



**APPENDIX E: ANALYTICAL RESULTS - GROUNDWATER AND CELL POREWATER**

<b>Groundwater (Dissolved)</b>				<b>Location</b>	<b>TWP25</b>	<b>TWP26</b>
<div style="border: 1px solid black; padding: 5px;"> <b>Notes:</b>                      - Field duplicates processed                      - Validation qualifiers not shown, only "&lt;" for NDs                      - Dissolved (filtered) analytes only                 </div>				<b>Year</b>	<b>2010</b>	<b>2010</b>
				<b>Sample Date</b>	<b>10/07/2010</b>	<b>10/04/2010</b>
				<b>Matrix</b>	<b>GW</b>	<b>GW</b>
				<b>Depth Range (ft)</b>	<b>102.36 - 102.36</b>	<b>103.35 - 103.35</b>
				<b>Stratum</b>	<b>Bedrock</b>	<b>Bedrock</b>
				<b>Sample ID</b>	<b>KIF-TWP25-GW-100710-B</b>	<b>KIF-TWP26-GW-100410-A</b>
<b>Group</b>	<b>Analytical Method</b>	<b>Analyte</b>	<b>Units</b>			
Inorganic-Cation/Anion	EPA 350.1	Ammonia, as N	mg/L	0.643	0.418	
Inorganic-Cation/Anion	EPA 300.0	Chloride	mg/L	1.5	2.49	
Inorganic-Cation/Anion	EPA 300.0	Fluoride	mg/L	0.247	1.78	
Inorganic-Cation/Anion	EPA 300.0	Sulfate	mg/L	4.45	19.3	
Physical Properties	SM 2540C	Total Dissolved Solids	mg/L	240	265	
Physical Properties	SM 2540D	Total Suspended Solids	mg/L	37.1	81.3	
Inorganic-Dissolved	SW846 6010 / 6020	Aluminum, Dissolved	mg/L	0.921	1.18	
Inorganic-Dissolved	SW846 6010 / 6020	Antimony, Dissolved	mg/L	0.00035	<0.00033	
Inorganic-Dissolved	SW846 6010 / 6020	Arsenic, Dissolved	mg/L	<0.00033	0.00076	
Inorganic-Dissolved	SW846 6010 / 6020	Barium, Dissolved	mg/L	0.544	0.128	
Inorganic-Dissolved	SW846 6010 / 6020	Beryllium, Dissolved	mg/L	<0.00033	<0.00033	
Inorganic-Dissolved	SW846 6010 / 6020	Boron, Dissolved	mg/L	0.0347	0.235	
Inorganic-Dissolved	SW846 6010 / 6020	Cadmium, Dissolved	mg/L	<0.00033	<0.00033	
Inorganic-Dissolved	SW846 6010 / 6020	Calcium, Dissolved	mg/L	60.8	12.5	
Inorganic-Dissolved	SW846 6010 / 6020	Chromium, Dissolved	mg/L	0.00064	<0.00033	
Inorganic-Dissolved	SW846 6010 / 6020	Cobalt, Dissolved	mg/L	<0.00033	<0.00033	
Inorganic-Dissolved	SW846 6010 / 6020	Copper, Dissolved	mg/L	0.00034	<0.00033	
Inorganic-Dissolved	SW846 6010 / 6020	Iron, Dissolved	mg/L	<0.025	<0.025	
Inorganic-Dissolved	SW846 6010 / 6020	Lead, Dissolved	mg/L	<0.00033	<0.0005	
Inorganic-Dissolved	SW846 6010 / 6020	Magnesium, Dissolved	mg/L	<0.25	<0.25	
Inorganic-Dissolved	SW846 6010 / 6020	Manganese, Dissolved	mg/L	0.00104	<0.00033	
Inorganic-Dissolved	SW846 7470	Mercury, Dissolved	mg/L	<0.0002	<0.00015	
Inorganic-Dissolved	SW846 6010 / 6020	Molybdenum, Dissolved	mg/L	0.00161	0.00605	
Inorganic-Dissolved	SW846 6010 / 6020	Nickel, Dissolved	mg/L	<0.00033	<0.001	
Inorganic-Dissolved	SW846 6010 / 6020	Potassium, Dissolved	mg/L	10.7	5.14	
Inorganic-Dissolved	SW846 6010 / 6020	Selenium, Dissolved	mg/L	<0.00033	<0.00033	
Inorganic-Dissolved	SW846 6010 / 6020	Silver, Dissolved	mg/L	<0.00033	<0.00033	
Inorganic-Dissolved	SW846 6010 / 6020	Sodium, Dissolved	mg/L	65.2	104	
Inorganic-Dissolved	SW846 6010 / 6020	Strontium, Dissolved	mg/L	1.07	0.35	
Inorganic-Dissolved	SW846 6010 / 6020	Thallium, Dissolved	mg/L	<0.0005	<0.0005	
Inorganic-Dissolved	SW846 6010 / 6020	Vanadium, Dissolved	mg/L	0.00263	0.00705	
Inorganic-Dissolved	SW846 6010 / 6020	Zinc, Dissolved	mg/L	<0.0083	<0.0083	
Radionuclides	EPA 901.1.	Actinium-228, Dissolved	pCi/L	<14.2	<13.2	
Radionuclides	EPA 901.1.	Americium-241, Dissolved	pCi/L	<28.7	<11.9	
Radionuclides	EPA 901.1.	Bismuth-214, Dissolved	pCi/L	17.7	19.4	
Radionuclides	EPA 901.1.	Cesium-137, Dissolved	pCi/L	<4.23	<3.03	
Radionuclides	EPA 901.1.	Cobalt-60, Dissolved	pCi/L	<3.85	<3.25	
Radionuclides	EPA 901.1.	Lead-212, Dissolved	pCi/L	<7.37	<7.52	
Radionuclides	EPA 901.1.	Lead-214, Dissolved	pCi/L	<16.7	12.4	
Radionuclides	EPA 901.1.	Potassium-40, Dissolved	pCi/L	<52.8	<43.7	
Radionuclides	EPA 903.1	Radium-226, Dissolved	pCi/L	0.815	0.283	
Radionuclides	EPA 904.0	Radium-228, Dissolved	pCi/L	<1.12	<0.586	
Radionuclides	EPA 901.1.	Thallium-208, Dissolved	pCi/L	<4.57	<3.96	
Radionuclides	HASL300 Th	Thorium-228, Dissolved	pCi/L	<0.0806	<0.0847	
Radionuclides	HASL300 Th	Thorium-230, Dissolved	pCi/L	0.0944	<0.0411	
Radionuclides	HASL300 Th	Thorium-232, Dissolved	pCi/L	<0.0431	<0.041	
Radionuclides	EPA 901.1.	Thorium-234, Dissolved	pCi/L	<218	<128	
Radionuclides	HASL300 U	Uranium-234, Dissolved	pCi/L	0.483	<0.133	
Radionuclides	HASL300 U	Uranium-235, Dissolved	pCi/L	<0.0712	<0.0889	
Radionuclides	HASL300 U	Uranium-238, Dissolved	pCi/L	0.457	<0.133	

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<b>Groundwater (Total)</b>		<b>Location</b>	<b>22</b>	<b>6AR</b>	<b>AD1</b>	<b>AD2</b>	<b>AD3</b>	
<b>Notes:</b> - Field duplicates processed - Validation qualifiers not shown, only "<" for NDs - Total (unfiltered) analytes only		<b>Year</b>	<b>2010</b>	<b>2010</b>	<b>2010</b>	<b>2010</b>	<b>2010</b>	
		<b>Sample Date</b>	09/29/2010	09/28/2010	09/27/2010	09/22/2010	09/23/2010	
		<b>Matrix</b>	GW	GW	GW	GW	GW	
		<b>Depth Range (ft)</b>	34.78 - 34.78	32.81 - 32.81	29.53 - 29.53	18.04 - 18.04	14.76 - 14.76	
		<b>Stratum</b>	Alluvium	Alluvium	Residuum	Residuum	Residuum	
		<b>Sample ID</b>	KIF-22-GW-092910-A	KIF-6AR-GW-092810-A	KIF-AD1-GW-092710-A	KIF-AD2-AW-092210-A	KIF-AD3-GW-092310-A	
<b>Group</b>	<b>Analytical Method</b>	<b>Analyte</b>	<b>Units</b>					
Inorganic-Cation/Anion	EPA 353.2	Nitrate-Nitrite Nitrogen	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Inorganic-Cation/Anion	EPA 351.2	Total Kjeldahl Nitrogen	mg/L	1.27	0.655	<0.1	0.629	<0.1
Physical Properties	SM 5310	Total Inorganic Carbon	mg/L	19.8	72.7	43.8	15.5	76.1
Inorganic-Total	SW846 6010 / 6020	Aluminum, Total	mg/L	0.252	0.18	0.0707	0.0669	<0.05
Inorganic-Total	SW846 6010 / 6020	Antimony, Total	mg/L	<0.00033	<0.00033	<0.00033	<0.00033	<0.00033
Inorganic-Total	SW846 6010 / 6020	Arsenic, Total	mg/L	<0.00033	<0.00033	0.0004	0.00149	0.00048
Inorganic-Total	SW846 6010 / 6020	Barium, Total	mg/L	0.0352	0.0275	0.0515	0.0482	0.0483
Inorganic-Total	SW846 6010 / 6020	Beryllium, Total	mg/L	<0.00033	0.00034	<0.00033	<0.00033	<0.00033
Inorganic-Total	SW846 6010 / 6020	Boron, Total	mg/L	1	0.643	0.128	0.55	1.06
Inorganic-Total	SW846 6010 / 6020	Cadmium, Total	mg/L	<0.00033	0.00212	<0.00033	<0.00033	<0.00033
Inorganic-Total	SW846 6010 / 6020	Calcium, Total	mg/L	38.3	47.5	4.47	65	175
Inorganic-Total	SW846 6010 / 6020	Chromium, Total	mg/L	0.00043	<0.0005	<0.0005	<0.00033	<0.00033
Inorganic-Total	SW846 6010 / 6020	Cobalt, Total	mg/L	0.00172	0.092	<0.00033	0.0061	0.00386
Inorganic-Total	SW846 6010 / 6020	Copper, Total	mg/L	0.00037	<0.00033	<0.00033	<0.00033	<0.00033
Inorganic-Total	SW846 6010 / 6020	Iron, Total	mg/L	0.444	0.384	0.069	1.73	0.0575
Inorganic-Total	SW846 6010 / 6020	Lead, Total	mg/L	<0.00033	<0.00033	<0.00033	0.00033	<0.00033
Inorganic-Total	SW846 6010 / 6020	Magnesium, Total	mg/L	11	13	1.07	10.5	22.4
Inorganic-Total	SW846 6010 / 6020	Manganese, Total	mg/L	1.96	32.2	0.0985	0.964	7.9
Inorganic-Total	SW846 7470	Mercury, Total	mg/L	<0.0002	<0.00015	<0.00015	<0.00015	<0.00015
Inorganic-Total	SW846 6010 / 6020	Molybdenum, Total	mg/L	NA	<0.00033	0.00034	0.00034	0.00043
Inorganic-Total	SW846 6010 / 6020	Nickel, Total	mg/L	0.00135	0.0392	<0.00033	0.00265	0.00152
Inorganic-Total	SW846 6010 / 6020	Potassium, Total	mg/L	2.79	0.906	1.53	5.22	5
Inorganic-Total	SW846 6010 / 6020	Selenium, Total	mg/L	<0.00033	<0.00033	<0.00033	<0.00033	<0.00033
Inorganic-Total	SW846 6010 / 6020	Silver, Total	mg/L	<0.00033	<0.00033	<0.00033	<0.00033	<0.00033
Inorganic-Total	SW846 6010 / 6020	Sodium, Total	mg/L	8.54	6.76	85	15	12.3
Inorganic-Total	SW846 6010 / 6020	Strontium, Total	mg/L	0.511	0.117	0.119	0.654	0.903
Inorganic-Total	SW846 6010 / 6020	Thallium, Total	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	0.0006
Inorganic-Total	SW846 6010 / 6020	Vanadium, Total	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Inorganic-Total	SW846 6010 / 6020	Zinc, Total	mg/L	<0.0083	0.0327	<0.0083	<0.0083	<0.0083
Radionuclides	EPA 901.1.	Actinium-228, Total	pCi/L	NA	NA	<16.5	<17.9	<13.9
Radionuclides	EPA 901.1.	Americium-241, Total	pCi/L	NA	NA	<33.4	<29.9	<16.5
Radionuclides	EPA 901.1.	Bismuth-214, Total	pCi/L	NA	NA	23.7	29.5	38.2
Radionuclides	EPA 901.1.	Cesium-137, Total	pCi/L	NA	NA	<3.75	<3.8	<2.9
Radionuclides	EPA 901.1.	Cobalt-60, Total	pCi/L	NA	NA	<3.45	<4.36	<3.68
Radionuclides	EPA 901.1.	Lead-212, Total	pCi/L	NA	NA	<7.82	<11.5	<7.37
Radionuclides	EPA 901.1.	Lead-214, Total	pCi/L	NA	NA	<29.6	45.9	33.8
Radionuclides	EPA 901.1.	Potassium-40, Total	pCi/L	NA	NA	<44.8	<60	<22.9
Radionuclides	EPA 903.1	Radium-226, Total	pCi/L	NA	NA	<0.788	<0.738	0.941
Radionuclides	EPA 904.0	Radium-228, Total	pCi/L	NA	NA	1.56	0.753	0.75
Radionuclides	EPA 901.1.	Thallium-208, Total	pCi/L	NA	NA	<4.1	<5.78	<3.95
Radionuclides	HASL300 Th	Thorium-228, Total	pCi/L	NA	NA	<0.0626	<0.154	<0.108
Radionuclides	HASL300 Th	Thorium-230, Total	pCi/L	NA	NA	<0.0404	0.107	<0.0667
Radionuclides	HASL300 Th	Thorium-232, Total	pCi/L	NA	NA	<0.0402	<0.0825	<0.0768
Radionuclides	EPA 901.1.	Thorium-234, Total	pCi/L	NA	NA	<257	<274	<175
Radionuclides	HASL300 U	Uranium-234, Total	pCi/L	NA	NA	<0.17	<0.168	0.92
Radionuclides	HASL300 U	Uranium-235, Total	pCi/L	NA	NA	<0.0959	<0.128	<0.0794
Radionuclides	HASL300 U	Uranium-238, Total	pCi/L	NA	NA	<0.124	<0.12	0.397

