



POWERTECH (USA) INC.

APPENDIX A

Edgemont Water Quality

Table A-1. Edgemont Water Quality – Madison Formation

Summary of Madison well data, Edgemont city water														
		Well ID	BNR/TVA	well 2	well 4	well 5	TVA	well 2	well 4	well 5	Mean	Minimum	Maximum	Std. Dev
		Sample Date	11/6/2002	11/6/2002	11/6/2002	11/6/2002	5/23/2000	5/23/2000	5/23/2000	5/23/2000				
Component		units												
Physical properties														
Conductivity	Cond.	umhos/cm	1154	1671	1785	2140	1300	1700	1800	2300	1731.3	1154.0	2300.0	382.1
Hardness			406	503	528	580	410	460	500	560	493.4	406.0	580.0	64.3
pH	pH		7.81	7.7	7.73	7.66	7.15	7.23	7.26	7.37	7.5	7.2	7.8	0.3
TDS	TDS	mg/L	726	1047	1101	1333	690	980	940	1000	977.1	690.0	1333.0	205.0
TSS	TSS	mg/L												
Turbidity	Turbidity	NTU												
Acidity	Acidity													
Alkalinity	CaCO3		188	181	182	180	170	160	160	170	173.9	160.0	188.0	10.5
Carbonate	CO3	mg/L												
Bicarbonate	HCO3	mg/L	229	221	222	220	210	200	200	210	214.0	200.0	229.0	10.7
Chloride	Cl	mg/L	185	255	300	385	150	250	270	360	269.4	150.0	385.0	79.7
Cyanide	CN	mg/L												
Fluoride	F	mg/L	0.843	1.1	1.07	1.32	0.9	1.05	1.03	1.2	1.1	0.8	1.3	0.2
Nitrogen, Ammonia	NH3	mg/L												
Nitrogen, Nitrate	NO3	mg/L	0.211	0.086	0.063	<.05	0.15	0.16	0.16	<.1	0.1	0.1	0.2	0.1
Nitrogen, Nitrite	NO2	mg/L					<.01	<.01	<.01	<.01		0.0	0.0	
Sulfate	SO4	mg/L	211	295	309	353	210	300	340	390	301.0	210.0	390.0	64.0
Metals														
Aluminum	Al	mg/L												
Arsenic	As	mg/L	0.006	0.01	0.01	0.008					0.0085	0.0	0.0	0.0019
Calcium	Ca	mg/L	115	150	156	175	100	120	130	140	135.8	100.0	175.0	24.4
Iron	Fe	mg/L	0.05	0.091	<.05	2.53	<.05	0.09	<.05	2.6	1.1	0.1	2.6	1.4
Magnesium	Mg	mg/L	28.8	31.1	33.7	34.8	30	32	35	36	32.7	28.8	36.0	2.6
Manganese	Mn	mg/L	0.05	0.05	<.05	<.05	<.03	<.03	<.03	0.05	0.05	0.1	0.1	0.00
Mercury	Hg	mg/L												
Lead	Pb	mg/L												
Molybdenum	Mo	mg/L												
Potassium	K	mg/L	10.6	17.3	17.9	23	12	19	20	24	18.0	10.6	24.0	4.7
Selenium	Se	mg/L												
Sodium	Na	mg/L	86.9	161	174	228	88	150	170	200	157.2	86.9	228.0	49.4

Source: Summary of Madison well data, Edgemont city water <http://www.sdgs.usd.edu/other/db.html>