaters. Class I - Domestic; Class II - Agriculture; Class III - Livestock.

= Concentration exceeds designated groundwater standard (lowest standard if multiple).

= Alluvium HSU (hydrostratigraphic unit)

= Wasatch HSU