

LONG TERM DISSOLUTION TESTING OF MINE WASTE

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APPENDICES

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APPENDIX A

SOLID PHASE CHARACTERIZATION

- Table A1.1. Particle size distribution of waste rock samples as received.
- Table A1.2. Particle size distribution of mine waste samples distributed for predictive tests.
- Table A2.1. Chemical analysis for regulatory parameters for mine waste samples.
- Table A2.2. Chemical analysis for major components in the mine waste samples.
- Table A2.3. Chemical analysis for miscellaneous parameters in the mine waste samples.

Table A1.1. Particle size distribution of waste rock samples as received.

Screen Diameter	Percent Retained			
	RK1 ¹	RK2 ²	RK3 ³	RK4 ⁴
+5 in	NA	NA	NA	45.90
+4 in	10.94	NA	NA	21.85
+3 in	18.12	NA	NA	17.06
+1.5 in	30.36	NA	NA	11.20
+1.05 in	NA	NA	20.03	NA
+1 in	23.83	NA	NA	NA
+0.525 in	NA	NA	15.23	NA
+0.5 in	12.48	NA	NA	NA
+0.371 in	NA	NA	5.32	NA
+3M	NA	NA	4.77	NA
+6M	NA	NA	9.35	NA
+10M	NA	NA	9.80	NA
+20M	NA	NA	13.10	NA
+35M	NA	NA	12.20	NA

NA = Not Analyzed

¹ 4.27% - 0.5 in

² 100% - 6 in/+1 in, estimated visually

³ 10.20% - 35 mesh

⁴ 3.99% - 1.5 in

Table A1.2. Particle size distribution of mine waste samples distributed for predictive tests.

Particle Size			RK1	RK2	RK3	RK4
Diameter (mm)		Mesh				
min	max					
3.360		+6	1.52	8.57	1.55	16.82
1.190	3.360	+16/-6	31.92	44.83	28.65	53.3
0.500	1.190	+35/-16	26.32	18.63	31.47	14.33
0.250	0.500	+60/-35	10.99	7.65	13.46	4.37
0.149	0.250	+100/-60	7.52	6.69	9.85	3.06
0.105	0.149	+140/-100	4.96	4.10	4.66	1.71
0.074	0.105	+200/-140	2.95	3.23	3.24	1.18
0.044	0.074	+325/-200	5.24	3.83	3.45	1.74
	0.044	-325	8.58	2.47	3.67	3.41

Particle Size			TL1	TL2	TL3	TL4	TL5	TL6
Diameter (mm)		Mesh						
min	max							
3.36		-6	0	0	0	0	0	0
1.00	3.36	+18/-6	2.6	0.14	0.006	0.14	1.02	0.59
0.500	1.00	+35/-18	24.2	1.38	0.001	1.08	2.33	0.88
0.250	0.500	+60/-35	21.6	3.22	0.002	3.25	4.51	2.05
0.177	0.250	+80/-60	7.6	2.95	0.012	2.71	3.57	2.46
0.149	0.177	+100/-80	19.5	19.88	5.85	19.8	19.6	16.48
0.053	0.149	+270/-100	11.69	26.65	31.22	23.16	21.10	31.41
0.025	0.053	+500/-270	4.14	14.61	29.90	12.08	12.10	18.31
	0.025	-500	8.68	31.17	38.24	37.66	35.72	27.71

Table A2.1. Chemical analysis for regulatory parameters for mine waste samples.

Solid	concentrations in percent				concentrations in parts per million															
	S _{tot}	SO ₄ as S	S ⁻²	CO ₂	Ag	As	Ba	Be	Cd	Cr	Cu	Hg	Mo	Ni	Pb	Sb	Se	Tl	Zn	
RK1	0.46	0.04	0.42	0.11	0.7	49	194	NA	<0.5	149	69	NA	<1	108	10	10	NA	NA	118	
RK2	0.64	0.01	0.63	0.03	1.6	37	189	NA	<0.5	161	2741	NA	<1	650	<2	<5	NA	NA	103	
RK3	1.63	0.03	1.60	1.41	9.1	49	610	NA	14.7	182	150	NA	11	8	2198	5	NA	NA	5274	
RK4	2.91	0.09	2.82	1.42	<0.5	118	353	NA	<0.5	149	59	NA	<1	93	11	102	NA	NA	115	
TL1	0.96	0.06	0.90	0.87	<0.5	21	244	NA	<0.5	231	127	NA	358	31	45	<5	NA	NA	97	
TL2	1.49	0.04	1.45	0.80	<0.5	37	992	NA	2.2	219	294	NA	112	23	16	<5	NA	NA	285	
TL3	2.19	0.07	2.12	4.06	<0.5	234	126	NA	<0.5	134	66	NA	<1	18	10	<5	NA	NA	58	
TL4	2.30	0.20	2.10	0.25	<0.5	28	475	NA	0.6	151	1248	NA	10	5	149	<5	NA	NA	299	
TL5	5.05	0.20	4.85	0.65	<0.5	31	435	NA	<0.5	151	146	NA	14	41	84	12	NA	NA	124	
TL6	5.81	0.63	5.18	2.01	7.6	372	476	NA	<0.5	123	1958	NA	8	38	176	<5	NA	NA	218	

NA = Not Analyzed

Table A2.2. Chemical analysis for major components in the mine waste samples.

Solid	concentrations in percent											
	Al ₂ O ₃	CaO	Fe ₂ O ₃	K ₂ O	MgO	MnO	Na ₂ O	P ₂ O ₅	SiO ₂	TiO ₂	LOI	Total
RK1	15.20	0.51	6.27	3.24	3.61	0.03	1.19	0.04	60.50	0.73	6.63	97.96
RK2	17.20	7.79	14.52	0.61	7.90	0.15	2.59	0.23	45.73	1.54	0.15	98.42
RK3	12.80	0.28	4.59	5.84	0.53	0.71	0.10	0.17	69.30	0.21	4.01	98.54
RK4	11.10	1.27	5.67	5.46	1.57	0.07	0.06	0.25	66.40	0.55	5.73	98.13
TL1	11.30	2.05	2.87	5.98	1.47	0.07	1.35	0.25	69.80	0.52	2.40	98.06
TL2	9.91	1.66	4.17	4.53	1.11	0.08	0.34	0.21	74.98	0.26	2.70	99.96
TL3	5.28	1.60	21.94	0.95	4.13	0.57	0.19	0.06	56.65	0.24	7.59	99.19
TL4	14.40	0.35	4.12	4.84	0.67	0.04	0.29	0.11	68.80	0.35	4.24	98.21
TL5	13.60	0.33	7.35	6.70	0.78	0.01	1.84	<0.01	62.40	0.29	5.09	98.40
TL6	4.59	14.90	22.30	1.31	4.92	0.27	0.27	0.21	47.60	0.30	2.63	99.30

Table A2.3. Chemical analysis for miscellaneous parameters in the mine waste samples.

Solid	concentrations in parts per million														
	Bi	Co	Ga	La	Li	Nb	Sc	Sn	Sr	Ta	Te	V	W	Y	Zr
RK1	<5	19	<10	8	66	<5	14	<20	53	<5	<25	182	<20	16	83
RK2	<5	77	13	7	17	9	136	<20	262	20	<25	168	<20	14	45
RK3	<5	3	16	13	10	<5	22	<20	112	13	<25	27	<20	8	17
RK4	<5	14	14	9	57	<5	40	<20	63	38	<25	134	<20	16	57
TL1	<5	10	<10	26	42	<5	19	<20	225	<5	<25	60	<20	13	8
TL2	<5	16	11	16	28	<5	22	<20	155	<5	<25	51	<20	15	28
TL3	<5	10	<10	16	18	<5	110	<20	28	104	<25	45	<20	11	18
TL4	<5	10	23	28	11	<5	<10	<20	165	<5	<25	25	<20	18	21
TL5	<5	12	<10	30	23	13	27	<20	521	25	<25	70	<20	18	71
TL6	<5	32	<10	23	10	<5	239	<20	80	110	<25	59	<20	20	17

APPENDIX B

WET-DRY CYCLE TEST

Table B1.1.	Wet-Dry Cycle Test: Summary statistics for weekly and daily temperature and relative humidity readings.
Tables B1.2.-B1.4.	Average weekly temperature and relative humidity readings for the Wet-Dry Cycle Test.
Figure B1.5.	Average weekly temperature and relative humidity versus time for the Wet-Dry Cycle Test.
Tables B1.6.-B1.13.	Temperature and relative humidity data for the Wet-Dry Cycle Test: daily readings.
Figure B1.14.	Daily temperature and relative humidity readings for the Wet-Dry Cycle Test (weeks 0 - 132).
Tables B2.1.-B2.30.	Wet-Dry Cycle Test drainage quality.
Table B2.31.	Identification of anomalous concentrations based on concentration versus time plots for the Wet-Dry Cycle Test (weeks 0 - 132).

Table B1.1. Wet-Dry Cycle Test: Summary statistics for weekly and daily temperature and relative humidity readings.

	Weekly	Daily
Temperature (°C)		
minimum	21.7	19.4
average	25.5	25.3
maximum	30.0	30.0
standard deviation	1.86	1.92
number of cases	132	451
Relative Humidity (%)		
minimum	42.0	30.0
average	52.2	52.3
maximum	67.5	68.0
standard deviation	5.14	5.79
number of cases	129	434

Table B1.2. Average weekly temperature and relative humidity readings for the Wet-Dry Cycle Test.

Week	Month	Day	Year	Temperature (°C)	Relative Humidity (%)
1	5	9	91	24.6	58.0
2	5	16	91	28.1	61.8
3	5	23	91	28.3	59.0
4	5	30	91	27.4	59.8
5	6	6	91	27.6	55.0
6	6	13	91	27.8	56.8
7	6	20	91	28.5	59.5
8	6	27	91	27.8	60.0
9	7	4	91	30.0	.
10	7	11	91	27.8	60.0
11	7	18	91	27.8	61.5
12	7	25	91	28.3	59.0
13	8	1	91	27.8	54.0
14	8	8	91	27.9	53.7
15	8	15	91	28.6	57.0
16	8	22	91	28.1	57.8
17	8	29	91	28.3	64.0
18	9	5	91	28.1	56.0
19	9	12	91	26.7	62.0
20	9	19	91	26.7	50.7
21	9	26	91	27.2	58.5
22	10	3	91	27.2	53.5
23	10	10	91	27.4	49.7
24	10	17	91	27.4	49.3
25	10	24	91	26.5	48.7
26	10	31	91	27.2	50.3
27	11	7	91	27.8	42.0
28	11	14	91	26.4	50.3
29	11	21	91	26.8	51.0
30	11	28	91	26.7	50.0
31	12	5	91	26.7	48.0
32	12	12	91	26.1	42.5
33	12	19	91	25.4	45.5
34	12	26	91	25.7	48.3
35	1	2	92	26.1	43.0
36	1	9	92	25.8	48.3
37	1	16	92	25.0	49.0
38	1	23	92	24.9	52.0
39	1	30	92	25.0	44.0
40	2	6	92	27.2	48.0
41	2	13	92	26.6	48.5
42	2	20	92	26.3	50.5
43	2	27	92	27.1	49.6
44	3	5	92	26.9	51.0
45	3	12	92	25.9	48.7
46	3	19	92	26.7	50.0
47	3	26	92	27.2	49.5
48	4	2	92	26.7	47.0
49	4	9	92	28.3	44.0
50	4	16	92	27.2	47.0
51	4	23	92	27.8	52.0
52	4	30	92	27.2	.
53	5	7	92	26.7	.
54	5	14	92	27.8	52.7
55	5	21	92	27.4	49.8
56	5	28	92	26.1	46.3
57	6	4	92	26.9	52.5
58	6	11	92	26.7	50.0
59	6	18	92	27.5	47.5
60	6	25	92	28.2	44.0

Table B1.3. Average weekly temperature and relative humidity readings for the Wet-Dry Cycle Test.

Week	Month	Day	Year	Temperature (°C)	Relative Humidity (%)
61	7	2	92	26.6	49.0
62	7	9	92	26.3	54.8
63	7	16	92	26.7	52.5
64	7	23	92	26.8	51.8
65	7	30	92	25.5	48.7
66	8	6	92	26.1	48.3
67	8	13	92	25.4	55.5
68	8	20	92	25.7	48.7
69	8	27	92	25.2	53.7
70	9	3	92	25.9	51.3
71	9	10	92	25.3	50.7
72	9	17	92	25.2	53.3
73	9	24	92	25.3	53.0
74	10	1	92	24.6	53.0
75	10	8	92	25.2	52.5
76	10	15	92	25.3	50.3
77	10	22	92	24.8	49.2
78	10	29	92	25.6	51.7
79	11	5	92	25.7	50.7
80	11	12	92	24.2	47.5
81	11	19	92	24.6	52.5
82	11	26	92	24.7	54.0
83	12	3	92	24.3	56.8
84	12	10	92	24.4	47.0
85	12	17	92	24.6	51.0
86	12	24	92	24.3	52.0
87	12	31	92	22.1	52.0
88	1	7	93	24.3	46.0
89	1	14	93	24.7	46.0
90	1	21	93	24.6	47.8
91	1	28	93	24.4	47.0
92	2	4	93	24.4	42.2
93	2	11	93	24.6	46.6
94	2	18	93	24.2	46.3
95	2	25	93	24.7	43.5
96	3	4	93	25.4	46.8
97	3	11	93	24.3	49.6
98	3	18	93	23.1	51.6
99	3	25	93	22.6	51.6
100	4	1	93	23.2	52.5
101	4	8	93	22.9	52.3
102	4	15	93	22.9	52.3
103	4	22	93	22.5	52.8
104	4	29	93	22.4	53.8
105	5	6	93	22.7	52.8
106	5	13	93	22.8	54.8
107	5	20	93	22.4	53.0
108	5	27	93	22.1	54.7
109	6	3	93	23.0	56.8
110	6	10	93	22.5	59.8
111	6	17	93	23.5	60.5
112	6	24	93	23.9	59.8
113	7	1	93	22.7	58.4
114	7	8	93	23.7	62.0
115	7	15	93	24.4	56.8
116	7	22	93	24.4	61.7
117	7	29	93	24.4	67.5
118	8	5	93	24.7	62.5
119	8	12	93	25.1	59.8
120	8	19	93	25.4	58.3

Table B1.4. Average weekly temperature and relative humidity readings for the Wet-Dry Cycle Test.

Week	Month	Day	Year	Temperature (°C)	Relative Humidity (%)
121	8	26	93	26.9	58.0
122	9	2	93	25.1	57.2
123	9	9	93	22.8	54.3
124	9	16	93	22.7	52.8
125	9	23	93	22.9	52.3
126	9	30	93	22.4	48.5
127	10	7	93	21.7	48.7
128	10	14	93	22.1	48.3
129	10	21	93	23.3	47.4
130	10	28	93	22.9	46.3
131	11	4	93	23.6	53.0
132	11	11	93	24.6	48.8

Figure B1.5. Average weekly temperature and relative humidity versus time for the Wet-Dry Cycle Test (weeks 0 - 132).

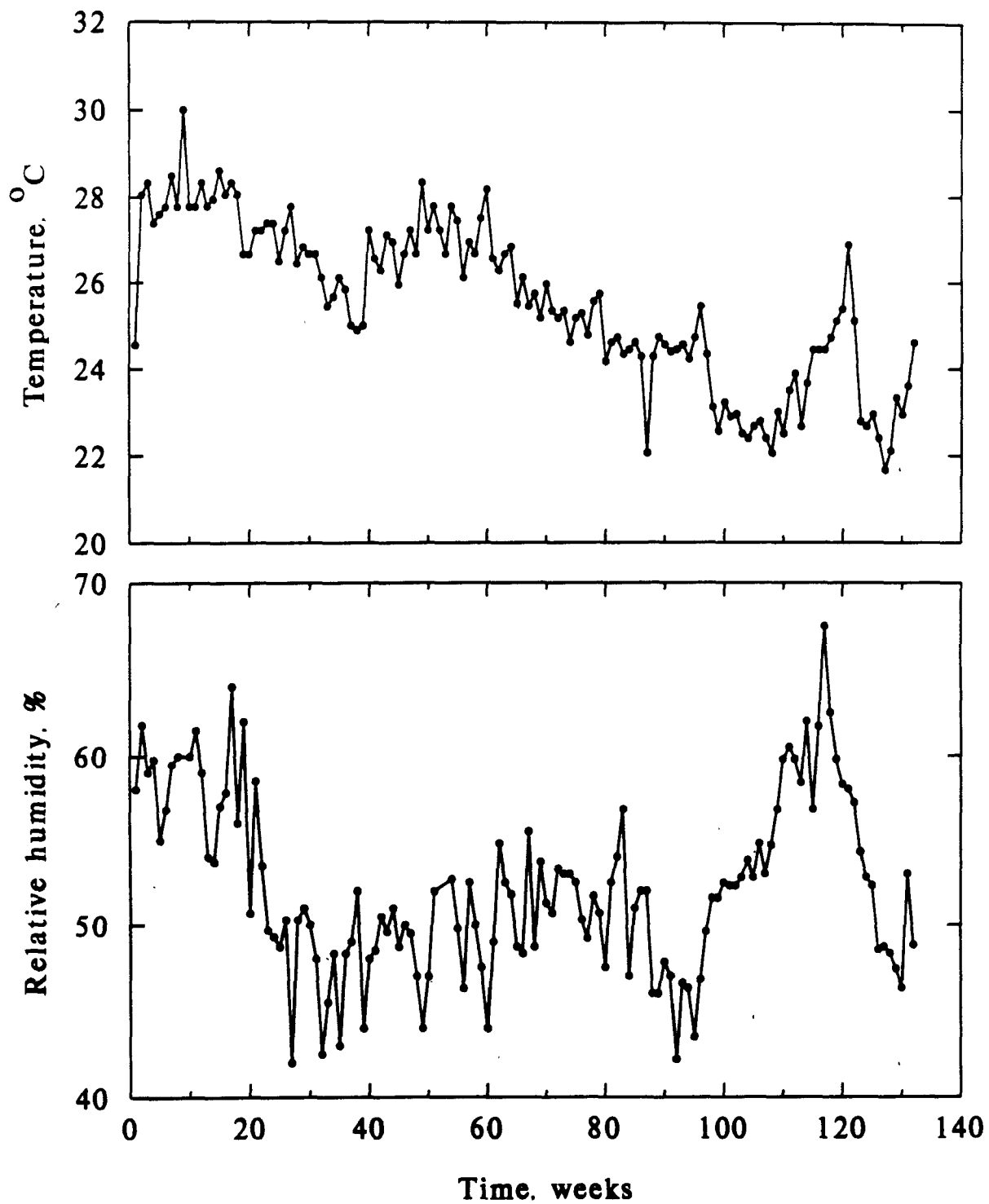


Table B1.6. Temperature and relative humidity data for the Wet-Dry Cycle Test: daily readings.

Month	Day	Year	Temperature (°C)	Relative Humidity (%)
5	3	91	23.9	55.0
5	6	91	24.4	58.0
5	7	91	23.9	55.0
5	8	91	23.9	55.0
5	9	91	26.7	67.0
5	13	91	28.9	63.0
5	14	91	26.7	62.0
5	15	91	28.9	60.0
5	16	91	27.8	62.0
5	17	91	27.2	57.0
5	22	91	28.3	63.0
5	23	91	29.4	57.0
5	24	91	27.8	62.0
5	28	91	27.2	57.0
5	29	91	26.7	62.0
5	30	91	27.8	58.0
6	3	91	27.8	55.0
6	4	91	27.8	55.0
6	5	91	27.2	55.0
6	10	91	28.3	59.0
6	11	91	27.8	55.0
6	12	91	28.3	53.0
6	13	91	26.7	60.0
6	17	91	28.9	56.0
6	18	91	28.9	63.0
6	20	91	27.8	.
6	24	91	27.8	58.0
6	25	91	27.8	62.0
7	3	91	30.0	.
7	8	91	28.9	.
7	9	91	26.7	60.0
7	15	91	28.9	63.0
7	16	91	26.7	60.0
7	17	91	.	.
7	23	91	28.3	59.0
7	29	91	28.9	50.0
7	30	91	26.7	57.0
8	1	91	27.8	55.0
8	5	91	28.3	53.0
8	6	91	28.3	53.0
8	8	91	27.2	55.0
8	13	91	28.9	56.0
8	15	91	28.3	58.0
8	16	91	30.0	57.0
8	20	91	28.3	55.0
8	21	91	26.7	62.0
8	22	91	27.2	57.0
8	27	91	28.9	63.0
8	28	91	27.8	65.0
9	2	91	28.9	58.0
9	4	91	27.2	54.0
9	10	91	26.7	62.0
9	13	91	27.2	54.0
9	16	91	26.1	50.0
9	18	91	26.7	48.0
9	24	91	26.7	62.0
9	26	91	27.8	55.0
9	30	91	28.3	53.0
10	1	91	26.1	54.0
10	8	91	26.1	50.0
10	9	91	28.3	47.0

Table B1.7. Temperature and relative humidity data for the Wet-Dry Cycle Test: daily readings.

Month	Day	Year	Temperature (°C)	Relative Humidity (%)
10	10	91	27.8	52.0
10	14	91	27.2	.
10	15	91	27.2	48.0
10	16	91	27.8	49.0
10	17	91	27.2	51.0
10	22	91	26.7	49.0
10	23	91	26.7	48.0
10	24	91	26.1	49.0
10	25	91	26.7	51.0
10	28	91	26.7	48.0
10	29	91	28.3	52.0
11	4	91	26.7	.
11	5	91	27.8	38.0
11	6	91	27.8	46.0
11	11	91	26.1	50.0
11	12	91	26.7	47.0
11	13	91	26.7	54.0
11	18	91	26.7	51.0
11	19	91	27.2	48.0
11	20	91	26.7	54.0
11	26	91	26.7	43.0
11	27	91	26.7	57.0
12	5	91	26.7	48.0
12	11	91	26.7	48.0
12	12	91	25.6	37.0
12	13	91	26.7	34.0
12	16	91	24.4	52.0
12	17	91	25.6	47.0
12	19	91	25.0	47.0
12	23	91	25.8	45.0
12	24	91	25.0	49.0
12	26	91	26.1	48.0
12	30	91	26.1	43.0
1	3	92	25.6	49.0
1	7	92	25.0	49.0
1	8	92	26.7	45.0
1	9	92	26.1	50.0
1	13	92	25.0	49.0
1	14	92	25.0	49.0
1	16	92	25.0	49.0
1	17	92	24.4	52.0
1	21	92	25.0	50.0
1	22	92	25.0	53.0
1	23	92	25.0	53.0
1	28	92	25.0	44.0
2	3	92	.	.
2	4	92	27.8	49.0
2	5	92	26.7	47.0
2	7	92	26.7	51.0
2	10	92	26.7	48.0
2	11	92	26.7	50.0
2	13	92	26.1	45.0
2	18	92	25.6	.
2	19	92	26.7	54.0
2	20	92	26.7	47.0
2	21	92	27.2	51.0
2	24	92	27.2	51.0
2	25	92	26.7	50.0
2	26	92	26.7	47.0
2	27	92	27.8	49.0
2	28	92	26.7	48.0

Table B1.8. Temperature and relative humidity data for the Wet-Dry Cycle Test: daily readings.

Month	Day	Year	Temperature (°C)	Relative Humidity (%)
3	2	92	27.2	51.0
3	3	92	27.2	51.0
3	5	92	26.7	54.0
3	9	92	.	.
3	10	92	26.1	50.0
3	11	92	25.0	46.0
3	12	92	26.7	50.0
3	17	92	.	.
3	19	92	26.7	50.0
3	23	92	.	.
3	24	92	27.2	48.0
3	25	92	27.2	51.0
3	27	92	26.7	47.0
3	31	92	26.7	47.0
4	7	92	.	.
4	8	92	28.9	39.0
4	9	92	27.8	49.0
4	13	92	.	.
4	14	92	27.2	47.0
4	20	92	.	.
4	21	92	28.3	52.0
4	23	92	27.2	52.0
4	29	92	27.2	.
5	5	92	26.7	.
5	7	92	.	.
5	11	92	27.8	52.0
5	12	92	28.3	62.0
5	13	92	27.8	.
5	14	92	27.2	44.0
5	15	92	26.7	46.0
5	18	92	27.2	48.0
5	19	92	28.3	47.0
5	20	92	27.2	54.0
5	21	92	27.8	54.0
5	26	92	25.6	40.0
5	27	92	26.7	51.0
5	28	92	26.1	48.0
6	1	92	26.7	48.0
6	2	92	27.8	54.0
6	3	92	27.2	54.0
6	4	92	26.1	54.0
6	8	92	27.2	46.0
6	9	92	26.1	50.0
6	10	92	26.7	54.0
6	12	92	27.2	57.0
6	15	92	27.8	39.0
6	16	92	27.2	46.0
6	17	92	27.8	48.0
6	22	92	28.9	42.0
6	23	92	28.9	42.0
6	24	92	26.7	48.0
6	29	92	26.7	48.0
6	30	92	26.7	48.0
7	1	92	26.1	50.0
7	1	92	26.7	50.0
7	6	92	27.2	46.0
7	7	92	26.1	53.0
7	8	92	26.1	57.0
7	9	92	25.6	63.0
7	13	92	26.7	50.0
7	14	92	27.2	52.0
7	15	92	27.2	52.0

Table B1.9. Temperature and relative humidity data for the Wet-Dry Cycle Test: daily readings.

Month	Day	Year	Temperature (°C)	Relative Humidity (%)
7	16	92	25.6	56.0
7	20	92	27.8	49.0
7	21	92	26.1	50.0
7	22	92	26.7	51.0
7	23	92	26.7	57.0
7	27	92	26.1	45.0
7	28	92	25.6	53.0
7	29	92	25.6	48.0
7	30	92	23.3	.
8	3	92	25.0	53.0
8	4	92	26.7	48.0
8	5	92	26.7	44.0
8	6	92	26.1	.
8	10	92	25.6	60.0
8	11	92	25.0	58.0
8	12	92	24.4	52.0
8	13	92	26.7	52.0
8	17	92	25.6	53.0
8	18	92	26.1	47.0
8	19	92	27.2	46.0
8	20	92	23.9	.
8	24	92	25.6	60.0
8	25	92	25.6	53.0
8	26	92	26.7	48.0
8	27	92	22.8	.
8	31	92	25.0	54.0
9	1	92	26.1	50.0
9	2	92	26.7	50.0
9	4	92	25.0	55.0
9	8	92	26.7	46.0
9	9	92	24.4	51.0
9	11	92	25.6	49.0
9	14	92	25.6	54.0
9	15	92	24.4	51.0
9	16	92	25.0	59.0
9	21	92	26.1	53.0
9	22	92	25.0	53.0
9	23	92	25.0	53.0
9	28	92	24.4	52.0
9	29	92	25.0	53.0
9	30	92	24.4	52.0
10	1	92	24.4	55.0
10	5	92	24.4	52.0
10	6	92	24.4	53.0
10	7	92	26.7	49.0
10	8	92	25.0	56.0
10	9	92	25.0	53.0
10	12	92	24.4	51.0
10	13	92	26.7	48.0
10	14	92	25.0	49.0
10	16	92	25.0	49.0
10	19	92	24.4	48.0
10	20	92	25.0	49.0
10	21	92	25.0	48.0
10	22	92	24.4	52.0
10	26	92	26.7	48.0
10	27	92	25.6	53.0
10	28	92	24.4	54.0
10	30	92	26.7	47.0
11	2	92	27.2	.
11	3	92	24.4	52.0

Table B1.10. Temperature and relative humidity data for the Wet-Dry Cycle Test: daily readings.

Month	Day	Year	Temperature (°C)	Relative Humidity (%)
11	4	92	24.4	53.0
11	9	92	23.9	43.0
11	10	92	24.4	52.0
11	16	92	24.4	53.0
11	17	92	25.0	50.0
11	18	92	24.4	52.0
11	19	92	24.4	55.0
11	23	92	25.0	53.0
11	24	92	24.4	55.0
11	30	92	25.0	53.0
12	1	92	24.4	58.0
12	2	92	23.9	58.0
12	3	92	23.9	58.0
12	4	92	23.9	45.0
12	7	92	23.3	38.0
12	8	92	25.6	50.0
12	9	92	25.0	49.0
12	10	92	25.0	53.0
12	11	92	25.6	49.0
12	15	92	23.9	53.0
12	16	92	25.0	50.0
12	17	92	23.9	52.0
12	18	92	23.3	54.0
12	21	92	25.6	47.0
12	22	92	23.9	55.0
12	29	92	19.4	57.0
12	30	92	22.2	53.0
12	31	92	24.4	46.0
1	4	93	23.9	37.0
1	5	93	23.9	52.0
1	6	93	25.0	49.0
1	8	93	24.4	49.0
1	11	93	25.0	43.0
1	12	93	24.4	43.0
1	14	93	25.0	49.0
1	15	93	24.4	49.0
1	18	93	25.6	47.0
1	19	93	23.9	48.0
1	20	93	23.3	48.0
1	21	93	25.6	47.0
1	22	93	24.7	52.0
1	25	93	23.3	47.0
1	26	93	25.0	40.0
1	27	93	.	.
1	28	93	24.4	49.0
1	29	93	24.4	33.0
2	1	93	23.9	48.0
2	2	93	25.0	43.0
2	3	93	25.0	42.0
2	4	93	23.9	45.0
2	5	93	25.6	47.0
2	8	93	24.4	46.0
2	9	93	24.4	46.0
2	10	93	23.9	48.0
2	11	93	24.4	46.0
2	12	93	24.4	46.0
2	15	93	25.0	.
2	16	93	23.3	45.0
2	17	93	23.9	48.0
2	18	93	24.4	46.0
2	19	93	24.4	46.0

Table B1.11. Temperature and relative humidity data for the Wet-Dry Cycle Test: daily readings.

Month	Day	Year	Temperature (°C)	Relative Humidity (%)
2	22	93	26.1	30.0
2	23	93	23.3	51.0
2	25	93	25.0	47.0
2	26	93	26.1	44.0
3	2	93	25.6	47.0
3	3	93	24.4	49.0
3	4	93	25.6	47.0
3	5	93	23.9	52.0
3	8	93	25.6	47.0
3	9	93	23.3	55.0
3	10	93	24.4	48.0
3	11	93	24.4	46.0
3	12	93	23.3	51.0
3	15	93	22.2	54.0
3	16	93	22.8	54.0
3	17	93	23.3	51.0
3	18	93	23.9	48.0
3	19	93	23.3	47.0
3	22	93	22.8	53.0
3	23	93	21.7	56.0
3	24	93	22.8	49.0
3	25	93	22.2	53.0
3	26	93	26.1	51.0
3	29	93	22.8	54.0
3	30	93	23.3	51.0
3	31	93	23.9	52.0
4	1	93	22.8	54.0
4	2	93	22.2	.
4	5	93	22.8	54.0
4	6	93	22.8	53.0
4	7	93	23.3	52.0
4	8	93	23.3	50.0
4	9	93	23.9	48.0
4	12	93	22.8	54.0
4	13	93	21.7	56.0
4	14	93	23.9	51.0
4	16	93	22.8	54.0
4	19	93	22.2	53.0
4	20	93	22.8	50.0
4	21	93	22.2	54.0
4	23	93	22.2	53.0
4	26	93	22.2	53.0
4	27	93	22.2	55.0
4	29	93	22.8	54.0
4	30	93	22.2	53.0
5	3	93	22.2	53.0
5	4	93	22.8	54.0
5	5	93	23.3	51.0
5	7	93	22.8	53.0
5	10	93	22.8	60.0
5	11	93	22.8	53.0
5	12	93	22.8	53.0
5	17	93	22.2	53.0
5	18	93	22.2	53.0
5	19	93	22.2	53.0
5	20	93	22.8	53.0
5	24	93	21.7	54.0
5	25	93	22.2	57.0
5	26	93	22.2	53.0
5	28	93	24.4	.
5	31	93	23.3	56.0

Table B1.12. Temperature and relative humidity data for the Wet-Dry Cycle Test: daily readings.

Month	Day	Year	Temperature (°C)	Relative Humidity (%)
6	1	93	22.8	57.0
6	2	93	22.2	57.0
6	3	93	22.2	57.0
6	7	93	22.8	57.0
6	8	93	21.7	58.0
6	9	93	22.8	62.0
6	10	93	22.8	62.0
6	14	93	24.4	64.0
6	15	93	23.3	58.0
6	16	93	23.3	58.0
6	17	93	22.8	62.0
6	18	93	23.3	58.0
6	21	93	23.3	62.0
6	22	93	24.4	58.0
6	23	93	24.4	61.0
6	25	93	24.4	55.0
6	28	93	22.2	57.0
6	29	93	22.2	61.0
6	30	93	22.2	57.0
7	1	93	23.3	62.0
7	2	93	23.3	62.0
7	5	93	24.4	63.0
7	6	93	23.9	57.0
7	7	93	23.3	62.0
7	8	93	23.3	66.0
7	12	93	23.9	58.0
7	13	93	23.3	58.0
7	14	93	26.1	54.0
7	19	93	23.9	63.0
7	20	93	25.6	59.0
7	21	93	23.9	63.0
7	26	93	23.9	68.0
7	27	93	24.4	67.0
7	28	93	24.4	68.0
7	29	93	25.0	67.0
7	30	93	27.2	58.0
8	2	93	24.4	63.0
8	3	93	23.9	63.0
8	4	93	23.3	66.0
8	6	93	23.3	62.0
8	9	93	24.4	60.0
8	10	93	25.0	63.0
8	11	93	26.1	57.0
8	12	93	26.7	57.0
8	16	93	25.6	60.0
8	17	93	24.4	60.0
8	18	93	26.1	55.0
8	20	93	25.6	63.0
8	23	93	26.7	55.0
8	24	93	26.7	60.0
8	25	93	27.2	58.0
8	26	93	28.3	54.0
8	28	93	27.8	55.0
8	30	93	26.1	60.0
8	31	93	24.4	55.0
9	1	93	23.3	58.0
9	2	93	23.9	58.0
9	7	93	23.3	52.0
9	8	93	21.7	53.0
9	9	93	23.3	58.0
9	13	93	23.9	51.0

Table B1.13. Temperature and relative humidity data for the Wet-Dry Cycle Test: daily readings.

Month	Day	Year	Temperature (°C)	Relative Humidity (%)
9	14	93	21.7	53.0
9	15	93	22.8	50.0
9	16	93	22.2	57.0
9	20	93	23.3	52.0
9	21	93	22.2	53.0
9	22	93	22.8	54.0
9	23	93	23.3	50.0
9	27	93	22.2	49.0
9	28	93	22.8	50.0
9	29	93	22.2	53.0
9	30	93	22.8	54.0
10	5	93	22.2	49.0
10	6	93	22.2	49.0
10	7	93	22.2	53.0
10	8	93	22.8	50.0
10	11	93	22.2	49.0
10	12	93	22.2	53.0
10	13	93	22.2	49.0
10	15	93	22.2	49.0
10	18	93	25.6	41.0
10	19	93	25.0	44.0
10	25	93	23.3	47.0
10	26	93	22.8	46.0
10	27	93	22.8	50.0
10	28	93	23.3	52.0
10	29	93	23.9	55.0
11	1	93	24.4	45.0
11	2	93	24.4	49.0
11	4	93	23.9	55.0
11	5	93	25.0	56.0
11	8	93	22.8	50.0
11	9	93	22.2	53.0
11	10	93	24.4	52.0

Figure B1.14. Daily temperature and relative humidity readings for the Wet-Dry Cycle Test (weeks 0 - 132).

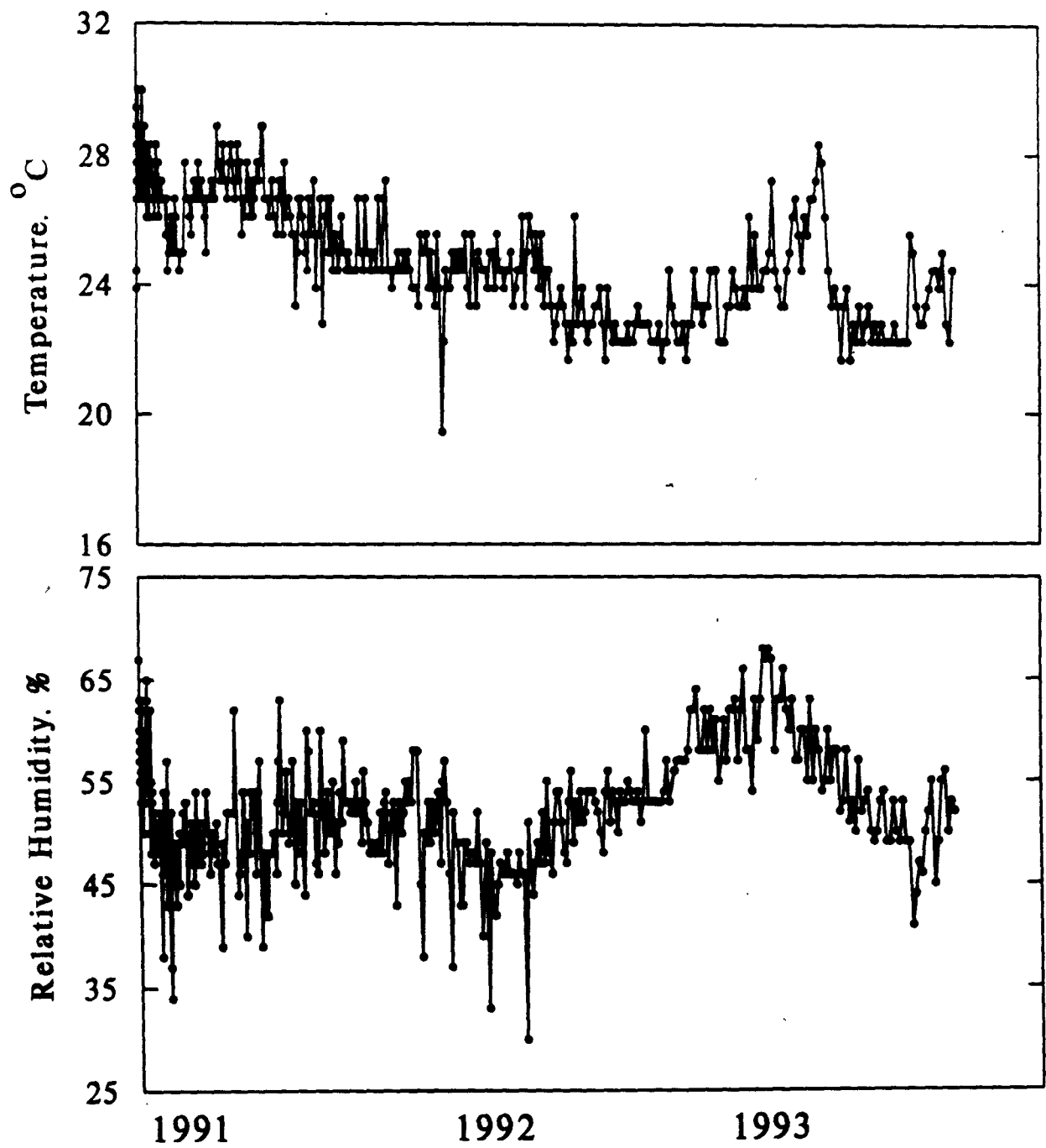


Table B2.1. Wet-Dry Cycle Test drainage quality from Solid RK1, reactor 1.

Week	Volume (mL)	S.C. (μ S/cm)	pH	Alk. (mg/L)	Acy. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	Decant (mL)	Month	Day	Year
0	.	625.	7.75	.	.	288.0	.	.	3000.	.	4	30	91
0	.	90.	.	.	.	.	.	.	.	.	4	30	91
0	.	15.	7.12	.	.	<2.0	0.65	0.65	3022.	.	5	2	91
1	154.8	168.	7.81	29.0	.	34.0	7.25	8.35	3044.	.	5	9	91
2	.	120.	7.69	34.0	.	34.0	8.00	8.30	3078.	.	5	16	91
3	151.4	102.	7.78	26.0	.	.	.	.	.	.	5	22	91
4	153.9	120.	7.62	.	.	8.0	.	.	3122.	.	5	30	91
5	146.8	138.	7.70	34.0	.	.	.	.	.	.	6	6	91
6	144.5	90.	7.54	.	.	11.4	4.25	4.10	3166.	.	6	13	91
7	154.9	78.	7.27	26.0	.	.	.	.	.	.	6	20	91
8	121.9	97.	7.62	.	.	14.4	4.55	4.75	3218.	.	6	27	91
9	136.6	119.	7.52	32.0	.	.	.	.	.	.	7	3	91
10	147.6	72.	7.43	.	.	10.2	3.40	3.35	3265.	.	7	11	91
11	146.3	77.	.	24.0	.	.	.	.	.	.	7	18	91
12	145.6	92.	7.66	.	.	12.7	3.85	3.85	3309.	.	7	25	91
13	141.2	68.	7.29	21.0	.	.	.	.	.	.	7	31	91
14	148.9	68.	7.03	.	.	9.3	3.10	3.20	3361.	.	8	8	91
15	135.8	66.	7.39	16.0	.	11.9	3.55	3.45	3408.	.	8	15	91
16	144.5	65.	7.38	.	.	.	.	.	.	.	8	22	91
17	144.2	60.	7.39	15.0	.	13.4	3.85	3.25	3452.	.	8	29	91
18	134.9	72.	7.88	.	.	.	.	.	.	.	9	5	91
19	153.3	72.	7.35	23.0	.	10.6	2.90	2.75	3504.	.	9	12	91
20	140.3	58.	.	.	.	.	.	.	.	.	9	19	91
21	137.9	70.	7.49	15.0	.	9.5	.	.	3548.	.	9	26	91
22	141.0	80.	7.42	.	.	.	.	.	.	.	10	3	91
23	143.7	62.	7.15	11.0	.	.	.	.	.	.	10	10	91
24	145.3	75.	7.33	.	.	9.6	3.45	3.35	3595.	.	10	17	91
25	.	65.	7.40	13.0	.	.	.	.	.	.	10	24	91
26	.	60.	7.34	.	.	9.7	3.40	4.05	3639.	.	10	31	91
27	142.5	58.	7.29	13.0	.	.	.	.	.	.	11	7	91
28	147.2	65.	6.91	.	.	9.6	3.20	2.50	3661.	.	11	14	91
29	122.4	60.	7.20	16.0	.	.	.	.	.	.	11	21	91
30	145.7	58.	6.88	.	.	8.6	2.30	2.30	3683.	.	11	27	91
31	136.7	65.	7.20	10.0	.	.	.	.	.	.	12	5	91
32	138.3	52.	7.16	.	.	.	.	.	3705.	.	12	12	91
33	150.2	92.	7.22	15.0	.	.	2.35	2.15	.	.	12	19	91
34	139.5	50.	7.15	.	.	6.7	2.40	2.65	3727.	.	12	26	91
35	141.9	52.	7.26	14.0	.	.	.	.	.	.	1	2	92
36	147.0	56.	7.23	6.3	.	.	2.10	2.05	3749.	.	1	9	92
37	147.3	57.	7.23	.	.	.	.	.	.	.	1	16	92
38	144.2	52.	7.23	.	.	8.9	2.50	2.30	3771.	.	1	23	92
39	146.7	50.	7.29	3.0	.	.	.	.	.	.	1	30	92
40	151.9	47.	7.19	.	.	6.5	2.30	2.50	3793.	.	2	6	92
41	145.7	40.	7.24	<3.0	.	.	.	.	.	49.0	2	13	92
42	148.3	50.	7.20	.	.	5.9	4.00	2.80	3815.	29.0	2	20	92
43	150.8	46.	7.18	9.0	.	.	.	.	.	52.0	2	27	92

Table B2.2. Wet-Dry Cycle Test drainage quality from Solid RK1, reactor 1.

Week	Volume (mL)	S.C. (µS/cm)	pH	Alk. (mg/L)	Acv. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	Decant (mL)	Month	Day	Year
44	149.5	38.	7.26	.	.	7.0	4.20	3.40	3837.	35.0	3	5	92
45	143.0	38.	7.14	6.0	.	.	.	.	.	34.0	3	12	92
46	153.1	42.	6.71	.	.	5.1	1.20	1.80	3859.	64.0	3	19	92
47	150.9	43.	6.82	9.0	.	.	.	.	.	57.0	3	26	92
48	149.4	49.	6.91	.	.	5.5	2.00	2.60	3881.	45.0	4	2	92
49	139.5	50.	6.90	12.6	.	.	.	.	.	42.0	4	9	92
50	148.6	55.	7.10	.	.	<2.0	1.40	2.80	55000.	50.0	4	16	92
51	152.2	44.	6.95	12.6	.	.	.	.	.	22.0	4	23	92
52	141.6	42.	7.11	.	.	4.8	0.80	2.60	55011.	12.0	4	30	92
53	144.0	46.	6.64	12.6	.	.	.	.	.	20.0	5	7	92
54	150.4	43.	6.40	.	.	6.7	1.80	4.40	55022.	26.0	5	14	92
55	148.8	43.	7.17	3.0	.	.	.	.	.	25.0	5	21	92
56	146.6	30.	6.56	.	.	4.7	2.50	2.90	55033.	0.0	5	28	92
57	140.1	58.	7.29	18.0	.	.	.	.	.	9.0	6	4	92
58	151.7	41.	7.23	8.0	.	4.4	2.00	1.80	55044.	0.0	6	11	92
59	149.1	40.	7.09	.	.	5.9	2.20	2.30	55056.	17.0	6	18	92
60	156.3	50.	7.08	.	.	.	.	.	.	0.0	6	25	92
61	159.1	40.	7.03	10.0	.	4.8	2.00	1.60	55067.	0.0	7	2	92
62	160.0	36.	6.90	.	.	.	.	.	.	.	7	9	92
63	159.3	31.	6.66	8.0	.	4.0	1.70	1.40	55078.	.	7	16	92
64	159.5	38.	6.88	.	.	.	.	.	.	.	7	23	92
65	154.0	35.	6.93	11.0	.	3.4	1.30	1.35	55089.	.	7	30	92
66	154.5	32.	6.78	.	.	.	.	.	.	.	8	6	92
67	153.2	44.	6.87	19.0	.	6.6	1.35	1.35	55100.	.	8	13	92
68	154.4	35.	6.92	.	.	.	.	.	.	.	8	20	92
69	159.2	47.	6.88	11.0	.	4.8	1.20	1.15	55112.	.	8	27	92
70	161.1	34.	6.97	34.	.	.	.	.	.	.	9	3	92
71	161.0	33.	7.06	13.0	.	6.2	1.25	1.30	55123.	.	9	10	92
72	158.1	33.	7.17	13.0	.	5.0	1.10	1.20	55134.	.	9	17	92
73	159.3	50.	7.18	.	.	.	.	.	.	.	9	24	92
74	159.7	37.	6.87	.	.	5.0	1.00	1.20	55134.	.	10	1	92
75	162.0	29.	7.18	11.0	.	5.0	1.00	1.15	55145.	.	10	8	92
76	160.6	29.	7.29	13.0	.	.	1.05	1.15	55157.	.	10	15	92
77	159.7	30.	7.26	.	.	.	.	.	.	.	10	22	92
78	159.0	28.	7.32	8.0	.	.	1.00	1.15	55168.	.	10	29	92
79	160.8	26.	7.21	.	.	.	1.00	1.00	55168.	47.0	11	5	92
80	148.0	30.	7.27	.	.	.	1.15	2.85	55179.	.	11	12	92
81	165.8	28.	7.00	.	.	.	1.15	2.85	55179.	.	11	18	92
82	164.0	27.	7.11	7.0	.	.	0.75	0.80	55190.	.	11	25	92
83	162.6	24.	6.96	.	.	.	.	.	.	.	12	3	92
84	160.4	27.	6.90	.	.	.	.	.	.	.	12	10	92
85	166.1	28.	6.82	8.1	.	.	1.05	2.15	55201.	71.0	12	17	92
86	139.4	25.	.	.	.	5.3	1.05	2.15	55201.	.	12	24	92
87	.	.	6.95	.	.	3.7	0.80	0.90	55213.	.	12	31	92
88	161.3	23.	6.74	9.7	.	.	.	.	.	.	1	7	93
89	162.6	23.	.	.	.	.	.	.	.	.	1	14	93

Table B2.3. Wet-Dry Cycle Test drainage quality from Solid RK1, reactor 1.

Week	Volume (mL)	S.C. (μ S/cm)	pH	Alk. (mg/L)	Acy. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	Decant (mL)	Month	Day	Year
90	159.7	23.	7.06	.	.	3.0	0.80	0.90	55224.	.	1	21	93
91	163.5	19.	6.94	8.1	.	.	.	.	.	.	1	28	93
92	162.4	25.	7.09	.	.	2.4	0.80	1.00	55235.	.	2	4	93
93	160.9	24.	6.94	7.4	.	.	.	.	.	.	2	11	93
94	159.3	23.	7.02	.	.	2.8	0.75	1.10	55246.	.	2	18	93
95	163.5	23.	7.05	11.4	.	.	.	.	.	.	2	25	93
96	162.1	24.	7.01	.	.	2.5	0.90	1.15	55257.	.	3	4	93
97	166.1	24.	6.84	10.2	.	.	.	.	.	.	3	11	93
98	164.2	18.	6.69	.	.	<2.0	0.75	1.50	55269.	.	3	18	93
99	165.0	21.	6.75	6.8	.	.	.	.	.	.	3	25	93
100	163.4	18.	6.78	.	.	3.1	0.65	0.75	55280.	.	4	1	93
101	163.6	19.	6.90	6.2	.	.	0.75	0.90	55291.	.	4	8	93
102	164.8	19.	6.88	.	.	3.4	.	.	.	.	4	15	93
103	160.2	24.	6.88	6.0	.	.	.	.	.	.	4	22	93
104	153.4	23.	6.65	.	.	3.1	0.85	1.10	55302.	38.0	4	29	93
105	168.2	20.	6.82	6.2	.	.	0.90	1.10	55314.	.	5	6	93
106	168.2	24.	6.65	.	.	4.4	.	.	.	.	5	13	93
107	162.4	21.	6.81	4.0	.	4.7	0.80	1.00	55325.	.	5	20	93
108	163.1	26.	6.90	.	.	.	.	.	.	.	5	27	93
109	166.2	22.	7.02	5.0	.	4.2	0.70	0.80	55336.	.	6	3	93
110	170.9	24.	6.65	.	.	.	.	0.80	.	.	6	10	93
111	160.6	25.	7.05	7.5	.	.	.	.	.	.	6	17	93
112	180.8	.	6.14	.	.	2.6	0.25	0.30	55347.	.	6	23	93
113	167.7	35.	7.08	7.5	.	.	.	.	.	.	7	1	93
114	.	.	.	.	.	.	.	.	.	.	7	8	93
115	161.2	33.	6.82	7.5	.	.	.	.	.	.	7	15	93
116	164.6	33.	6.82	.	.	5.1	0.95	1.10	55359.	.	7	22	93
117	164.7	26.	6.85	7.5	.	.	.	.	.	.	7	29	93
118	163.7	28.	6.88	.	.	8.3	1.00	1.20	55370.	.	8	5	93
119	165.1	26.	6.90	10.0	.	.	.	.	.	.	8	12	93
120	165.4	26.	6.90	.	.	4.9	0.80	0.95	55381.	.	8	19	93
121	164.2	26.	6.79	5.0	.	.	.	.	.	.	8	26	93
122	164.7	25.	6.99	.	.	6.2	0.70	0.80	55392.	.	9	2	93
123	164.3	26.	7.08	6.0	.	.	.	.	.	.	9	9	93
124	165.9	22.	6.80	.	.	4.0	0.60	0.85	55404.	.	9	16	93
125	168.2	21.	6.88	5.0	.	.	.	.	.	.	9	23	93
126	164.5	21.	6.94	.	.	4.2	0.75	1.45	55416.	.	9	30	93
127	166.5	21.	7.02	7.0	.	.	.	.	.	.	10	7	93
128	163.6	29.	6.79	.	.	4.1	0.60	0.75	55427.	.	10	14	93
129	161.6	26.	6.86	7.5	.	.	.	.	.	.	10	20	93
130	169.2	24.	7.17	.	.	3.6	0.70	1.20	55439.	.	10	28	93
131	167.4	22.	6.92	5.0	.	.	.	.	.	.	11	4	93
132	168.1	22.	7.25	.	.	3.7	0.60	0.85	55450.	.	11	10	93

Table B2.4. Wet-Dry Cycle Test drainage quality from Solid RK2, reactor 3.

Week	Volume (mL)	S.C. (μS/cm)	pH	Alk. (mg/L)	Acv. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	Decant (mL)	Month	Day	Year
0	-	262.	7.92	-	-	83.0	13.10	4.52	3002.	-	4	30	91
0	-	102.	-	-	-	-	-	-	-	-	5	1	91
0	-	48.	8.45	-	-	10.0	4.30	1.60	3024.	-	5	2	91
1	169.0	160.	7.85	40.0	-	60.0	11.10	5.20	3046.	-	5	9	91
2	-	132.	7.70	31.0	-	43.0	10.50	3.45	3080.	-	5	16	91
3	162.0	136.	7.64	23.0	-	-	-	-	-	-	5	23	91
4	164.6	158.	7.49	-	-	41.0	-	-	3124.	-	5	30	91
5	167.0	124.	7.45	16.0	-	-	-	-	-	-	6	6	91
6	167.1	105.	7.45	-	-	28.0	7.70	1.75	3168.	-	6	13	91
7	164.1	102.	7.45	9.0	-	-	-	-	-	-	6	20	91
8	165.7	82.	7.43	-	-	18.6	6.05	1.50	3220.	-	6	27	91
9	159.9	97.	7.38	11.0	-	28.0	6.20	1.55	3267.	-	7	3	91
10	166.5	94.	7.26	-	-	-	-	-	-	-	7	11	91
11	171.6	96.	6.85	8.0	-	21.7	-	-	3311.	-	7	18	91
12	166.3	81.	7.37	-	-	-	-	-	-	-	7	25	91
13	166.5	69.	7.23	8.0	-	-	-	-	3311.	-	7	31	91
14	168.6	70.	6.83	-	-	19.9	4.20	1.35	3363.	-	8	8	91
15	166.0	69.	7.15	8.0	-	19.2	4.15	1.40	3410.	-	8	15	91
16	165.3	65.	7.37	-	-	-	-	-	-	-	8	22	91
17	166.8	70.	7.06	8.0	-	20.1	4.10	1.75	3454.	-	8	29	91
18	160.1	68.	7.78	-	-	-	-	-	-	-	9	5	91
19	168.0	68.	7.18	7.0	-	19.3	3.70	1.60	3506.	-	9	12	91
20	168.4	62.	7.02	-	-	-	-	-	-	-	9	19	91
21	164.7	50.	7.11	5.2	-	-	-	-	-	-	9	26	91
22	166.6	55.	7.22	-	-	14.4	3.30	1.60	3550.	-	10	3	91
23	163.1	50.	7.07	10.0	-	13.8	2.90	1.40	3597.	-	10	10	91
24	169.3	50.	6.85	-	-	-	-	-	-	-	10	17	91
25	168.5	45.	6.88	5.2	-	9.1	2.35	0.95	3640.	-	10	24	91
26	-	44.	6.86	-	-	-	-	-	-	-	10	31	91
27	168.0	37.	6.82	5.2	-	10.9	2.35	1.15	3662.	-	11	7	91
28	161.2	42.	6.82	-	-	-	-	-	-	-	11	14	91
29	168.9	50.	6.95	6.3	-	7.6	2.05	1.10	3684.	-	11	21	91
30	167.3	34.	6.91	-	-	-	-	-	-	-	11	27	91
31	169.0	35.	6.98	6.3	-	8.5	1.95	1.20	3706.	-	12	5	91
32	167.7	34.	6.97	-	-	5.8	2.05	1.05	3728.	-	12	12	91
33	160.7	41.	6.96	5.0	-	10.6	2.30	1.05	3750.	-	12	19	91
34	170.6	34.	6.89	-	-	-	-	-	-	-	12	26	91
35	162.1	35.	7.03	5.8	-	8.5	2.15	1.15	3772.	-	1	2	92
36	168.6	42.	6.87	-	-	-	-	-	-	-	1	9	92
37	168.9	36.	6.86	6.3	-	-	-	-	-	-	1	16	92
38	169.9	32.	6.79	-	-	10.2	2.55	1.35	3794.	-	1	23	92
39	167.4	41.	6.88	4.0	-	-	-	-	-	-	1	30	92
40	168.7	37.	6.90	-	-	11.2	3.60	2.00	3816.	-	2	6	92
41	167.9	37.	6.63	<3.0	-	-	-	-	-	-	2	13	92
42	168.0	43.	6.87	-	-	-	-	-	-	-	2	20	92
43	168.1	42.	6.75	6.3	-	-	-	-	-	-	2	27	92

Table B2.5. Wet-Dry Cycle Test drainage quality from Solid RK2, reactor 3.

Week	Volume (mL)	S.C. (μ S/cm)	pH	Alk. (mg/L)	Acy. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	Decant (mL)	Month	Day	Year
44	169.9	42.	6.75	6.0	.	13.1	4.60	2.00	3838.	.	3	5	92
45	170.6	39.	6.68	.	.	.	.	.	.	.	3	12	92
46	170.1	40.	6.60	.	.	12.2	2.60	1.60	3860.	.	3	19	92
47	169.9	44.	6.68	4.0	.	.	.	.	.	.	3	26	92
48	165.3	43.	6.78	.	.	12.4	2.20	1.80	3882.	.	4	2	92
49	171.1	41.	6.72	3.0	.	.	.	.	.	.	4	9	92
50	167.3	47.	6.49	.	.	13.4	2.00	2.40	55001.	.	4	16	92
51	170.8	44.	6.77	9.0	.	.	.	.	.	.	4	23	92
52	170.2	45.	7.03	.	.	11.9	1.40	2.00	55012.	.	4	30	92
53	166.4	34.	6.61	9.0	.	.	.	.	.	.	5	7	92
54	168.9	33.	6.38	.	.	11.4	1.80	2.00	55023.	.	5	14	92
55	157.5	36.	6.79	3.0	.	.	.	.	.	.	5	21	92
56	170.2	36.	6.38	.	.	10.2	3.00	1.30	55034.	.	5	28	92
57	165.8	39.	6.91	4.7	.	.	.	.	.	.	6	4	92
58	168.8	34.	6.72	.	.	8.7	2.70	1.20	55045.	.	6	11	92
59	168.5	37.	6.61	2.5	.	.	.	.	.	.	6	18	92
60	169.0	37.	6.62	.	.	8.6	2.70	1.30	55057.	.	6	25	92
61	168.7	37.	6.74	2.6	.	.	.	.	.	.	7	2	92
62	164.8	33.	6.77	.	.	9.0	3.00	2.00	55068.	.	7	9	92
63	169.9	35.	6.44	2.5	.	.	.	.	.	.	7	16	92
64	169.4	34.	6.64	.	.	7.5	2.70	1.40	55079.	.	7	23	92
65	169.8	30.	6.71	2.6	.	.	.	.	.	.	7	30	92
66	159.2	27.	6.52	.	.	6.0	2.15	1.05	55090.	.	8	6	92
67	168.2	31.	6.65	5.3	.	.	.	.	.	.	8	13	92
68	165.4	32.	6.59	.	.	7.8	2.30	1.30	55101.	.	8	20	92
69	167.9	30.	6.68	5.3	.	.	.	.	.	.	8	27	92
70	164.6	31.	6.71	.	.	6.6	2.20	1.15	55113.	.	9	3	92
71	169.0	31.	6.89	5.3	.	.	.	.	.	.	9	10	92
72	167.9	26.	7.10	.	.	7.9	2.00	0.90	55124.	.	9	17	92
73	165.8	27.	6.92	5.3	.	.	.	.	.	.	9	24	92
74	167.0	29.	6.56	.	.	7.9	1.90	0.80	55135.	.	10	1	92
75	166.3	25.	7.02	5.3	.	.	.	.	.	.	10	8	92
76	166.6	24.	6.98	.	.	7.4	1.70	0.90	55146.	.	10	15	92
77	167.7	25.	6.93	5.3	.	.	.	.	.	.	10	22	92
78	166.4	24.	7.09	.	.	.	.	.	.	.	10	29	92
79	168.6	21.	6.81	5.3	.	.	.	.	.	.	11	5	92
80	169.3	22.	6.87	.	.	.	.	.	.	.	11	12	92
81	166.6	21.	6.74	.	.	.	.	.	.	.	11	18	92
82	169.8	24.	6.10	.	.	.	.	.	.	.	11	25	92
83	169.0	20.	6.37	5.4	.	.	1.60	0.60	55180.	.	12	3	92
84	166.5	22.	6.41	.	.	.	1.55	1.15	55191.	.	12	10	92
85	170.7	23.	6.44	5.4	.	.	.	.	.	.	12	17	92
86	173.3	26.	6.57	.	.	5.4	1.95	3.95	55202.	.	12	24	92
87	171.0	24.	6.47	.	.	.	.	.	.	.	12	31	92
88	167.3	19.	6.31	.	.	4.5	1.60	0.60	55214.	.	1	7	93
89	167.2	17.	6.26	.	3.0	.	.	.	.	.	1	14	93

Table B2.6. Wet-Dry Cycle Test drainage quality from Solid RK2, reactor 3.

Week	Volume (mL)	S.C. (µS/cm)	pH	Alk. (mg/L)	Acv. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	Decant (mL)	Month	Day	Year
90	162.9	19.	6.36	.	.	3.8	1.25	0.50	55225.	.	1	21	93
91	165.4	18.	6.37	5.4	.	.	.	.	.	.	1	28	93
92	167.2	18.	6.39	.	.	3.2	1.30	0.45	55236.	.	2	4	93
93	166.7	19.	6.36	<5.7	.	.	.	.	.	.	2	11	93
94	165.4	19.	6.33	.	.	4.0	1.35	0.75	55247.	.	2	18	93
95	167.8	18.	6.44	4.5	.	.	.	.	.	.	2	25	93
96	166.2	19.	6.46	.	.	4.3	1.40	0.60	55258.	.	3	4	93
97	168.2	18.	6.45	4.5	.	.	.	.	.	.	3	11	93
98	166.1	17.	6.37	.	.	3.5	1.35	0.55	55270.	.	3	18	93
99	164.7	17.	6.41	5.7	.	.	.	.	.	.	3	25	93
100	169.3	17.	6.36	.	.	3.5	1.45	0.60	55281.	.	4	1	93
101	163.0	17.	6.54	2.5	.	3.4	1.35	0.60	55292.	.	4	8	93
102	163.5	16.	6.54	.	.	.	.	.	.	.	4	15	93
103	163.1	20.	6.54	2.5	.	3.6	1.45	0.70	55303.	.	4	22	93
104	171.2	18.	6.39	.	.	.	.	.	.	.	4	29	93
105	170.5	18.	6.49	2.5	.	.	.	.	.	.	5	6	93
106	170.7	18.	6.39	.	.	5.4	1.70	0.80	55315.	.	5	13	93
107	168.3	17.	6.52	2.5	.	.	.	.	.	.	5	20	93
108	170.5	18.	6.49	.	.	4.4	1.45	0.55	55326.	.	5	27	93
109	169.5	18.	6.62	2.5	.	.	.	.	.	.	6	3	93
110	171.0	19.	6.48	.	.	4.6	1.50	1.10	55337.	.	6	10	93
111	169.1	18.	6.67	5.0	.	.	.	.	.	.	6	17	93
112	168.1	18.	6.25	.	.	4.8	1.55	0.55	55348.	.	6	23	93
113	169.2	20.	6.72	3.8	.	.	.	.	.	.	7	1	93
114	.	.	.	.	.	.	.	.	.	.	7	8	93
115	168.5	22.	6.62	2.5	.	.	.	.	.	.	7	15	93
116	170.9	20.	6.67	.	.	4.9	1.65	0.55	55360.	.	7	22	93
117	168.9	19.	6.63	5.0	.	.	.	.	.	.	7	29	93
118	167.8	20.	6.61	.	.	4.9	1.55	0.55	55371.	.	8	5	93
119	168.5	22.	6.62	4.0	.	.	.	.	.	.	8	12	93
120	169.1	21.	6.66	.	.	6.2	1.60	0.55	55382.	.	8	19	93
121	168.0	21.	6.52	5.0	.	.	.	.	.	.	8	26	93
122	168.5	22.	6.76	.	.	6.3	1.60	0.55	55393.	.	9	2	93
123	166.9	19.	6.82	4.0	.	.	.	.	.	.	9	9	93
124	169.9	19.	6.54	.	.	5.6	1.45	0.50	55405.	.	9	16	93
125	169.4	19.	6.54	4.0	.	.	.	.	.	.	9	23	93
126	167.2	19.	6.67	.	.	5.6	1.50	0.60	55417.	.	9	30	93
127	169.2	18.	6.61	4.0	.	.	.	.	.	.	10	7	93
128	170.8	20.	6.57	.	.	5.0	1.35	0.50	55428.	.	10	14	93
129	168.7	19.	6.70	2.5	.	.	.	.	.	.	10	20	93
130	164.6	18.	6.71	.	.	4.5	1.35	0.50	55440.	.	10	28	93
131	172.0	19.	6.49	4.0	.	.	.	.	.	.	11	4	93
132	168.3	18.	6.52	.	.	4.7	1.35	0.50	55451.	.	11	10	93

Table B2.7. Wet-Dry Cycle Test drainage quality from Solid RK3, reactor 5.

Week	Volume (mL)	S.C. (μ S/cm)	pH	Alk. (mg/L)	AcY. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	Decant (mL)	Month	Day	Year
0	.	675.	7.18	.	.	310.0	54.20	23.90	3004.	.	4	30	91
0	.	255.	.	.	.	.	.	.	.	.	5	1	91
0	.	33.	7.16	.	.	5.0	1.50	0.60	3026.	.	5	2	91
1	158.3	160.	7.57	29.0	.	50.0	10.10	4.15	3048.	.	5	9	91
2	.	255.	7.30	17.0	.	97.0	24.50	8.60	3082.	.	5	16	91
3	163.3	170.	7.40	11.0	.	.	.	.	.	.	5	23	91
4	162.3	157.	7.52	.	.	39.0	.	.	3126.	.	5	30	91
5	167.1	122.	7.47	21.0	.	.	.	.	.	.	6	6	91
6	164.9	96.	7.13	.	.	24.0	8.30	2.40	3170.	.	6	13	91
7	167.7	92.	7.13	11.0	.	.	.	.	.	.	6	20	91
8	164.8	104.	7.45	.	.	19.2	8.20	2.40	3222.	.	6	27	91
9	166.5	86.	7.39	18.0	.	.	.	.	.	.	7	3	91
10	171.1	135.	7.09	.	.	6.8	2.50	0.60	3269.	.	7	11	91
11	164.8	132.	6.88	11.0	.	.	.	.	.	.	7	18	91
12	166.4	78.	7.37	.	.	23.2	6.20	1.65	3313.	.	7	25	91
13	161.8	77.	7.30	18.0	.	.	.	.	.	.	7	31	91
14	156.0	80.	7.23	.	.	14.8	6.80	1.70	3365.	.	8	8	91
15	167.0	40.	7.11	8.0	.	.	.	.	.	.	8	15	91
16	167.3	78.	7.50	.	.	14.7	6.75	1.75	3412.	.	8	22	91
17	158.0	80.	7.56	10.5	.	.	.	.	.	.	8	29	91
18	155.4	72.	7.46	.	.	12.4	7.90	2.20	3456.	.	9	5	91
19	159.9	67.	7.33	17.0	.	.	.	.	.	.	9	12	91
20	157.7	60.	7.13	.	.	11.9	5.45	1.50	3508.	.	9	19	91
21	159.3	52.	7.37	15.0	.	.	.	.	.	.	9	26	91
22	156.5	59.	7.32	.	.	8.7	4.95	1.50	3552.	.	10	3	91
23	163.2	55.	7.20	13.0	.	.	.	.	.	.	10	10	91
24	159.2	61.	7.35	.	.	10.6	5.90	1.75	3599.	.	10	17	91
25	149.5	60.	7.38	26.0	.	.	.	.	.	.	10	24	91
26	.	46.	7.29	.	.	5.9	4.00	0.90	3641.	.	10	31	91
27	155.2	49.	7.29	17.0	.	.	.	.	.	.	11	7	91
28	158.8	57.	6.99	.	.	6.7	5.50	1.30	3663.	.	11	14	91
29	157.2	52.	7.17	16.0	.	.	.	.	.	.	11	21	91
30	161.5	42.	6.82	.	.	6.0	4.35	1.70	3685.	.	11	27	91
31	156.4	50.	7.12	19.0	.	.	.	.	.	.	12	5	91
32	170.7	11.	7.00	.	.	<2.0	0.85	0.30	3707.	.	12	12	91
33	166.3	58.	7.20	18.0	.	.	.	.	.	.	12	19	91
34	171.8	25.	7.03	.	.	3.8	2.30	0.60	3729.	.	12	26	91
35	171.3	44.	7.06	12.0	.	.	.	.	.	.	1	2	92
36	158.5	58.	7.13	.	.	7.2	4.85	1.35	3751.	.	1	9	92
37	167.8	50.	7.37	16.0	.	.	.	.	.	.	1	16	92
38	172.8	35.	7.12	.	.	4.5	3.10	2.05	3773.	.	1	23	92
39	175.9	6.	7.05	7.0	.	.	.	.	.	.	1	30	92
40	166.3	51.	7.05	.	.	7.8	5.15	1.75	3795.	.	2	6	92
41	165.4	40.	7.20	18.0	.	.	.	.	.	24.0	2	13	92
42	181.8	5.	6.97	.	.	<2.0	2.20	0.40	3817.	.	2	20	92
43	172.3	48.	7.17	12.6	.	.	.	.	.	.	2	27	92

Week	Volume (mL)	S.C. (µS/cm)	pH	Alk. (mg/L)	Acy. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	Decant (mL)	Month	Day	Year
44	168.6	45.	7.30	.	.	5.7	5.40	1.60	3839.	.	3	5	92
45	167.9	36.	7.11	12.6	.	.	.	.	.	.	3	12	92
46	168.1	37.	6.74	.	.	3.7	3.00	1.40	3861.	.	3	19	92
47	169.4	40.	6.73	12.6	.	.	.	.	.	.	3	26	92
48	168.6	36.	6.88	12.6	.	3.9	2.60	2.00	3883.	.	4	2	92
49	170.8	42.	6.82	12.6	.	.	.	.	.	.	4	9	92
50	169.1	44.	7.17	.	.	4.1	2.40	2.20	55002.	.	4	16	92
51	169.9	43.	7.11	12.6	.	4.6	1.60	1.80	55013.	.	4	23	92
52	170.1	43.	7.01	16.0	.	.	.	.	.	.	4	30	92
53	167.4	40.	6.67	.	.	5.0	3.00	2.00	55024.	.	5	7	92
54	166.7	32.	6.33	.	.	.	.	.	.	.	5	14	92
55	162.3	42.	7.08	19.0	.	4.8	3.70	1.30	55035.	.	5	21	92
56	169.6	38.	6.55	.	.	5.3	3.90	1.70	55046.	.	6	28	92
57	165.5	44.	6.88	12.6	.	.	.	.	.	.	6	4	92
58	168.1	43.	6.99	.	.	5.6	3.60	1.50	55058.	.	6	11	92
59	171.2	43.	7.10	7.8	.	.	.	.	.	.	6	18	92
60	169.7	55.	7.07	.	.	4.7	3.30	1.40	55069.	.	7	25	92
61	169.9	45.	7.01	10.0	.	.	.	.	.	.	7	2	92
62	169.7	40.	6.84	.	.	5.9	3.30	1.70	55080.	.	7	9	92
63	171.6	35.	6.72	10.0	.	6.8	2.95	1.50	55091.	.	7	16	92
64	168.9	47.	6.99	.	.	.	.	.	.	.	7	23	92
65	168.4	46.	6.95	11.0	.	9.1	3.20	1.55	55102.	.	8	30	92
66	167.5	41.	6.87	.	.	7.5	2.75	1.35	55114.	.	8	6	92
67	168.6	42.	6.79	11.0	.	8.8	2.55	1.35	55125.	.	8	13	92
68	167.1	43.	6.72	.	.	.	.	.	.	.	8	20	92
69	168.6	50.	6.77	11.0	.	.	.	.	.	.	8	27	92
70	169.5	47.	6.75	.	.	.	.	.	.	.	9	3	92
71	169.8	47.	6.70	11.0	.	8.8	2.55	1.35	55136.	.	9	10	92
72	170.9	38.	6.84	.	.	7.3	2.40	1.30	55147.	.	9	17	92
73	171.7	43.	6.79	13.0	.	7.8	2.20	1.25	55159.	.	9	24	92
74	170.0	43.	6.90	.	.	.	.	.	.	.	10	1	92
75	168.6	40.	6.78	11.0	.	.	.	.	.	.	10	8	92
76	169.1	36.	6.79	.	.	8.8	2.20	1.25	55170.	.	10	15	92
77	168.3	34.	6.80	13.0	.	.	2.60	1.40	55181.	.	10	22	92
78	168.8	41.	6.84	.	.	.	.	.	.	.	10	29	92
79	170.0	33.	6.89	11.0	.	.	1.70	1.05	55192.	.	11	5	92
80	170.4	33.	6.86	.	.	.	.	.	.	.	11	12	92
81	170.3	32.	6.77	.	.	.	1.70	1.15	55170.	.	11	18	92
82	170.6	33.	6.81	.	.	.	.	.	.	.	11	25	92
83	171.9	28.	6.73	9.0	.	.	1.50	0.90	55181.	.	12	3	92
84	170.9	31.	7.01	.	.	.	1.20	1.10	55192.	.	12	10	92
85	172.7	30.	6.84	11.0	.	5.4	1.40	1.00	55203.	.	12	17	92
86	170.8	26.	.	.	.	.	.	.	.	.	12	24	92
87	170.5	28.	6.89	.	.	4.2	1.40	1.00	55215.	.	12	31	92
88	172.3	26.	6.96	.	.	.	.	.	.	.	1	7	93
89	170.5	23.	6.73	9.7	.	.	.	.	.	.	1	14	93

Table B2.9. Wet-Dry Cycle Test drainage quality from Solid RK3, reactor 5.

Week	Volume (mL)	S.C. (μ S/cm)	pH	Alk. (mg/L)	Acy. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	Decant (mL)	Month	Day	Year
90	171.4	26.	6.94	.	.	4.2	1.30	0.95	55226.	.	1	21	93
91	172.5	24.	6.86	10.8	.	.	.	.	.	.	1	28	93
92	171.4	27.	7.10	.	.	3.5	1.35	1.00	55237.	.	2	4	93
93	171.3	32.	6.96	10.2	.	.	.	.	.	.	2	11	93
94	172.3	28.	6.97	.	.	4.5	1.50	1.90	55248.	.	2	18	93
95	171.6	22.	6.84	8.5	.	.	.	.	.	.	2	25	93
96	173.7	27.	6.96	.	.	2.8	1.10	0.95	55259.	.	3	4	93
97	173.0	31.	6.98	11.4	.	.	.	.	.	.	3	11	93
98	174.2	27.	6.77	.	.	3.1	1.25	1.20	55271.	.	3	18	93
99	171.4	27.	6.83	11.4	.	.	.	.	.	.	3	25	93
100	175.0	25.	6.78	.	.	3.7	1.25	1.05	55282.	.	4	1	93
101	172.2	31.	6.76	6.2	.	.	.	.	.	.	4	8	93
102	173.3	29.	6.81	.	.	3.8	1.55	1.40	55293.	.	4	15	93
103	169.1	33.	6.81	8.5	.	.	.	.	.	.	4	22	93
104	174.3	32.	6.59	.	.	4.9	1.40	1.40	55304.	.	4	29	93
105	173.4	31.	6.90	7.5	.	.	.	.	.	.	5	6	93
106	174.3	31.	6.69	.	.	7.1	1.35	1.30	55316.	.	5	13	93
107	170.4	32.	6.72	8.8	.	.	.	.	.	.	5	20	93
108	171.7	32.	7.05	.	.	6.2	1.40	1.40	55327.	.	5	27	93
109	175.5	28.	7.16	10.0	.	.	.	.	.	.	6	3	93
110	174.9	32.	6.82	.	.	5.4	1.25	1.25	55338.	.	6	10	93
111	172.1	32.	7.19	10.0	.	.	.	.	.	.	6	17	93
112	171.6	31.	6.46	.	.	9.4	1.25	1.40	55349.	.	6	23	93
113	171.9	36.	7.17	8.8	.	.	.	.	.	.	7	1	93
114	.	.	.	.	.	.	.	.	.	.	7	8	93
115	172.4	38.	6.99	10.0	.	.	.	.	.	.	7	15	93
116	172.1	36.	6.64	.	.	7.8	1.40	1.75	55361.	.	7	22	93
117	171.3	34.	7.03	10.0	.	.	.	.	.	.	7	29	93
118	172.7	38.	6.94	.	.	9.2	1.40	1.55	55372.	.	8	5	93
119	169.7	39.	6.87	6.0	.	.	.	.	.	.	8	12	93
120	171.0	34.	6.93	.	.	7.1	1.20	1.45	55383.	.	8	19	93
121	170.2	34.	6.82	5.0	.	.	.	.	.	.	8	26	93
122	170.7	33.	6.93	.	.	7.6	1.15	1.45	55394.	.	9	2	93
123	173.8	35.	7.02	5.0	.	.	.	.	.	.	9	9	93
124	172.0	28.	6.80	5.0	.	6.1	0.90	1.20	55406.	.	9	16	93
125	173.7	24.	6.99	5.0	.	.	.	.	.	.	9	23	93
126	169.2	27.	6.76	.	.	4.5	0.95	1.25	55418.	.	9	30	93
127	170.9	25.	6.88	10.0	.	.	.	.	.	.	10	7	93
128	173.4	29.	6.75	.	.	4.9	0.85	1.20	55429.	.	10	14	93
129	171.3	28.	6.65	7.5	.	.	.	.	.	.	10	20	93
130	172.5	28.	7.18	.	.	4.3	0.75	1.10	55441.	.	10	28	93
131	172.8	28.	6.98	14.6	.	.	.	.	.	.	11	4	93
132	169.9	21.	6.79	.	.	24.5	0.60	0.90	55452.	.	11	10	93

Table B2.11. Wet-Dry Cycle Test drainage quality from Solid RK4, reactor 7.

Week	Volume (ml.)	S.C. (μS/cm)	pH	Alk. (mg/L)	Acv. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	Decant (ml.)	Month	Day	Year
44	167.3	190.	7.79	38.0	.	66.0	25.00	11.00	3840.	.	3	5	92
45	162.8	190.	7.52	.	.	.	.	.	.	.	3	12	92
46	168.5	180.	7.18	28.0	.	46.4	18.00	8.20	3862.	.	3	19	92
47	168.0	262.	7.11	28.0	.	.	.	.	.	.	3	26	92
48	164.5	190.	7.12	38.0	.	43.0	17.60	8.60	3884.	.	4	2	92
49	154.3	300.	7.16	38.0	.	.	.	.	.	.	4	9	92
50	158.7	235.	7.71	44.0	.	52.4	19.40	9.60	55003.	.	4	16	92
51	165.3	200.	7.68	22.0	.	46.4	18.20	9.20	55014.	.	4	23	92
52	169.1	225.	7.45	22.0	.	.	.	.	.	.	4	30	92
53	164.8	180.	7.27	38.0	.	92.0	28.60	13.60	55025.	.	5	7	92
54	162.6	250.	6.74	38.0	.	.	.	.	.	.	5	14	92
55	161.6	210.	7.51	26.0	.	76.0	25.90	11.20	55036.	.	5	21	92
56	167.7	238.	7.03	38.0	.	.	.	.	.	.	5	28	92
57	160.5	275.	7.39	38.0	.	68.0	.	11.00	55047.	.	6	4	92
58	162.4	225.	7.39	31.0	.	48.4	20.00	9.40	55059.	.	6	11	92
59	167.8	232.	7.60	26.0	.	.	.	.	.	.	6	18	92
60	164.8	197.	7.60	29.0	.	62.8	22.20	10.50	55070.	.	6	25	92
61	167.1	195.	7.63	21.0	.	54.8	21.40	10.35	55081.	.	7	2	92
62	164.1	205.	7.36	29.0	.	60.8	21.90	9.90	55092.	.	7	9	92
63	166.3	203.	7.46	29.0	.	76.0	23.65	10.70	55103.	.	7	16	92
64	165.7	203.	7.55	29.0	.	74.0	24.30	11.25	55115.	.	7	23	92
65	162.2	198.	7.58	.	.	45.6	14.55	6.50	55126.	.	7	30	92
66	153.2	205.	7.18	.	.	50.0	17.50	8.45	55137.	.	8	6	92
67	170.0	14.	7.38	.	.	47.2	17.70	8.20	55148.	.	8	13	92
68	160.4	240.	7.08	.	.	.	.	.	.	.	8	20	92
69	174.3	.	7.33	21.0	.	74.0	24.30	11.25	55115.	.	8	27	92
70	168.5	250.	7.20	21.0	.	45.6	14.55	6.50	55126.	.	9	3	92
71	167.7	163.	7.20	21.0	.	50.0	17.50	8.45	55137.	37.0	9	10	92
72	166.5	164.	7.59	21.0	.	47.2	17.70	8.20	55148.	.	9	17	92
73	167.1	138.	7.56	29.0	.	.	.	.	.	.	9	24	92
74	166.4	210.	7.47	29.0	.	47.2	17.70	8.20	55148.	.	10	1	92
75	165.9	175.	7.33	29.0	.	50.0	17.50	8.45	55137.	.	10	8	92
76	165.1	185.	7.20	26.0	.	.	15.75	7.55	55160.	.	10	15	92
77	166.1	175.	7.20	26.0	.	.	17.55	8.40	55171.	.	10	22	92
78	164.6	165.	7.13	25.0	.	.	13.90	7.75	55182.	.	10	29	92
79	165.8	158.	7.43	25.0	.	.	12.95	6.25	55193.	.	11	5	92
80	167.0	190.	7.32	22.0	.	38.8	12.55	6.70	55204.	15.0	11	12	92
81	168.5	140.	7.27	.	.	40.4	11.80	5.60	55216.	30.0	11	18	92
82	166.7	150.	7.19	19.0	.	.	.	.	.	.	11	25	92
83	167.8	135.	7.36	19.0	.	.	.	.	.	.	12	3	92
84	167.0	155.	7.64	22.0	.	.	.	.	.	.	12	10	92
85	164.8	127.	7.30	22.0	.	.	.	.	.	.	12	17	92
86	154.0	135.	7.76	.	.	.	.	.	.	15.0	12	24	92
87	161.4	145.	7.45	.	.	.	.	.	.	.	12	31	92
88	161.4	113.	7.62	.	.	.	.	.	.	30.0	1	7	93
89	166.5	98.	7.32	26.0	.	.	.	.	.	.	1	14	93

Table B2.12. Wet-Dry Cycle Test drainage quality from Solid RK4, reactor 7.

Week	Volume (mL)	S.C. (µS/cm)	pH	Alk. (mg/L)	Acy. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	Decant (mL)	Month	Day	Year
90	167.1	105.	7.51	.	.	37.4	10.40	5.00	55227.	.	1	21	93
91	168.7	90.	7.54	24.0	.	.	.	.	.	.	1	28	93
92	166.7	115.	7.67	.	.	36.0	10.25	4.85	55238.	.	2	4	93
93	170.1	120.	7.50	23.0	.	.	.	.	.	.	2	11	93
94	169.3	100.	7.54	.	.	31.2	8.85	4.85	55249.	.	2	18	93
95	168.4	100.	7.47	23.0	.	.	.	.	.	.	2	25	93
96	167.7	95.	7.52	.	.	25.6	8.60	4.70	55260.	.	3	4	93
97	171.9	108.	7.38	26.0	.	.	.	.	.	.	3	11	93
98	170.0	98.	7.25	23.0	.	31.6	9.15	5.20	55272.	.	3	18	93
99	166.7	110.	7.49	.	.	.	.	.	.	.	3	25	93
100	167.0	129.	7.35	15.0	.	40.6	11.25	5.85	55283.	.	4	1	93
101	167.3	98.	7.53	.	.	.	.	.	.	.	4	8	93
102	173.4	122.	7.28	18.0	.	37.0	12.20	6.30	55294.	.	4	15	93
103	165.4	122.	7.32	.	.	.	.	.	.	.	4	22	93
104	169.3	132.	7.05	.	.	59.0	12.80	6.75	55305.	.	4	29	93
105	170.7	122.	7.25	11.0	.	.	.	.	.	.	5	6	93
106	172.8	148.	7.02	.	.	53.6	13.65	7.70	55317.	.	5	13	93
107	168.2	127.	7.02	10.0	.	.	.	.	.	.	5	20	93
108	175.8	126.	7.20	10.0	.	46.0	11.10	5.90	55328.	.	5	27	93
109	168.4	125.	7.29	10.0	.	.	.	.	.	.	6	3	93
110	175.8	122.	7.03	.	.	51.0	11.80	6.90	55339.	.	6	10	93
111	170.3	140.	7.25	10.0	.	.	.	.	.	.	6	17	93
112	171.5	116.	6.53	.	.	45.0	10.75	5.45	55350.	.	6	23	93
113	172.7	130.	7.18	10.0	.	.	.	.	.	.	7	1	93
114	.	.	.	.	.	.	.	.	.	.	7	8	93
115	173.6	128.	6.96	10.0	.	.	.	.	.	.	7	15	93
116	174.7	102.	6.79	.	.	36.6	9.15	4.85	55362.	.	7	22	93
117	172.6	90.	7.02	7.5	.	.	.	.	.	.	7	29	93
118	171.7	105.	6.91	.	.	32.8	7.20	3.70	55373.	.	8	5	93
119	171.3	87.	6.94	10.0	.	.	.	.	.	.	8	12	93
120	172.5	92.	6.87	.	.	.	.	.	.	.	8	19	93
121	171.5	93.	6.77	5.0	.	29.4	6.25	3.45	55384.	.	8	26	93
122	171.1	90.	6.92	.	.	.	.	.	.	.	9	2	93
123	171.6	80.	6.95	5.0	.	.	.	.	.	.	9	9	93
124	174.9	62.	6.80	.	.	19.2	4.25	2.65	55407.	.	9	16	93
125	173.8	55.	6.99	5.0	.	.	.	.	.	.	9	23	93
126	169.9	60.	6.79	.	.	18.0	4.00	2.20	55419.	.	9	30	93
127	172.6	55.	6.88	5.0	.	.	.	.	.	.	10	7	93
128	175.3	50.	6.75	.	.	15.4	3.20	1.80	55430.	.	10	14	93
129	172.1	52.	6.66	5.0	.	.	.	.	.	.	10	20	93
130	175.4	50.	6.97	.	.	14.0	3.05	1.70	55442.	.	10	28	93
131	176.6	50.	6.89	5.0	.	.	.	.	.	.	11	4	93
132	167.1	53.	6.71	.	.	10.5	3.25	1.80	55453.	.	11	10	93

Table B2.13. Wet-Dry Cycle Test drainage quality from Solid TL1, reactor 11.

Week	Volume (mL)	S.C. (μS/cm)	pH	Alk. (mg/L)	Acy. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	Decant (mL)	Month	Day	Year
0	.	610.	7.91	.	.	238.0	103.00	11.10	3010.	.	4	29	91
0	.	145.	.	.	.	.	.	.	.	.	5	1	91
0	.	58.	8.87	.	.	7.0	7.60	0.65	3032.	.	5	1	91
1	182.1	65.	7.60	23.0	.	8.0	9.00	2.25	3054.	.	5	9	91
2	.	58.	7.73	20.0	.	6.0	8.55	0.60	3088.	.	5	16	91
3	176.5	62.	7.71	21.0	.	.	.	.	.	.	5	23	91
4	177.8	65.	7.70	.	.	4.0	.	.	3132.	.	5	30	91
5	177.9	60.	7.76	21.0	.	.	.	.	.	.	6	6	91
6	174.0	52.	7.58	.	.	4.1	7.70	0.50	3176.	.	6	13	91
7	176.4	55.	7.52	20.0	.	.	.	.	.	.	6	20	91
8	178.1	50.	7.74	.	.	5.0	7.10	0.40	3228.	.	6	27	91
9	174.4	59.	8.58	18.0	.	.	.	.	.	.	7	3	91
10	181.2	62.	7.67	.	.	5.4	8.40	0.45	3275.	.	7	11	91
11	179.3	66.	7.38	18.0	.	.	.	.	.	.	7	18	91
12	178.1	71.	7.65	.	.	12.4	.	.	3319.	.	7	25	91
13	177.0	71.	7.51	16.0	.	.	.	.	.	.	7	31	91
14	176.3	72.	7.57	.	.	10.9	9.60	0.35	3371.	.	8	8	91
15	176.6	72.	7.60	18.0	.	.	.	.	.	.	8	15	91
16	177.9	75.	7.65	.	.	12.9	10.45	0.45	3418.	.	8	22	91
17	178.5	72.	7.71	16.0	.	.	.	.	.	.	8	29	91
18	175.2	80.	7.45	.	.	14.1	11.00	0.30	3462.	.	9	5	91
19	176.3	72.	7.44	16.0	.	.	.	.	.	.	9	12	91
20	180.6	67.	7.28	.	.	10.8	9.65	0.30	3514.	.	9	19	91
21	178.3	62.	7.53	16.0	.	.	.	.	.	.	9	26	91
22	176.3	68.	7.54	.	.	9.1	8.95	0.25	3558.	.	10	3	91
23	176.9	45.	7.33	13.0	.	.	.	.	.	.	10	10	91
24	177.5	62.	7.51	.	.	8.6	9.50	0.20	3605.	.	10	17	91
25	180.8	60.	7.45	13.0	.	.	.	.	.	.	10	24	91
26	.	50.	7.50	.	.	6.5	7.55	0.35	3644.	.	10	31	91
27	183.9	50.	7.47	16.0	.	.	.	.	.	.	11	7	91
28	176.8	53.	7.21	.	.	6.9	7.50	0.10	3666.	.	11	14	91
29	177.2	59.	7.34	16.0	.	.	.	.	.	.	11	21	91
30	179.0	52.	7.25	.	.	7.3	8.35	0.15	3688.	.	11	27	91
31	175.6	50.	7.28	16.0	.	.	.	.	.	.	12	5	91
32	177.0	50.	7.51	.	.	10.6	6.60	0.10	3710.	.	12	12	91
33	176.5	90.	7.55	18.0	.	.	.	.	.	.	12	19	91
34	178.1	50.	7.33	.	.	6.0	7.55	0.10	3732.	.	12	26	91
35	177.8	49.	7.52	14.0	.	.	.	.	.	.	1	2	92
36	177.1	50.	7.29	.	.	6.8	7.65	0.20	3754.	.	1	9	92
37	178.7	55.	7.59	19.0	.	.	.	.	.	.	1	16	92
38	177.3	49.	7.60	.	.	5.2	6.95	0.10	3776.	.	1	23	92
39	176.3	50.	7.50	22.0	.	.	.	.	.	.	1	30	92
40	176.8	52.	7.43	.	.	6.4	9.10	0.55	3798.	.	2	6	92
41	177.1	44.	7.52	19.0	.	.	.	.	.	.	2	13	92
42	177.1	49.	7.41	.	.	5.4	8.20	0.60	3820.	.	2	20	92
43	177.4	49.	7.46	12.0	.	.	.	.	.	.	2	27	92

Table B2.14. Wet-Dry Cycle Test drainage quality from Solid TL1, reactor 11.

Week	Volume (mL)	S.C. (μS/cm)	pH	Alk. (mg/L)	Acv. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	Decant (mL)	Month	Day	Year
44	178.6	49.	7.56	19.0	.	5.8	8.60	0.40	3842.	.	3	5	92
45	178.0	42.	7.17	19.0	.	5.3	6.40	0.60	3864.	.	3	12	92
46	171.4	47.	7.17	19.0	.	5.3	6.40	0.60	3864.	.	3	19	92
47	176.1	37.	6.98	19.0	.	4.5	6.00	1.20	3886.	.	3	26	92
48	176.7	45.	6.85	16.0	.	4.5	6.00	1.20	3886.	.	4	2	92
49	177.4	48.	7.04	16.0	.	5.4	6.20	1.20	55005.	.	4	9	92
50	176.4	50.	7.56	12.6	.	5.1	5.60	0.80	55016.	.	4	16	92
51	178.6	50.	7.39	12.6	.	4.7	7.00	0.80	55027.	.	4	23	92
52	171.7	50.	7.22	6.3	.	4.6	7.60	0.40	55038.	.	4	30	92
53	175.2	45.	7.10	6.3	.	3.3	8.00	0.60	55049.	.	5	7	92
54	177.2	44.	6.75	12.6	.	4.7	8.00	0.40	55061.	.	5	14	92
55	171.5	43.	7.29	12.6	.	3.7	8.00	1.40	55072.	.	5	21	92
56	176.4	44.	6.97	18.0	.	3.0	7.85	0.20	55083.	.	5	28	92
57	172.3	49.	7.27	18.0	.	2.6	7.60	0.20	55094.	.	6	4	92
58	175.9	47.	7.34	16.0	.	3.8	7.35	0.15	55105.	.	6	11	92
59	176.1	50.	7.46	16.0	.	4.0	7.20	0.20	55117.	.	6	18	92
60	174.1	48.	7.40	13.0	.	4.9	7.35	0.10	55128.	.	6	25	92
61	174.5	50.	7.48	13.0	.	5.3	7.20	0.35	55139.	.	7	2	92
62	176.1	45.	7.30	10.0	.	5.3	6.55	0.10	55150.	.	7	9	92
63	174.5	49.	7.36	10.0	.	5.3	6.55	0.10	55173.	.	7	16	92
64	175.0	50.	7.46	13.0	.	3.5	5.95	0.15	55195.	.	7	23	92
65	173.5	46.	7.65	13.0	.	3.5	5.75	0.60	55206.	.	7	30	92
66	172.3	46.	7.54	16.0	.	3.5	5.75	0.60	55206.	.	8	6	92
67	174.3	47.	7.37	16.0	.	3.5	5.75	0.60	55206.	.	8	13	92
68	174.2	46.	7.37	16.0	.	4.0	7.20	0.20	55117.	.	8	20	92
69	175.2	50.	7.29	13.0	.	4.9	7.35	0.10	55128.	.	8	27	92
70	173.9	50.	7.37	13.0	.	4.9	7.35	0.10	55128.	.	9	3	92
71	174.8	50.	7.47	16.0	.	5.3	7.20	0.35	55139.	.	9	10	92
72	174.4	46.	7.34	16.0	.	5.3	7.20	0.35	55139.	.	9	17	92
73	174.2	45.	7.66	16.0	.	5.3	7.20	0.35	55139.	.	9	24	92
74	174.5	50.	7.54	18.0	.	5.3	7.20	0.35	55139.	.	10	1	92
75	175.6	46.	7.36	18.0	.	5.3	7.20	0.35	55139.	.	10	8	92
76	174.9	41.	7.51	16.0	.	5.3	7.20	0.35	55139.	.	10	15	92
77	174.8	44.	7.58	16.0	.	5.3	7.20	0.35	55139.	.	10	22	92
78	174.5	43.	7.20	16.0	.	5.3	7.20	0.35	55139.	.	10	29	92
79	175.1	41.	7.42	16.0	.	5.3	7.20	0.35	55139.	.	11	5	92
80	175.5	43.	7.69	17.2	.	5.3	7.20	0.35	55139.	.	11	12	92
81	177.2	39.	7.40	17.2	.	5.3	7.20	0.35	55139.	.	11	18	92
82	177.1	42.	7.17	17.1	.	5.3	7.20	0.35	55139.	.	11	25	92
83	175.2	37.	7.38	17.2	.	5.3	7.20	0.35	55139.	.	12	3	92
84	177.3	41.	7.62	17.3	.	5.3	7.20	0.35	55139.	.	12	10	92
85	179.8	37.	7.36	11.0	.	5.3	7.20	0.35	55139.	.	12	17	92
86	177.1	37.	7.30	11.0	.	5.3	7.20	0.35	55139.	.	12	24	92
87	176.7	40.	7.34	11.0	.	5.3	7.20	0.35	55139.	.	12	31	92
88	178.7	34.	7.62	16.0	.	5.3	7.20	0.35	55139.	.	1	7	93
89	177.0	32.	7.32	16.0	.	5.3	7.20	0.35	55139.	.	1	14	93

Table B2.15. Wet-Dry Cycle Test drainage quality from Solid TL1, reactor 11.

Week	Volume (mL)	S.C. (μS/cm)	pH	Alk. (mg/L)	Acy. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	Decant (mL)	Month	Day	Year
90	177.8	34.	7.47			2.3	6.00	0.30	55229.		1	21	93
91	176.4	35.	7.51	16.0							1	28	93
92	176.0	37.	7.61			3.5	5.95	0.10	55240.		2	4	93
93	178.8	40.	7.55	14.0							2	11	93
94	180.0	35.	7.58			2.2	5.80	0.10	55251.		2	18	93
95	176.9	36.	7.53	17.0							2	25	93
96	175.8	36.	7.55			2.4	5.95	0.10	55262.		3	4	93
97	178.7	37.	7.35	17.0							3	11	93
98	179.0	34.	7.39			2.4	5.55	0.25	55274.		3	18	93
99	176.6	37.	7.45	20.0							3	25	93
100	176.7	35.	7.51			2.9	6.25	0.40	55285.		4	1	93
101	177.3	36.	7.57	12.0							4	8	93
102	177.9	36.	7.49			2.4	6.30	0.30	55296.		4	15	93
103	174.4	39.	7.47	14.0							4	22	93
104	177.9	36.	7.44			2.8	6.05	0.25	55307.		4	29	93
105	189.6	38.	7.44	15.0							5	6	93
106	177.9	38.	7.34			3.2	6.80	0.50	55319.		5	13	93
107	175.1	36.	7.58	12.0							5	20	93
108	176.0	37.	7.46			3.2	6.15	0.15	55330.		5	27	93
109	178.1	36.	7.68	15.0							6	3	93
110	179.0	39.	7.51			4.0	6.35	0.20	55341.		6	10	93
111	174.4	38.	7.69	20.0							6	17	93
112	174.3	38.	7.48			3.5	6.75	0.20	55352.		6	23	93
113	175.3	40.	7.66	14.0							7	1	93
114											7	8	93
115	176.8	45.	7.57	15.0							7	15	93
116	176.7	37.	7.34			3.6	6.75	<0.05	55364.		7	22	93
117	175.8	40.	7.60	15.0							7	29	93
118	176.7	38.	7.56			3.5	6.80	0.60	55375.		8	5	93
119	176.1	42.	7.47	12.5							8	12	93
120	175.1	39.	7.49			3.4	6.60	0.10	55386.		8	19	93
121	174.9	40.	7.50	15.0							8	26	93
122	174.7	40.	7.62			4.1	6.45	0.10	55397.		9	2	93
123	175.2	38.	7.40	12.5							9	9	93
124	176.9	36.	7.46			3.1	5.90	0.10	55409.		9	16	93
125	177.8	33.	7.56	10.0							9	23	93
126	175.5	36.	7.33			3.2	5.80	0.90	55421.		9	30	93
127	177.3	34.	7.49	13.5							10	7	93
128	177.4	36.	7.35			3.1	5.10	0.10	55432.		10	14	93
129	175.8	31.	7.15	10.0							10	20	93
130	177.6	31.	7.55			3.6	4.60	0.95	55444.		10	28	93
131	178.5	29.	7.39	10.5							11	4	93
132	175.8	26.	7.33				4.20	0.10	55455.		11	10	93

Table B2.17. Wet-Dry Cycle Test drainage quality from Solid TL2, reactor 13.

Week	Volume (mL)	S.C. (μS/cm)	pH	Alk. (mg/L)	AcY. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	Decant (mL)	Month	Day	Year
44	172.6	130.	7.86	.	.	5.5	23.20	1.00	3843.	.	3	5	92
45	165.6	100.	7.73	38.0	.	.	.	1.00	.	.	3	12	92
46	170.6	125.	7.69	.	.	4.8	20.60	1.00	3865.	.	3	19	92
47	170.3	140.	7.63	50.0	.	.	.	.	.	.	3	26	92
48	169.7	140.	7.31	.	.	4.8	21.80	1.80	3887.	.	4	2	92
49	170.5	140.	7.20	53.0	.	.	.	.	.	.	4	9	92
50	168.1	135.	7.78	.	.	4.0	19.40	1.40	55006.	.	4	16	92
51	172.0	140.	7.74	47.0	.	.	.	1.20	55017.	.	4	23	92
52	173.7	150.	7.69	.	.	4.7	22.20	1.20	55017.	.	4	30	92
53	170.1	115.	7.67	38.0	.	.	.	1.40	55028.	.	5	7	92
54	169.6	120.	7.05	.	.	5.2	21.80	1.40	55028.	.	5	14	92
55	164.0	122.	7.73	44.0	.	.	.	1.00	55039.	.	5	21	92
56	171.1	125.	7.42	.	.	4.9	21.80	1.00	55039.	.	5	28	92
57	167.2	125.	7.70	41.0	.	.	.	0.60	55050.	.	6	4	92
58	169.1	125.	7.52	.	.	4.4	23.60	0.60	55050.	.	6	11	92
59	170.7	125.	7.83	39.0	.	.	.	0.60	55062.	.	6	18	92
60	170.3	115.	7.75	.	.	3.8	21.40	0.60	55062.	.	6	25	92
61	168.8	125.	7.77	41.0	.	.	.	0.80	55073.	.	7	2	92
62	169.0	115.	7.59	.	.	3.6	22.40	0.80	55073.	.	7	9	92
63	170.5	125.	7.74	31.0	.	.	.	0.60	55084.	.	7	16	92
64	170.8	125.	7.83	.	.	3.6	21.50	0.60	55084.	.	7	23	92
65	170.2	118.	7.78	40.0	.	.	.	0.65	55095.	.	7	30	92
66	168.4	115.	7.77	.	.	3.6	21.95	0.65	55095.	.	8	6	92
67	167.4	105.	7.66	34.0	.	.	.	0.65	55106.	.	8	13	92
68	167.4	120.	7.69	.	.	7.0	21.45	0.65	55106.	.	8	20	92
69	169.7	112.	7.60	34.0	.	6.0	20.00	0.55	55118.	.	8	27	92
70	170.1	122.	7.67	.	.	.	.	0.50	55118.	.	9	3	92
71	170.0	123.	7.64	32.0	.	9.2	18.65	0.50	55129.	.	9	10	92
72	170.9	105.	7.42	.	.	.	.	0.55	55129.	.	9	17	92
73	168.3	120.	7.78	37.0	.	7.4	20.15	0.55	55140.	.	9	24	92
74	170.5	139.	7.90	.	.	.	.	0.50	55140.	.	10	1	92
75	170.6	123.	7.66	34.0	.	.	19.45	0.50	55151.	.	10	8	92
76	169.5	112.	7.62	.	.	.	.	0.50	55151.	.	10	15	92
77	168.4	103.	7.85	40.0	.	.	20.30	0.50	55163.	.	10	22	92
78	168.1	103.	7.51	.	.	.	.	0.50	55163.	.	10	29	92
79	169.9	108.	7.72	32.0	.	.	20.75	0.60	55174.	.	11	5	92
80	170.1	118.	7.79	.	.	.	.	0.60	55174.	.	11	12	92
81	166.2	110.	7.73	.	.	.	19.50	0.60	55185.	.	11	18	92
82	170.5	105.	7.44	30.0	.	.	.	0.60	55185.	.	11	25	92
83	171.5	105.	7.72	.	.	.	17.40	0.40	55196.	.	12	3	92
84	170.7	108.	7.87	.	.	.	.	0.40	55196.	.	12	10	92
85	169.7	102.	7.70	32.0	.	5.3	19.00	0.65	55207.	.	12	17	92
86	171.8	102.	7.94	.	.	.	.	0.65	55207.	.	12	24	92
87	170.2	100.	7.85	.	.	4.5	19.40	0.40	55219.	.	12	31	92
88	172.3	98.	7.90	.	.	.	.	.	55219.	.	1	7	93
89	170.8	93.	7.71	38.0	.	.	.	.	.	.	1	14	93

Table B2.18. Wet-Dry Cycle Test drainage quality from Solid TL2, reactor 13.

Week	Volume (mL)	S.C. (µS/cm)	pH	Alk. (mg/L)	Acv. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	Decant (mL)	Month	Day	Year
90	171.6	98.	7.77	.	.	3.1	19.05	0.45	55230.	.	1	21	93
91	170.9	90.	7.78	33.0	.	.	.	.	.	.	1	28	93
92	169.9	99.	7.88	.	.	3.7	18.65	0.45	55241.	.	2	4	93
93	170.9	109.	7.83	40.0	.	.	.	.	.	.	2	11	93
94	167.5	102.	7.88	.	.	4.3	19.05	0.45	55252.	.	2	18	93
95	170.4	108.	7.87	40.0	.	.	.	.	.	.	2	25	93
96	169.4	100.	7.85	.	.	4.2	17.70	0.40	55263.	.	3	4	93
97	173.7	108.	7.72	34.0	.	.	.	.	.	.	3	11	93
98	172.2	100.	7.74	.	.	4.3	17.25	0.55	55275.	.	3	18	93
99	170.3	107.	7.91	35.0	.	.	.	.	.	.	3	25	93
100	169.9	102.	7.80	.	.	3.8	18.35	0.55	55286.	.	4	1	93
101	169.4	100.	7.88	32.0	.	.	.	.	.	.	4	8	93
102	170.1	95.	7.76	.	.	5.2	18.60	0.60	55297.	.	4	15	93
103	168.5	102.	7.85	34.0	.	.	.	.	.	.	4	22	93
104	173.7	100.	7.62	.	.	5.8	18.40	0.60	55308.	.	4	29	93
105	171.0	102.	7.79	32.5	.	.	.	.	.	.	5	6	93
106	171.5	112.	7.66	.	.	8.6	19.50	0.65	55320.	.	5	13	93
107	171.1	108.	7.75	36.0	.	.	.	.	.	.	5	20	93
108	170.0	110.	7.83	.	.	9.0	20.20	0.60	55331.	.	5	27	93
109	170.8	108.	7.94	30.0	.	.	.	.	.	.	6	3	93
110	170.4	106.	7.79	.	.	10.2	19.45	0.55	55342.	.	6	10	93
111	169.9	100.	7.91	30.0	.	.	.	.	.	.	6	17	93
112	170.3	109.	7.57	.	.	14.0	20.25	0.55	55353.	.	6	23	93
113	170.2	127.	7.94	30.0	.	.	.	.	.	.	7	1	93
114	.	.	.	.	.	.	.	.	.	.	7	8	93
115	170.9	127.	7.73	33.0	.	.	.	.	.	.	7	15	93
116	172.3	130.	7.58	.	.	26.2	24.15	0.75	55365.	.	7	22	93
117	171.7	128.	7.76	25.0	.	.	.	.	.	.	7	29	93
118	170.2	130.	7.75	.	.	28.8	24.20	0.75	55376.	.	8	5	93
119	170.1	140.	7.70	25.0	.	.	.	.	.	.	8	12	93
120	171.1	140.	7.60	.	.	31.8	23.25	1.05	55387.	.	8	19	93
121	168.7	153.	7.62	25.0	.	.	.	.	.	.	8	26	93
122	168.5	160.	7.71	.	.	35.2	24.70	0.90	55398.	.	9	2	93
123	169.8	150.	7.52	21.0	.	.	.	.	.	.	9	9	93
124	170.3	142.	7.54	.	.	30.4	22.15	0.85	55410.	.	9	16	93
125	170.7	140.	7.68	25.0	.	.	.	.	.	.	9	23	93
126	169.0	135.	7.54	.	.	27.8	22.95	1.00	55422.	.	9	30	93
127	169.6	140.	7.65	25.0	.	.	.	.	.	.	10	7	93
128	172.4	135.	7.52	.	.	26.0	22.20	0.90	55433.	.	10	14	93
129	170.0	140.	7.42	25.0	.	.	.	.	.	.	10	20	93
130	168.7	130.	7.76	.	.	24.4	20.95	2.15	55445.	.	10	28	93
131	167.3	130.	7.62	25.0	.	.	.	.	.	.	11	4	93
132	161.6	120.	7.55	.	.	23.2	17.85	0.80	55456.	.	11	10	93

Table B2.19. Wet-Dry Cycle Test drainage quality from Solid TL3, reactor 15.

Week	Volume (mL)	S.C. (µS/cm)	pH	Alk. (mg/L)	Acv. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	Decant (mL)	Month	Day	Year
0	.	1525.	7.30	.	.	900.0	205.00	89.20	3014.	.	4	29	91
0	.	155.	.	.	.	.	.	.	.	.	5	1	91
0	.	100.	8.07	.	.	9.0	11.50	3.05	3036.	.	5	1	91
1	166.6	320.	7.82	51.0	.	41.0	38.90	13.30	3058.	.	5	9	91
2	.	240.	8.15	57.0	.	34.0	25.60	10.80	3092.	.	5	16	91
3	164.0	212.	8.26	48.0	.	.	.	.	.	.	5	23	91
4	166.2	215.	8.17	.	.	45.0	.	.	3136.	.	5	30	91
5	167.7	260.	8.14	45.0	.	.	.	.	.	.	6	6	91
6	168.7	350.	7.97	46.0	.	109.0	35.70	14.10	3180.	.	6	13	91
7	165.5	365.	7.98	46.0	.	.	.	.	.	.	6	20	91
8	167.6	353.	7.99	47.0	.	113.0	34.50	13.60	3232.	.	6	27	91
9	170.2	370.	7.93	47.0	.	.	.	.	.	.	7	3	91
10	167.4	342.	8.09	50.0	.	84.0	37.10	12.10	3279.	.	7	11	91
11	169.3	358.	7.92	50.0	.	.	.	.	.	.	7	18	91
12	169.0	308.	8.01	45.0	.	85.0	.	.	3323.	.	7	25	91
13	167.3	228.	8.01	45.0	.	.	.	.	.	.	7	31	91
14	165.2	228.	7.92	45.0	.	55.2	27.70	9.35	3375.	.	8	8	91
15	159.3	205.	7.91	45.0	.	43.2	23.10	8.30	3422.	.	8	15	91
16	166.5	.	7.97	52.0	.	35.5	19.30	7.85	3466.	.	8	22	91
17	163.8	220.	8.12	52.0	.	27.2	15.95	6.20	3518.	.	8	29	91
18	164.9	212.	7.98	52.0	.	.	.	.	.	.	9	5	91
19	167.5	198.	8.04	50.0	.	15.2	15.00	6.25	3562.	.	9	12	91
20	157.5	178.	7.80	50.0	.	17.2	16.90	5.85	3609.	.	9	19	91
21	169.9	160.	8.02	47.0	.	15.9	13.35	5.20	3646.	.	10	3	91
22	164.7	167.	8.02	47.0	.	13.0	14.65	6.05	3668.	.	10	10	91
23	164.7	140.	7.90	37.0	.	13.6	15.65	6.20	3690.	.	10	17	91
24	163.0	160.	7.96	37.0	.	13.2	14.10	5.40	3712.	.	10	24	91
25	167.0	135.	7.91	37.0	.	11.4	13.65	5.50	3734.	.	10	31	91
26	.	135.	7.95	45.0	.	17.2	13.90	5.95	3756.	.	11	7	91
27	166.8	148.	7.91	45.0	.	13.5	14.75	6.30	3778.	.	11	14	91
28	166.9	150.	7.78	47.0	.	19.2	16.40	6.85	3800.	.	11	21	91
29	167.6	155.	7.88	47.0	.	16.8	16.20	7.20	3822.	.	11	28	91
30	168.7	154.	7.99	57.0	.	.	.	.	.	.	12	5	91
31	167.7	140.	7.88	57.0	.	13.2	14.10	5.40	3712.	.	12	12	91
32	166.2	145.	8.00	69.0	.	11.4	13.65	5.50	3734.	.	12	19	91
33	166.6	140.	8.02	69.0	.	17.2	13.90	5.95	3756.	.	12	26	91
34	169.0	125.	7.96	55.0	.	13.5	14.75	6.30	3778.	.	1	2	92
35	166.6	133.	7.91	55.0	.	19.2	16.40	6.85	3800.	.	1	9	92
36	166.2	150.	7.91	54.0	.	16.8	16.20	7.20	3822.	.	1	16	92
37	168.0	170.	8.08	54.0	.	13.5	14.75	6.30	3778.	.	1	23	92
38	166.1	150.	8.04	63.0	.	19.2	16.40	6.85	3800.	.	1	30	92
39	167.7	165.	8.08	63.0	.	16.8	16.20	7.20	3822.	.	2	6	92
40	167.1	145.	7.94	57.0	.	.	.	.	.	.	2	13	92
41	165.1	142.	7.98	57.0	.	.	.	.	.	.	2	20	92
42	168.6	160.	8.01	57.0	.	.	.	.	.	.	2	27	92
43	168.6	150.	7.96	57.0	.	.	.	.	.	.	2	27	92

Table B2.20: Wet-Dry Cycle Test drainage quality from Solid TL3, reactor 15.

Week	Volume (mL)	S.C. (μ S/cm)	pH	Alk. (mg/L)	Acv. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	Decant (mL)	Month	Day	Year
44	168.0	143.	8.01	50.0	.	17.4	16.40	7.20	3844.	.	3	5	92
45	169.2	135.	7.82	50.0	.	21.2	13.40	6.40	3866.	.	3	12	92
46	166.3	150.	7.75	57.0	.	18.6	14.00	7.80	3888.	.	3	19	92
47	167.4	150.	7.65	57.0	.	18.6	14.00	7.80	3888.	.	3	26	92
48	167.2	165.	7.43	57.0	.	18.6	14.00	7.80	3888.	.	4	2	92
49	168.5	160.	7.41	57.0	.	18.6	14.80	8.00	55007.	.	4	9	92
50	166.7	170.	8.02	63.0	.	20.2	14.20	7.20	55018.	.	4	16	92
51	167.8	155.	7.91	63.0	.	22.0	15.20	8.40	55029.	.	4	23	92
52	165.6	170.	7.75	.	.	22.0	15.20	8.40	55029.	.	5	30	92
53	166.6	140.	7.98	.	.	22.7	14.80	6.80	55040.	.	5	7	92
54	166.1	130.	7.28	53.0	.	17.2	15.60	7.20	55051.	.	5	14	92
55	159.6	140.	7.96	53.0	.	16.6	16.20	7.60	55063.	.	5	21	92
56	166.5	140.	7.48	53.0	.	17.0	12.60	5.80	55074.	.	6	28	92
57	162.8	140.	8.01	53.0	.	16.8	16.00	7.50	55085.	.	6	4	92
58	165.4	155.	7.78	44.0	.	20.0	14.40	6.80	55096.	.	7	11	92
59	167.8	155.	7.97	44.0	.	18.0	13.90	6.60	55107.	.	7	18	92
60	167.3	150.	7.94	51.0	.	21.6	13.35	6.50	55119.	.	7	25	92
61	166.9	160.	7.98	51.0	.	20.6	14.15	6.80	55130.	.	8	2	92
62	168.8	122.	7.67	44.0	.	21.2	14.15	6.80	55141.	.	8	9	92
63	168.2	148.	7.68	44.0	.	20.6	16.45	8.60	55152.	.	9	16	92
64	167.8	152.	7.97	53.0	.	21.2	14.15	6.80	55152.	.	9	23	92
65	167.4	148.	7.99	53.0	.	20.6	16.45	8.60	55164.	.	9	30	92
66	163.1	135.	7.92	49.0	.	21.6	13.35	6.50	55119.	.	10	6	92
67	164.5	135.	7.87	49.0	.	21.2	14.15	6.80	55130.	.	10	13	92
68	164.6	138.	7.89	45.0	.	20.6	16.45	8.60	55141.	.	10	20	92
69	166.1	145.	7.74	45.0	.	21.2	14.15	6.80	55152.	.	10	27	92
70	167.0	150.	7.90	48.0	.	20.6	16.45	8.60	55164.	.	10	3	92
71	167.3	163.	7.87	48.0	.	21.2	14.15	6.80	55175.	.	10	10	92
72	169.8	142.	7.77	53.0	.	20.6	16.45	8.60	55186.	.	10	17	92
73	161.2	167.	8.09	53.0	.	21.2	14.15	6.80	55197.	.	10	24	92
74	166.2	194.	8.11	56.0	.	20.6	16.45	8.60	55208.	.	10	1	92
75	168.1	158.	7.93	56.0	.	21.2	14.15	6.80	55220.	.	10	8	92
76	169.3	150.	7.91	56.0	.	21.2	14.15	6.80	55220.	.	10	15	92
77	166.4	142.	7.92	53.0	.	21.2	14.15	6.80	55220.	.	10	22	92
78	165.6	142.	7.66	48.0	.	21.2	14.15	6.80	55220.	.	10	29	92
79	166.3	138.	7.91	48.0	.	21.2	14.15	6.80	55220.	.	11	5	92
80	169.1	145.	7.91	48.0	.	21.2	14.15	6.80	55220.	.	11	12	92
81	167.4	122.	7.78	48.0	.	21.2	14.15	6.80	55220.	.	11	18	92
82	169.3	133.	7.64	48.0	.	21.2	14.15	6.80	55220.	.	11	25	92
83	167.6	138.	7.91	48.0	.	21.2	14.15	6.80	55220.	.	12	3	92
84	167.4	152.	7.91	48.0	.	21.2	14.15	6.80	55220.	.	12	10	92
85	168.4	118.	7.84	51.0	.	21.2	14.15	6.80	55220.	.	12	17	92
86	168.6	142.	8.08	51.0	.	21.2	14.15	6.80	55220.	.	12	24	92
87	167.0	135.	7.96	51.0	.	21.2	14.15	6.80	55220.	.	12	31	92
88	165.5	112.	7.99	59.0	.	20.8	12.95	5.95	55220.	.	1	7	93
89	166.7	125.	7.94	59.0	.	20.8	12.95	5.95	55220.	.	1	14	93

Table B2.21. Wet-Dry Cycle Test drainage quality from Solid TL3, reactor 15.

Week	Volume (mL)	S.C. (μS/cm)	pH	Alk. (mg/L)	AcY. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	Decant (mL)	Month	Day	Year
90	168.1	104.	7.77			23.4	11.85	5.30	55231.		1	21	93
91	165.7	138.	8.04	59.0							1	28	93
92	167.0	139.	8.10			14.4	15.25	6.85	55242.		2	4	93
93	167.3	132.	7.94	48.0							2	11	93
94	166.9	118.	7.94			15.6	12.20	6.35	55253.		2	18	93
95	166.3	145.	8.03	57.0							2	25	93
96	167.2	138.	7.97			17.0	14.20	9.15	55264.		3	4	93
97	165.8	150.	7.91	51.0							3	11	93
98	166.8	140.	7.98			19.8	15.00	7.85	55276.		3	18	93
99	166.6	160.	8.11	60.0							3	25	93
100	167.2	150.	8.06			23.0	15.60	7.85	55287.		4	1	93
101	168.0	150.	8.12	60.0							4	8	93
102	168.4	142.	8.06			20.8	16.15	8.10	55298.		4	15	93
103	163.7	162.	8.11	60.0							4	22	93
104	170.3	140.	7.87			22.4	14.55	7.40	55309.		4	29	93
105	167.2	152.	8.05	55.0							5	6	93
106	167.3	155.	8.04			22.0	15.15	7.85	55321.		5	13	93
107	165.8	160.	8.04	58.0							5	20	93
108	167.7	140.	8.05			9.4	14.70	8.05	55332.		5	27	93
109	167.2	129.	8.10	43.0							6	3	93
110	169.2	143.	8.07			25.0	15.30	8.40	55343.		6	10	93
111	166.7	152.	8.21	55.0							6	17	93
112	166.3	145.	7.87			22.2	15.40	7.80	55354.		6	23	93
113	166.0	175.	8.23	62.0							7	1	93
114											7	8	93
115	167.9	170.	8.12	58.0							7	15	93
116	167.1	150.	8.08			24.0	16.70	9.80	55366.		7	22	93
117	166.8	149.	8.15	45.0							7	29	93
118	167.0	155.	8.12			24.4	15.75	8.70	55377.		8	5	93
119	166.9	168.	8.15	55.0							8	12	93
120	167.2	160.	8.10			29.8	15.25	8.50	55388.		8	19	93
121	166.1	167.	8.09	50.0							8	26	93
122	166.3	168.	8.23			29.6	15.25	9.15	55399.		9	2	93
123	166.1	160.	8.06	52.0							9	9	93
124	167.0	140.	8.04			20.0	13.55	8.00	55411.		9	16	93
125	166.0	145.	8.05	45.0							9	23	93
126	165.4	148.	7.97			20.8	14.35	8.35	55423.		9	30	93
127	166.5	168.	8.14	60.0							10	7	93
128	169.8	152.	8.08			19.8	14.55	8.45	55434.		10	17	93
129	166.0	170.	7.97	55.0							10	20	93
130	165.9	162.	8.18			20.0	15.85	9.25	55446.		10	28	93
131	166.5	178.	8.11	65.0							11	4	93
132	166.4	172.	8.14			23.0	16.75	9.60	55457.		11	10	93

Table B2.22. Wet-Dry Cycle Test drainage quality from Solid TL4, reactor 17.

Week	Volume (mL)	S.C. (μS/cm)	pH	Alk. (mg/L)	Acv. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	Decant (mL)	Month	Day	Year
0	.	1000.	7.84	.	.	530.0	210.00	4.80	3016.	.	4	29	91
0	.	120.	.	.	.	.	.	.	.	.	5	1	91
0	.	47.	7.55	.	.	10.0	6.95	0.20	3038.	.	5	2	91
1	165.4	160.	7.98	46.0	.	41.0	32.30	0.79	3060.	.	5	9	91
2	.	175.	7.93	41.0	.	53.0	32.40	0.58	3094.	.	5	16	91
3	164.7	159.	7.59	31.0	.	.	.	.	.	.	5	23	91
4	168.8	114.	7.72	.	.	21.0	.	.	3138.	.	5	30	91
5	164.9	89.	7.82	21.0	.	.	.	.	.	.	6	6	91
6	168.2	70.	7.71	.	.	12.4	10.55	0.25	3182.	.	6	13	91
7	165.2	75.	7.70	16.0	.	.	.	.	.	.	6	20	91
8	168.5	63.	7.77	.	.	8.7	8.60	0.60	3234.	.	6	27	91
9	169.2	74.	7.50	18.0	.	.	.	.	.	.	7	3	91
10	168.7	71.	7.73	.	.	11.9	9.80	0.70	3281.	.	7	11	91
11	160.7	70.	7.78	18.0	.	.	.	.	.	.	7	18	91
12	167.2	72.	7.66	.	.	17.6	8.80	0.80	3325.	.	7	25	91
13	156.4	68.	7.66	11.0	.	.	.	.	.	.	7	31	91
14	161.1	75.	7.77	.	.	18.7	8.55	1.20	3377.	.	8	8	91
15	156.9	71.	7.58	16.0	.	.	.	.	.	.	8	15	91
16	166.5	70.	7.68	.	.	14.9	7.60	1.25	3424.	.	8	22	91
17	163.1	65.	7.62	10.5	.	.	.	.	.	.	8	29	91
18	161.6	60.	7.68	.	.	11.0	6.90	1.35	3468.	.	9	5	91
19	161.5	55.	7.69	10.0	.	.	.	.	.	.	9	12	91
20	161.7	50.	7.66	.	.	8.4	6.00	1.40	3520.	.	9	19	91
21	168.3	45.	7.50	8.0	.	.	.	.	.	.	9	26	91
22	.	50.	7.61	.	.	.	5.10	1.40	3564.	.	10	3	91
23	167.3	46.	7.60	8.0	.	.	.	.	.	.	10	10	91
24	163.9	50.	7.49	.	.	6.7	5.25	1.70	3611.	.	10	17	91
25	160.9	41.	7.45	11.0	.	.	.	.	.	.	10	24	91
26	.	35.	7.36	.	.	3.7	5.60	0.80	3647.	.	10	31	91
27	163.5	35.	7.49	11.0	.	.	.	.	.	.	11	7	91
28	170.9	41.	7.42	.	.	4.3	3.70	1.05	3669.	.	11	14	91
29	162.2	39.	7.49	10.0	.	.	.	.	.	.	11	21	91
30	168.0	34.	.	.	.	4.2	3.55	1.05	3691.	.	11	28	91
31	164.8	36.	7.59	6.3	.	.	.	.	.	.	12	5	91
32	158.4	38.	7.52	.	.	.	3.45	1.20	3713.	.	12	12	91
33	162.7	55.	7.63	22.0	.	.	.	.	.	.	12	19	91
34	149.9	41.	7.59	.	.	5.4	4.05	1.20	3735.	.	12	26	91
35	158.9	41.	7.69	12.0	.	.	.	.	.	.	1	2	92
36	163.4	42.	7.62	.	.	6.3	3.60	1.25	3757.	.	1	9	92
37	157.3	42.	7.48	6.0	.	.	.	.	.	.	1	16	92
38	161.3	35.	7.44	.	.	4.9	4.10	1.10	3779.	.	1	23	92
39	161.3	43.	7.68	9.0	.	.	.	.	.	.	1	30	92
40	161.0	35.	7.55	.	.	.	3.45	1.35	3801.	.	2	6	92
41	167.6	27.	7.36	6.0	.	.	.	.	.	100.0	2	13	92
42	166.2	31.	7.51	.	.	4.3	4.60	1.60	3823.	83.0	2	20	92
43	162.9	36.	7.52	6.0	.	.	.	.	.	35.0	2	27	92

Table B2.23. Wet-Dry Cycle Test drainage quality from Solid TL4, reactor 17.

Week	Volume (ml.)	S.C. (μS/cm)	pH	Alk. (mg/L)	Acy. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	Decant (ml.)	Month	Day	Year
44	165.8	40.	7.61	.	.	14.5	4.60	1.60	3845.	50.0	3	5	92
45	162.0	28.	7.59	6.0	.	.	.	.	.	68.0	3	12	92
46	156.6	32.	7.70	.	.	3.4	1.80	1.40	3867.	62.0	3	19	92
47	164.5	31.	7.53	6.0	.	.	.	.	.	72.0	3	26	92
48	161.5	31.	7.56	6.0	.	3.1	1.80	2.00	3889.	86.0	4	2	92
49	164.5	37.	7.42	6.0	.	.	.	.	.	37.0	4	9	92
50	167.0	32.	7.62	.	.	3.2	1.80	2.20	55008.	23.0	4	16	92
51	164.1	41.	7.78	16.0	.	.	.	.	.	24.0	4	23	92
52	163.5	40.	7.85	.	.	4.0	2.80	2.00	55019.	57.0	4	30	92
53	162.1	33.	7.86	6.0	.	.	.	.	.	57.0	5	7	92
54	163.4	31.	7.77	9.0	.	4.5	2.00	3.40	55030.	58.0	5	14	92
55	160.0	40.	7.77	.	.	.	.	.	.	46.0	5	21	92
56	156.5	35.	7.69	.	.	5.1	3.50	1.50	55041.	58.0	5	28	92
57	153.7	40.	7.80	16.0	.	.	.	.	.	52.0	6	4	92
58	163.2	34.	7.47	13.0	.	3.5	3.30	1.60	55052.	72.0	6	11	92
59	169.4	38.	7.45	.	.	.	.	.	.	77.0	6	18	92
60	164.4	40.	7.44	.	.	4.0	4.00	1.80	55064.	55.0	6	25	92
61	167.9	35.	7.53	10.0	.	.	.	.	.	75.0	7	2	92
62	165.0	34.	7.57	10.0	.	3.0	3.40	1.60	55075.	63.0	7	9	92
63	165.6	35.	7.57	10.0	.	3.5	3.65	1.75	55086.	28.0	7	16	92
64	161.0	41.	7.70	.	.	.	.	.	.	45.0	7	23	92
65	161.5	44.	7.76	11.0	.	4.3	4.00	1.90	55097.	36.0	7	30	92
66	161.5	40.	7.67	11.0	.	.	.	.	.	.	8	6	92
67	168.2	38.	7.63	11.0	.	4.6	3.50	1.70	55108.	.	8	13	92
68	166.3	38.	7.63	11.0	.	.	.	.	.	.	8	20	92
69	170.1	39.	7.49	11.0	.	.	.	.	.	.	8	27	92
70	170.3	39.	7.58	11.0	.	5.3	3.05	1.50	55120.	.	9	3	92
71	164.5	39.	7.65	11.0	.	.	.	.	.	13.0	9	10	92
72	155.7	33.	7.43	13.0	.	7.0	2.70	1.30	55131.	23.0	9	17	92
73	161.4	37.	7.65	13.0	.	6.9	3.15	1.65	55142.	32.0	9	24	92
74	166.1	42.	7.52	11.0	.	.	.	.	.	13.0	10	1	92
75	162.8	34.	7.53	11.0	.	.	2.45	1.25	55153.	33.0	10	8	92
76	161.9	28.	7.46	.	.	.	.	.	.	42.0	10	15	92
77	161.9	32.	7.66	11.0	.	.	2.40	1.20	55165.	36.0	10	22	92
78	160.6	29.	7.53	10.0	.	.	.	.	.	63.0	10	29	92
79	160.7	27.	7.42	10.0	.	.	.	.	.	47.0	11	5	92
80	154.2	27.	7.22	.	.	.	2.30	1.15	55176.	100.0	11	12	92
81	161.7	58.	7.49	.	.	.	.	.	.	95.0	11	18	92
82	158.5	37.	7.45	.	.	.	2.60	2.05	55187.	93.0	11	25	92
83	159.0	30.	7.34	8.0	.	.	.	.	.	87.0	12	3	92
84	150.2	72.	7.51	.	.	.	5.90	2.90	55198.	116.0	12	10	92
85	163.9	23.	7.45	11.0	.	4.5	.	.	.	114.0	12	17	92
86	165.8	18.	7.61	.	.	.	1.45	0.85	55209.	142.0	12	24	92
87	163.4	27.	7.52	.	.	.	.	.	.	135.0	12	31	92
88	172.0	29.	7.20	10.8	.	5.4	0.25	0.75	55221.	.	1	7	93
89	166.6	22.	6.95	10.8	.	.	.	.	.	.	1	14	93

Table B2.24. Wet-Dry Cycle Test drainage quality from Solid TL4, reactor 17.

Week	Volume (mL)	S.C. (μ S/cm)	pH	Alk. (mg/L)	Acy. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	Decant (mL)	Month	Day	Year
90	167.1	24.	7.14			2.5	1.70	0.95	55232.	60.0	1	21	93
91	163.4	22.	7.24	10.8						62.0	1	28	93
92	164.1	26.	7.36			2.6	2.15	1.20	55243.	43.0	2	4	93
93	164.2	24.	7.33	11.4						30.0	2	11	93
94	165.1	22.	7.28			2.8	1.85	1.15	55254.	31.0	2	18	93
95	163.4	21.	7.42	8.5							2	25	93
96	165.3	25.	7.42			2.5	2.25	1.70	55265.	24.0	3	4	93
97	165.6	25.	7.42	11.4						33.0	3	11	93
98	165.5	23.	7.41			2.5	1.70	1.05	55277.	35.0	3	18	93
99	164.0	25.	7.61	11.4						6.0	3	25	93
100	159.0	26.	7.44			3.8	2.35	2.25	55288.		4	1	93
101	161.7	24.	7.46	6.0						22.0	4	8	93
102	159.9	25.	7.34			3.6	2.10	1.30	55299.	26.0	4	15	93
103	168.6	24.	7.47	6.0							4	22	93
104	165.2	27.	7.57			4.5	2.05	1.25	55310.	7.0	4	29	93
105	143.3	31.	7.52	6.2							5	6	93
106	152.9	29.	7.59			6.5	2.75	2.30	55322.	20.0	5	13	93
107	152.9	27.	7.65	7.5						42.0	5	20	93
108	158.5	30.	7.27			6.7	2.45	1.35	55333.	18.0	5	27	93
109	172.3	25.	7.26	5.0						48.0	6	3	93
110	168.5	28.	7.39			5.6	2.30	1.40	55344.		6	10	93
111	164.9	26.	7.30	7.5							6	17	93
112	166.2	24.	7.58			5.5	1.90	1.00	55355.		6	23	93
113	172.1	28.	7.46	8.5							7	1	93
114											7	8	93
115	174.1	26.	7.46	7.5							7	15	93
116	171.4	25.	7.64			5.7	2.20	1.70	55367.		7	22	93
117	171.2	24.	7.43	7.5							7	29	93
118	171.1	23.	7.45			5.2	2.05	1.10	55378.		8	5	93
119	167.7	27.	7.32	7.5							8	12	93
120	170.1	25.	7.26			6.2	2.15	1.50	55389.		8	19	93
121	168.1	25.	7.27	7.5							8	26	93
122	168.8	25.	7.56			6.4	2.05	1.20	55400.		9	2	93
123	170.8	25.	7.57								9	9	93
124	171.6	23.	7.46	6.2		4.9	1.90	1.10	55412.		9	16	93
125	173.0	20.	7.39	10.0							9	23	93
126	169.0	19.	7.39			4.4	1.50	0.95	55424.		9	30	93
127	171.6	20.	7.37	9.0							10	7	93
128	174.4	18.	7.29			5.1	1.20	0.75	55435.		10	14	93
129	170.5	19.	6.95	5.0							10	20	93
130	172.5	20.	7.30			4.3	1.30	0.85	55447.		10	28	93
131	175.3	21.	6.99	6.0							11	4	93
132	171.6	17.	7.12			4.9	1.15	0.75	55458.		11	10	93

Week	Volume (mL)	S.C. (μS/cm)	pH	Alk. (mg/L)	Acy. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	Decant (mL)	Month	Day	Year
0		1175.	6.44	.	.	1250.0	592.00	88.80	3018.	.	4	29	91
0	.	290.	.	.	.	22.0	9.15	1.45	3040.	.	5	1	91
0	.	68.	7.10	.	.	308.0	93.00	25.40	3062.	.	5	9	91
1	168.1	550.	4.57	.	26.0	400.0	77.50	37.30	3096.	.	5	16	91
2	720.	720.	3.91	.	109.0	.	.	.	.	.	5	23	91
3	163.7	710.	3.61	.	147.0	350.0	.	.	3140.	.	5	30	91
4	171.2	750.	3.46	.	.	.	.	.	.	.	5	6	91
5	168.2	820.	3.19	.	247.0	370.0	9.40	16.10	3184.	.	6	13	91
6	167.7	1000.	3.06	.	336.0	.	.	.	.	.	6	20	91
7	164.9	925.	3.06	.	.	410.0	4.25	28.00	3236.	.	6	27	91
8	171.7	925.	3.00	.	333.0	470.0	3.55	35.50	3283.	.	7	3	91
9	172.4	800.	2.99	.	362.0	.	.	.	3327.	.	7	11	91
10	170.8	1150.	2.90	.	155.0	302.0	4.25	36.05	3379.	.	7	18	91
11	168.5	1200.	2.92	.	236.0	366.0	3.90	23.85	3426.	.	8	15	91
12	172.9	925.	3.02	.	391.0	355.0	3.70	24.80	3470.	.	8	22	91
13	168.7	790.	3.04	.	270.0	340.0	4.15	14.45	3522.	.	8	29	91
14	172.5	800.	3.00	.	333.0	290.0	2.90	9.00	3566.	.	9	5	91
15	168.4	875.	2.90	.	276.0	324.0	3.65	8.35	3613.	.	9	12	91
16	171.1	975.	2.85	.	282.0	248.0	2.40	8.00	3648.	.	9	19	91
17	170.1	900.	2.79	.	270.0	260.0	2.20	6.85	3670.	.	9	26	91
18	170.1	1100.	2.81	.	290.0	214.0	1.60	5.50	3692.	.	10	3	91
19	173.1	1050.	2.84	.	270.0	234.0	1.90	2.65	3714.	.	10	10	91
20	173.8	1175.	2.83	.	333.0	290.0	2.90	9.00	3566.	.	10	17	91
21	172.9	1100.	2.70	.	276.0	324.0	3.65	8.35	3613.	.	10	24	91
22	170.0	910.	2.80	.	282.0	248.0	2.40	8.00	3648.	.	10	31	91
23	174.2	850.	2.81	.	270.0	260.0	2.20	6.85	3670.	.	11	7	91
24	162.2	890.	2.73	.	290.0	214.0	1.60	5.50	3692.	.	11	14	91
25	171.5	1000.	2.78	.	227.0	234.0	1.90	2.65	3714.	.	11	24	91
26	.	600.	2.76	.	247.0	199.0	1.70	3.90	3736.	.	11	28	91
27	172.1	950.	2.71	.	290.0	214.0	1.65	4.90	3758.	.	12	5	91
28	172.1	850.	2.82	.	270.0	234.0	1.90	2.65	3714.	.	12	12	91
29	172.5	995.	2.71	.	290.0	199.0	1.70	3.90	3736.	.	12	19	91
30	173.6	800.	2.79	.	227.0	234.0	1.90	2.65	3714.	.	12	26	91
31	172.1	800.	2.82	.	247.0	199.0	1.70	3.90	3736.	.	1	2	92
32	171.9	990.	2.73	.	290.0	214.0	1.65	4.90	3758.	.	1	9	92
33	172.7	950.	2.73	.	247.0	199.0	1.70	3.90	3736.	.	1	16	92
34	175.4	625.	2.74	.	290.0	214.0	1.65	4.90	3758.	.	1	23	92
35	173.8	700.	2.82	.	247.0	199.0	1.70	3.90	3736.	.	1	30	92
36	169.6	800.	2.78	.	236.0	184.0	1.30	3.90	3780.	.	1	6	92
37	172.6	1100.	2.79	.	247.0	199.0	1.70	3.90	3736.	.	2	13	92
38	169.7	900.	2.81	.	236.0	184.0	1.30	3.90	3780.	.	2	20	92
39	173.1	1000.	2.82	.	241.0	230.0	3.00	3.40	3824.	.	2	27	92
40	169.8	900.	2.77	.	276.0	.	.	.	.	.	.	.	.
41	920.	920.	2.76	.	276.0	.	.	.	.	.	.	.	.
42	714.3	1000.	2.78	.	276.0	.	.	.	.	.	.	.	.
43	173.2	1005.	2.78	.	276.0	.	.	.	.	.	.	.	.

Table B2.27. Wet-Dry Cycle Test drainage quality from Solid TL5, reactor 19.

Week	Volume (mL)	S.C. (μ S/cm)	pH	Alk. (mg/L)	AcY. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	Decant (mL)	Month	Day	Year
90	170.3	580.	2.87	.	.	97.0	0.20	0.70	55233.	.	1	21	93
91	171.8	510.	2.89	.	186.0	.	.	.	.	.	1	28	93
92	172.2	530.	2.89	.	.	112.0	0.20	0.70	55244.	.	2	4	93
93	171.4	580.	2.90	.	156.0	.	.	.	.	.	2	11	93
94	172.6	580.	2.93	.	.	121.0	0.25	1.05	55255.	.	2	18	93
95	172.2	515.	2.95	.	144.0	.	.	.	.	.	2	25	93
96	172.2	490.	2.87	.	.	101.0	0.20	0.80	55266.	.	3	4	93
97	174.6	590.	2.89	.	162.0	.	.	.	.	.	3	11	93
98	173.2	530.	2.93	.	168.0	93.0	0.10	0.65	55278.	.	3	18	93
99	171.6	590.	2.95	.	.	.	.	.	.	.	3	25	93
100	169.5	550.	2.96	.	.	136.0	0.35	0.85	55289.	.	4	1	93
101	171.9	460.	2.92	.	122.0	.	.	.	.	.	4	8	93
102	169.8	470.	2.92	.	120.0	104.0	0.30	0.95	55300.	.	4	15	93
103	168.9	510.	2.89	.	.	.	.	.	.	.	4	22	93
104	171.8	500.	2.90	.	135.0	84.0	0.10	0.85	55311.	.	5	6	93
105	171.7	520.	2.91	.	.	124.0	0.35	0.95	55323.	.	5	13	93
106	173.9	620.	2.90	.	142.0	106.0	0.40	0.80	55334.	.	5	20	93
107	170.4	510.	2.92	.	145.0	.	.	.	.	.	6	3	93
108	169.9	435.	2.91	.	.	110.0	0.15	0.70	55345.	.	6	10	93
109	172.5	500.	2.90	.	.	103.0	0.20	0.70	55356.	.	6	17	93
110	174.4	470.	2.92	.	.	.	.	.	.	.	7	23	93
111	171.2	430.	2.83	.	150.0	.	.	.	.	.	7	1	93
112	170.7	455.	2.88	.	.	.	.	.	.	.	7	8	93
113	171.9	540.	2.82	.	140.0	.	.	.	.	.	7	15	93
114	.	.	.	.	.	.	.	.	.	.	7	22	93
115	172.1	575.	2.86	.	155.0	134.0	0.25	0.75	55368.	.	7	29	93
116	172.1	525.	2.84	.	.	.	.	.	.	.	8	5	93
117	173.8	550.	2.87	.	155.0	136.0	0.30	1.15	55379.	.	8	12	93
118	172.8	525.	2.88	.	155.0	130.0	0.25	0.60	55390.	.	8	19	93
119	174.0	675.	2.81	.	162.0	144.0	0.25	0.75	55401.	.	9	2	93
120	175.2	740.	2.81	.	150.0	114.0	0.35	0.80	55413.	.	9	9	93
121	172.6	780.	2.80	.	110.0	109.0	0.25	0.50	55425.	.	9	16	93
122	172.6	770.	2.85	.	145.0	93.0	0.20	0.45	55436.	.	10	7	93
123	167.6	725.	2.84	.	100.0	92.0	0.05	0.45	55448.	.	10	14	93
124	176.4	625.	2.88	.	122.0	100.0	.	.	.	.	10	20	93
125	175.7	600.	2.89	.	.	.	.	.	.	.	11	28	93
126	171.7	550.	2.90	.	.	100.0	0.10	0.50	55459.	.	11	4	93
127	173.8	610.	2.92	.	.	.	.	.	.	.	11	10	93
128	172.5	500.	2.94	.	.	.	.	.	.	.	.	.	.
129	170.5	600.	2.89	.	.	.	.	.	.	.	.	.	.
130	170.8	500.	2.81	.	.	.	.	.	.	.	.	.	.
131	172.5	520.	2.88	.	.	.	.	.	.	.	.	.	.
132	170.3	600.	2.90	.	.	100.0	0.10	0.50	55459.	.	11	10	93

Week	Volume (mL)	S.C. (μS/cm)	pH	Alk. (mg/L)	Acv. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	Decant (mL)	Month	Day	Year
0	.	4950.	6.68	.	.	2120.0	.	96.50	3020.	.	4	29	91
0	.	2400.	.	.	.	1230.0	.	.	.	.	5	1	91
0	.	1900.	7.36	.	.	1000.0	620.00	0.93	3042.	.	5	1	91
1	171.4	1800.	7.71	51.0	.	980.0	508.00	3.37	3064.	.	5	9	91
2	.	1620.	7.76	43.0	.	.	517.00	6.34	3098.	.	5	16	91
3	169.8	1300.	7.85	40.0	.	.	.	.	.	.	5	23	91
4	174.7	1000.	7.82	.	.	415.0	.	.	3142.	.	5	30	91
5	171.3	750.	7.80	39.0	.	.	.	.	.	.	6	6	91
6	172.6	700.	7.60	.	.	276.0	156.00	2.59	3186.	.	6	13	91
7	172.9	650.	7.82	37.0	.	.	.	.	.	.	6	20	91
8	173.1	500.	7.83	.	.	205.0	103.00	2.16	3238.	.	6	27	91
9	172.0	500.	7.76	39.0	.	.	.	.	.	.	7	3	91
10	175.5	460.	7.74	.	.	148.0	76.20	1.58	3285.	.	7	11	91
11	171.7	445.	7.70	39.0	.	.	.	.	.	.	7	18	91
12	175.7	460.	7.87	.	.	150.0	.	.	3329.	.	7	25	91
13	175.1	452.	7.84	32.0	.	.	.	.	.	.	7	31	91
14	177.1	340.	7.69	.	.	139.0	78.90	1.58	3381.	.	8	8	91
15	171.7	370.	7.79	42.0	.	.	.	.	.	.	8	15	91
16	176.5	450.	7.83	.	.	143.0	76.50	1.67	3428.	.	8	22	91
17	175.1	385.	7.86	20.0	.	.	.	.	.	.	8	29	91
18	174.4	465.	7.76	.	.	143.0	69.40	1.43	3472.	.	9	5	91
19	176.7	400.	7.56	34.0	.	.	.	.	.	.	9	12	91
20	176.7	345.	7.67	.	.	84.0	52.50	1.14	3524.	.	9	19	91
21	176.7	390.	7.87	31.0	.	.	.	.	.	.	9	26	91
22	174.7	382.	7.82	.	.	108.0	53.40	1.80	3568.	.	10	3	91
23	175.3	370.	7.72	31.0	.	.	.	.	.	.	10	10	91
24	180.7	285.	7.80	.	.	75.0	44.40	1.60	3615.	.	10	17	91
25	175.8	390.	7.82	37.0	.	.	.	.	.	.	10	24	91
26	.	315.	7.73	.	.	99.0	48.60	2.20	3649.	.	10	31	91
27	174.7	290.	7.74	34.0	.	.	.	.	.	.	11	7	91
28	174.5	362.	7.64	.	.	102.0	58.80	1.80	3671.	.	11	14	91
29	174.6	350.	7.71	35.0	.	.	.	.	.	.	11	21	91
30	175.5	265.	7.63	.	.	62.0	45.60	1.00	3693.	.	11	28	91
31	174.8	280.	7.66	45.0	.	.	.	.	.	.	12	5	91
32	175.5	300.	7.82	.	.	84.4	48.60	1.40	3715.	.	12	12	91
33	175.2	275.	7.80	57.0	.	.	.	.	.	.	12	19	91
34	176.2	250.	7.74	.	.	66.0	42.60	1.20	3737.	.	12	26	91
35	175.5	300.	7.74	49.0	.	.	.	.	.	.	1	2	92
36	175.6	330.	7.74	.	.	84.0	47.60	1.20	3759.	.	1	9	92
37	176.8	310.	7.91	50.0	.	.	.	.	.	.	1	16	92
38	175.2	310.	7.88	.	.	82.0	49.60	1.00	3781.	.	1	23	92
39	175.3	325.	7.89	50.0	.	.	.	.	.	.	1	30	92
40	172.5	260.	7.73	.	.	.	45.60	1.00	3803.	.	2	5	92
41	177.0	300.	7.81	50.0	.	.	.	.	.	.	2	13	92
42	175.0	300.	7.83	.	.	75.0	47.80	1.60	3825.	.	2	20	92
43	174.9	310.	7.76	47.0	.	.	.	.	.	.	2	27	92

Table B2.29. Wet-Dry Cycle Test drainage quality from Solid TL6, reactor 21.

Week	Volume (ml.)	S.C. (μS/cm)	pH	Alk. (mg/L)	AcY. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	Decant (ml.)	Month	Day	Year
44	175.1	315.	7.77	.	.	80.0	50.80	1.20	3847.	.	3	5	92
45	172.3	270.	7.72	30.0	.	98.0	53.20	1.60	3869.	.	3	12	92
46	173.6	320.	7.52	.	.	.	.	.	.	.	3	19	92
47	175.6	310.	7.55	50.0	.	86.5	49.00	2.00	3891.	.	4	26	92
48	174.0	310.	7.32	50.0	.	94.4	48.40	2.00	55010.	.	4	2	92
49	176.0	320.	7.28	50.0	.	77.2	46.60	1.40	55021.	.	4	9	92
50	176.1	330.	7.74	57.0	.	80.0	61.40	1.40	55032.	.	4	16	92
51	174.7	305.	7.81	57.0	.	.	47.40	1.40	55043.	.	5	23	92
52	175.0	310.	7.65	.	.	77.5	49.00	1.40	55054.	.	5	30	92
53	174.9	300.	7.39	44.0	.	55.0	39.40	1.00	55066.	.	6	7	92
54	175.5	225.	7.09	.	.	69.2	43.00	0.80	55077.	.	6	14	92
55	171.8	270.	7.63	31.0	.	75.2	48.10	1.10	55088.	.	7	21	92
56	176.0	280.	7.30	38.0	.	57.2	40.85	0.95	55099.	.	7	28	92
57	171.5	395.	7.14	.	.	56.0	38.85	0.90	55110.	.	8	4	92
58	173.7	285.	7.55	41.0	.	64.0	40.10	0.90	55122.	.	8	11	92
59	174.9	290.	7.69	7.80	.	69.2	43.00	0.80	55133.	.	8	18	92
60	174.1	250.	7.80	45.0	.	56.0	38.85	0.90	55144.	.	9	25	92
61	173.6	275.	7.67	45.0	.	56.0	40.60	0.80	55155.	.	9	2	92
62	175.1	235.	7.57	31.0	.	64.0	40.10	0.90	55167.	.	9	9	92
63	173.5	270.	7.58	31.0	.	56.0	41.50	0.90	55178.	.	10	16	92
64	173.8	278.	7.57	34.0	.	56.0	41.50	0.90	55189.	.	10	23	92
65	173.1	230.	7.72	34.0	.	56.0	41.50	0.90	55200.	.	10	30	92
66	172.1	230.	7.66	40.0	.	56.0	41.50	0.90	55211.	.	11	6	92
67	172.3	220.	7.69	40.0	.	56.0	41.50	0.90	55223.	.	11	13	92
68	172.2	224.	7.71	40.0	.	56.0	41.50	0.90	55234.	.	11	20	92
69	173.3	240.	7.60	40.0	.	56.0	41.50	0.90	55245.	.	11	27	92
70	173.7	253.	7.67	40.0	.	56.0	41.50	0.90	55256.	.	12	3	92
71	173.5	262.	7.60	37.0	.	56.0	41.50	0.90	55267.	.	12	10	92
72	173.6	235.	7.57	37.0	.	56.0	41.50	0.90	55278.	.	12	17	92
73	172.7	220.	7.77	37.0	.	56.0	41.50	0.90	55289.	.	12	24	92
74	174.6	262.	7.87	45.0	.	56.0	41.50	0.90	55300.	.	1	31	92
75	173.1	242.	7.73	45.0	.	56.0	41.50	0.90	55311.	.	1	7	92
76	173.2	222.	7.70	42.0	.	56.0	41.50	0.90	55322.	.	1	14	92
77	173.4	210.	7.78	42.0	.	56.0	41.50	0.90	55333.	.	1	21	92
78	173.2	220.	7.55	48.0	.	56.0	41.50	0.90	55344.	.	1	28	92

Table B2.30. Wet-Dry Cycle Test drainage quality from Solid TL6, reactor 21.

Week	Volume (mL)	S.C. (μ S/cm)	pH	Alk. (mg/L)	Acy. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	Decant (mL)	Month	Day	Year
90	174.6	175.	7.72	.	.	54.2	31.35	0.65	55234.	.	1	21	93
91	179.1	185.	7.84	44.0	.	.	.	.	.	.	1	28	93
92	174.1	187.	7.91	.	.	42.6	31.70	0.65	55245.	.	2	4	93
93	175.1	205.	7.85	45.0	.	.	.	.	.	.	2	11	93
94	175.9	185.	7.88	.	.	46.0	32.55	2.50	55256.	.	2	18	93
95	175.0	190.	7.88	45.0	.	.	.	.	.	.	2	25	93
96	175.6	180.	7.77	.	.	30.0	31.25	0.90	55267.	.	3	4	93
97	175.3	208.	7.85	50.0	.	.	.	.	.	.	3	11	93
98	177.6	183.	7.68	.	.	48.2	31.60	0.75	55279.	.	3	18	93
99	175.7	200.	7.95	45.0	.	.	.	.	.	.	3	25	93
100	173.8	220.	7.91	.	.	70.0	36.70	0.90	55290.	.	4	1	93
101	176.2	215.	7.93	45.0	.	.	.	.	.	.	4	8	93
102	176.9	215.	7.85	.	.	74.0	40.45	1.00	55301.	.	4	15	93
103	173.7	225.	7.84	41.0	.	.	.	.	.	.	4	22	93
104	174.8	192.	7.66	.	.	56.4	34.50	0.80	55312.	.	4	29	93
105	177.6	220.	7.84	41.0	.	.	.	.	.	.	5	6	93
106	175.2	225.	7.69	.	.	61.2	41.20	0.95	55324.	.	5	13	93
107	175.1	210.	7.82	44.0	.	.	.	.	.	.	5	20	93
108	175.1	192.	7.87	.	.	52.0	36.15	0.90	55335.	.	5	27	93
109	176.8	180.	7.95	35.0	.	.	.	.	.	.	6	3	93
110	178.7	190.	7.82	.	.	51.2	37.35	0.95	55346.	.	6	10	93
111	174.3	230.	7.89	45.0	.	.	.	.	.	.	6	17	93
112	174.5	226.	7.40	.	.	70.4	40.10	0.90	55357.	.	6	23	93
113	176.0	225.	7.88	32.0	.	.	.	.	.	.	7	1	93
114	.	.	.	.	.	.	.	.	.	.	7	8	93
115	177.3	223.	7.82	35.0	.	.	.	.	.	.	7	15	93
116	174.4	198.	7.74	.	.	59.4	37.20	1.05	55369.	.	7	22	93
117	175.5	200.	7.80	33.0	.	.	.	.	.	.	7	29	93
118	176.1	200.	7.76	.	.	84.0	49.80	1.10	55380.	.	8	5	93
119	176.6	85.	7.39	17.0	.	.	.	.	.	.	8	12	93
120	171.4	275.	7.75	.	.	100.4	46.55	1.50	55391.	.	8	19	93
121	172.1	295.	7.67	30.0	.	.	.	.	.	.	8	26	93
122	172.4	245.	7.91	.	.	68.0	38.20	1.10	55402.	.	9	2	93
123	173.0	218.	7.75	34.0	.	.	.	.	.	.	9	9	93
124	173.2	195.	7.76	.	.	56.0	33.85	0.95	55414.	.	9	16	93
125	172.2	172.	7.81	30.0	.	.	.	.	.	.	9	23	93
126	171.8	190.	7.74	.	.	44.6	33.45	0.90	55426.	.	9	30	93
127	173.5	195.	7.88	45.0	.	.	.	.	.	.	10	7	93
128	174.2	200.	7.86	.	.	43.6	32.75	0.90	55437.	.	10	14	93
129	171.8	205.	7.67	42.0	.	.	.	.	.	.	10	20	93
130	173.9	195.	7.94	.	.	43.6	32.40	0.90	55449.	.	10	28	93
131	175.1	210.	7.88	45.0	.	.	.	.	.	.	11	4	93
132	172.8	200.	7.95	.	.	46.0	33.40	1.05	55460.	.	11	10	93

Table B2.31. Identification of anomalous concentrations based on concentration versus time plots for the Wet-Dry Cycle Test (weeks 0 - 132).

Solid	Parameter	Sample Number	Concentration (mg/L)	Comments
RK1	magnesium	55022	4.4	Trend was ~2; sample was rerun and new value was 4.2; original value was used
	pH	55201	8.00	Trend was ~6.9; suspected laboratory error; sample was deleted
RK2	magnesium	55202	3.95	Trend was <1; sample was rerun; new value was 3.80; original value was used
RK3	calcium	55080	8.6	Trend was ~3; this concentration seemed inconsistent with conductance; sample was rerun; new value 3.30
	magnesium	55080	4.4	Trend was ~1.5; this concentration seemed inconsistent with conductance; sample was rerun; new value 1.70
	pH	55203	7.77	Trend was ~6.9; suspected laboratory error; sample was deleted
	sulfate	55542	24.5	Trend was ~5; not enough sample to rerun; concentration was kept in data file
RK4	sulfate	55339	95.2	Trend was ~45; this concentration seemed inconsistent with conductance; sample was rerun; new value 51.0
TL1	sulfate	55455	13.3	Trend was 3.0; not enough sample to rerun; inconsistent with conductance; concentration was omitted
TL4	sulfate	3713	20.5	Trend was ~5; this concentration seemed inconsistent with conductance; not enough sample to rerun; sample was omitted
	sulfate	3845	14.5	Trend was ~3.0; not enough sample to rerun; concentration was kept in data file
TL5	sulfate	55255	12.1	Data entry error; should have been 121
	magnesium	55143	6.4	Trend was ~1.5; sample was rerun; new value 1.30
	calcium	55222	33.15	Trend was <1; this concentration seemed inconsistent with conductance; rerun was 33.75; sample was omitted
	sulfate	55460	4.6	Data entry error; should have been 46.0
TL6	calcium	55223	2.15	Trend was ~30; concentration seemed inconsistent with conductance; rerun was 2.15; sample was omitted; possibly samples numbers were interchanged between this sample and #55222
	sulfate	55460	4.6	Data entry error; should have been 46.0

APPENDIX C

ELEVATED TEMPERATURE TEST

Table C1.1.	Elevated Temperature Test: Summary statistics for weekly and daily temperature readings.
Tables C1.2.-C1.3.	Average weekly temperature readings for the Elevated Temperature Test.
Figure C1.4.	Average weekly temperature versus time for the Elevated Temperature Test (weeks 0 - 130/131).
Tables C1.5.-C.12.	Temperature data for the Elevated Temperature Test: daily readings.
Figure C1.13.	Daily temperature readings for the Elevated Temperature Test (May 6, 1991 - November 3, 1993).
Tables C2.1.-C.2.20.	Elevated Temperature Test drainage quality.
Table C2.21.	Identification of anomalous concentrations based on concentration versus time plots for the Elevated Temperature Test (weeks 0 - 130/131).

Table C1.1. Elevated Temperature Test: Summary statistics for weekly and daily temperature readings.

	Weekly: rocks	Weekly: tailings	Daily
Temperature (°C)			
minimum	91.0	91.0	82.0
average	97.6	97.6	97.3
maximum	106	107	102
standard deviation	3.05	3.11	4.07
number of cases	66	65	473

Table C1.2. Average weekly temperature readings for the Elevated Temperature Test for rocks RK1 - RK4.

Week	Month	Day	Year	Temperature (°C)
0	5	9	91	37.2
2	5	22	91	38.0
4	6	5	91	37.6
6	6	19	91	37.6
8	7	3	91	40.0
10	7	17	91	36.8
12	7	31	91	39.3
14	8	14	91	38.3
16	8	28	91	37.1
18	9	11	91	41.0
20	9	24	91	37.8
22	10	9	91	36.3
24	10	23	91	41.2
26	11	6	91	40.0
28	11	20	91	41.3
30	12	4	91	36.7
32	12	18	91	36.4
34	1	2	92	36.6
36	1	15	92	37.3
38	1	29	92	37.6
40	2	12	92	37.3
42	2	26	92	36.7
44	3	11	92	36.8
46	3	25	92	36.4
48	4	8	92	35.9
50	4	22	92	36.7
52	5	6	92	37.2
54	5	20	92	35.1
56	6	3	92	35.8
58	6	18	92	35.5
60	7	1	92	35.2
62	7	15	92	36.0
64	7	29	92	34.4
66	8	12	92	35.2
68	8	26	92	35.7
70	9	9	92	36.6
72	9	23	92	35.5
74	10	7	92	36.9
76	10	21	92	36.6
78	11	4	92	35.9
80	11	18	92	35.9
82	12	2	92	34.7
84	12	16	92	34.7
86	12	30	92	35.2
88	1	13	93	35.7
90	1	27	93	35.6
92	2	10	93	35.2
94	2	23	93	34.2
96	3	10	93	34.1
98	3	23	93	32.8
100	4	7	93	34.6
102	4	21	93	34.9
104	5	5	93	35.4
106	5	19	93	34.4
108	6	1	93	35.6
110	6	16	93	34.9
112	6	30	93	36.2
114	7	14	93	36.4
116	7	28	93	36.3
118	8	11	93	35.6
120	8	25	93	35.2
122	9	8	93	34.8
124	9	22	93	35.9
126	10	6	93	36.2
128	10	20	93	37.9
130	11	3	93	37.8

Table C1.3. Average weekly temperature readings for the Elevated Temperature Test for tailings TL1 - TL6.

Week	Month	Day	Year	Temperature (°C)
0	5	2	91	.
2	5	15	91	37.4
4	5	29	91	38.1
6	6	12	91	37.7
8	6	26	91	38.1
10	7	8	91	41.1
12	7	24	91	38.3
14	8	7	91	38.3
16	8	21	91	38.2
18	9	4	91	37.6
20	9	18	91	39.7
22	10	2	91	38.5
24	10	16	91	36.1
26	10	30	91	41.4
28	11	13	91	40.4
30	11	27	91	40.2
32	12	11	91	36.7
34	12	26	92	36.5
36	1	8	92	36.9
38	1	22	92	37.4
40	2	5	92	37.2
41	2	26	92	36.7
43	3	11	92	36.8
45	3	25	92	36.4
47	4	8	92	35.9
49	4	22	92	36.7
51	5	6	92	37.2
53	5	20	92	35.1
55	6	3	92	35.8
57	6	18	92	35.5
59	7	1	92	35.2
61	7	15	92	36.0
63	7	29	92	34.4
65	8	12	92	35.2
67	8	26	92	35.7
69	9	9	92	36.6
71	9	23	92	35.5
73	10	7	92	36.9
75	10	21	92	36.6
77	11	4	92	35.9
79	11	18	92	35.9
81	12	2	92	34.7
83	12	16	92	34.7
85	12	30	92	35.2
87	1	13	93	35.7
89	1	27	93	35.6
91	2	10	93	35.2
93	2	23	93	34.2
95	3	10	93	34.1
97	3	23	93	32.8
99	4	7	93	34.6
101	4	21	93	34.9
103	5	5	93	35.4
105	5	19	93	34.4
107	6	1	93	35.6
109	6	16	93	34.9
111	6	30	93	36.2
113	7	14	93	36.4
115	7	28	93	36.3
117	8	11	93	35.6
119	8	25	93	35.2
121	9	8	93	34.8
123	9	22	93	35.9
125	10	6	93	33.8
127	10	20	93	37.9
129	11	3	93	37.8

Figure C1.4. Average weekly temperature versus time for the Elevated Temperature Test (weeks 0 - 129/131).

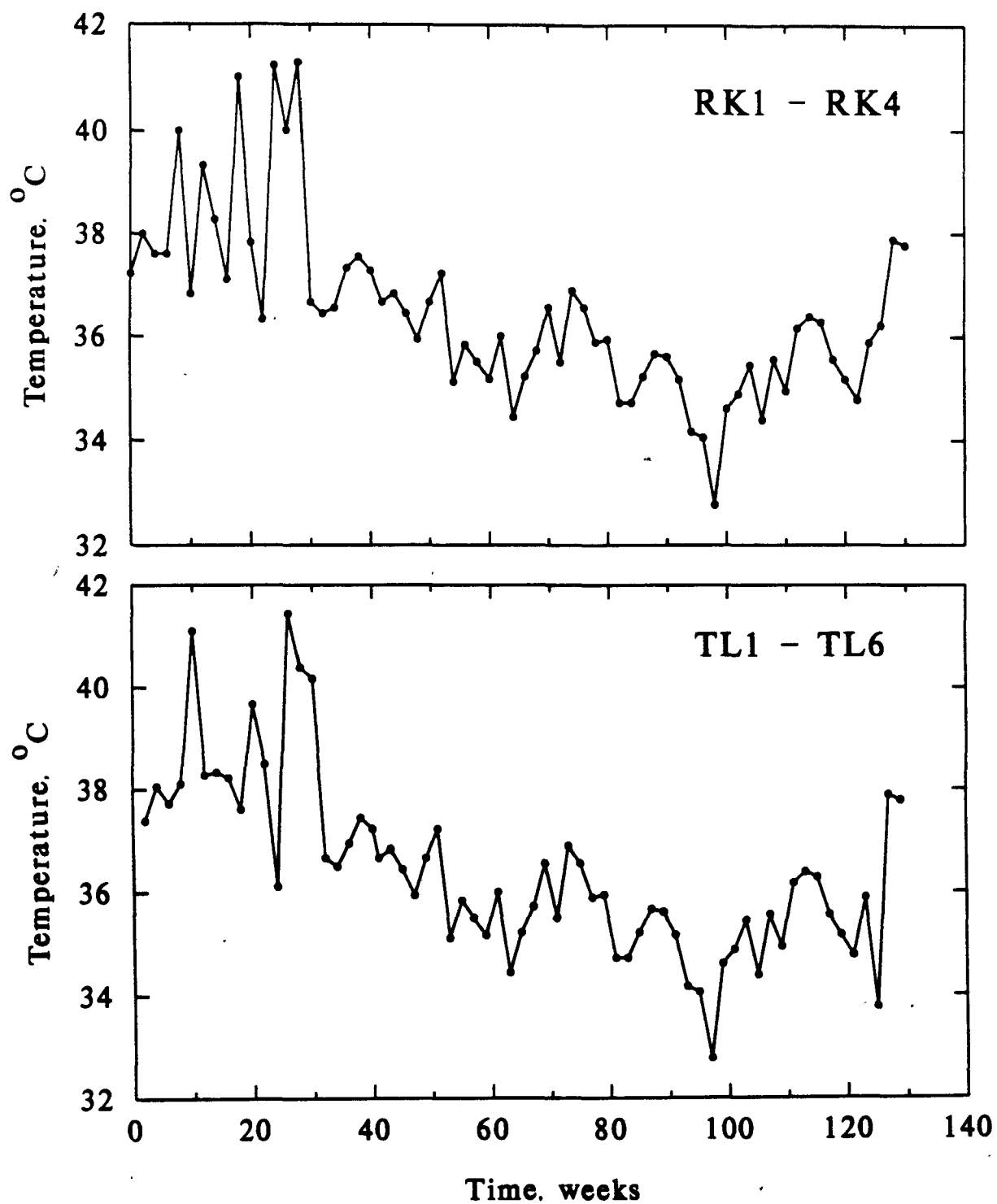


Table C1.5. Temperature data for the Elevated Temperature Test: daily readings.

Month	Day	Year	Temperature (°C)
5	6	91	35.0
5	7	91	36.1
5	8	91	38.9
5	9	91	38.9
5	10	91	38.9
5	13	91	34.4
5	14	91	39.4
5	15	91	37.2
5	16	91	38.9
5	17	91	40.0
5	20	91	37.8
5	21	91	37.8
5	22	91	37.8
5	23	91	38.3
5	24	91	38.9
5	27	91	38.9
5	28	91	36.7
5	29	91	35.6
5	30	91	37.8
5	31	91	37.8
6	3	91	37.8
6	4	91	37.2
6	5	91	37.2
6	6	91	39.4
6	7	91	38.3
6	10	91	37.8
6	11	91	36.7
6	12	91	37.2
6	13	91	37.8
6	14	91	37.8
6	17	91	37.2
6	19	91	37.2
6	20	91	38.9
6	24	91	38.9
6	26	91	38.9
7	1	91	38.9
7	3	91	44.4
7	8	91	40.0
7	15	91	40.0
7	17	91	30.6
7	18	91	40.0
7	19	91	40.0
7	22	91	40.6
7	23	91	38.9
7	24	91	37.8
7	25	91	40.0
7	29	91	40.6
7	30	91	37.8
7	31	91	38.3
8	5	91	38.3
8	6	91	37.2
8	7	91	36.1
8	8	91	38.9
8	12	91	37.8
8	13	91	39.4
8	14	91	40.0
8	15	91	36.7
8	16	91	38.3
8	19	91	38.9
8	21	91	35.6
8	26	91	36.7
8	28	91	36.7
9	4	91	39.4

Table C1.6. Temperature data for the Elevated Temperature Test: daily readings.

Month	Day	Year	Temperature (°C)
9	5	91	43.3
9	6	91	41.1
9	9	91	39.4
9	10	91	41.1
9	11	91	41.7
9	12	91	36.1
9	13	91	38.9
9	16	91	38.3
9	17	91	37.2
9	19	91	37.2
9	23	91	36.7
9	24	91	40.6
9	25	91	37.8
9	26	91	41.7
9	30	91	40.6
10	2	91	35.0
10	4	91	36.7
10	7	91	32.2
10	8	91	32.2
10	9	91	34.4
10	10	91	41.7
10	14	91	37.8
10	16	91	37.8
10	17	91	43.9
10	22	91	46.1
10	23	91	40.0
10	24	91	40.0
10	25	91	40.0
10	28	91	39.4
10	29	91	40.6
11	4	91	40.0
11	7	91	38.9
11	11	91	42.2
11	14	91	35.0
11	18	91	48.9
11	27	91	36.7
12	2	91	36.7
12	3	91	36.7
12	4	91	36.7
12	10	91	36.7
12	11	91	36.7
12	12	91	36.1
12	13	91	36.7
12	16	91	36.1
12	23	91	36.7
12	24	91	36.7
12	26	91	36.7
12	30	91	36.7
12	31	91	36.7
1	2	92	36.1
1	3	92	37.2
1	6	92	37.2
1	8	92	37.8
1	13	92	36.7
1	15	92	37.8
1	16	92	37.2
1	21	92	37.8
1	22	92	37.8
1	23	92	37.2
1	29	92	37.8
2	3	92	36.7
2	4	92	37.2
2	6	92	36.7

Table C1.7. Temperature data for the Elevated Temperature Test: daily readings.

Month	Day	Year	Temperature (°C)
2	7	92	37.8
2	10	92	36.7
2	11	92	38.3
2	12	92	37.8
2	14	92	36.7
2	17	92	36.7
2	19	92	36.7
2	20	92	36.7
2	26	92	36.7
2	27	92	37.8
3	2	92	45.6
3	4	92	35.0
3	5	92	35.6
3	6	92	35.0
3	9	92	35.6
3	10	92	35.0
3	11	92	35.0
3	12	92	35.0
3	13	92	36.1
3	16	92	35.6
3	17	92	37.2
3	19	92	37.2
3	20	92	37.2
3	23	92	37.2
3	24	92	36.1
3	25	92	36.1
3	27	92	35.6
3	30	92	36.1
4	1	92	36.1
4	2	92	36.1
4	3	92	36.1
4	6	92	36.1
4	7	92	35.6
4	9	92	35.6
4	10	92	35.6
4	13	92	36.1
4	14	92	36.1
4	15	92	37.8
4	20	92	37.8
4	21	92	37.2
4	22	92	37.2
4	27	92	40.6
4	29	92	36.7
5	1	92	37.2
5	4	92	37.2
5	6	92	34.4
5	8	92	36.1
5	11	92	35.6
5	14	92	37.2
5	18	92	37.2
5	19	92	35.0
5	20	92	29.4
5	21	92	34.4
5	22	92	35.0
5	26	92	36.1
5	27	92	36.7
5	28	92	35.6
6	1	92	37.2
6	2	92	36.1
6	3	92	35.6
6	4	92	35.0
6	5	92	35.0
6	8	92	35.0

Table C1.8. Temperature data for the Elevated Temperature Test: daily readings.

Month	Day	Year	Temperature (°C)
6	9	92	36.7
6	10	92	35.6
6	12	92	36.1
6	15	92	36.7
6	16	92	35.0
6	17	92	34.4
6	19	92	35.6
6	22	92	36.1
6	23	92	35.6
6	24	92	35.6
6	29	92	34.4
6	30	92	34.4
7	1	92	34.4
7	6	92	36.1
7	6	92	43.3
7	7	92	36.1
7	8	92	35.6
7	9	92	34.4
7	10	92	34.4
7	13	92	35.0
7	14	92	34.4
7	15	92	34.4
7	20	92	31.1
7	21	92	34.4
7	22	92	34.4
7	23	92	35.0
7	27	92	38.9
7	28	92	33.3
7	29	92	33.9
7	30	92	35.6
8	3	92	37.8
8	4	92	33.9
8	5	92	32.8
8	6	92	35.6
8	10	92	36.1
8	11	92	35.0
8	12	92	35.0
8	13	92	32.2
8	17	92	32.2
8	18	92	37.2
8	19	92	37.2
8	20	92	36.7
8	24	92	37.2
8	25	92	36.1
8	26	92	36.7
8	27	92	37.2
8	31	92	38.3
9	1	92	36.7
9	2	92	35.0
9	3	92	36.1
9	4	92	38.9
9	7	92	38.9
9	8	92	34.4
9	9	92	33.3
9	10	92	29.4
9	11	92	36.1
9	14	92	36.1
9	15	92	36.7
9	21	92	36.7
9	22	92	36.7
9	23	92	36.7
9	28	92	35.0
9	29	92	38.3

Table C1.9. Temperature data for the Elevated Temperature Test: daily readings.

Month	Day	Year	Temperature (°C)
9	30	92	37.8
10	1	92	36.7
10	2	92	36.7
10	5	92	37.8
10	6	92	36.7
10	7	92	36.1
10	8	92	33.9
10	9	92	35.6
10	12	92	40.0
10	13	92	36.7
10	14	92	36.1
10	15	92	37.8
10	16	92	39.4
10	19	92	37.2
10	20	92	34.4
10	21	92	34.4
10	22	92	36.7
10	26	92	36.7
10	27	92	33.9
10	28	92	35.0
10	29	92	36.7
10	30	92	37.2
11	2	92	36.7
11	3	92	34.4
11	5	92	36.1
11	9	92	35.0
11	10	92	35.6
11	11	92	35.6
11	12	92	36.7
11	16	92	37.8
11	18	92	35.0
11	19	92	33.9
11	23	92	35.0
11	24	92	35.0
11	25	92	35.0
11	30	92	35.0
12	1	92	34.4
12	3	92	35.6
12	4	92	36.1
12	7	92	36.1
12	8	92	34.4
12	9	92	34.4
12	10	92	33.3
12	11	92	34.4
12	14	92	34.4
12	15	92	33.9
12	16	92	34.4
12	17	92	35.0
12	18	92	35.6
12	21	92	35.6
12	22	92	35.0
12	23	92	36.7
12	28	92	34.4
12	29	92	34.4
12	30	92	35.0
12	31	92	33.9
1	4	93	36.7
1	5	93	36.1
1	6	93	36.1
1	7	93	35.6
1	8	93	36.7
1	11	93	36.1
1	12	93	35.6

Table C1.10. Temperature data for the Elevated Temperature Test: daily readings.

Month	Day	Year	Temperature (°C)
1	13	93	35.0
1	14	93	36.7
1	15	93	35.0
1	18	93	35.6
1	19	93	35.0
1	22	93	35.0
1	25	93	36.7
1	26	93	35.0
1	27	93	36.1
1	28	93	35.6
1	29	93	35.6
2	1	93	36.1
2	2	93	33.9
2	4	93	35.0
2	5	93	34.4
2	8	93	34.4
2	9	93	35.6
2	10	93	36.1
2	12	93	35.0
2	15	93	34.4
2	16	93	34.4
2	17	93	34.4
2	18	93	33.9
2	19	93	33.3
2	22	93	34.4
2	23	93	33.3
2	25	93	28.9
2	26	93	33.9
3	1	93	35.0
3	3	93	35.0
3	4	93	35.6
3	5	93	36.7
3	8	93	34.4
3	9	93	33.3
3	10	93	33.9
3	11	93	33.9
3	12	93	31.1
3	15	93	33.9
3	16	93	34.4
3	17	93	33.9
3	18	93	29.4
3	22	93	32.8
3	23	93	32.8
3	25	93	35.0
3	26	93	35.0
3	29	93	35.0
3	30	93	34.4
3	31	93	34.4
4	1	93	33.9
4	5	93	36.1
4	6	93	33.9
4	7	93	33.9
4	8	93	34.4
4	9	93	33.3
4	12	93	37.2
4	13	93	35.0
4	14	93	35.0
4	16	93	34.4
4	19	93	35.6
4	20	93	34.4
4	21	93	34.4
4	23	93	35.6
4	26	93	36.7

Table C1.11. Temperature data for the Elevated Temperature Test: daily readings.

Month	Day	Year	Temperature (°C)
4	27	93	35.6
4	29	93	35.6
4	30	93	35.6
5	3	93	35.0
5	4	93	35.0
5	5	93	34.4
5	7	93	35.0
5	10	93	32.2
5	11	93	35.0
5	12	93	34.4
5	13	93	34.4
5	17	93	32.2
5	18	93	35.0
5	19	93	36.7
5	21	93	35.6
5	24	93	35.6
5	28	93	36.1
5	31	93	35.6
6	1	93	35.0
6	3	93	35.0
6	7	93	37.2
6	8	93	34.4
6	9	93	35.0
6	10	93	35.6
6	14	93	35.0
6	15	93	33.9
6	16	93	33.3
6	17	93	36.1
6	18	93	35.0
6	21	93	36.7
6	22	93	35.6
6	23	93	35.6
6	25	93	38.3
6	28	93	37.2
6	29	93	35.0
6	30	93	36.1
7	2	93	36.7
7	5	93	40.6
7	6	93	37.8
7	7	93	35.6
7	8	93	35.0
7	12	93	35.6
7	13	93	35.0
7	14	93	35.0
7	19	93	36.1
7	20	93	37.2
7	21	93	37.2
7	26	93	33.9
7	27	93	36.7
7	28	93	36.7
7	29	93	35.0
7	30	93	34.4
8	2	93	35.0
8	3	93	36.1
8	4	93	36.7
8	6	93	38.3
8	9	93	36.7
8	10	93	33.9
8	11	93	33.9
8	16	93	36.1
8	17	93	36.7
8	18	93	36.7
8	19	93	34.4

Table C1.12. Temperature data for the Elevated Temperature Test: daily readings.

Month	Day	Year	Temperature (°C)
8	23	93	33.9
8	24	93	33.9
8	25	93	34.4
8	26	93	35.0
8	27	93	35.6
8	30	93	35.6
8	31	93	36.1
9	1	93	35.6
9	2	93	27.8
9	6	93	37.2
9	8	93	35.6
9	13	93	37.2
9	14	93	36.7
9	15	93	35.6
9	20	93	35.0
9	22	93	35.0
9	23	93	33.9
9	28	93	35.0
9	29	93	38.3
10	4	93	37.2
10	6	93	36.7
10	7	93	37.8
10	11	93	37.8
10	13	93	38.3
10	15	93	37.8
10	18	93	38.3
10	20	93	37.2
10	25	93	40.0
10	26	93	37.2
10	29	93	38.3
11	1	93	38.3
11	3	93	35.0

Figure C1.13. Daily temperature readings for the Elevated Temperature Test
(May 6, 1991 – November 3, 1993).

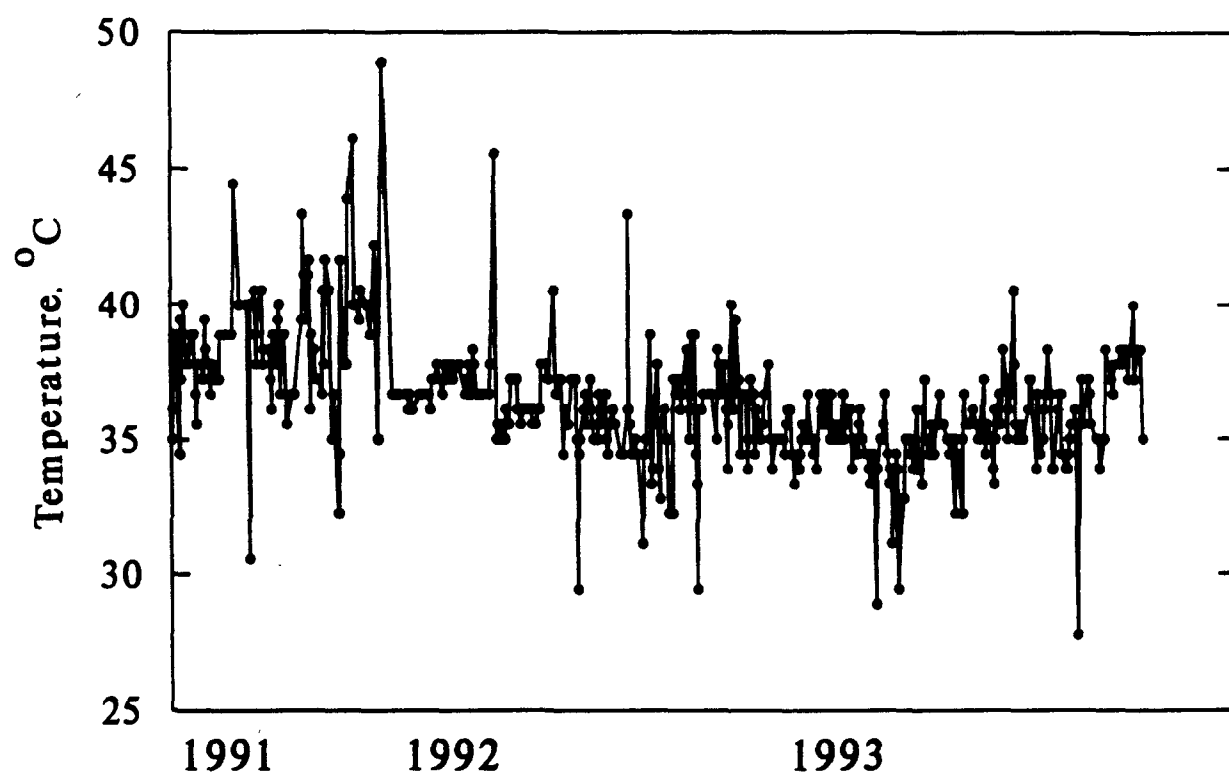


Table C2.1. Elevated Temperature Test drainage quality from Solid RK1, reactor 1.

Week	Volume (mL)	S.C. (μ S/cm)	pH	Alk. (mg/L)	Acy. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	S.C. (μ S/cm)	Decant (mL)	Month	Day	Year
0	.	650.	7.65	.	.	88.0	36.000	34.000	.	.	.	5	7	91
0	.	90.	.	.	.	<2.0	0.469	0.652	.	.	.	5	8	91
0	.	62.	.	.	.	72.0	13.100	11.000	.	.	.	5	9	91
2	315.1	270.	7.45	28.0	.	123.0	26.200	19.800	3100.	.	.	5	22	91
4	321.0	340.	7.13	26.0	.	149.0	25.600	24.000	3144.	.	.	6	5	91
6	326.4	430.	6.31	16.0	.	202.0	32.400	28.600	3196.	.	.	6	19	91
8	325.7	500.	4.42	.	29.0	64.0	21.600	18.000	3243.	.	.	7	3	91
10	312.5	262.	4.87	.	46.0	150.0	6.700	5.850	3287.	.	.	7	17	91
12	318.3	435.	4.16	.	46.0	164.0	6.950	6.150	3331.	.	.	7	31	91
14	321.1	450.	4.03	.	8.0	60.8	6.750	6.250	3383.	.	.	8	14	91
16	330.7	157.	6.00	.	12.0	49.2	6.950	6.250	3430.	.	.	8	28	91
18	321.8	190.	5.96	.	37.0	108.0	5.300	4.600	3474.	.	.	9	11	91
20	323.0	158.	5.90	.	32.0	86.5	4.050	3.650	3526.	.	.	9	24	91
22	321.4	150.	4.46	.	40.0	23.9	4.900	4.550	3573.	.	.	10	9	91
24	336.0	370.	4.25	.	34.0	15.5	2.300	2.150	3617.	.	.	10	23	91
26	311.3	160.	4.01	.	17.0	15.6	2.400	2.250	3650.	.	.	11	6	91
28	330.6	425.	3.60	.	14.0	13.0	2.350	2.050	3672.	.	.	11	20	91
30	322.7	150.	4.04	.	8.6	16.7	4.400	2.600	3694.	.	.	12	4	91
32	329.0	143.	4.13	.	11.0	27.6	5.600	4.000	3716.	.	15.0	12	18	91
34	328.8	68.	5.43	.	46.0	15.6	4.000	3.200	3738.	.	41.0	1	2	92
36	329.2	80.	4.51	.	52.0	14.2	4.200	3.600	3760.	.	32.0	1	15	92
38	324.8	82.	4.72	.	57.0	14.2	4.800	3.600	3782.	.	.	1	29	92
40	320.0	50.	5.71	.	92.0	15.6	6.600	4.600	3804.	.	.	2	12	92
42	318.6	75.	4.60	.	23.0	11.1	3.400	2.200	3826.	152.	.	2	26	92
44	328.6	120.	4.43	.	8.6	8.7	4.800	1.800	3848.	240.	.	3	11	92
46	328.9	85.	4.25	.	7.0	8.7	2.500	1.900	3870.	195.	.	3	25	92
48	332.1	120.	3.95	.	14.0	13.0	2.350	2.050	3892.	239.	.	4	8	92
50	315.4	138.	3.95	.	57.0	14.2	4.800	3.600	60000.	240.	.	4	22	92
52	301.8	150.	3.86	.	92.0	15.6	6.600	4.600	60011.	325.	.	5	6	92
54	328.1	39.	5.89	.	17.0	8.0	3.400	2.200	60022.	111.	.	5	20	92
56	320.5	80.	5.65	.	23.0	11.1	3.000	2.400	60033.	145.	.	6	3	92
58	321.4	55.	5.92	.	8.6	8.7	4.800	1.800	60044.	92.	.	6	17	92
60	324.1	42.	6.13	.	7.0	8.7	2.500	1.900	60056.	72.	.	7	1	92
62	323.4	50.	6.05	.	11.0	11.4	2.500	1.900	60067.	98.	.	7	15	92
64	329.7	39.	6.24	.	14.0	7.5	1.800	1.200	60078.	70.	.	7	29	92
66	309.0	38.	6.08	.	8.6	8.3	1.250	1.200	60089.	65.	.	8	12	92
68	323.9	40.	6.03	.	2.8	6.6	1.100	1.150	60101.	70.	.	8	26	92
70	324.0	34.	6.11	.	11.5	7.0	1.000	1.050	60112.	75.	.	9	9	92
72	321.3	34.	6.09	.	6.0	6.4	0.950	1.050	60123.	64.	.	9	23	92
74	325.2	42.	6.13	.	3.0	7.7	1.450	1.200	60134.	76.	.	10	7	92
76	325.4	32.	6.26	.	9.0	6.6	1.200	1.100	60145.	72.	.	10	21	92
78	323.5	43.	6.25	.	6.0	6.6	1.200	1.100	60157.	62.	.	11	4	92
80	334.6	41.	5.24	.	15.0	.	1.300	1.150	60168.	.	.	11	18	92

Table C2.2. Elevated Temperature Test drainage quality from Solid RK1, reactor 1.

Week	Volume (mL)	S.C. ¹ (μ S/cm)	pH	Alk. (mg/L)	Acy. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	S.C. (μ S/cm)	Decant (mL)	Month	Day	Year
82	324.9	35.	6.24	.	9.0	.	0.800	0.800	60179.	55.	.	12	2	92
84	336.4	27.	6.21	.	6.0	.	0.850	1.100	60190.	55.	49.0	12	16	92
86	323.5	32.	5.01	.	6.0	.	0.850	0.850	60201.	59.	25.0	12	30	92
88	331.4	37.	4.64	.	18.0	4.8	0.900	0.850	60213.	58.	.	1	13	93
90	329.3	45.	4.50	.	24.0	4.8	0.950	1.050	60224.	78.	.	1	27	93
92	323.3	45.	4.77	.	17.0	4.6	1.100	1.100	60235.	88.	.	2	10	93
94	324.7	34.	4.93	.	12.0	4.0	0.750	0.700	60246.	58.	.	2	23	93
96	337.7	26.	5.89	.	6.0	4.6	0.600	0.650	60257.	58.	.	3	10	93
98	321.2	23.	5.82	.	12.0	3.8	0.600	0.650	60269.	55.	.	3	24	93
100	328.4	23.	6.23	.	3.0	4.5	0.550	0.650	60280.	54.	12.0	4	7	93
102	326.3	24.	6.30	5.0	.	3.9	0.800	0.600	60291.	45.	.	4	21	93
104	324.6	27.	6.77	5.0	.	4.3	0.850	0.900	60302.	43.	.	5	5	93
106	324.0	22.	6.24	.	3.0	3.4	0.650	0.500	60314.	50.	.	5	19	93
108	328.6	22.	6.38	.	10.0	3.7	0.600	0.500	60325.	43.	.	6	2	93
110	276.8	15.	6.20	.	2.5	2.8	0.250	0.250	60336.	14.	.	6	16	93
112	329.7	22.	6.56	5.0	.	4.2	0.550	0.400	60347.	38.	.	6	30	93
114	325.7	33.	5.71	.	3.8	5.2	0.800	0.650	60359.	71.	.	7	14	93
116	338.5	24.	6.23	.	5.0	4.4	0.950	0.450	60370.	55.	.	7	28	93
118	333.6	34.	6.37	5.0	.	4.3	0.950	1.750	60382.	62.	.	8	11	93
120	333.8	23.	6.46	5.0	.	4.0	0.500	0.400	60394.	40.	.	8	25	93
122	334.4	21.	6.53	5.0	.	4.3	0.800	0.750	60405.	44.	.	9	8	93
124	330.8	24.	6.45	7.5	.	3.7	0.700	0.650	60416.	50.	.	9	22	93
126	334.7	18.	6.37	12.5	.	3.6	0.800	0.650	60427.	55.	.	10	6	93
128	330.0	34.	6.27	.	5.0	4.9	0.900	0.850	60440.	62.	.	10	20	93
130	331.8	24.	6.41	7.5	.	4.3	0.500	0.450	60451.	50.	.	11	3	93

¹ Specific conductance was obtained as a composite (first column labelled S.C.). To evaluate rinsing efficiency, a preliminary specific conductance was measured (second column labelled S.C.).

Table C2.3. Elevated Temperature Test drainage quality from Solid RK2, reactor 3.

Week	Volume (mL)	S.C. (μ S/cm)	pH	Alk. (mg/L)	Acy. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	S.C. (μ S/cm)	Decant (mL)	Month	Day	Year
0		262.	8.00	.	.	83.0	13.100	4.520	.	.	.	5	7	91
0	.	90.	.	.	.	.	.	.	.	.	.	5	8	91
0	.	79.	.	.	.	10.0	4.310	1.730	.	.	.	5	9	91
2	343.2	210.	7.65	28.0	.	48.5	22.000	5.400	3102.	.	.	5	22	91
4	344.8	117.	7.39	21.0	.	21.0	.	.	3146.	.	.	6	5	91
6	345.6	75.	7.10	16.0	.	13.6	6.050	0.750	3198.	.	.	6	19	91
8	344.0	53.	7.08	13.0	.	8.5	3.900	0.800	3245.	.	.	7	3	91
10	339.2	53.	6.88	7.8	.	9.3	.	.	3289.	.	.	7	17	91
12	341.1	75.	6.61	16.0	.	14.1	.	.	3333.	.	.	7	31	91
14	322.5	58.	6.38	.	2.9	12.3	.	.	3385.	.	.	8	14	91
16	340.4	60.	6.78	14.0	.	9.3	4.350	1.250	3432.	.	.	8	28	91
18	342.2	60.	6.53	.	13.0	10.0	.	.	3476.	.	.	9	11	91
20	341.2	55.	6.67	.	9.0	7.7	4.000	1.200	3528.	.	.	9	24	91
22	337.4	50.	6.31	.	9.0	7.5	4.350	1.850	3575.	.	.	10	9	91
24	343.1	50.	6.26	.	1.0	7.5	3.650	1.150	3619.	.	.	10	23	91
26	339.6	46.	6.33	5.2	.	13.0	3.300	1.000	3651.	.	.	11	6	91
28	348.6	125.	4.49	.	46.0	4.8	9.900	3.150	3673.	.	.	11	20	91
30	331.6	65.	5.42	.	14.0	4.4	4.950	2.000	3695.	.	.	12	14	91
32	339.6	50.	5.41	.	9.0	5.7	2.350	4.250	3717.	.	.	12	18	91
34	344.3	46.	6.16	.	9.5	4.8	3.100	1.400	3739.	.	.	1	2	92
36	341.2	35.	6.48	.	3.0	5.0	2.300	1.050	3761.	.	.	1	15	92
38	338.7	45.	6.57	6.3	.	5.4	2.500	1.150	3783.	.	.	1	29	92
40	391.5	31.	6.47	9.0	.	.	.	.	3805.	.	.	2	12	92
42	339.1	43.	6.54	12.6	.	9.1	4.400	1.600	3827.	72.	.	2	26	92
44	336.0	58.	6.23	5.7	.	12.5	5.400	2.000	3849.	105.	.	3	11	92
46	342.1	38.	6.24	.	5.7	8.5	3.400	1.200	3871.	70.	.	3	25	92
48	340.2	36.	6.24	.	5.0	8.1	3.000	1.200	3893.	68.	.	4	8	92
50	339.8	45.	5.94	.	5.0	7.7	4.000	1.000	60001.	73.	.	4	22	92
52	294.6	27.	6.10	.	5.0	7.5	4.000	1.400	60012.	76.	.	5	6	92
54	335.7	25.	6.39	6.3	.	6.4	3.400	1.400	60023.	49.	.	5	20	92
56	330.5	30.	6.45	12.6	.	5.8	2.800	1.300	60034.	49.	.	6	3	92
58	332.7	32.	6.44	5.0	.	6.6	3.100	1.200	60045.	50.	.	6	17	92
60	331.9	26.	6.42	7.0	.	7.2	2.600	1.100	60057.	47.	.	7	1	92
62	335.1	41.	6.59	5.0	.	8.6	3.900	1.600	60068.	71.	.	7	15	92
64	331.9	26.	6.46	11.0	.	5.9	2.300	0.850	60079.	46.	.	7	29	92
66	326.1	6.	6.30	5.0	.	.	0.450	0.250	60090.	48.	.	8	12	92
68	338.8	28.	5.71	.	5.7	5.0	1.800	0.650	60102.	49.	.	8	26	92
70	334.7	29.	5.71	.	11.0	5.3	1.800	0.700	60113.	58.	.	9	9	92
72	332.8	25.	5.99	.	6.0	5.6	2.050	0.800	60124.	52.	.	9	23	92
74	336.9	30.	5.83	.	3.0	5.6	2.600	0.800	60135.	52.	.	10	7	92
76	337.8	46.	4.83	.	18.0	5.3	3.850	1.100	60146.	78.	.	10	21	92
78	333.6	47.	4.77	.	15.0	.	3.750	1.050	60158.	84.	.	11	4	92
80	341.6	38.	4.75	.	12.0	.	2.600	1.500	60169.	.	.	11	18	92

Table C2.4. Elevated Temperature Test drainage quality from Solid RK2, reactor 3.

Week	Volume (mL)	S.C. ¹ (μ S/cm)	pH	Alk. (mg/L)	Acy. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	S.C. (μ S/cm)	Decant (mL)	Month	Day	Year
82	345.5	36.	4.78	.	15.0	.	2.450	0.600	60180.	57.	.	12	2	92
84	352.9	19.	5.77	.	6.0	.	1.700	0.900	60191.	40.	.	12	16	92
86	349.2	26.	4.99	.	12.0	.	1.650	0.450	60202.	39.	.	12	30	92
88	340.4	29.	4.60	.	18.0	3.6	1.800	0.500	60214.	48.	.	1	13	93
90	333.3	25.	4.72	.	9.0	4.5	2.100	0.600	60225.	55.	.	1	27	93
92	347.9	26.	4.76	.	9.0	3.5	1.900	0.500	60236.	57.	.	2	10	93
94	337.9	24.	5.07	.	6.0	3.8	1.500	0.450	60247.	45.	.	2	23	93
96	335.3	20.	5.33	.	6.0	4.1	1.500	0.650	60258.	45.	.	3	10	93
98	336.4	18.	5.55	.	3.0	3.8	1.300	0.400	60270.	40.	.	3	24	93
100	338.0	17.	6.06	.	3.0	4.3	1.750	0.450	60281.	31.	.	4	7	93
102	335.8	18.	6.19	.	4.0	4.3	1.550	0.450	60292.	33.	.	4	21	93
104	332.6	20.	6.44	4.0	.	4.4	1.450	0.700	60303.	32.	.	5	5	93
106	331.2	19.	5.65	.	3.0	4.0	1.550	0.450	60315.	36.	.	5	19	93
108	327.1	20.	5.74	.	5.0	3.7	1.550	0.450	60326.	36.	.	6	2	93
110	332.8	20.	5.80	.	3.0	4.3	1.800	0.750	60337.	36.	.	6	16	93
112	329.0	17.	6.09	.	2.5	4.3	1.500	0.350	60348.	30.	.	6	30	93
114	326.0	22.	5.23	.	5.0	4.3	1.450	0.400	60360.	42.	.	7	14	93
116	332.2	19.	5.68	.	<5.0	4.7	1.450	0.350	60371.	38.	.	7	28	93
118	333.8	25.	5.91	.	7.0	5.2	1.550	0.450	60383.	38.	.	8	11	93
120	331.4	21.	6.18	.	2.5	4.4	1.450	0.400	60395.	34.	.	8	25	93
122	330.6	22.	6.10	.	10.0	4.9	1.850	0.500	60406.	30.	.	9	8	93
124	337.0	20.	5.79	.	<5.0	3.6	1.550	0.450	60417.	33.	.	9	22	93
126	330.4	16.	5.84	.	2.5	4.4	1.350	0.400	60428.	32.	.	10	6	93
128	349.2	10.	5.68	.	2.5	2.0	0.800	0.250	60441.	16.	.	10	20	93
130	326.8	33.	5.14	.	7.5	6.2	2.050	0.600	60452.	70.	.	11	3	93

¹ Specific conductance was obtained as a composite (first column labelled S.C.). To evaluate rinsing efficiency, a preliminary specific conductance was measured (second column labelled S.C.).

Table C2.5. Elevated Temperature Test drainage quality from Solid RK3, reactor 5.

Week	Volume (mL)	S.C. (μ S/cm)	pH	Alk. (mg/L)	Acy. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	S.C. (μ S/cm)	Decant (mL)	Month	Day	Year
0	.	700.	7.10	.	.	310.0	54.200	23.900	.	.	.	5	7	91
0	.	250.	.	.	.	.	.	.	.	.	.	5	8	91
0	.	50.	.	.	.	5.0	1.530	0.652	.	.	.	5	9	91
2	327.2	500.	7.28	46.0	.	154.0	37.200	13.400	.	.	.	5	22	91
4	332.4	370.	7.32	37.0	.	117.0	28.400	8.000	3104.	.	.	6	5	91
6	340.4	330.	7.01	24.0	.	108.0	26.400	8.600	3200.	.	.	6	19	91
8	331.4	580.	4.90	.	69.0	287.0	36.600	13.200	3247.	.	.	7	3	91
10	341.2	155.	6.35	10.5	.	43.4	.	.	3291.	.	.	7	17	91
12	335.3	438.	4.58	.	109.0	109.0	23.600	9.200	3335.	.	.	7	31	91
14	328.3	240.	5.03	.	29.0	63.6	.	.	3387.	.	.	8	14	91
16	332.1	275.	5.33	.	26.0	88.0	10.700	5.800	3434.	.	.	8	28	91
18	335.9	145.	6.30	16.0	.	36.0	.	.	3478.	.	.	9	11	91
20	330.2	172.	5.81	.	12.0	43.6	6.300	4.400	3530.	.	.	9	24	91
22	328.2	318.	4.71	.	32.0	105.0	12.100	9.500	3577.	.	.	10	9	91
24	326.8	.	5.94	.	9.0	20.8	1.800	1.700	3621.	.	.	10	23	91
26	319.9	250.	4.65	.	49.0	8.7	6.100	6.650	3652.	.	.	11	6	91
28	329.2	500.	4.17	.	124.0	157.0	9.450	12.650	3674.	.	.	11	20	91
30	324.6	145.	5.20	.	17.0	34.5	2.600	4.450	3696.	.	.	12	4	91
32	326.3	123.	5.17	.	14.0	42.5	2.350	4.250	3718.	.	.	12	18	91
34	333.1	108.	5.46	.	13.0	31.7	2.150	4.150	3740.	.	.	1	2	92
36	330.8	92.	5.18	.	5.7	30.5	2.150	4.100	3762.	.	.	1	15	92
38	329.6	150.	4.96	.	11.5	36.8	2.800	5.000	3784.	.	.	1	29	92
40	332.8	80.	5.35	.	11.5	.	.	.	3806.	.	.	2	12	92
42	323.0	169.	4.74	.	26.0	51.2	5.000	6.600	3828.	295.	.	2	26	92
44	326.5	205.	4.57	.	28.0	57.2	4.800	7.200	3850.	342.	.	3	11	92
46	329.6	200.	4.27	.	75.0	53.0	4.200	7.200	3872.	420.	.	3	25	92
48	331.2	150.	4.25	.	69.0	31.6	2.600	4.400	3894.	280.	.	4	8	92
50	336.4	243.	4.15	.	74.0	40.4	4.000	5.800	30002.	375.	.	4	22	92
52	305.8	140.	4.37	.	40.0	28.4	3.400	4.400	60013.	245.	.	5	6	92
54	328.6	112.	4.33	.	40.0	27.3	2.800	4.200	60024.	189.	.	5	20	92
56	326.2	110.	4.49	.	29.0	24.0	2.200	3.600	60035.	159.	.	6	3	92
58	327.3	70.	4.45	.	34.0	26.5	3.900	3.500	60046.	150.	.	6	17	92
60	328.3	80.	4.38	.	14.0	29.4	2.200	4.400	60058.	162.	.	7	1	92
62	331.0	135.	4.33	.	29.0	26.1	1.350	3.800	60069.	198.	.	7	15	92
64	332.4	105.	4.36	.	29.0	26.1	1.350	2.950	60080.	145.	.	7	29	92
66	314.1	95.	4.34	.	15.0	21.5	1.100	2.300	60091.	135.	.	8	12	92
68	335.3	105.	4.23	.	32.0	20.2	1.050	2.400	60103.	155.	.	8	26	92
70	336.6	110.	4.16	.	37.0	23.5	1.200	2.650	60114.	204.	.	9	9	92
72	326.9	85.	4.58	.	11.0	22.3	1.050	2.300	60125.	145.	.	9	23	92
74	330.3	100.	4.41	.	24.0	17.8	1.150	2.100	60136.	142.	.	10	7	92
76	333.8	80.	4.57	.	21.0	15.8	1.000	1.900	60147.	115.	.	10	21	92
78	329.4	68.	4.54	.	18.0	.	0.950	1.900	60159.	112.	.	11	4	92
80	333.7	65.	4.70	.	9.0	.	0.800	1.600	60170.	.	.	11	18	92

Table C2.6. Elevated Temperature Test drainage quality from Solid RK3, reactor 5.

Week	Volume (mL)	S.C. ¹ (μ S/cm)	pH	Alk. (mg/L)	AcY. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	S.C. (μ S/cm)	Decant (mL)	Month	Day	Year
82	334.4	67.	4.69	.	9.0	.	0.750	1.600	60181.	89.	.	12	2	92
84	346.6	55.	4.77	.	11.0	.	0.750	1.450	60192.	82.	.	12	16	92
86	336.1	60.	4.61	.	12.0	.	0.600	1.400	60203.	78.	.	12	30	92
88	330.1	62.	4.27	.	21.0	16.6	0.950	1.800	60215.	95.	.	1	13	93
90	329.9	60.	4.40	.	15.0	14.2	0.750	1.650	60226.	99.	.	1	27	93
92	338.0	55.	4.50	.	15.0	13.6	0.800	1.400	60237.	100.	.	2	10	93
94	338.6	55.	4.65	.	12.0	12.8	0.650	1.050	60248.	68.	.	2	23	93
96	326.2	59.	4.78	.	15.0	14.3	0.750	1.200	60259.	82.	.	3	10	93
98	324.5	52.	4.68	.	9.0	15.8	0.750	1.300	60271.	83.	.	3	24	93
100	328.6	55.	4.82	.	7.5	15.4	1.000	1.100	60282.	73.	.	4	7	93
102	326.5	58.	4.82	.	7.5	17.0	1.000	1.100	60293.	78.	.	4	21	93
104	321.6	65.	4.92	.	7.5	20.6	1.000	1.350	60304.	90.	.	5	5	93
106	327.4	60.	4.53	.	10.0	14.8	1.050	1.100	60316.	87.	.	5	19	93
108	326.3	61.	4.52	.	5.0	17.0	1.000	1.050	60327.	80.	.	6	2	93
110	328.0	61.	4.45	.	10.0	15.5	1.000	1.100	60338.	95.	.	6	16	93
112	323.0	61.	4.53	.	10.0	16.2	1.050	1.000	60349.	90.	.	6	30	93
114	319.8	81.	4.38	.	12.0	20.8	1.100	1.100	60361.	101.	.	7	14	93
116	332.9	62.	4.43	.	12.0	18.8	0.750	0.900	60372.	87.	.	7	28	93
118	330.4	81.	4.27	.	15.0	21.5	1.000	1.050	60384.	110.	.	8	11	93
120	332.1	70.	4.30	.	15.0	16.8	0.900	0.900	60396.	100.	.	8	25	93
122	326.1	68.	4.32	.	10.0	15.8	0.800	0.850	60407.	85.	.	9	8	93
124	332.0	72.	4.28	.	15.0	17.4	0.900	0.900	60418.	94.	.	9	22	93
126	336.5	68.	4.35	.	10.0	18.4	1.050	0.850	60429.	105.	.	10	6	93
128	326.8	210.	3.51	.	55.0	67.6	3.650	2.900	60442.	410.	.	10	20	93
130	332.5	113.	3.89	.	20.0	27.7	1.000	1.200	60453.	180.	.	11	3	93

¹ Specific conductance was obtained as a composite (first column labelled S.C.). To evaluate rinsing efficiency, a preliminary specific conductance was measured (second column labelled S.C.).

Table C2.7. Elevated Temperature Test drainage quality from Solid RK4, reactor 7.

Week	Volume (mL)	S.C. (μ S/cm)	pH	Alk. (mg/L)	Acy. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	S.C. (μ S/cm)	Decant (mL)	Month	Day	Year
0		1380.	6.83	.	.	685.0	120.000	52.000	.	.	.	5	7	91
0	.	460.	.	.	.	.	.	.	.	.	.	5	8	91
0	.	168.	.	.	.	13.0	10.600	8.170	.	.	.	5	9	91
2	326.8	1100.	7.62	91.0	.	415.0	99.800	70.200	3106.	.	.	5	22	91
4	315.7	1200.	7.70	89.0	.	515.0	.	.	3150.	.	.	6	5	91
6	325.1	1520.	7.77	52.5	.	368.0	112.000	51.200	3202.	.	.	6	19	91
8	327.2	3100.	6.18	.	43.0	970.0	240.000	129.000	3249.	.	.	7	3	91
10	338.6	790.	7.37	59.0	.	338.0	.	.	3293.	.	.	7	17	91
12	331.4	1050.	6.47	34.0	.	610.0	.	.	3337.	.	.	7	31	91
14	327.7	725.	6.67	34.0	.	358.0	.	.	3389.	.	.	8	14	91
16	334.0	980.	4.81	.	46.0	504.0	105.800	45.600	3436.	.	.	8	28	91
18	332.9	1000.	3.59	.	109.0	510.0	.	.	3480.	.	.	9	11	91
20	331.4	438.	4.18	.	35.0	135.0	34.600	12.600	3532.	.	.	9	24	91
22	329.9	675.	3.57	.	115.0	268.0	57.000	19.000	3579.	.	.	10	9	91
24	332.9	1000.	3.13	.	207.0	370.0	53.800	18.800	3623.	.	.	10	23	91
26	310.8	680.	3.22	.	168.0	178.0	32.800	11.800	3653.	.	.	11	6	91
28	339.5	1200.	2.79	.	437.0	390.0	31.600	11.600	3675.	.	.	11	20	91
30	328.2	500.	3.20	.	112.0	97.0	11.750	4.650	3697.	.	.	12	4	91
32	319.3	625.	3.00	.	158.0	168.0	15.100	5.800	3719.	.	.	12	18	91
34	333.0	440.	3.24	.	110.0	93.0	11.000	4.400	3741.	.	.	1	2	92
36	329.1	440.	3.21	.	75.0	97.0	11.750	4.400	3763.	.	.	1	15	92
38	327.9	500.	3.30	.	106.0	91.0	11.300	4.050	3785.	.	.	1	29	92
40	330.6	420.	3.27	.	80.0	.	.	.	3807.	.	.	2	12	92
42	328.3	400.	3.35	.	86.0	93.0	14.000	3.800	3829.	590.	.	2	26	92
44	330.5	470.	3.28	.	86.0	98.0	9.000	3.800	3851.	700.	.	3	11	92
46	332.0	400.	3.22	.	92.0	95.0	7.400	3.000	3873.	625.	.	3	25	92
48	328.4	400.	3.21	.	92.0	90.0	6.000	2.600	3895.	670.	.	4	8	92
50	330.2	690.	3.03	.	144.0	148.0	7.800	3.000	60003.	1075.	.	4	22	92
52	302.1	500.	3.08	.	132.0	128.0	7.000	3.200	60014.	980.	.	5	6	92
54	328.6	500.	3.05	.	144.0	118.0	6.000	3.000	60025.	840.	.	5	20	92
56	320.2	500.	3.10	.	144.0	115.0	5.100	2.800	60036.	830.	.	6	3	92
58	321.4	420.	3.16	.	103.0	89.0	4.400	2.500	60047.	650.	.	6	17	92
60	328.0	430.	3.16	.	120.0	98.4	4.100	2.500	60059.	680.	.	7	1	92
62	329.4	590.	3.02	.	195.0	144.0	5.000	2.700	60070.	950.	.	7	15	92
64	332.7	340.	3.13	.	104.0	89.6	3.100	2.100	60081.	575.	.	7	29	92
66	323.0	420.	3.13	.	109.0	98.0	3.050	2.100	60092.	650.	.	8	12	92
68	334.1	440.	3.14	.	103.0	74.4	2.700	1.900	60104.	660.	.	8	26	92
70	331.7	500.	3.08	.	142.0	102.0	2.950	2.150	60115.	840.	.	9	9	92
72	329.8	340.	3.21	.	121.0	86.4	2.700	2.000	60126.	640.	.	9	23	92
74	331.8	460.	3.18	.	138.0	85.2	2.900	1.750	60137.	720.	.	10	7	92
76	336.9	310.	3.30	.	81.0	.	2.100	1.450	60148.	468.	.	10	21	92
78	334.0	325.	3.25	.	96.0	.	2.200	1.550	60160.	500.	.	11	4	92
80	334.8	365.	3.22	.	96.0	.	2.050	1.500	60171.	.	.	11	18	92

Table C2.8. Elevated Temperature Test drainage quality from Solid RK4, reactor 7.

Week	Volume (mL)	S.C. ¹ (μ S/cm)	pH	Alk. (mg/L)	Acy. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	S.C. (μ S/cm)	Decant (mL)	Month	Day	Year
82	336.2	335.	3.22	.	108.0	.	2.000	1.550	60182.	475.	.	12	2	92
84	347.0	262.	3.37	.	72.0	.	1.900	1.550	60193.	485.	.	12	16	92
86	341.6	190.	3.55	.	66.0	.	1.600	1.300	60204.	610.	.	12	30	92
88	322.1	290.	3.27	.	150.0	96.4	2.300	2.100	60216.	500.	36.0	1	13	93
90	314.1	220.	3.29	.	144.0	79.2	1.850	1.950	60227.	470.	.	1	27	93
92	338.9	318.	3.40	.	84.0	61.6	1.700	1.600	60238.	458.	.	2	10	93
94	330.2	245.	3.35	.	72.0	50.0	1.200	1.100	60249.	.	.	2	23	93
96	334.0	250.	3.36	.	72.0	46.4	0.950	0.850	60260.	390.	.	3	10	93
98	327.5	240.	3.33	.	84.0	54.6	1.100	1.000	60272.	385.	.	3	24	93
100	330.0	290.	3.33	.	70.0	59.6	1.900	1.600	60283.	468.	.	4	7	93
102	330.6	262.	3.39	.	58.0	63.6	1.450	1.150	60294.	398.	.	4	21	93
104	327.9	271.	3.30	.	72.0	60.0	1.500	1.150	60305.	475.	.	5	5	93
106	325.7	235.	3.31	.	67.5	52.0	1.350	1.000	60317.	425.	.	5	19	93
108	328.8	195.	3.51	.	60.0	51.0	1.450	0.950	60328.	110.	32.0	6	2	93
110	326.7	210.	3.36	.	70.0	60.6	1.600	1.200	60339.	410.	.	6	16	93
112	325.6	295.	3.30	.	70.0	64.0	1.550	1.100	60350.	490.	.	6	30	93
114	327.3	325.	3.30	.	72.0	71.2	1.500	1.100	60362.	500.	.	7	14	93
116	334.8	320.	3.30	.	82.0	75.6	1.700	1.200	60373.	467.	.	7	28	93
118	327.5	315.	3.27	.	85.0	74.0	1.500	1.150	60385.	480.	.	8	11	93
120	327.4	310.	3.35	.	75.0	56.8	1.400	0.950	60397.	490.	.	8	25	93
122	325.0	310.	3.33	.	65.0	60.8	1.700	1.900	60408.	475.	36.0	9	8	93
124	332.9	285.	3.33	.	62.0	64.8	1.350	1.000	60419.	415.	.	9	22	93
126	332.1	200.	3.30	.	60.0	72.0	1.550	1.100	60430.	500.	.	10	6	93
128	329.8	500.	3.05	.	150.0	126.0	2.050	1.500	60443.	800.	.	10	20	93
130	331.2	380.	3.18	.	85.0	95.2	1.250	1.200	60454.	650.	.	11	3	93

¹ Specific conductance was obtained as a composite (first column labelled S.C.). To evaluate rinsing efficiency, a preliminary specific conductance was measured (second column labelled S.C.).

Table C2.9. Elevated Temperature Test drainage quality from Solid TLL, reactor 11.

Week	Volume (mL)	S.C. (μ S/cm)	pH	Alk. (mg/L)	Acv. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	S.C. (μ S/cm)	Decant (mL)	Month	Day	Year
0	.	525.	8.26	.	.	238.0	103.000	11.100	.	.	.	4	30	91
0	.	165.	.	.	.	.	.	.	.	.	.	5	1	91
0	.	65.	.	.	.	7.0	8.370	0.874	.	.	.	5	2	91
2	350.0	102.	7.50	34.0	.	13.2	14.700	0.850	3066.	.	.	5	15	91
4	355.8	98.	7.70	31.0	.	9.2	.	.	3110.	.	.	5	29	91
6	353.6	91.	7.60	26.0	.	9.4	12.550	0.600	3154.	.	.	6	12	91
8	351.4	82.	7.60	26.0	.	7.7	12.300	0.300	3206.	.	.	6	26	91
10	347.2	130.	7.76	26.0	.	14.8	.	.	3253.	.	.	7	10	91
12	346.0	134.	7.65	16.0	.	16.0	.	.	3297.	.	.	7	24	91
14	348.8	191.	7.46	26.0	.	39.4	.	.	3349.	.	.	8	7	91
16	350.1	210.	7.40	30.0	.	47.2	33.600	1.200	3396.	.	.	8	21	91
18	349.4	182.	7.53	32.0	.	42.8	.	.	3440.	.	.	9	4	91
20	348.9	245.	7.46	32.0	.	52.5	35.800	1.400	3492.	.	.	9	18	91
22	349.5	270.	7.60	37.0	.	66.0	.	.	3536.	.	.	10	2	91
24	349.4	225.	7.42	37.0	.	24.3	35.800	0.800	3583.	.	.	10	16	91
26	347.7	150.	7.37	28.0	.	29.0	24.000	1.000	3627.	.	.	10	30	91
28	354.6	220.	7.41	37.0	.	50.8	37.400	0.800	3655.	.	.	11	13	91
30	348.6	200.	7.44	.	.	38.8	33.000	1.000	3677.	.	.	11	27	91
32	353.6	212.	7.21	35.0	.	51.2	33.200	0.600	3699.	.	.	12	11	91
34	353.4	220.	7.39	.	.	67.2	38.000	0.600	3721.	.	.	12	26	91
36	350.5	135.	7.33	25.0	.	25.4	32.000	0.600	3743.	.	.	1	8	92
38	351.5	220.	7.11	28.0	.	49.6	30.400	0.600	3765.	.	.	1	22	92
40	350.5	160.	7.23	9.0	.	46.6	28.000	0.400	3787.	.	.	2	5	92
41	349.1	82.	7.28	28.0	.	16.6	16.000	0.600	3809.	125.	.	2	12	92
43	345.0	240.	7.00	22.0	.	71.2	35.400	0.600	3831.	395.	.	2	26	92
45	347.8	272.	6.58	19.0	.	80.0	41.600	1.400	3853.	480.	.	3	11	92
47	348.9	105.	6.88	19.0	.	23.8	18.600	0.400	3875.	162.	.	3	25	92
49	343.8	215.	6.70	22.0	.	54.4	33.800	0.400	3897.	400.	.	4	8	92
51	348.8	230.	7.08	25.0	.	49.6	32.000	0.400	60005.	353.	.	4	22	92
53	331.2	120.	7.15	35.0	.	22.7	21.200	0.400	60016.	200.	.	5	6	92
55	336.9	115.	6.91	18.9	.	29.0	15.600	0.200	60027.	170.	.	5	20	92
57	342.4	90.	6.80	25.0	.	26.6	21.000	0.800	60038.	178.	.	6	3	92
59	345.7	122.	7.22	20.0	.	30.5	22.000	0.600	60049.	160.	.	6	17	92
61	343.2	135.	6.82	9.0	.	42.4	22.200	0.600	60061.	218.	.	7	1	92
63	344.0	140.	6.78	16.0	.	36.8	23.400	0.600	60072.	204.	.	7	15	92
65	343.3	100.	7.09	21.0	.	23.8	17.500	0.250	60083.	128.	.	7	29	92
67	330.5	80.	7.00	16.0	.	16.3	12.750	0.200	60094.	100.	.	8	12	92
69	348.5	115.	6.88	16.0	.	26.8	18.000	0.100	60106.	172.	.	8	26	92
71	344.1	200.	6.19	.	7.9	53.4	31.200	0.300	60117.	360.	.	9	9	92
73	341.2	125.	6.46	10.6	.	28.2	21.850	0.300	60128.	202.	.	9	23	92
75	343.5	110.	6.67	5.0	.	18.4	18.100	0.150	60139.	152.	.	10	7	92
77	340.9	115.	6.55	16.0	.	.	19.650	0.250	60150.	163.	.	10	21	92
79	342.9	135.	5.85	.	3.0	.	24.600	0.250	60162.	215.	.	11	4	92

Table C2.10. Elevated Temperature Test drainage quality from Solid TL1, reactor 11.

Week	Volume (mL)	S.C. ¹ (μ S/cm)	pH	Alk. (mg/L)	Acv. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	S.C. (μ S/cm)	Decant (mL)	Month	Day	Year
81	347.1	100.	6.21	.	3.0	.	19.550	0.250	60173.	.	.	11	18	92
83	348.5	143.	5.65	.	16.0	.	26.100	0.250	60184.	230.	.	12	2	92
85	357.9	95.	6.29	.	6.0	.	17.250	0.200	60195.	152.	.	12	16	92
87	347.6	82.	6.31	.	13.0	.	15.100	0.200	60206.	123.	.	12	30	92
89	349.1	98.	5.98	.	3.0	13.6	18.200	0.200	60218.	140.	.	1	13	93
91	344.8	115.	5.91	.	3.0	24.5	22.800	0.250	60229.	200.	.	1	27	93
93	347.1	75.	6.48	13.0	.	15.2	14.150	0.200	60240.	150.	.	2	10	93
95	334.0	82.	6.91	16.0	.	13.6	13.150	0.150	60251.	120.	.	2	23	93
97	338.5	92.	6.79	11.0	.	19.4	15.250	0.150	60262.	150.	.	3	10	93
99	344.0	82.	7.27	11.0	.	16.8	13.750	0.250	60274.	125.	.	3	24	93
101	333.4	90.	6.67	10.0	.	20.2	15.550	0.200	60285.	118.	.	4	7	93
103	338.3	90.	6.58	12.0	.	20.6	15.550	0.200	60296.	131.	.	4	21	93
105	338.9	77.	7.45	12.0	.	17.5	13.150	0.200	60307.	110.	.	5	5	93
107	338.2	80.	6.82	12.5	.	18.9	14.600	0.200	60319.	130.	.	5	19	93
109	338.3	90.	6.92	7.5	.	24.2	16.900	0.200	60330.	140.	.	6	2	93
111	338.2	95.	6.72	10.0	.	25.6	16.900	0.200	60341.	155.	.	6	16	93
113	340.8	92.	6.64	10.0	.	23.5	16.300	0.200	60352.	135.	.	6	30	93
115	344.4	119.	6.43	10.0	.	30.0	18.550	0.250	60364.	180.	.	7	14	93
117	344.0	82.	7.04	12.0	.	18.5	13.450	<0.050	60375.	115.	.	7	28	93
119	338.0	75.	7.26	12.0	.	14.5	12.300	0.100	60387.	105.	.	8	11	93
121	336.2	120.	6.98	10.0	.	26.8	20.000	0.250	60399.	185.	.	8	25	93
123	336.1	82.	7.32	12.5	.	17.2	13.000	0.150	60410.	110.	.	9	8	93
125	338.9	88.	7.34	14.0	.	20.2	14.350	0.150	60421.	124.	.	9	22	93
127	341.6	75.	7.05	10.0	.	18.3	13.250	0.150	60432.	120.	.	10	6	93
129	338.7	160.	6.35	10.0	.	47.6	24.400	0.250	60445.	230.	.	10	20	93
131	333.3	120.	6.56	10.0	.	68.6	18.500	0.200	60456.	200.	.	11	3	93

¹ Specific conductance was obtained as a composite (first column labelled S.C.). To evaluate rinsing efficiency, a preliminary specific conductance was measured (second column labelled S.C.).

Table C2.11. Elevated Temperature Test drainage quality from Solid TL2, reactor 13.

Week	Volume (mL)	S.C. (μ S/cm)	pH	Alk. (mg/L)	Acy. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	S.C. (μ S/cm)	Decant (mL)	Month	Day	Year
0	.	520.	8.07	.	.	184.0	84,200	3,930	.	.	.	4	30	91
0	.	208.	.	.	.	.	.	.	.	.	.	5	1	91
0	.	112.	.	.	.	21.0	26,000	1,790	.	.	.	5	2	91
2	340.5	298.	7.98	51.0	.	58.0	50,400	2,600	3068.	.	.	5	15	91
4	341.5	332.	7.80	46.0	.	31.0	.	.	3112.	.	.	5	29	91
6	339.4	252.	7.96	45.0	.	31.0	34,600	3,200	3156.	.	.	6	12	91
8	343.5	214.	7.91	42.0	.	27.0	33,800	2,600	3208.	.	.	6	26	91
10	337.5	210.	7.98	37.0	.	26.0	.	.	3255.	.	.	7	10	91
12	341.7	248.	7.98	47.0	.	39.0	.	.	3299.	.	.	7	24	91
14	344.1	395.	7.94	68.0	.	97.0	.	.	3351.	.	.	8	7	91
16	338.7	500.	8.13	63.0	.	114.0	85,600	3,800	3398.	.	.	8	21	91
18	337.9	550.	7.96	76.0	.	168.0	.	.	3442.	.	.	9	4	91
20	340.9	875.	7.80	74.0	.	302.0	154,400	7,000	3494.	.	.	9	18	91
22	342.7	600.	7.86	71.0	.	178.0	.	.	3538.	.	.	10	2	91
24	338.1	475.	7.75	70.0	.	101.0	73,800	3,400	3585.	.	.	10	16	91
26	338.5	575.	7.55	71.0	.	108.0	116,000	7,000	3629.	.	.	10	30	91
28	344.9	500.	7.27	47.0	.	157.0	87,600	4,200	3656.	.	.	11	13	91
30	328.8	580.	6.64	38.0	.	157.0	99,600	5,600	3678.	.	.	11	27	91
32	335.4	330.	7.51	44.0	.	64.0	50,000	2,400	3700.	.	.	12	11	91
34	339.5	300.	7.33	.	.	82.0	48,800	3,000	3722.	.	.	12	26	91
36	338.0	250.	7.35	32.0	.	49.6	36,600	2,400	3744.	.	.	1	8	92
38	337.0	260.	7.31	25.0	.	54.4	33,600	2,000	3766.	.	.	1	22	92
40	334.8	240.	7.14	22.0	.	69.6	37,600	2,400	3788.	.	.	2	5	92
41	330.2	170.	7.15	18.0	.	44.6	26,600	2,000	3810.	258.	.	2	12	92
43	335.3	200.	6.85	10.0	.	75.2	36,000	2,800	3832.	438.	.	2	26	92
45	338.4	342.	6.19	10.0	.	110.0	44,400	3,800	3854.	510.	.	3	11	92
47	337.6	175.	6.41	9.0	.	52.6	25,600	2,000	3876.	285.	.	3	25	92
49	336.4	169.	6.19	.	17.0	47.6	22,800	1,800	3898.	270.	.	4	8	92
51	340.4	173.	6.39	6.3	.	49.4	21,200	1,600	60006.	260.	.	4	22	92
53	315.2	172.	5.89	.	46.0	55.6	25,200	2,200	60017.	325.	.	5	6	92
55	335.9	150.	5.91	.	37.0	45.2	20,400	2,000	60028.	219.	.	5	20	92
57	387.7	140.	5.86	.	30.0	37.0	19,000	2,000	60039.	198.	.	6	3	92
59	333.8	138.	5.55	.	43.0	42.6	17,800	1,800	60050.	210.	.	6	17	92
61	333.8	138.	5.52	.	37.0	42.0	16,800	1,800	60062.	195.	.	7	1	92
63	334.4	150.	5.18	.	43.0	39.8	17,600	1,800	60073.	211.	.	7	15	92
65	335.6	115.	5.61	.	29.0	33.6	14,350	1,500	60084.	161.	.	7	29	92
67	319.0	110.	5.72	.	43.0	31.5	13,600	1,350	60095.	165.	.	8	12	92
69	337.3	70.	5.35	.	34.0	33.0	13,900	1,300	60107.	191.	.	8	26	92
70	338.5	120.	5.51	.	19.0	28.0	12,300	1,250	60118.	176.	.	9	9	92
73	233.8	98.	5.50	.	34.0	27.7	11,250	1,200	60129.	152.	.	9	23	92
75	335.4	110.	5.31	.	30.0	29.6	12,550	1,200	60140.	164.	.	10	7	92
77	337.1	160.	4.86	.	42.0	.	15,900	1,550	60151.	210.	.	10	21	92
79	334.0	100.	5.33	.	33.0	.	11,350	1,200	60163.	146.	.	11	4	92

Table C2.12. Elevated Temperature Test drainage quality from Solid TL2, reactor 13.

Week	Volume (mL)	S.C. ¹ (μ S/cm)	pH	Alk. (mg/L)	Acy. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	S.C. (μ S/cm)	Decant (mL)	Month	Day	Year
81	343.8	90.	5.37	-	24.0	-	11.700	1.250	60174.	-	-	11	18	92
83	339.1	95.	5.52	-	28.0	-	10.550	1.150	60185.	135.	-	12	2	92
85	351.2	82.	5.63	-	30.0	-	9.500	1.100	60196.	128.	-	12	16	92
87	341.0	100.	4.97	-	36.0	-	11.450	1.250	60207.	150.	-	12	30	92
89	335.2	85.	4.88	-	33.0	25.5	10.250	1.250	60219.	120.	-	1	13	93
91	343.5	80.	4.97	-	33.0	21.9	10.450	1.350	60230.	140.	-	1	27	93
93	343.2	75.	5.03	-	18.0	22.0	8.600	1.150	60241.	145.	-	2	10	93
95	343.3	80.	5.11	-	19.0	21.0	9.100	1.200	60252.	132.	-	2	23	93
97	341.6	88.	5.20	-	21.0	27.4	8.750	1.650	60263.	132.	-	3	10	93
99	332.4	80.	5.30	-	30.0	23.8	8.550	1.200	60275.	128.	-	3	24	93
101	330.4	82.	5.61	-	15.0	26.4	9.100	1.150	60286.	120.	-	4	7	93
103	334.0	82.	5.65	-	15.0	26.2	9.050	1.200	60297.	120.	-	4	21	93
105	329.7	87.	5.62	-	20.0	28.3	9.750	1.400	60308.	138.	-	5	5	93
107	335.1	75.	5.16	-	17.5	18.5	7.700	1.100	60320.	107.	-	5	19	93
109	333.9	78.	5.52	-	20.0	25.6	8.300	1.150	60331.	115.	-	6	2	93
111	329.6	78.	5.31	-	15.0	24.3	9.150	1.300	60342.	135.	-	6	16	93
113	332.1	75.	5.31	-	20.0	24.0	8.300	1.150	60353.	115.	-	6	30	93
115	338.0	89.	4.72	-	20.0	25.0	8.350	1.150	60365.	148.	-	7	14	93
117	341.5	74.	5.07	-	20.0	22.9	7.400	1.050	60376.	112.	-	7	28	93
119	331.5	80.	5.06	-	20.0	24.6	7.900	1.250	60388.	123.	-	8	11	93
121	336.1	85.	5.14	-	25.0	25.2	8.650	1.300	60400.	155.	-	8	25	93
123	339.8	92.	5.26	-	15.0	22.5	7.700	1.250	60411.	125.	-	9	8	93
125	335.2	65.	5.95	-	20.0	19.4	6.300	1.000	60422.	100.	-	9	22	93
127	338.5	63.	5.76	-	90.0	20.6	6.600	1.100	60433.	100.	-	10	6	93
129	337.3	68.	5.69	-	10.0	19.4	6.500	1.100	60446.	100.	-	10	20	93
131	334.0	63.	5.20	-	15.0	17.2	6.000	1.100	60457.	125.	-	11	3	93

¹ Specific conductance was obtained as a composite (first column labelled S.C.). To evaluate rinsing efficiency, a preliminary specific conductance was measured (second column labelled S.C.).

Table C2.13. Elevated Temperature Test drainage quality from Solid TL3, reactor 15.

Week	Volume (mL)	S.C. (μ S/cm)	pH	Alk. (mg/L)	Acy. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	S.C. (μ S/cm)	Decant (mL)	Month	Day	Year
0	.	1410.	7.38	.	.	900.0	205.000	89.200	.	.	.	4	29	91
0	.	170.	.	.	.	.	.	.	.	.	.	5	1	91
0	.	98.	.	.	.	9.0	13.100	3.360	.	.	.	5	2	91
2	343.5	610.	8.00	101.0	.	204.0	82.000	25.800	3070.	.	.	5	15	91
4	347.9	620.	8.00	103.0	.	176.0	.	.	3114.	.	.	5	29	91
6	346.1	428.	8.22	95.0	.	87.0	39.000	16.200	3158.	.	.	5	12	91
8	342.0	350.	8.21	92.0	.	63.0	35.800	13.400	3210.	.	.	6	26	91
10	360.8	400.	8.25	89.0	.	66.0	.	.	3257.	.	.	6	10	91
12	340.2	410.	8.15	89.0	.	73.0	.	.	3301.	.	.	7	24	91
14	336.5	500.	8.05	97.0	.	117.0	.	.	3353.	.	.	7	7	91
16	341.1	495.	8.17	92.0	.	97.0	51.600	18.800	3400.	.	.	8	21	91
18	340.4	500.	8.15	92.0	.	112.0	.	.	3444.	.	.	8	4	91
20	342.2	425.	8.05	84.0	.	76.0	39.600	16.600	3496.	.	.	9	18	91
22	336.1	350.	8.16	79.0	.	56.4	.	.	3540.	.	.	10	2	91
24	341.3	302.	7.86	71.0	.	144.0	91.400	4.200	3587.	.	.	10	16	91
26	347.4	215.	7.72	47.0	.	40.6	21.800	9.200	3631.	.	.	10	30	91
28	343.7	245.	7.98	68.0	.	35.6	25.200	11.000	3657.	.	.	11	13	91
30	338.6	330.	7.83	113.0	.	28.5	34.800	15.000	3679.	.	.	11	27	91
32	344.7	208.	7.85	82.0	.	19.6	22.200	9.000	3701.	.	.	12	11	91
34	344.0	187.	7.87	.	.	22.2	20.200	8.600	3723.	.	.	12	26	91
36	342.4	178.	7.78	57.0	.	19.2	16.850	7.350	3745.	.	.	1	8	92
38	340.0	180.	7.94	63.0	.	21.4	17.950	7.950	3767.	.	.	1	22	92
40	339.9	150.	7.85	63.0	.	17.2	16.500	7.500	3789.	.	.	2	5	92
41	341.0	130.	7.94	63.0	.	13.6	15.800	6.200	3811.	185.	.	2	12	92
43	340.9	162.	7.76	63.0	.	19.4	17.600	8.000	3833.	230.	.	2	26	92
45	341.5	220.	7.93	69.0	.	33.8	20.400	16.000	3855.	320.	.	3	11	92
47	342.4	170.	7.56	63.0	.	24.6	19.000	8.800	3877.	260.	.	3	25	92
49	338.0	155.	7.35	63.0	.	15.2	15.600	6.800	3899.	212.	.	4	8	92
51	340.2	188.	7.62	57.0	.	42.0	17.400	7.400	60007.	260.	.	4	22	92
53	323.8	180.	7.68	46.0	.	20.4	19.600	9.200	60018.	280.	.	5	6	92
55	336.6	140.	7.66	63.0	.	12.3	17.200	7.800	60029.	182.	.	5	20	92
57	332.6	150.	7.46	63.0	.	13.6	15.150	7.600	60040.	204.	.	6	3	92
59	336.9	160.	7.92	52.0	.	17.3	17.600	8.200	60051.	210.	.	6	17	92
61	336.2	135.	7.74	52.0	.	12.8	15.400	7.200	60063.	182.	.	7	1	92
63	337.3	150.	7.82	72.0	.	19.8	21.200	10.400	60074.	282.	.	7	15	92
65	334.5	130.	7.93	56.0	.	8.0	14.100	7.650	60085.	162.	.	7	29	92
67	323.1	130.	7.80	42.0	.	8.4	14.050	7.500	60096.	170.	.	8	12	92
69	338.3	105.	7.64	48.0	.	9.1	15.250	8.250	60108.	204.	.	8	26	92
71	338.5	142.	7.50	50.0	.	9.2	13.450	7.050	60119.	196.	.	9	9	92
73	334.8	100.	7.68	40.0	.	7.8	13.100	7.100	60130.	178.	.	9	23	92
75	331.5	270.	7.70	100.0	.	8.2	32.550	16.100	60141.	489.	.	10	7	92
77	332.4	175.	7.49	69.0	.	.	19.450	10.300	60152.	262.	.	10	21	92
79	332.3	140.	7.77	58.0	.	.	15.300	8.050	60164.	192.	.	11	4	92

Table C2.14. Elevated Temperature Test drainage quality from Solid TL3, reactor 15.

Week	Volume (mL)	S.C. ¹ (μ S/cm)	pH	Alk. (mg/L)	Acy. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	S.C. (μ S/cm)	Decant (mL)	Month	Day	Year
81	338.2	100.	7.59	54.0	.	.	15.600	8.200	60175.	.	.	11	18	92
83	337.3	120.	7.45	48.0	.	.	12.750	7.050	60186.	158.	.	12	2	92
85	349.8	140.	7.45	54.0	.	.	16.350	8.350	60197.	240.	.	12	16	92
87	338.8	220.	7.38	52.0	.	.	26.700	12.950	60208.	330.	.	12	30	92
89	340.9	320.	7.20	86.0	.	.	39.000	19.750	60220.	505.	.	1	13	93
91	336.1	200.	7.20	75.0	.	4.2	29.050	14.000	60231.	410.	.	1	27	93
93	337.6	130.	7.63	48.0	.	6.8	14.650	7.800	60242.	220.	.	2	10	93
95	336.1	115.	7.72	60.0	.	4.2	12.000	6.400	60253.	162.	.	2	23	93
97	335.3	92.	7.73	45.0	.	5.4	10.800	5.550	60264.	145.	.	3	10	93
99	331.4	100.	7.84	40.0	.	5.4	11.050	6.000	60276.	133.	.	3	24	93
101	331.2	105.	7.84	45.0	.	4.9	11.950	5.950	60287.	139.	.	4	7	93
103	337.8	94.	7.65	42.0	.	4.3	10.100	5.250	60298.	139.	.	4	21	93
105	327.9	103.	8.08	48.0	.	5.0	11.050	5.500	60309.	138.	.	5	5	93
107	335.1	90.	7.77	45.0	.	4.8	10.450	5.350	60321.	135.	.	5	19	93
109	331.5	100.	7.91	42.5	.	4.4	10.150	5.300	60332.	130.	.	6	2	93
111	333.3	90.	8.03	40.0	.	4.9	10.700	5.600	60343.	142.	.	6	16	93
113	329.2	80.	8.08	40.0	.	5.4	10.050	5.500	60354.	120.	.	6	30	93
115	334.0	104.	7.99	42.0	.	9.4	10.250	5.550	60366.	145.	.	7	14	93
117	336.6	93.	7.95	40.0	.	6.5	9.750	6.350	60377.	121.	.	7	28	93
119	336.1	98.	8.03	43.0	.	5.4	10.000	6.750	60389.	125.	.	8	11	93
121	326.5	110.	8.02	35.0	.	5.4	10.300	6.150	60401.	140.	.	8	25	93
123	324.4	94.	7.91	30.0	.	4.3	9.200	6.100	60412.	110.	.	9	8	93
125	335.5	95.	8.00	44.0	.	5.0	8.950	5.250	60423.	120.	.	9	22	93
127	322.9	100.	7.64	35.0	.	5.0	9.350	2.600	60434.	130.	.	10	6	93
129	337.8	70.	7.64	30.0	.	5.0	8.250	5.250	60447.	125.	.	10	20	93
131	327.3	90.	7.92	40.0	.	4.7	7.600	5.100	60458.	125.	.	11	3	93

¹ Specific conductance was obtained as a composite (first column labelled S.C.). To evaluate rinsing efficiency, a preliminary specific conductance was measured (second column labelled S.C.).

Table C2.15. Elevated Temperature Test drainage quality from Solid TL4, reactor 17.

Week	Volume (mL)	S.C. (μ S/cm)	pH	Alk. (mg/L)	Acy. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	S.C. (μ S/cm)	Decant (mL)	Month	Day	Year
0	0	980.	7.88	.	.	530.0	210.000	4.800	.	.	.	4	30	91
0	0	159.	.	.	.	.	.	.	.	.	.	5	1	91
0	0	46.	.	.	.	10.0	7.270	0.403	.	.	.	5	2	91
2	337.2	215.	7.95	43.0	.	52.0	38.000	1.000	3072.	.	.	5	15	91
4	342.8	135.	7.40	26.0	.	27.0	18.250	0.350	3116.	.	.	5	29	91
6	335.7	94.	7.30	18.0	.	17.0	12.800	0.500	3160.	.	.	6	12	91
8	337.8	70.	7.15	23.0	.	12.0	9.350	0.550	3212.	.	.	6	26	91
10	344.6	60.	7.60	10.0	.	8.0	.	.	3259.	.	.	7	10	91
12	322.8	82.	7.38	15.0	.	13.0	10.350	1.100	3303.	.	.	7	24	91
14	335.4	75.	7.64	13.0	.	15.0	.	.	3355.	.	.	8	7	91
16	334.8	69.	7.09	13.0	.	7.6	7.650	1.850	3402.	.	.	8	21	91
18	342.1	75.	7.50	16.0	.	9.6	.	.	3446.	.	.	9	4	91
20	347.0	68.	7.29	13.0	.	6.0	6.450	1.800	3498.	.	.	9	18	91
22	333.3	70.	7.12	11.0	.	.	.	.	3542.	.	.	10	2	91
24	340.5	52.	7.19	12.0	.	4.4	4.540	1.450	3589.	.	.	10	16	91
26	329.1	48.	7.25	5.0	.	3.6	3.900	1.250	3633.	.	.	10	30	91
28	329.4	44.	7.00	5.3	.	4.0	3.550	1.250	3658.	.	.	11	13	91
30	335.7	88.	5.98	.	11.5	4.9	8.250	3.000	3680.	.	.	11	27	91
32	342.1	61.	6.80	6.3	.	10.7	5.100	2.000	3702.	.	.	12	11	91
34	333.3	122.	6.65	.	.	5.6	10.500	4.500	3724.	.	.	12	26	91
36	340.1	105.	4.75	.	52.0	5.3	8.250	3.900	3746.	.	.	1	8	92
38	340.0	110.	4.61	.	40.0	4.6	6.950	3.400	3768.	.	.	1	22	92
40	339.1	58.	4.81	.	23.0	4.2	4.750	2.450	3790.	.	.	2	5	92
41	335.2	37.	5.29	.	11.5	4.0	5.200	2.400	3812.	72.	103.0	2	12	92
43	340.4	51.	5.30	.	9.4	8.6	5.800	2.400	3834.	115.	129.0	2	26	92
45	334.3	88.	4.91	.	19.0	14.4	4.600	3.600	3856.	170.	149.0	3	11	92
47	337.0	58.	5.14	.	14.0	10.9	4.800	2.400	3878.	112.	85.0	3	25	92
49	338.9	51.	5.26	.	17.0	6.8	4.200	2.000	3900.	98.	60.0	4	8	92
51	339.0	52.	5.42	.	10.0	7.6	5.400	2.200	60008.	94.	109.0	4	22	92
53	310.8	34.	5.95	.	10.0	7.0	5.000	2.200	60019.	90.	102.0	5	6	92
55	334.9	37.	6.21	.	2.5	5.4	3.800	1.900	60030.	63.	106.0	5	20	92
57	327.6	42.	5.82	.	3.0	6.6	4.000	2.000	60041.	78.	132.0	6	3	92
59	335.4	39.	5.85	.	3.0	7.8	3.300	1.800	60052.	72.	150.0	6	17	92
61	335.1	46.	5.25	.	3.0	7.0	3.600	1.900	60064.	85.	106.0	7	1	92
63	337.9	65.	4.97	.	11.0	11.9	4.900	2.700	60075.	126.	101.0	7	15	92
65	335.1	45.	5.26	.	12.0	8.2	2.950	1.800	60086.	82.	121.0	7	29	92
67	323.4	37.	5.43	.	11.5	7.3	2.200	1.400	60097.	60.	107.0	8	12	92
69	333.7	50.	5.02	.	5.7	7.7	2.650	1.700	60109.	88.	71.0	8	26	92
71	337.5	51.	5.45	.	5.7	11.5	2.600	1.700	60120.	88.	53.0	9	9	92
73	321.8	43.	5.57	.	6.0	12.3	2.350	1.700	60131.	80.	15.0	9	23	92
75	329.6	60.	5.74	.	9.0	15.6	3.400	1.950	60142.	87.	27.0	10	7	92
77	329.5	60.	5.56	.	6.0	.	3.700	2.250	60153.	94.	.	10	21	92
79	336.7	55.	5.33	.	9.0	.	3.350	2.050	60165.	93.	.	11	4	92

Table C2.16. Elevated Temperature Test drainage quality from Solid TL4, reactor 17.

Week	Volume (mL)	S.C. ¹ (μ S/cm)	pH	Alk. (mg/L)	Acy. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	S.C. (μ S/cm)	Decant (mL)	Month	Day	Year
81	331.7	60.	5.22	.	3.0	.	3.650	2.150	60176.	.	43.0	11	18	92
83	337.3	65.	5.02	.	12.0	.	3.650	2.150	60187.	110.	93.0	12	2	92
85	340.6	72.	4.81	.	24.0	.	3.850	2.350	60198.	130.	85.0	12	16	92
87	331.0	85.	4.59	.	18.0	.	4.250	2.400	60209.	135.	31.0	12	30	92
89	336.0	95.	4.31	.	24.0	29.0	4.200	2.600	60221.	145.	.	1	13	93
91	335.9	95.	4.14	.	42.0	33.1	4.200	2.700	60232.	200.	.	1	27	93
93	330.5	130.	4.05	.	28.0	36.5	3.600	2.150	60243.	230.	.	2	10	93
95	329.6	110.	4.00	.	30.0	35.3	3.350	2.050	60254.	220.	15.0	2	23	93
97	332.3	155.	3.83	.	42.0	36.0	3.250	2.000	60265.	268.	.	3	10	93
99	331.1	130.	3.78	.	54.0	32.4	2.750	1.650	60277.	245.	12.0	3	24	93
101	331.9	135.	3.74	.	35.0	38.0	2.700	1.450	60288.	245.	.	4	7	93
103	333.2	168.	3.57	.	40.0	42.6	2.500	1.300	60299.	291.	.	4	21	93
105	330.7	174.	3.55	.	42.0	43.2	2.350	1.150	60310.	320.	.	5	5	93
107	333.9	123.	3.58	.	35.0	32.4	1.900	0.950	60322.	250.	.	5	19	93
109	331.1	190.	3.50	.	35.0	38.8	1.600	0.800	60333.	245.	.	6	2	93
111	328.9	150.	3.47	.	35.0	37.0	1.400	0.700	60344.	300.	.	6	16	93
113	329.3	115.	3.51	.	37.0	39.0	1.400	0.800	60355.	270.	.	6	30	93
115	326.3	215.	3.43	.	52.0	44.2	1.100	0.500	60367.	340.	.	7	14	93
117	338.1	172.	3.49	.	42.0	31.6	0.900	0.400	60378.	270.	.	7	28	93
119	340.1	185.	3.41	.	35.0	36.4	0.850	0.350	60390.	300.	.	8	11	93
121	339.1	285.	3.35	.	50.0	44.0	0.800	0.350	60402.	490.	.	8	25	93
123	329.5	325.	3.27	.	60.0	52.8	0.900	0.550	60413.	500.	.	9	8	93
125	336.6	225.	3.39	.	52.0	33.2	0.550	0.300	60424.	348.	.	9	22	93
127	332.7	190.	3.48	.	35.0	31.2	0.500	0.300	60435.	350.	.	10	6	93
129	334.9	430.	3.13	.	125.0	84.0	0.700	0.350	60448.	600.	.	10	20	93
131	332.0	180.	3.44	.	35.0	31.2	0.300	0.200	60459.	430.	.	11	3	93

¹ Specific conductance was obtained as a composite (first column labelled S.C.). To evaluate rinsing efficiency, a preliminary specific conductance was measured (second column labelled S.C.).

Table C2.17. Elevated Temperature Test drainage quality from Solid TL5, reactor 19.

Week	Volume (mL)	S.C. (μ S/cm)	pH	Alk. (mg/L)	Acy. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	S.C. (μ S/cm)	Decant (mL)	Month	Day	Year
0	-	1920.	6.45	-	-	1250.0	592.000	88.800	-	-	-	4	29	91
0	-	300.	-	-	-	-	-	-	-	-	-	5	1	91
0	-	87.	-	-	-	22.0	10.200	1.700	-	-	-	5	2	91
2	342.0	650.	3.85	-	104.0	328.0	62.400	22.200	3074.	-	-	5	15	91
4	346.5	1200.	3.10	-	339.0	400.0	-	-	3118.	-	-	5	29	91
6	342.9	800.	3.30	-	201.0	338.0	18.600	35.600	3162.	-	-	6	12	91
8	337.5	715.	3.27	-	201.0	344.0	10.050	36.650	3214.	-	-	6	26	91
10	339.0	1200.	2.91	-	488.0	500.0	-	-	3261.	-	-	7	10	91
12	333.3	1310.	2.89	-	604.0	565.0	-	-	3305.	-	-	7	24	91
14	338.8	1900.	2.56	-	1173.0	1050.0	-	-	3357.	-	-	8	7	91
16	342.3	1925.	2.61	-	937.0	940.0	4.850	25.150	3404.	-	-	8	21	91
18	344.5	2150.	2.63	-	1276.0	1230.0	-	-	3448.	-	-	9	4	91
20	343.5	1880.	2.60	-	834.0	760.0	3.850	17.400	3500.	-	-	9	18	91
22	347.7	1600.	2.62	-	592.0	1140.0	-	-	3544.	-	-	10	2	91
24	342.6	1075.	2.78	-	331.0	254.0	2.550	9.250	3591.	-	-	10	16	91
26	345.1	1000.	2.72	-	312.0	312.0	2.850	9.000	3635.	-	-	10	30	91
28	334.2	900.	2.72	-	535.0	356.0	6.500	8.350	3659.	-	-	11	13	91
30	340.1	500.	3.04	-	221.0	128.0	1.800	7.050	3681.	-	-	11	27	91
32	343.7	418.	3.19	-	173.0	74.0	0.800	4.150	3703.	-	-	12	11	91
34	345.4	305.	3.01	-	-	59.0	0.650	3.650	3725.	-	-	12	26	91
36	344.9	378.	3.24	-	132.0	78.0	0.650	4.000	3747.	-	-	1	8	92
38	340.8	800.	2.91	-	252.0	148.0	0.750	4.450	3769.	-	-	1	22	92
40	344.8	322.	3.16	-	126.0	75.0	0.600	3.100	3791.	-	-	2	5	92
41	335.4	350.	3.19	-	80.0	72.0	2.800	2.400	3813.	580.	-	2	12	92
43	339.7	500.	3.01	-	158.0	114.0	2.600	3.000	3835.	1020.	-	2	26	92
45	341.0	1080.	2.80	-	431.0	302.0	2.600	4.000	3857.	2300.	-	3	11	92
47	336.5	450.	3.07	-	167.0	81.0	1.200	1.800	3879.	780.	-	3	25	92
49	341.0	500.	3.04	-	138.0	50.0	1.200	1.800	3901.	850.	-	4	8	92
51	339.2	500.	3.13	-	109.0	70.0	1.800	1.800	60009.	750.	-	4	22	92
53	318.9	520.	2.99	-	150.0	88.0	2.200	2.200	60020.	1000.	-	5	6	92
55	336.7	470.	3.01	-	144.0	78.0	1.100	1.600	60031.	730.	-	5	20	92
57	331.5	600.	2.95	-	144.0	110.0	1.400	1.700	60042.	1080.	-	6	3	92
59	336.9	450.	3.10	-	115.0	88.0	1.100	1.700	60053.	720.	-	6	17	92
61	337.4	425.	3.13	-	98.0	81.6	1.300	1.400	60065.	680.	-	7	1	92
63	337.0	490.	3.06	-	138.0	100.0	1.200	1.400	60076.	750.	-	7	15	92
65	335.8	295.	3.13	-	89.0	73.6	0.500	1.100	60087.	500.	-	7	29	92
67	322.1	455.	3.02	-	103.0	108.0	0.450	1.100	60098.	900.	-	8	12	92
69	337.6	420.	3.09	-	86.0	80.4	0.300	1.050	60110.	700.	-	8	26	92
71	337.2	425.	3.06	-	79.0	70.0	0.300	1.000	60121.	760.	-	9	9	92
73	334.7	200.	3.08	-	63.0	77.2	0.300	0.950	60132.	710.	-	9	23	92
75	334.2	870.	2.87	-	186.0	178.0	0.500	1.100	60143.	1370.	-	10	7	92
77	336.9	720.	2.86	-	198.0	-	0.350	0.950	60154.	1250.	-	10	21	92
79	335.2	470.	3.05	-	108.0	-	0.250	0.750	60166.	760.	-	11	4	92

Table C2.18. Elevated Temperature Test drainage quality from Solid TL5, reactor 19.

Week	Volume (mL)	S.C. ¹ (μ S/cm)	pH	Alk. (mg/L)	Acy. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	S.C. (μ S/cm)	Decant (mL)	Month	Day	Year
81	336.8	452.	3.06	.	96.0	.	0.400	0.750	60177.	.	.	11	18	92
83	343.7	410.	3.07	.	99.0	.	0.300	0.700	60188.	525.	.	12	2	92
85	351.1	400.	3.04	.	102.0	.	0.250	0.700	60199.	750.	.	12	16	92
87	341.6	350.	3.07	.	90.0	.	0.400	0.700	60210.	500.	.	12	30	92
89	332.3	400.	2.97	.	126.0	94.0	0.200	0.800	60222.	720.	.	1	13	93
91	329.6	420.	2.95	.	150.0	89.0	0.150	0.800	60233.	820.	.	1	27	93
93	333.1	300.	3.11	.	90.0	65.7	0.300	0.650	60244.	600.	.	2	10	93
95	337.0	330.	3.09	.	60.0	63.2	0.200	0.750	60255.	700.	.	2	23	93
97	329.1	435.	3.07	.	90.0	63.2	0.200	0.700	60266.	720.	.	3	10	93
99	334.8	320.	3.10	.	90.0	67.2	0.250	0.650	60278.	610.	.	3	24	93
101	331.7	380.	3.06	.	80.0	68.8	0.350	0.650	60289.	600.	.	4	7	93
103	332.5	490.	2.99	.	115.0	95.6	0.350	0.700	60300.	740.	.	4	21	93
105	329.9	395.	3.01	.	92.0	68.0	0.400	0.650	60311.	700.	.	5	5	93
107	332.7	320.	3.08	.	82.0	61.0	0.400	0.600	60323.	500.	.	5	19	93
109	329.7	580.	2.90	.	120.0	113.0	0.650	1.900	60334.	575.	.	6	2	93
111	330.1	390.	2.99	.	95.0	92.0	0.300	0.600	60345.	720.	.	6	16	93
113	332.7	450.	2.95	.	120.0	113.0	0.300	0.700	60356.	650.	.	6	30	93
115	336.5	520.	2.94	.	150.0	142.0	0.400	0.650	60368.	850.	.	7	14	93
117	341.6	368.	3.13	.	110.0	70.0	0.350	0.450	60379.	540.	.	7	28	93
119	339.8	330.	3.13	.	80.0	60.8	0.300	0.750	60391.	480.	.	8	11	93
121	332.7	470.	3.07	.	80.0	74.0	0.300	0.600	60403.	780.	.	8	25	93
123	333.9	610.	2.93	.	125.0	115.0	0.350	0.600	60414.	1000.	.	9	8	93
125	341.9	620.	2.88	.	130.0	105.0	0.200	0.550	60425.	973.	.	9	22	93
127	336.9	500.	2.94	.	100.0	108.0	0.200	0.600	60436.	1000.	.	10	6	93
129	334.9	990.	2.69	.	260.0	225.0	0.250	0.750	60449.	1700.	.	10	20	93
131	333.5	610.	2.82	.	80.0	132.0	0.200	0.550	60460.	1250.	.	11	3	93

¹ Specific conductance was obtained as a composite (first column labelled S.C.). To evaluate rinsing efficiency, a preliminary specific conductance was measured (second column labelled S.C.).

Table C2.19. Elevated Temperature Test drainage quality from Solid TL6, reactor 21.

Week	Volume (mL)	S.C. (μ S/cm)	pH	Alk. (mg/L)	Acy. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	S.C. (μ S/cm)	Decant (mL)	Month	Day	Year
0		4775.	6.63	.	.	2120.0	1200.000	96.500	.	.	.	4	29	91
0	.	2450.	.	.	.	.	.	.	.	.	.	5	1	91
0	.	1900.	.	.	.	1230.0	620.000	0.938	.	.	.	5	2	91
2	346.3	2000.	8.00	128.0	.	1080.0	560.000	8.800	3076.	.	.	5	15	91
4	352.2	1625.	7.48	125.0	.	660.0	.	.	3120.	.	.	5	29	91
6	351.8	810.	7.74	113.0	.	295.0	185.400	4.200	3164.	.	.	6	12	91
8	343.7	625.	7.72	102.0	.	233.0	133.000	4.200	3216.	.	.	6	26	91
10	343.0	750.	7.69	100.0	.	224.0	.	.	3263.	.	.	7	10	91
12	346.8	800.	6.70	100.0	.	292.0	.	.	3307.	.	.	7	24	91
14	344.1	725.	7.57	102.0	.	254.0	.	.	3359.	.	.	8	7	91
16	340.2	625.	7.50	100.0	.	226.0	143.400	3.600	3406.	.	.	8	21	91
18	345.6	790.	7.41	100.0	.	264.0	.	.	3450.	.	.	9	4	91
20	348.8	575.	7.64	89.0	.	156.0	94.800	3.200	3502.	.	.	9	18	91
22	346.8	800.	7.66	105.0	.	246.0	.	.	3546.	.	.	10	2	91
24	345.1	380.	7.44	50.0	.	117.0	57.400	1.800	3593.	.	.	10	16	91
26	347.8	445.	7.68	74.0	.	100.0	69.200	2.400	3637.	.	.	10	30	91
28	337.9	500.	7.60	49.0	.	128.0	88.600	2.800	3660.	.	.	11	13	91
30	341.7	600.	7.56	132.0	.	118.0	114.800	4.000	3682.	.	.	11	27	91
32	350.1	378.	7.71	104.0	.	66.0	62.000	1.800	3704.	.	.	12	11	91
34	349.1	390.	7.61	.	.	94.0	71.800	1.600	3726.	.	.	12	26	91
36	346.3	400.	7.54	63.0	.	87.0	59.600	1.600	3748.	.	.	1	8	92
38	347.0	450.	7.61	69.0	.	97.0	67.000	1.800	3770.	.	.	1	22	92
40	348.5	270.	7.69	69.0	.	84.0	55.600	1.600	3792.	.	.	2	5	92
41	339.0	235.	7.73	63.0	.	60.8	42.200	2.400	3814.	363.	.	2	12	92
43	341.3	345.	7.56	63.0	.	80.5	56.000	1.800	3836.	500.	.	2	26	92
45	344.3	413.	7.48	69.0	.	98.0	65.200	2.000	3858.	550.	.	3	11	92
47	342.8	280.	7.13	60.0	.	60.5	50.000	1.600	3880.	445.	.	3	25	92
49	342.2	255.	7.02	63.0	.	55.5	52.400	1.400	3902.	500.	.	4	8	92
51	348.4	359.	7.25	63.0	.	57.0	55.600	1.800	60010.	500.	.	4	22	92
53	315.3	320.	7.20	63.0	.	53.5	58.400	2.000	60021.	520.	.	5	6	92
55	340.3	235.	7.31	66.0	.	60.8	68.800	2.200	60032.	480.	.	5	20	92
57	337.4	300.	7.24	69.0	.	53.0	58.600	2.400	60043.	495.	.	6	3	92
59	345.9	260.	7.50	57.0	.	53.4	47.200	2.000	60054.	400.	.	6	17	92
61	342.6	245.	7.43	52.0	.	51.6	44.000	1.800	60066.	378.	.	7	1	92
63	344.2	320.	7.42	67.0	.	80.0	70.800	2.600	60077.	610.	.	7	15	92
65	344.2	260.	7.51	56.0	.	63.2	53.500	1.900	60088.	427.	.	7	29	92
67	333.1	220.	7.21	42.0	.	42.6	37.700	1.300	60099.	332.	.	8	12	92
69	344.3	230.	7.42	37.0	.	46.4	42.500	1.350	60111.	368.	.	8	26	92
71	348.1	230.	7.20	42.0	.	46.8	36.200	1.200	60122.	358.	.	9	9	92
73	342.3	170.	7.37	42.0	.	45.6	35.550	1.050	60133.	315.	.	9	23	92
75	342.9	230.	7.38	42.0	.	46.4	38.500	1.250	60144.	342.	.	10	7	92
77	344.9	270.	7.31	48.0	.	.	46.600	1.650	60155.	397.	.	10	21	92
79	342.7	178.	7.39	40.0	.	.	32.250	1.100	60167.	264.	.	11	4	92

Table C2.20. Elevated Temperature Test drainage quality from Solid TL6, reactor 21.

Week	Volume (mL)	S.C. ¹ (μ S/cm)	pH	Alk. (mg/L)	Acv. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Sample	S.C. (μ S/cm)	Decant (mL)	Month	Day	Year
81	342.7	158.	7.27	32.0	.	.	28.800	1.000	60178.	.	.	11	18	92
83	348.5	165.	7.33	37.0	.	.	28.500	0.950	60189.	230.	.	12	2	92
85	355.0	175.	7.31	35.0	.	.	30.150	1.050	60200.	285.	.	12	16	92
87	347.0	175.	7.32	32.0	.	.	32.300	1.600	60211.	255.	.	12	30	92
89	342.7	130.	7.43	38.0	.	35.0	30.700	1.150	60223.	220.	.	1	13	93
91	339.9	200.	7.25	43.0	.	50.0	43.100	1.650	60234.	400.	.	1	27	93
93	343.4	150.	7.38	27.0	.	41.0	29.400	1.150	60245.	305.	.	2	10	93
95	346.2	150.	7.51	28.0	.	29.2	27.150	1.100	60256.	250.	.	2	23	93
97	342.4	160.	7.54	21.0	.	34.2	27.400	1.100	60267.	250.	.	3	10	93
99	345.9	145.	7.46	34.0	.	29.4	26.600	1.050	60279.	230.	.	3	24	93
101	343.7	160.	7.44	35.0	.	32.4	31.500	1.350	60290.	275.	.	4	7	93
103	339.4	152.	7.33	32.0	.	28.8	27.150	1.250	60301.	226.	.	4	21	93
105	339.8	137.	7.62	32.0	.	26.4	23.250	1.150	60312.	200.	.	5	5	93
107	341.8	110.	7.58	27.5	.	23.4	21.250	0.950	60324.	175.	.	5	19	93
109	338.5	130.	7.62	30.0	.	27.6	22.800	0.950	60335.	192.	.	6	2	93
111	347.0	120.	7.49	25.0	.	29.6	23.050	1.300	60346.	200.	.	6	16	93
113	339.2	128.	7.65	30.0	.	29.8	22.750	1.050	60357.	192.	.	6	30	93
115	336.2	147.	7.49	30.0	.	36.6	24.400	1.100	60369.	210.	.	7	14	93
117	348.1	160.	7.42	22.0	.	43.2	27.750	1.350	60380.	247.	.	7	11	93
119	352.3	140.	7.51	25.0	.	37.6	24.400	1.400	60392.	220.	.	8	25	93
121	344.0	140.	7.57	22.0	.	34.6	20.400	1.300	60404.	250.	.	8	8	93
123	336.2	158.	7.40	30.0	.	37.6	24.450	1.450	60415.	228.	.	9	22	93
125	340.9	130.	7.56	22.0	.	29.0	19.450	1.150	60426.	190.	.	9	6	93
127	341.9	120.	7.48	25.0	.	31.0	20.350	1.250	60437.	190.	.	10	20	93
129	342.8	180.	7.38	22.0	.	54.8	29.800	2.050	60450.	350.	.	10	3	93
131	343.5	148.	7.44	24.0	.	35.6	21.300	1.650	60461.	250.	.	11	17	93

¹ Specific conductance was obtained as a composite (first column labelled S.C.). To evaluate rinsing efficiency, a preliminary specific conductance was measured (second column labelled S.C.).

Table C2.21. Identification of anomalous concentrations based on concentration versus time plots for the Elevated Temperature Test (weeks 0 - 130/131).

Solid	Parameter	Sample Number	Concentration (mg/L)	Comments
RK1	calcium	60044	12.0	Data entry error; should have been 4.8
RK2	sulfate	3849	18.5	Trend was ~8; sample was rerun; new value was 12.5
	calcium	3673	9.9	Trend was ~3.5; sample was rerun; new value was 9.60; original value was used
TL3	calcium	60040	0.6	Trend was ~17; this concentration seemed inconsistent with conductance; sample was rerun; new value 15.15
	magnesium	60434	0.65	Data entry error; should have been 2.6
TL4	sulfate	3542	95.0	Trend was ~5; this concentration seemed inconsistent with conductance; not enough sample to rerun; sample was omitted
	sulfate	60448	125	Data entry error; should have been 84
TL5	calcium	60042	7.0	Data entry error; should have been 1.4

APPENDIX D

PARTICLE SIZE EXPERIMENT

Table D1.1.	Average weekly temperature and relative humidity summary statistics for the Particle Size Experiment.
Tables D1.2.-D1.4.	Average weekly temperature and relative humidity readings from the Particle Size Experiment.
Figure D1.5.	Average weekly temperature and relative humidity versus time for the Particle Size Experiment.
Table D1.6.	Temperature and relative humidity daily reading summary statistics for the Particle Size Experiment.
Tables D1.7.-D1.12.	Temperature and relative humidity from the Particle Size Experiment: daily readings.
Figure D1.13.	Temperature and relative humidity daily readings versus time for the Particle Size Experiment.
Tables D2.1.-D2.24.	Initial rinse drainage quality for the Particle Size Experiment.
Tables D3.1-D3.17.	Particle Size Experiment drainage quality.

Table D1.1. Average weekly temperature and relative humidity summary statistics for the Particle Size Experiment.

	Upper Shelf ¹	Lower Shelf ²	Box ³	All data ⁴
Temperature (°C)				
minimum	21.1	20.9	22.9	20.9
average	23.9	24.0	24.4	24.1
maximum	26.3	26.0	26.8	26.8
standard deviation	1.63	1.21	1.01	1.31
number of cases	29	29	30	88
Relative Humidity (%)				
minimum	44.0	45.4	50.5	44.0
average	50.8	51.2	56.6	52.9
maximum	57.2	58.8	63.0	63.0
standard deviation	3.66	4.19	3.48	4.60
number of cases	29	29	30	88

¹ Reactors 5, 6, 7, 12, 18, 19, and 23.

² Reactors 4, 11, 13, 17, 21, 20, 24, and 25.

³ Reactors 1, 2, 3, 8, 9, 10, 14, 15, and 16.

⁴ Represents statistics for the data overall.

Table D1.2. Average weekly temperature and relative humidity readings for the upper shelf from the Particle Size Experiment.

Week	Month	Day	Year	Temperature (°C)	Relative Humidity (%)
1	12	9	93	.	.
2	12	16	93	23.333	47.0
3	12	23	93	22.667	47.2
4	12	30	93	21.111	50.3
5	1	6	94	21.944	50.0
6	1	13	94	22.889	51.6
7	1	20	94	21.500	51.3
8	1	27	94	22.333	54.0
9	2	3	94	22.111	51.0
1	2	10	94	21.556	55.8
11	2	17	94	24.556	51.6
12	2	24	94	24.611	52.3
13	3	3	94	23.333	53.4
14	3	10	94	23.333	53.5
15	3	17	94	22.333	57.2
16	3	24	94	22.500	55.5
17	3	31	94	23.333	50.0
18	4	7	94	23.222	47.6
19	4	14	94	26.278	47.8
20	4	21	94	25.556	44.0
21	4	28	94	26.111	45.8
22	5	5	94	25.556	47.0
23	5	12	94	25.556	45.5
24	5	19	94	25.167	47.0
25	5	26	94	25.722	46.5
26	6	2	94	24.444	53.0
27	6	9	94	24.611	54.0
28	6	16	94	25.556	55.3
29	6	23	94	25.833	54.0
30	6	30	94	26.278	55.0

Table D1.3. Average weekly temperature and relative humidity readings for the lower shelf from the Particle Size Experiment.

Week	Month	Day	Year	Temperature (°C)	Relative Humidity (%)
1	12	9	93	.	.
2	12	16	93	24.778	45.8
3	12	23	93	23.778	47.6
4	12	30	93	22.611	48.7
5	1	6	94	23.222	48.8
6	1	13	94	24.667	47.0
7	1	20	94	23.778	46.8
8	1	27	94	24.778	48.6
9	2	3	94	25.111	45.4
10	2	10	94	23.667	51.8
11	2	17	94	25.333	50.2
12	2	24	94	25.556	48.2
13	3	3	94	25.222	50.6
14	3	10	94	24.444	52.0
15	3	17	94	22.222	57.8
16	3	24	94	22.500	58.8
17	3	31	94	23.333	51.8
18	4	7	94	23.222	49.4
19	4	14	94	26.000	46.0
20	4	21	94	24.722	46.0
21	4	28	94	25.222	46.6
22	5	5	94	23.611	51.0
23	5	12	94	20.944	57.5
24	5	19	94	21.944	54.0
25	5	26	94	23.500	55.7
26	6	2	94	23.611	54.5
27	6	9	94	23.889	55.0
28	6	16	94	24.611	56.3
29	6	24	94	25.000	56.8
30	6	30	94	25.167	55.5

Table D1.4. Average weekly temperature and relative humidity readings for the box from the Particle Size Experiment.

Week	Month	Day	Year	Temperature (°C)	Relative Humidity (%)
1	12	16	93	24.111	52.4
2	12	23	93	23.778	52.4
3	12	30	93	22.944	51.3
4	1	6	94	23.611	54.8
5	1	13	94	23.667	55.4
6	1	20	94	24.056	52.7
7	1	27	94	24.889	54.2
8	2	3	94	24.667	52.0
9	2	10	94	24.556	52.6
10	2	17	94	24.111	58.8
11	2	24	94	24.611	56.8
12	3	3	94	24.778	57.0
13	3	10	94	24.167	60.5
14	3	17	94	24.056	63.0
15	3	24	94	23.611	60.0
16	3	31	94	24.222	56.4
17	4	7	94	23.444	59.0
18	4	14	94	25.000	53.5
19	4	21	94	23.611	54.3
20	4	28	94	24.000	58.0
21	5	5	94	23.611	56.0
22	5	12	94	23.167	50.5
23	5	19	94	23.333	57.8
24	5	26	94	25.167	59.7
25	6	2	94	25.167	59.3
26	6	9	94	25.278	57.0
27	6	16	94	25.833	61.8
28	6	23	94	26.556	60.8
29	6	30	94	26.833	59.5
30	7	7	94	26.500	61.0

Figure D1.5. Average weekly temperature and relative humidity versus time for the Particle Size Experiment (weeks 0 - 30).

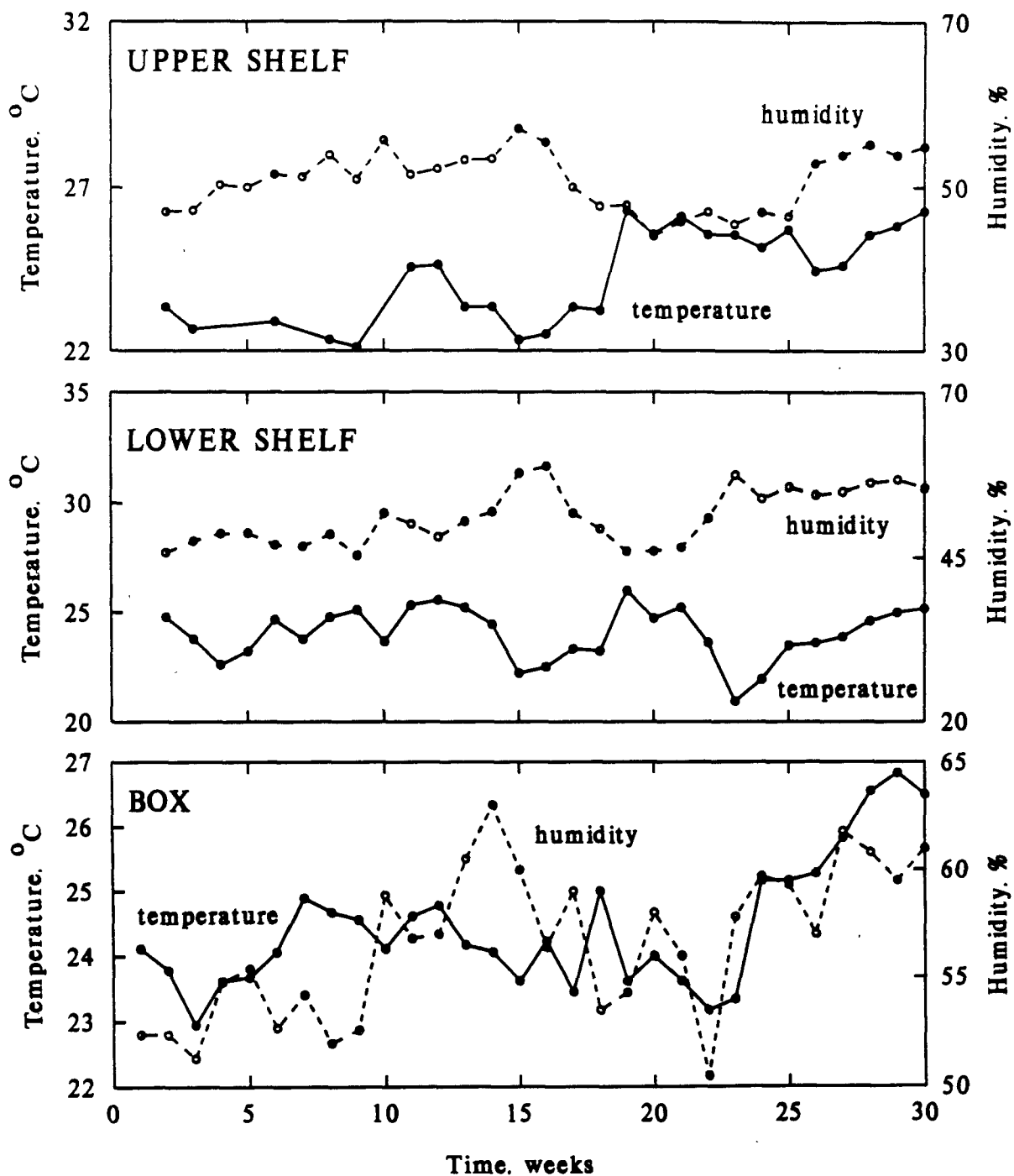


Table D1.6. Temperature and relative humidity daily reading summary statistics for the Particle Size Experiment.

	Upper Shelf ¹	Lower Shelf ²	Box ³	All data ⁴
Temperature (°C)				
minimum	21.1	20.6	22.2	20.6
average	23.8	24.1	24.4	24.1
maximum	28.3	26.7	27.2	28.3
standard deviation	1.78	1.39	1.13	1.47
number of cases	120	121	122	363
Relative Humidity (%)				
minimum	40.0	40.0	46.0	40.0
average	50.9	50.9	56.5	52.8
maximum	65.0	68.0	68.0	68.0
standard deviation	4.75	5.13	4.33	5.44
number of cases	114	120	120	354

¹ Reactors 5, 6, 7, 12, 18, 19, and 23.

² Reactors 4, 11, 13, 17, 21, 20, 24, and 25.

³ Reactors 1, 2, 3, 8, 9, 10, 14, 15, and 16.

⁴ Represents statistics for the data overall.

Table D1.7. Temperature and relative humidity for the upper shelf from the Particle Size Experiment: daily readings.

Month	Day	Year	Temperature (°C)	Relative Humidity (%)
12	10	93	22.8	47.0
12	13	93	23.3	45.0
12	14	93	25.6	44.0
12	15	93	22.2	49.0
12	16	93	22.8	50.0
12	17	93	23.3	47.0
12	20	93	22.8	50.0
12	21	93	21.7	43.0
12	22	93	23.3	47.0
12	23	93	22.2	49.0
12	27	93	21.1	53.0
12	28	93	21.1	49.0
12	29	93	21.1	49.0
1	3	94	22.2	48.0
1	4	94	22.2	49.0
1	5	94	21.1	56.0
1	6	94	22.2	49.0
1	7	94	22.8	53.0
1	10	94	22.2	53.0
1	11	94	27.2	40.0
1	12	94	21.1	56.0
1	13	94	21.1	56.0
1	14	94	21.1	53.0
1	18	94	.	.
1	19	94	21.7	49.0
1	20	94	21.7	52.0
1	21	94	22.2	49.0
1	24	94	22.2	53.0
1	25	94	22.2	57.0
1	26	94	22.8	54.0
1	27	94	22.2	57.0
1	28	94	23.3	50.0
1	31	94	22.2	54.0
2	1	94	22.2	43.0
2	2	94	21.1	55.0
2	3	94	21.7	53.0
2	4	94	22.2	51.0
2	7	94	21.7	56.0
2	8	94	21.1	56.0
2	9	94	21.1	56.0
2	10	94	21.7	60.0
2	11	94	23.9	50.0
2	14	94	25.6	50.0
2	15	94	25.0	50.0
2	16	94	24.4	53.0
2	17	94	23.9	55.0
2	18	94	25.6	53.0
2	22	94	24.4	53.0
2	23	94	25.6	50.0
2	24	94	22.8	53.0
2	25	94	23.9	55.0
2	28	94	23.3	54.0
3	1	94	23.3	50.0
3	2	94	22.8	54.0
3	3	94	23.3	54.0
3	7	94	23.9	50.0
3	8	94	22.8	57.0
3	10	94	.	.
3	11	94	22.2	60.0
3	14	94	22.8	57.0
3	15	94	22.2	65.0

Table D1.8. Temperature and relative humidity for the upper shelf from the Particle Size Experiment: daily readings.

Month	Day	Year	Temperature (°C)	Relative Humidity (%)
3	16	94	22.2	51.0
3	17	94	22.2	53.0
3	18	94	22.2	51.0
3	21	94	21.7	64.0
3	22	94	22.8	57.0
3	24	94	23.3	50.0
3	25	94	23.3	54.0
3	28	94	23.3	54.0
3	29	94	23.9	48.0
3	30	94	23.3	47.0
3	31	94	22.8	47.0
4	1	94	23.9	47.0
4	4	94	22.2	50.0
4	5	94	22.2	46.0
4	6	94	23.3	47.0
4	7	94	24.4	48.0
4	11	94	25.6	47.0
4	12	94	26.7	56.0
4	13	94	26.7	43.0
4	14	94	26.1	45.0
4	18	94	25.6	44.0
4	19	94	26.1	42.0
4	20	94	26.1	45.0
4	21	94	24.4	45.0
4	22	94	26.1	42.0
4	25	94	26.7	45.0
4	26	94	25.0	49.0
4	27	94	26.7	45.0
4	28	94	26.1	48.0
4	29	94	26.1	48.0
5	2	94	25.0	46.0
5	6	94	25.6	.
5	9	94	25.0	49.0
5	11	94	26.1	42.0
5	16	94	25.6	47.0
5	17	94	25.0	49.0
5	18	94	25.0	46.0
5	19	94	25.0	46.0
5	24	94	28.3	44.0
5	25	94	25.0	49.0
5	26	94	23.9	.
5	27	94	24.4	52.0
5	31	94	25.0	56.0
6	1	94	25.0	54.0
6	2	94	23.3	50.0
6	6	94	25.0	.
6	7	94	25.0	56.0
6	8	94	25.0	54.0
6	9	94	24.4	52.0
6	13	94	25.0	.
6	14	94	25.6	53.0
6	15	94	26.1	60.0
6	16	94	25.6	53.0
6	20	94	26.1	.
6	21	94	26.1	54.0
6	22	94	25.6	54.0
6	23	94	26.7	54.0
6	27	94	26.7	.
6	28	94	26.7	54.0
6	29	94	26.1	57.0
6	30	94	25.6	54.0

Table D1.9. Temperature and relative humidity for the lower shelf from the Particle Size Experiment: daily readings.

Month	Day	Year	Temperature (°C)	Relative Humidity (%)
12	10	93	23.3	48.0
12	13	93	23.3	45.0
12	14	93	26.7	43.0
12	15	93	25.6	44.0
12	16	93	25.0	49.0
12	17	93	25.0	46.0
12	20	93	23.3	50.0
12	21	93	23.3	44.0
12	22	93	24.4	48.0
12	23	93	22.8	50.0
12	27	93	22.2	49.0
12	28	93	22.2	49.0
12	29	93	23.3	47.0
1	3	94	22.8	50.0
1	4	94	23.3	50.0
1	5	94	22.8	47.0
1	6	94	23.9	48.0
1	7	94	25.6	47.0
1	10	94	25.0	49.0
1	11	94	25.6	40.0
1	12	94	23.9	49.0
1	13	94	23.3	50.0
1	14	94	23.3	45.0
1	18	94	23.9	49.0
1	19	94	24.4	43.0
1	20	94	23.3	50.0
1	21	94	23.9	48.0
1	24	94	24.4	45.0
1	25	94	25.6	47.0
1	26	94	25.6	50.0
1	27	94	24.4	53.0
1	28	94	26.7	43.0
1	31	94	25.0	46.0
2	1	94	25.6	41.0
2	2	94	24.4	49.0
2	3	94	23.9	48.0
2	4	94	25.0	46.0
2	7	94	23.3	54.0
2	8	94	23.3	50.0
2	9	94	23.9	52.0
2	10	94	22.8	57.0
2	11	94	24.4	52.0
2	14	94	25.0	49.0
2	15	94	26.1	47.0
2	16	94	25.6	54.0
2	17	94	25.6	49.0
2	18	94	26.7	47.0
2	22	94	25.6	46.0
2	23	94	25.6	49.0
2	24	94	24.4	52.0
2	25	94	26.1	50.0
2	28	94	25.6	50.0
3	1	94	25.6	47.0
3	2	94	24.4	53.0
3	3	94	24.4	53.0
3	7	94	25.0	49.0
3	8	94	23.9	55.0
3	10	94	.	.
3	11	94	22.2	60.0
3	14	94	22.8	57.0
3	15	94	21.7	68.0
3	16	94	22.2	51.0

Table D1.10. Temperature and relative humidity for the lower shelf from the Particle Size Experiment: daily readings.

Month	Day	Year	Temperature (°C)	Relative Humidity (%)
3	17	94	22.2	53.0
3	18	94	22.2	60.0
3	21	94	21.7	68.0
3	22	94	22.8	53.0
3	24	94	23.3	54.0
3	25	94	23.3	54.0
3	28	94	23.3	54.0
3	29	94	23.9	48.0
3	30	94	22.8	53.0
3	31	94	23.3	50.0
4	1	94	23.9	51.0
4	4	94	22.2	53.0
4	5	94	22.2	44.0
4	6	94	23.3	51.0
4	7	94	24.4	48.0
4	11	94	25.0	46.0
4	12	94	26.7	48.0
4	13	94	26.1	45.0
4	14	94	26.1	45.0
4	18	94	24.4	45.0
4	19	94	25.0	44.0
4	20	94	25.6	47.0
4	21	94	23.9	48.0
4	22	94	25.6	44.0
4	25	94	26.1	47.0
4	26	94	25.0	46.0
4	27	94	23.3	51.0
4	28	94	26.1	45.0
4	29	94	26.1	47.0
5	2	94	21.1	55.0
5	6	94	21.1	55.0
5	9	94	21.1	55.0
5	11	94	20.6	60.0
5	16	94	21.1	55.0
5	17	94	21.7	55.0
5	18	94	23.3	50.0
5	19	94	21.7	56.0
5	24	94	23.3	58.0
5	25	94	23.9	55.0
5	26	94	23.3	54.0
5	27	94	23.9	55.0
5	31	94	23.3	58.0
6	1	94	23.9	55.0
6	2	94	23.3	50.0
6	6	94	23.9	55.0
6	7	94	23.9	55.0
6	8	94	23.9	55.0
6	9	94	23.9	55.0
6	13	94	23.9	55.0
6	14	94	24.4	55.0
6	15	94	25.6	60.0
6	16	94	24.4	55.0
6	20	94	24.4	64.0
6	21	94	25.0	52.0
6	22	94	25.0	55.0
6	23	94	25.6	56.0
6	27	94	25.6	50.0
6	28	94	25.6	54.0
6	29	94	25.0	59.0
6	30	94	24.4	59.0

Table D1.11. Temperature and relative humidity for the box from the Particle Size Experiment:
daily readings.

Month	Day	Year	Temperature (°C)	Relative Humidity (%)
12	10	93	25.0	49.0
12	13	93	23.9	48.0
12	14	93	23.3	55.0
12	15	93	23.3	58.0
12	16	93	25.0	52.0
12	17	93	23.9	52.0
12	20	93	23.3	55.0
12	21	93	23.3	47.0
12	22	93	25.0	49.0
12	23	93	23.3	59.0
12	27	93	23.3	54.0
12	28	93	22.2	50.0
12	29	93	23.3	50.0
1	3	94	22.2	57.0
1	4	94	23.9	55.0
1	5	94	22.8	57.0
1	6	94	25.6	50.0
1	7	94	24.4	52.0
1	10	94	25.0	53.0
1	11	94	22.2	57.0
1	12	94	22.8	61.0
1	13	94	23.9	54.0
1	14	94	23.3	54.0
1	18	94	.	.
1	19	94	24.4	52.0
1	20	94	24.4	52.0
1	21	94	25.0	52.0
1	24	94	25.0	53.0
1	25	94	24.4	58.0
1	26	94	25.6	53.0
1	27	94	24.4	55.0
1	28	94	25.0	55.0
1	31	94	24.4	52.0
2	1	94	25.0	49.0
2	2	94	23.9	55.0
2	3	94	25.0	49.0
2	4	94	25.0	46.0
2	7	94	23.9	58.0
2	8	94	24.4	55.0
2	9	94	24.4	55.0
2	10	94	25.0	49.0
2	11	94	24.4	58.0
2	14	94	23.3	62.0
2	15	94	23.9	58.0
2	16	94	24.4	58.0
2	17	94	24.4	58.0
2	18	94	25.0	59.0
2	22	94	24.4	55.0
2	23	94	25.0	55.0
2	24	94	23.9	58.0
2	25	94	26.1	53.0
2	28	94	25.0	56.0
3	1	94	23.9	59.0
3	2	94	25.0	55.0
3	3	94	23.9	62.0
3	7	94	24.4	58.0
3	8	94	23.9	63.0
3	10	94	.	.
3	11	94	23.3	65.0
3	14	94	24.4	62.0
3	15	94	23.3	66.0
3	16	94	25.0	59.0

Table D1.12. Temperature and relative humidity for the box from the Particle Size Experiment: daily readings.

Month	Day	Year	Temperature (°C)	Relative Humidity (%)
3	17	94.	.	.
3	18	94	23.3	65.0
3	21	94	23.3	66.0
3	22	94	23.3	54.0
3	24	94	24.4	55.0
3	25	94	23.9	58.0
3	28	94	25.0	55.0
3	29	94	24.4	55.0
3	30	94	23.3	62.0
3	31	94	24.4	52.0
4	1	94	24.4	58.0
4	4	94	22.8	60.0
4	5	94	23.3	57.0
4	6	94	23.3	62.0
4	7	94	23.3	58.0
4	11	94	23.9	55.0
4	12	94	25.0	50.0
4	13	94	24.4	55.0
4	14	94	26.7	54.0
4	18	94	23.3	54.0
4	19	94	23.3	54.0
4	20	94	24.4	55.0
4	21	94	23.3	54.0
4	22	94	23.3	58.0
4	25	94	24.4	58.0
4	26	94	24.4	58.0
4	27	94	23.9	58.0
4	28	94	23.9	58.0
4	29	94	24.4	55.0
5	2	94	22.8	57.0
5	6	94	22.8	.
5	9	94	23.3	54.0
5	11	94	23.3	47.0
5	16	94	23.3	57.0
5	17	94	23.3	58.0
5	18	94	23.3	58.0
5	19	94	23.3	58.0
5	24	94	25.6	60.0
5	25	94	25.6	60.0
5	26	94	24.4	59.0
5	27	94	25.0	64.0
5	31	94	25.6	57.0
6	1	94	25.6	57.0
6	2	94	24.4	59.0
6	6	94	25.0	.
6	7	94	25.6	60.0
6	8	94	25.6	56.0
6	9	94	25.0	55.0
6	13	94	25.0	59.0
6	14	94	26.1	60.0
6	15	94	26.7	68.0
6	16	94	25.6	60.0
6	20	94	26.1	65.0
6	21	94	26.7	60.0
6	22	94	26.7	57.0
6	23	94	26.7	61.0
6	27	94	27.2	58.0
6	28	94	27.2	58.0
6	29	94	26.7	61.0
6	30	94	26.1	61.0
7	5	94	26.1	61.0
7	6	94	26.7	61.0
7	7	94	26.7	61.0

Figure D1.13. Temperature and relative humidity (daily readings) versus time for the Particle Size Experiment (weeks 0 - 30).

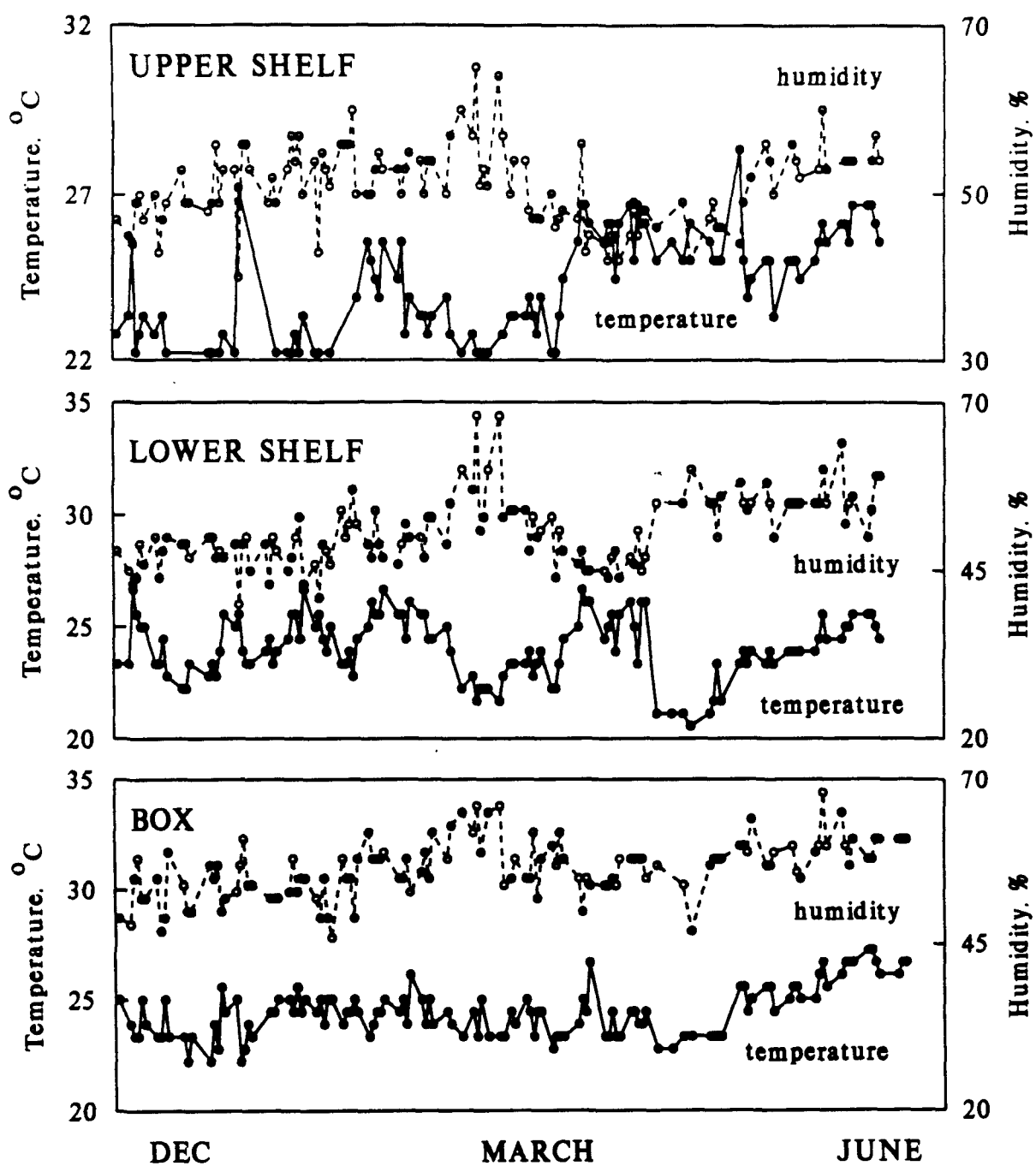


Table D2.1. Initial rinse drainage quality for the Particle Size Experiment: RK3 (reactor 8, -270 mesh, 75 grams).

Month	Day	Year	S.C.	pH	Alk.	SO ₄	Ca	Mg	Na	K	Vol. Out	Rinse	Sample
12	1	93	1850.0	6.32	.	.	.	.	.	.	147.9	1	.
12	2	93	1400.0	6.90	.	.	.	.	.	.	147.1	2	.
12	3	93	700.0	7.00	.	.	.	.	.	.	100.1	3	.
12	4	93	480.0	7.05	.	.	.	.	.	.	123.9	4	.
12	6	93	280.0	7.31	.	.	.	.	.	.	137.2	5	.
12	7	93	89.0	7.07	.	.	.	.	.	.	136.7	6	.
12 ¹	7	93	.	.	.	432.5	105.00	21.35	1.05	12.95	792.9	-	70008.
12	9	93	110.0	7.33	12.0	26.0	13.10	0.75	0.20	2.55	121.6	7	70028.

Table D2.2. Initial rinse drainage quality for the Particle Size Experiment: RK3 (reactor 9, +270/-100 mesh, 75 grams).

Month	Day	Year	S.C.	pH	Alk.	SO ₄	Ca	Mg	Na	K	Vol. Out	Rinse	Sample
11	30	93	195.0	6.22	.	.	.	.	.	.	166.8	1	.
12	1	93	98.0	7.27	.	.	.	.	.	.	192.2	2	.
12	1	93	36.0	7.36	.	.	.	.	.	.	199.6	3	.
12	2	93	50.0	7.24	.	.	.	.	.	.	192.0	4	.
12	2	93	28.0	7.15	.	.	.	.	.	.	197.0	5	.
12 ¹	2	93	.	.	.	19.9	5.60	2.65	0.45	1.30	947.6	-	70009.

Table D2.3. Initial rinse drainage quality for the Particle Size Experiment: RK3 (reactor 10, +100/-35 mesh, 75 grams).

Month	Day	Year	S.C.	pH	Alk.	SO ₄	Ca	Mg	Na	K	Vol. Out	Rinse	Sample
11	30	93	162.0	6.26	.	.	.	.	.	.	172.4	1	.
12	1	93	70.0	7.25	.	.	.	.	.	.	189.2	2	.
12	1	93	25.0	7.39	.	.	.	.	.	.	198.1	3	.
12	2	93	34.0	7.29	.	.	.	.	.	.	193.4	4	.
12	2	93	19.0	7.12	.	.	.	.	.	.	197.7	5	.
12 ¹	2	93	.	.	.	15.6	4.60	1.55	0.80	1.05	950.8	-	70010.

¹ Represents flow weighted composite of previous rinses.

Table D2.4. Initial rinse drainage quality for the Particle Size Experiment: RK3 (reactor 11, +100/-35 mesh, 225 grams).

Month	Day	Year	S.C.	pH	Alk.	SO ₄	Ca	Mg	Na	K	Vol. Out	Rinse	Sample
11	30	93	440.0	6.30	.	.	.	.	.	.	123.2	1	.
12	1	93	225.0	6.98	.	.	.	.	.	.	181.2	2	.
12	1	93	82.0	7.04	.	.	.	.	.	.	195.7	3	.
12	2	93	93.0	7.06	.	.	.	.	.	.	193.8	4	.
12	2	93	62.0	7.04	.	.	.	.	.	.	201.8	5	.
12 ¹	2	93	.	.	.	49.4	13.15	4.70	0.80	3.85	895.7	.	70011.

Table D2.5. Initial rinse drainage quality for the Particle Size Experiment: RK3 (reactor 12, +35/-10 mesh, 1000 grams).

Month	Day	Year	S.C.	pH	Alk.	SO ₄	Ca	Mg	Na	K	Vol. Out	Rinse	Sample
11	30	93	750.0	6.24	.	.	.	.	.	.	181.9	1	.
12	1	93	400.0	6.76	.	.	.	.	.	.	382.6	2	.
12	1	93	115.0	6.58	.	.	.	.	.	.	370.5	3	.
12	2	93	133.0	7.01	.	.	.	.	.	.	342.2	4	.
12	2	93	78.0	7.02	.	.	.	.	.	.	374.0	5	.
12 ¹	2	93	.	.	.	89.7	11.25	10.60	1.15	6.65	1651.2	.	70012.

Table D2.6. Initial rinse drainage quality for the Particle Size Experiment: RK3 (reactor 13, +10 mesh/-1/4", 500 grams).

Month	Day	Year	S.C.	pH	Alk.	SO ₄	Ca	Mg	Na	K	Vol. Out	Rinse	Sample
11	30	93	720.0	6.12	.	.	.	.	.	.	159.4	1	.
12	1	93	580.0	6.58	.	.	.	.	.	.	190.5	2	.
12	1	93	137.0	6.71	.	.	.	.	.	.	199.6	3	.
12	2	93	139.0	6.80	.	.	.	.	.	.	192.8	4	.
12	2	93	62.0	6.68	.	.	.	.	.	.	195.2	5	.
12 ¹	2	93	.	.	.	124.8	8.15	14.55	1.60	9.20	937.5	.	70013.

¹ Represents flow weighted composite of previous rinses.

Table D2.7. Initial rinse drainage quality for the Particle Size Experiment: RK4 (reactor 1, -270 mesh, 75 grams).

Month	Day	Year	S.C.	pH	Alk.	SO ₄	Ca	Mg	Na	K	Vol. Out	Rinse	Sample
12	1	93	3625.0	6.54	.	.	.	.	.	.	154.0	1	.
12	2	93	1600.0	7.39	.	.	.	.	.	.	148.7	2	.
12	3	93	218.0	7.92	.	.	.	.	.	.	110.5	3	.
12	4	93	198.0	7.93	.	.	.	.	.	.	135.0	4	.
12	6	93	210.0	8.13	.	.	.	.	.	.	137.6	5	.
12 ¹	6	93	.	.	.	758.9	175.00	95.00	1.60	7.15	685.8	-	70001.
12	9	93	200.0	7.91	60.0	42.4	26.75	7.50	0.30	2.35	149.0	6	70021.

Table D2.8. Initial rinse drainage quality for the Particle Size Experiment: RK4 (reactor 2, +270/-100 mesh, 75 grams).

Month	Day	Year	S.C.	pH	Alk.	SO ₄	Ca	Mg	Na	K	Vol. Out	Rinse	Sample
11	30	93	500.0	6.30	.	.	.	.	.	.	158.2	1	.
12	1	93	215.0	7.35	.	.	.	.	.	.	188.0	2	.
12	1	93	102.0	7.32	.	.	.	.	.	.	210.2	3	.
12	2	93	118.0	7.69	.	.	.	.	.	.	191.0	4	.
12	2	93	85.0	7.66	.	.	.	.	.	.	197.5	5	.
12 ¹	2	93	.	.	.	58.9	16.25	9.60	0.50	1.80	944.9	-	70002.

Table D2.9. Initial rinse drainage quality for the Particle Size Experiment: RK4 (reactor 3, +100/-35 mesh, 75 grams).

Month	Day	Year	S.C.	pH	Alk.	SO ₄	Ca	Mg	Na	K	Vol. Out	Rinse	Sample
11	30	93	620.0	6.18	.	.	.	.	.	.	161.7	1	.
12	1	93	180.0	7.39	.	.	.	.	.	.	178.6	2	.
12	1	93	75.0	7.35	.	.	.	.	.	.	198.7	3	.
12	2	93	100.0	7.67	.	.	.	.	.	.	193.4	4	.
12	2	93	67.0	7.63	.	.	.	.	.	.	197.1	5	.
12 ¹	2	93	.	.	.	79.7	19.85	10.25	1.00	1.55	929.5	-	70003.

¹ Represents flow weighted composite of previous rinses.

Table D2.10. Initial rinse drainage quality for the Particle Size Experiment: RK4 (reactor 4, + 100/-35 mesh, 225 grams).

Month	Day	Year	S.C.	pH	Alk.	SO ₄	Ca	Mg	Na	K	Vol. Out	Rinse	Sample
11	30	93	1850.0	6.29	.	.	.	.	.	.	89.9	1	.
12	1	93	800.0	7.17	.	.	.	.	.	.	175.4	2	.
12	1	93	305.0	7.18	.	.	.	.	.	.	198.5	3	.
12	2	93	220.0	7.63	.	.	.	.	.	.	189.0	4	.
12	2	93	160.0	7.67	.	.	.	.	.	.	202.8	5	.
12	3	93	125.0	7.85	.	.	.	.	.	.	191.9	6	.
12 ¹	3	93	.	.	.	196.3	48.60	23.40	2.35	2.45	1047.5	-	70004.

Table D2.11. Initial rinse drainage quality for the Particle Size Experiment: RK4 (reactor 5, + 35/-10 mesh, 1000 grams).

Month	Day	Year	S.C.	pH	Alk.	SO ₄	Ca	Mg	Na	K	Vol. Out	Rinse	Sample
11	30	93	4700.0	3.92	.	.	.	.	.	.	228.9	1	.
12	1	93	2700.0	5.77	.	.	.	.	.	.	440.9	2	.
12	1	93	910.0	6.16	.	.	.	.	.	.	397.4	3	.
12	2	93	725.0	6.68	.	.	.	.	.	.	383.9	4	.
12	2	93	300.0	6.99	.	.	.	.	.	.	394.0	5	.
12	2	93	137.0	7.19	.	.	.	.	.	.	394.5	6	.
12	2	93	128.0	6.98	.	.	.	.	.	.	393.6	7	.
12 ¹	2	93	.	.	.	774.2	150.00	90.00	2.80	1.60	2633.2	-	70005.

Table D2.12. Initial rinse drainage quality for the Particle Size Experiment: RK4 (reactor 6, + 10 mesh/- 1/4", 1000 grams).

Month	Day	Year	S.C.	pH	Alk.	SO ₄	Ca	Mg	Na	K	Vol. Out	Rinse	Sample
11	30	93	2800.0	3.36	.	.	.	.	.	.	323.4	1	.
12	1	93	2375.0	3.65	.	.	.	.	.	.	398.6	2	.
12	1	93	1350.0	3.91	.	.	.	.	.	.	373.9	3	.
12	2	93	1575.0	4.50	.	.	.	.	.	.	391.5	4	.
12	2	93	510.0	4.54	.	.	.	.	.	.	395.4	5	.
12	2	93	195.0	4.72	.	.	.	.	.	.	398.0	6	.
12	2	93	195.0	4.69	.	.	.	.	.	.	394.9	7	.
12 ¹	2	93	.	.	.	708.6	100.00	90.00	1.05	2.20	2675.6	-	70006.

¹ Represents flow weighted composite of previous rinses.

Table D2.13. Initial rinse drainage quality for the Particle Size Experiment: RK4 (reactor 7, + 1/4" / - 3/4", 1000 grams).

Month	Day	Year	S.C.	pH	Alk.	SO ₄	Ca	Mg	Na	K	Vol. Out	Rinse	Sample
11	30	93	1450.0	3.49	.	.	.	.	.	.	332.3	1	.
12	1	93	3525.0	3.85	.	.	.	.	.	.	404.1	2	.
12	1	93	710.0	4.02	.	.	.	.	.	.	391.1	3	.
12	2	93	1425.0	3.99	.	.	.	.	.	.	395.1	4	.
12	2	93	415.0	4.15	.	.	.	.	.	.	393.9	5	.
12	2	93	155.0	4.30	.	.	.	.	.	.	395.9	6	.
12	2	93	195.0	4.22	.	731.3	75.00	85.00	1.00	1.95	2708.0	7	70007.
12 ¹	2	93	.	.	.	.	.	.	.	.	.	.	.

Table D2.14. Initial rinse drainage quality for the Particle Size Experiment: RK4 (reactor 23, + 1/4" / - 3/4", 1000 grams, uncovered).

Month	Day	Year	S.C.	pH	Alk.	SO ₄	Ca	Mg	Na	K	Vol. Out	Rinse	Sample
12	14	93	575.0	4.07	.	.	.	.	.	.	394.6	1	.
12	15	93	1050.0	4.21	.	.	.	.	.	.	383.9	2	.
12	15	93	318.0	4.42	.	.	.	.	.	.	397.6	3	.
12	16	93	340.0	4.22	.	376.0	42.30	45.60	1.10	1.45	394.2	4	70043.
12 ¹	16	93	.	.	.	.	.	.	.	.	1570.3	.	.

Table D2.15. Initial rinse drainage quality for the Particle Size Experiment: RK5 (reactor 14, -270 mesh, 75 grams).

Month	Day	Year	S.C.	pH	Alk.	SO ₄	Ca	Mg	Na	K	Vol. Out	Rinse	Sample
12	1	93	1300.0	7.42	.	.	.	.	.	.	172.8	1	.
12	2	93	230.0	8.11	.	.	.	.	.	.	192.7	2	.
12	2	93	145.0	7.94	.	.	.	.	.	.	193.2	3	.
12	3	93	102.0	7.96	.	.	.	.	.	.	196.1	4	.
12	4	93	102.0	7.88	.	.	.	.	.	.	193.8	5	.
12	6	93	95.0	7.85	.	121.4	30.95	19.00	2.30	1.95	1140.7	6	70014.
12 ¹	6	93	.	.	20.0	46.4	20.30	4.80	0.70	1.95	190.2	7	70034.
12	9	93	165.0	7.48	.	.	.	.	.	.	.	.	.

¹ Represents flow weighted composite of previous rinses.

Table D2.16. Initial rinse drainage quality for the Particle Size Experiment: RK5 (reactor 15, +270/-100 mesh, 75 grams).

Month	Day	Year	S.C.	pH	Alk.	SO ₄	Ca	Mg	Na	K	Vol. Out	Rinse	Sample
11	30	93	680.0	6.66	.	.	.	.	.	.	172.6	1	.
12	1	93	82.0	7.37	.	.	.	.	.	.	194.3	2	.
12	1	93	31.0	7.25	.	.	.	.	.	.	199.2	3	.
12	2	93	51.0	7.63	.	.	.	2.45	1.25	0.90	193.9	4	.
12 ¹	2	93	.	.	.	12.4	3.05	.	.	.	760.0	.	70015.

Table D2.17. Initial rinse drainage quality for the Particle Size Experiment: RK5 (reactor 22, +270/-100 mesh, 75 grams, uncovered).

Month	Day	Year	S.C.	pH	Alk.	SO ₄	Ca	Mg	Na	K	Vol. Out	Rinse	Sample
12	13	93	63.0	6.24	.	.	.	.	.	.	170.0	1	.
12	13	93	38.0	7.11	.	.	.	.	.	.	196.3	2	.
12	13	93	27.0	7.05	.	.	.	.	.	.	199.3	3	.
12	13	93	19.0	7.06	.	.	.	.	.	.	199.3	4	.
12 ¹	13	93	.	.	.	7.8	1.75	1.55	1.70	0.60	764.9	.	70042.
12	13	93	18.0	7.08	.	7.6	1.10	0.95	0.65	0.70	199.3	5	70044.
12	16	93	99.0	7.00	5.0	190.0	6.45	4.60	1.30	1.80	178.9	6	70045.

Table D2.18. Initial rinse drainage quality for the Particle Size Experiment: RK5 (reactor 16, +100/-35 mesh, 75 grams).

Month	Day	Year	S.C.	pH	Alk.	SO ₄	Ca	Mg	Na	K	Vol. Out	Rinse	Sample
11	30	93	1350.0	4.81	.	.	.	.	.	.	171.6	1	.
12	1	93	73.0	6.86	.	.	.	.	.	.	192.5	2	.
12	1	93	21.0	7.31	.	.	.	.	.	.	197.7	3	.
12	2	93	39.0	7.55	.	.	.	.	.	.	193.4	4	.
12 ¹	2	93	.	.	.	10.0	2.60	2.25	1.80	0.65	755.2	.	70016.

¹ Represents flow weighted composite of previous rinses.

Table D2.19. Initial rinse drainage quality for the Particle Size Experiment: RK5 (reactor 17, +100/-35 mesh, 225 grams).

Month	Day	Year	S.C.	pH	Alk.	SO ₄	Ca	Mg	Na	K	Vol. Out	Rinse	Sample
11	30	93	300.0	6.29	.	.	.	.	.	.	120.5	1	.
12	1	93	203.0	7.22	.	.	.	.	.	.	188.3	2	.
12	1	93	60.0	7.08	.	.	.	.	.	.	196.6	3	.
12	2	93	98.0	7.32	.	.	.	.	.	.	193.4	4	.
12 ¹	2	93	.	.	.	28.2	7.60	7.35	4.35	1.10	698.8	.	70017.

Table D2.20. Initial rinse drainage quality for the Particle Size Experiment: RK5 (reactor 18, +350/-10 mesh, 1000 grams).

Month	Day	Year	S.C.	pH	Alk.	SO ₄	Ca	Mg	Na	K	Vol. Out	Rinse	Sample
11	30	93	300.0	6.43	.	.	.	.	.	.	119.9	1	.
12	1	93	255.0	7.19	.	.	.	.	.	.	333.8	2	.
12	1	93	60.0	7.10	.	.	.	.	.	.	290.2	3	.
12	2	93	96.0	7.34	.	.	.	.	.	.	282.1	4	.
12 ¹	2	93	.	.	.	50.4	10.40	8.25	3.40	1.05	1026.0	.	70018.

Table D2.21. Initial rinse drainage quality for the Particle Size Experiment: RK5 (reactor 24, +35/-10 mesh, 1000 grams).

Month	Day	Year	S.C.	pH	Alk.	SO ₄	Ca	Mg	Na	K	Vol. Out	Rinse	Sample
1	12	94	445.0	6.62	.	.	.	.	.	.	93.1	1	.
1	12	94	238.0	6.69	.	.	.	.	.	.	319.8	2	.
1	12	94	102.0	6.95	.	.	.	.	.	.	299.2	3	.
1	13	94	158.0	7.00	.	.	.	.	.	.	284.0	4	.
1	13	94	65.0	7.32	.	.	.	.	.	.	300.2	5	.
1 ¹	13	94	.	.	.	47.2	9.00	6.45	4.50	0.85	1296.3	.	70117.

¹ Represents flow weighted composite of previous rinses.

Table D2.22. Initial rinse drainage quality for the Particle Size Experiment: RK5 (reactor 19, + 10 mesh/-1/4", 1000 grams).

Month	Day	Year	S.C.	pH	Alk.	SO ₄	Ca	Mg	Na	K	Vol. Out	Rinse	Sample
11	30	93	330.0	6.22	.	.	.	.	.	.	264.9	1	.
12	1	93	195.0	7.10	.	.	.	.	.	.	301.0	2	.
12	1	93	30.0	7.18	.	.	.	.	.	.	298.4	3	.
12	2	93	81.0	6.95	.	.	.	.	.	.	285.3	4	.
12 ¹	2	93	.	.	.	49.7	9.40	6.15	2.40	0.75	1149.6	-	70019.

Table D2.23. Initial rinse drainage quality for the Particle Size Experiment: RK5 (reactor 20, + 1/4"/-3/4", 1000 grams).

Month	Day	Year	S.C.	pH	Alk.	SO ₄	Ca	Mg	Na	K	Vol. Out	Rinse	Sample
11	30	93	168.0	5.99	.	.	.	.	.	.	287.1	1	.
12	1	93	133.0	6.60	.	.	.	.	.	.	292.0	2	.
12	1	93	20.0	6.67	.	.	.	.	.	.	295.8	3	.
12	2	93	75.0	6.44	.	.	.	.	.	.	285.3	4	.
12 ¹	2	93	.	.	.	30.5	5.15	3.80	1.65	0.65	1160.2	-	70020.

Table D2.24. Initial rinse drainage quality for the Particle Size Experiment: RK5 (reactor 25, + 1/4"/-3/4", 1000 grams).

Month	Day	Year	S.C.	pH	Alk.	SO ₄	Ca	Mg	Na	K	Vol. Out	Rinse	Sample
1	12	94	88.0	5.82	.	.	.	.	.	.	217.8	1	.
1	12	94	55.0	5.89	.	.	.	.	.	.	301.6	2	.
1	12	94	36.0	5.79	.	.	.	.	.	.	301.6	3	.
1	13	94	150.0	6.81	.	.	.	.	.	.	271.7	4	.
1	13	94	22.0	5.46	.	.	.	.	.	.	296.0	5	.
1 ¹	13	94	.	.	.	16.9	3.90	2.85	1.70	0.75	1388.7	-	70118.

¹ Represents flow weighted composite of previous rinses.

Table D3.1. Particle Size Experiment drainage quality from Solid RK3, reactor 8 (-270 mesh, 75 grams).

Week	Volume (mL)	S.C. (μ S/cm)	pH	Alk. (mg/L)	AcV. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Sample	Volume 1 (mL)	Volume 2 (mL)	Volume 3 (mL)	Month	Day	Year
1	137.2	105.	6.77	5.0	.	29.6	10.95	0.85	0.25	0.67	70054.	62.8	24.6	9.5	12	16	93
2	154.3	85.	6.89	<5.0	.	25.0	8.15	1.10	0.30	2.85	70089.	47.6	17.9	6.3	12	23	93
3	133.1	50.	6.80	5.0	.	.	.	.	.	.	.	63.1	28.3	11.5	12	30	93
4	167.6	75.	6.55	.	.	19.0	6.80	0.80	1.15	2.90	70094.	36.7	0.0	0.0	1	6	94
5	144.5	60.	7.24	9.0	.	.	.	.	.	.	.	44.5	.	0.0	1	13	94
6	138.3	55.	6.98	.	.	10.9	4.55	0.70	0.75	2.70	70120.	49.4	15.3	0.0	1	20	94
7	143.3	49.	6.89	9.0	.	.	3.60	0.60	1.35	2.60	70148.	45.2	0.0	0.0	1	27	94
8	142.8	46.	7.23	.	.	9.7	3.60	0.60	1.35	2.60	70148.	44.9	2.4	0.0	2	3	94
9	142.8	25.	6.80	5.0	.	5.7	2.50	0.45	0.15	3.00	70173.	53.8	3.9	0.0	2	10	94
10	132.8	34.	7.19	.	.	.	.	.	.	.	.	44.7	4.0	0.0	2	17	94
11	146.2	43.	7.29	10.0	.	7.9	2.55	0.55	0.25	2.70	70199.	44.4	0.0	0.0	2	24	94
12	143.2	39.	7.22	5.0	.	5.7	2.60	1.05	0.70	2.15	70224.	43.7	16.1	0.0	3	3	94
13	146.9	28.	6.76	.	.	.	.	.	.	.	.	45.4	23.3	12.2	3	10	94
14	164.9	32.	7.51	10.0	.	4.6	2.10	0.70	1.00	2.75	70250.	36.8	13.5	9.3	3	17	94
15	168.6	42.	7.48	.	.	.	.	.	.	.	.	34.1	12.9	0.8	3	24	94
16	142.7	29.	7.33	.	.	4.3	2.05	0.40	.	.	.	48.8	23.1	14.1	3	31	94
17	176.5	23.	7.20	10.0	.	4.3	2.05	0.40	.	.	70276.	30.8	0.0	0.0	4	7	94
18	136.3	30.	7.36	.	.	.	.	.	.	.	.	49.3	.	0.0	4	14	94
19	142.8	27.	7.29	10.0	.	3.9	2.05	0.35	.	.	.	43.5	0.0	0.0	4	20	94
20	131.7	28.	7.38	.	.	.	.	.	.	.	70301.	50.5	20.0	8.1	4	28	94
21	172.6	15.	6.81	5.0	.	4.0	1.55	0.40	0.95	1.80	70327.	28.8	3.0	0.0	5	5	94
22	144.6	26.	7.40	.	.	.	.	.	.	.	.	45.2	12.5	0.0	5	12	94
23	146.4	18.	7.45	5.0	.	3.8	1.55	0.65	1.00	1.60	70353.	43.4	8.5	0.0	5	19	94
24	150.9	25.	7.51	.	.	.	.	.	.	.	.	30.4	16.1	8.5	5	26	94
25	170.3	27.	7.40	10.0	.	4.6	1.90	1.30	0.95	1.60	70378.	39.7	8.5	0.0	6	2	94
26	145.2	30.	7.40	.	.	.	.	.	.	.	.	34.5	12.5	0.0	6	9	94
27	160.9	25.	7.09	10.0	.	2.5	1.05	0.30	0.30	1.40	70404.	31.4	14.3	0.0	6	16	94
28	156.3	29.	7.55	.	.	.	.	.	.	.	.	33.5	2.7	0.0	6	23	94
29	155.8	17.	7.31	10.0	.	3.4	1.25	0.35	0.95	1.55	70429.	32.2	9.0	0.0	6	30	94
30	147.7	24.	7.35	.	.	.	.	.	.	.	.	.	.	0.0	7	7	94

Table D3.2. Particle Size Experiment drainage quality from Solid RK3, reactor 9 (+270/-100 mesh, 75 grams).

Week	Volume (mL)	S.C. (μ S/cm)	pH	Alk. (mg/L)	Acv. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Sample	Volume 1 (mL)	Volume 2 (mL)	Volume 3 (mL)	Month	Day	Year
1	197.9	67.	7.24	10.0	.	15.5	5.30	2.20	0.05	0.22	70029.	34.7	0.8	0.0	12	9	93
2	158.1	65.	6.69	5.0	.	16.6	4.45	1.85	0.25	1.60	70055.	40.0	37.2	36.2	12	16	93
3	198.2	79.	7.26	12.0	.	.	.	.	.	.	.	36.2	34.3	33.3	12	23	93
4	198.3	55.	7.14	.	.	11.0	4.05	1.65	0.10	1.50	70074.	34.4	32.3	31.7	12	30	93
5	195.3	52.	6.74	15.0	.	.	.	.	.	.	.	33.9	30.4	29.8	1	6	94
6	187.1	55.	6.87	.	.	9.3	4.50	1.70	0.25	1.30	70103.	38.5	.	35.3	1	13	94
7	199.4	55.	7.22	15.0	.	.	.	.	.	.	.	35.3	33.1	31.7	1	20	94
8	193.0	55.	7.27	.	.	9.4	4.65	1.70	0.40	0.90	70131.	33.9	31.4	30.5	1	27	94
9	191.0	51.	7.22	15.0	.	.	.	.	.	.	.	35.1	35.3	34.3	2	3	94
10	197.1	50.	7.23	.	.	7.9	4.60	2.45	0.55	1.05	70156.	35.2	33.5	32.8	2	10	94
11	197.0	54.	6.77	18.0	.	.	.	.	.	.	.	32.8	31.1	30.2	2	17	94
12	197.4	55.	7.41	.	.	5.4	4.25	1.85	<0.05	0.65	70182.	31.3	28.7	28.0	2	24	94
13	190.2	50.	7.41	15.0	.	.	.	.	.	.	.	36.8	35.3	33.8	3	3	94
14	198.6	50.	7.12	.	.	6.5	3.95	1.80	<0.05	0.55	70207.	34.1	33.1	32.7	3	10	94
15	196.3	47.	7.40	12.5	.	.	.	.	.	.	.	33.3	32.0	31.7	3	17	94
16	197.7	48.	7.29	.	.	5.9	3.80	1.70	0.20	0.55	70233.	33.0	31.4	30.9	3	24	94
17	197.5	46.	7.48	16.0	.	.	.	.	.	.	.	32.1	30.9	30.4	3	31	94
18	197.8	45.	7.31	.	.	5.9	3.75	1.80	0.15	0.50	70258.	32.2	30.5	30.0	4	7	94
19	196.6	53.	7.24	18.0	.	.	.	.	.	.	.	31.8	.	29.9	4	14	94
20	197.0	46.	7.14	.	.	4.8	3.55	1.80	.	.	70284.	31.9	30.8	30.3	4	20	94
21	197.3	49.	7.46	16.0	.	.	.	.	.	.	.	33.1	31.8	31.3	4	28	94
22	195.6	50.	7.32	.	.	5.0	3.85	2.95	.	.	70310.	32.9	31.6	30.4	5	5	94
23	196.6	50.	7.33	15.0	.	.	.	.	.	.	.	33.0	31.9	31.5	5	12	94
24	198.4	47.	7.02	.	.	4.9	3.45	1.95	1.45	0.90	70335.	.	30.9	30.5	5	19	94
25	198.7	47.	7.59	12.5	.	.	.	.	.	.	.	32.6	31.2	31.0	5	26	94
26	197.8	52.	7.65	.	.	5.1	3.55	2.55	0.85	0.65	70361.	32.9	31.8	31.3	6	2	94
27	192.8	60.	7.56	15.0	.	.	.	.	.	.	.	32.5	31.3	30.9	6	9	94
28	197.1	50.	7.57	.	.	5.7	3.45	2.00	<0.05	0.60	70386.	33.0	31.8	31.3	6	16	94
29	197.4	49.	7.66	15.0	.	.	.	.	.	.	.	32.9	31.3	30.7	6	23	94
30	196.3	48.	7.68	.	.	5.7	3.15	1.95	0.05	0.90	70412.	33.0	.	30.5	6	30	94

Table D3.4. Particle Size Experiment drainage quality from Solid RK3, reactor 12 (+35/-10 mesh, 1000 grams).

Week	Volume (mL)	S.C. (μ S/cm)	pH	Alk. (mg/L)	AcY. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Sample	Volume 1 (mL)	Volume 2 (mL)	Volume 3 (mL)	Month	Day	Year
1	451.9	225.	6.96	30.0	.	63.2	12.25	9.30	0.07	1.02	70032.	349.7	147.1	74.6	12	9	93
2	203.0	225.	6.68	5.0	.	84.0	11.95	8.20	0.40	3.75	70058.	224.8	201.6	199.8	12	16	93
3	394.0	260.	7.40	18.0	.	.	.	.	.	.	.	237.9	188.5	186.7	12	23	93
4	374.5	172.	7.30	.	.	56.4	10.90	6.75	0.20	2.90	70077.	206.5	187.1	185.5	12	30	93
5	375.3	142.	7.04	20.0	.	.	.	.	.	.	.	208.7	188.5	187.2	1	6	94
6	370.8	150.	7.13	.	.	41.4	9.70	5.60	0.35	2.45	70106.	212.1	.	187.4	1	13	94
7	360.4	143.	7.23	23.0	.	.	.	.	.	.	.	220.2	201.8	201.3	1	20	94
8	383.4	140.	7.43	.	.	37.4	9.85	5.25	0.60	2.30	70134.	207.4	202.7	198.1	1	27	94
9	372.4	138.	7.44	26.0	.	.	.	.	.	.	.	214.5	200.8	200.1	2	3	94
10	359.6	137.	7.52	.	.	35.5	10.35	5.10	0.05	1.95	70159.	233.1	222.8	222.6	2	10	94
11	396.2	152.	7.19	35.0	.	.	.	.	.	.	.	220.6	205.0	205.0	2	17	94
12	373.1	152.	7.55	.	.	32.4	11.80	5.70	0.10	2.10	70185.	225.6	204.2	202.2	2	24	94
13	359.4	155.	7.52	30.0	.	.	.	.	.	.	.	236.7	218.2	216.5	3	3	94
14	368.0	142.	7.62	.	.	39.0	13.00	5.90	0.30	1.70	70210.	242.5	200.1	198.3	3	10	94
15	328.8	132.	7.64	38.0	.	.	.	.	.	.	.	263.7	204.2	199.7	3	17	94
16	356.9	138.	7.40	.	.	29.8	12.50	5.80	0.20	1.45	70236.	236.7	199.2	197.1	3	24	94
17	355.0	150.	7.82	42.0	.	.	.	.	.	.	.	234.2	196.7	189.9	3	31	94
18	349.9	142.	7.70	.	.	25.8	13.05	6.40	.	.	70261.	231.6	195.2	190.9	4	7	94
19	350.6	174.	7.84	53.0	.	.	.	.	.	.	.	232.9	.	190.0	4	14	94
20	353.7	172.	7.59	.	.	30.6	16.10	8.20	.	.	70287.	257.9	187.2	187.2	4	20	94
21	354.5	180.	7.58	55.0	.	.	.	.	.	.	.	223.5	186.2	182.2	4	28	94
22	340.5	173.	7.62	.	.	28.7	16.45	9.15	.	.	70313.	238.6	190.2	178.7	5	5	94
23	326.3	179.	7.92	50.0	.	.	.	.	.	.	.	243.4	195.2	179.2	5	12	94
24	324.8	175.	7.84	.	.	25.9	15.60	10.15	2.15	1.70	70338.	246.9	198.2	180.7	5	19	94
25	326.6	175.	8.06	50.0	.	.	.	.	.	.	.	231.0	174.7	167.8	5	26	94
26	320.4	180.	7.99	65.0	.	22.6	14.10	10.00	0.40	1.55	70364.	246.9	189.2	173.2	6	2	94
27	320.6	180.	8.04	.	.	.	.	.	.	.	.	247.9	184.2	169.7	6	9	94
28	334.3	178.	7.95	.	.	21.9	14.20	9.80	0.20	3.10	70389.	235.4	185.7	168.2	6	16	94
29	330.4	180.	8.14	65.0	.	.	.	.	.	.	.	228.4	175.2	168.2	6	23	94
30	316.9	190.	8.17	.	.	25.0	14.90	10.95	0.20	1.75	70415.	236.5	.	171.2	6	30	94

Table D3.7. Particle Size Experiment drainage quality from Solid RK4, reactor 2 (+270/-100 mesh, 75 grams).

Week	Volume (mL)	S.C. (μ S/cm)	pH	Alk. (mg/L)	Acv. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Sample	Volume 1 (mL)	Volume 2 (mL)	Volume 3 (mL)	Day	Year
1	197.1	180.	7.71	21.0	.	64.8	16.45	8.65	0.07	0.25	70022.	40.2	0.0	0.0	12	9
2	152.6	600.	6.90	5.0	.	257.5	60.00	31.75	0.15	0.68	70048.	44.0	38.6	38.3	12	16
3	196.1	420.	7.60	22.0	.	.	.	.	.	.	.	40.5	39.6	39.1	12	23
4	193.2	158.	7.47	.	.	45.2	14.90	7.35	0.15	1.60	70068.	44.2	43.4	42.8	12	30
5	197.6	150.	7.00	25.0	.	.	.	.	.	.	.	42.2	40.3	39.7	1	6
6	193.8	148.	7.24	.	.	43.4	13.75	6.45	0.60	1.60	70097.	42.5	.	41.0	1	13
7	196.0	119.	7.58	25.0	.	.	.	.	.	.	.	42.5	41.0	40.4	1	20
8	196.3	125.	7.64	.	.	37.6	12.00	5.30	0.60	1.05	70125.	41.4	40.2	39.6	1	27
9	196.8	116.	7.52	20.0	.	.	.	.	.	.	.	40.7	39.6	39.1	2	3
10	196.8	112.	7.69	.	.	30.1	11.05	4.90	0.40	0.80	70150.	40.4	39.7	39.0	2	10
11	196.9	105.	7.25	18.0	.	.	.	.	.	.	.	40.3	33.7	33.1	2	17
12	189.2	152.	7.60	.	.	42.0	14.30	6.65	0.05	1.20	70176.	41.0	35.6	34.9	2	24
13	191.3	150.	7.53	18.0	.	.	.	.	.	.	.	41.0	39.8	38.1	3	3
14	195.8	100.	7.52	.	.	31.2	10.15	4.65	<0.05	0.65	70201.	39.5	39.0	38.8	3	10
15	196.5	88.	7.57	20.0	.	.	.	.	.	.	.	39.7	39.0	38.7	3	17
16	197.1	83.	7.43	.	.	20.6	8.40	3.80	0.40	0.55	70227.	40.4	39.3	38.8	3	24
17	196.4	93.	7.72	21.0	.	.	.	.	.	.	.	40.0	39.3	39.0	3	31
18	195.3	87.	7.54	.	.	19.0	8.25	3.95	0.25	0.75	70252.	39.9	38.8	38.0	4	7
19	196.6	90.	7.56	20.0	.	.	.	.	.	.	.	39.7	.	38.6	4	14
20	195.8	80.	7.56	.	.	16.9	7.85	3.35	.	.	70278.	40.0	38.1	37.2	4	20
21	194.0	85.	7.14	25.0	.	.	.	.	.	.	.	40.0	37.7	36.9	4	28
22	196.4	82.	7.70	.	.	15.6	8.45	3.30	.	.	70304.	40.2	39.3	39.0	5	5
23	196.0	78.	7.67	21.0	.	.	.	.	.	.	.	41.0	40.1	39.8	5	12
24	196.9	71.	7.37	.	.	14.8	7.65	3.35	0.30	0.95	70329.	.	39.7	39.4	5	19
25	198.8	82.	7.03	20.0	.	.	.	.	.	.	.	40.3	37.5	37.0	5	26
26	194.8	85.	7.83	.	.	14.6	7.55	3.80	0.50	0.80	70355.	39.6	38.9	38.6	6	2
27	197.4	90.	7.70	25.0	.	.	.	.	.	.	.	40.4	39.0	38.2	6	9
28	195.5	100.	7.81	.	.	16.6	9.40	4.00	<0.05	0.75	70380.	39.9	37.3	35.6	6	16
29	194.7	95.	7.80	25.0	.	.	.	.	.	.	.	39.4	36.7	34.0	6	23
30	192.4	95.	7.76	.	.	19.0	8.60	3.70	0.10	0.85	70406.	40.3	.	39.1	6	30

1 Original reported concentration 1320.0 mg/L sulfate; inconsistent with specific conductance and other sulfate concentrations; concentration estimated as average between values determined by the relationship between conductance and sulfate and as determined by charge balance.

Table D3.8. Particle Size Experiment drainage quality from Solid RK4, reactor 3 (+100/-35 mesh, 75 grams).

Week	Volume (mL)	S.C. (μ S/cm)	pH	Alk. (mg/L)	Acy. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Sample	Volume 1 (mL)	Volume 2 (mL)	Volume 3 (mL)	Month	Day	Year
1	195.6	165.	7.60	25.0	.	44.4	15.90	7.40	0.09	0.19	70023.	43.6	0.4	0.0	12	9	93
2	157.8	500.	6.37	2.5	.	201.0 ¹	48.30	23.00	0.18	0.61	70049.	41.4	37.6	36.9	12	16	93
3	194.2	410.	7.57	20.0	.	.	.	.	.	.	.	40.0	39.0	38.6	12	23	93
4	192.1	155.	7.45	.	.	55.2	15.85	7.60	0.15	1.75	70069.	43.8	40.7	40.2	12	30	93
5	194.7	172.	7.00	21.0	.	.	.	.	.	.	.	40.9	41.2	37.5	1	6	94
6	193.9	162.	7.28	.	.	48.2	15.65	7.75	0.20	0.75	70098.	40.6	.	38.3	1	13	94
7	194.0	122.	7.71	20.0	.	.	.	.	.	.	.	41.0	38.3	37.5	1	20	94
8	193.8	140.	7.62	.	.	45.0	13.40	6.00	0.55	0.75	70126.	40.3	38.8	37.5	1	27	94
9	195.0	115.	7.55	20.0	.	.	.	.	.	.	.	39.9	37.9	35.5	2	3	94
10	192.2	113.	7.65	.	.	33.6	11.75	5.10	0.50	0.70	70151.	40.3	39.3	37.1	2	10	94
11	194.6	118.	7.33	20.0	.	.	.	.	.	.	.	39.9	33.6	31.7	2	17	94
12	188.3	130.	7.60	.	.	34.0	12.30	5.50	0.15	0.75	70177.	40.5	32.3	30.1	2	24	94
13	184.8	168.	7.52	19.0	.	.	.	.	.	.	.	39.8	37.4	35.1	3	3	94
14	190.2	102.	7.52	.	.	27.4	10.35	4.65	0.05	0.60	70202.	39.9	39.3	39.1	3	10	94
15	191.6	90.	7.61	25.0	.	.	.	.	.	.	.	40.4	39.4	39.2	3	17	94
16	196.5	88.	7.44	.	.	23.5	9.30	4.20	0.20	0.55	70228.	40.6	39.4	38.8	3	24	94
17	194.8	110.	7.71	20.0	.	.	.	.	.	.	.	40.9	39.2	38.7	3	31	94
18	196.7	94.	7.56	.	.	22.6	9.10	4.15	0.20	0.60	70253.	39.5	37.9	37.1	4	7	94
19	194.1	95.	7.60	20.0	.	.	.	.	.	.	.	40.2	.	38.9	4	14	94
20	197.9	92.	7.51	.	.	20.9	8.75	3.70	.	.	70279.	39.3	37.3	36.1	4	20	94
21	192.5	90.	7.22	20.0	.	.	.	.	.	.	.	40.9	39.4	.	.	.	.

Table D3.9. Particle Size Experiment drainage quality from Solid RK4, reactor 5 (+35/-10 mesh, 1000 grams).

Week	Volume (mL)	S.C. (μ S/cm)	pH	Alk. (mg/L)	AcY. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Sample	Volume 1 (mL)	Volume 2 (mL)	Volume 3 (mL)	Month	Day	Year
1	395.2	1250.	6.95	20.0	.	675.0	170.00	110.00	0.17	0.33	70025.	164.4	83.8	46.5	12	9	93
2	213.2	1450.	5.42	10.0	.	850.0	200.00	90.00	0.31	0.48	70051.	191.4	188.7	188.3	12	16	93
3	390.2	2030.	7.23	19.0	.	.	.	.	.	.	.	194.1	184.0	182.4	12	23	93
4	376.6	1800.	7.31	.	.	1138.5 ¹	250.00	120.00	0.55	1.80	70071.	195.5	180.5	179.2	12	30	93
5	375.5	1550.	7.16	22.5	.	.	.	.	.	.	.	197.9	184.3	183.3	1	6	94
6	383.9	1350.	7.25	.	.	965.0	210.00	100.00	0.65	1.70	70100.	191.7	.	169.4	1	13	94
7	381.1	1560.	7.26	25.0	.	.	.	.	.	.	.	181.5	164.5	157.0	1	20	94
8	386.9	1350.	7.42	.	.	890.0	190.00	87.50	0.80	1.85	70128.	161.6	150.8	149.8	1	27	94
9	376.5	1380.	7.15	20.0	.	.	.	.	.	.	.	162.4	151.3	150.2	2	3	94
10	380.1	1450.	7.41	.	.	922.9	205.00	93.50	0.70	1.80	70153.	162.5	146.1	143.8	2	10	94
11	381.1	1550.	6.97	25.0	.	.	.	.	.	.	.	157.8	144.0	143.7	2	17	94
12	377.8	1450.	7.35	.	.	840.0	215.00	95.00	0.35	2.45	70179.	158.9	146.0	145.0	2	24	94
13	379.3	1420.	7.35	25.0	.	.	.	.	.	.	.	162.1	145.3	144.5	3	3	94
14	378.6	1350.	7.38	.	.	865.0	190.00	85.00	0.35	1.75	70204.	161.3	146.2	145.3	3	10	94
15	374.0	1250.	7.40	25.0	.	.	.	.	.	.	.	164.8	146.3	145.5	3	17	94
16	381.2	1190.	7.11	.	.	797.2	166.00	74.00	0.45	1.55	70230.	158.1	153.5	149.2	3	24	94
17	383.3	1400.	7.41	22.0	.	.	.	.	.	.	.	159.7	145.0	143.7	3	31	94
18	377.1	1280.	7.37	.	.	741.7	162.00	74.00	0.45	1.40	70255.	158.4	152.5	146.9	4	7	94
19	383.7	1410.	7.43	25.0	.	.	.	.	.	.	.	196.3	.	142.2	4	14	94
20	373.4	1380.	7.20	.	.	827.0	179.00	82.50	.	.	70281.	184.9	143.3	141.8	4	20	94
21	377.9	1400.	7.14	25.0	.	.	.	.	.	.	.	157.4	143.5	142.0	4	28	94
22	381.5	1330.	7.45	.	.	752.5	162.00	72.50	.	.	70307.	158.6	143.0	141.5	5	5	94
23	375.1	1190.	7.37	25.0	.	.	.	.	.	.	.	160.0	141.5	140.5	5	12	94
24	376.3	1200.	7.26	.	.	703.9	162.00	73.00	2.30	2.00	70332.	152.8	143.0	140.5	5	19	94
25	365.9	1250.	7.55	25.0	.	.	.	.	.	.	.	160.0	141.5	141.5	5	26	94
26	371.7	1250.	7.49	.	.	736.1	162.00	74.00	0.70	1.80	70358.	165.8	142.5	142.5	6	2	94
27	392.9	1000.	7.35	30.0	.	.	.	.	.	.	.	175.7	146.0	144.5	6	9	94
28	386.1	1100.	7.64	.	.	604.7	128.00	60.00	0.20	1.50	70383.	162.5	141.0	141.5	6	16	94
29	371.9	1200.	7.57	25.0	.	.	.	.	.	.	.	159.5	140.5	138.5	6	23	94
30	362.9	1000.	7.68	.	.	775.5	157.00	73.00	0.60	2.00	70409.	165.5	.	142.5	6	30	94

¹ Original reported concentration 1320.0 mg/L sulfate; inconsistent with specific conductance and other sulfate concentrations; concentration estimated as average between values determined by the relationship between conductance and sulfate and as determined by charge balance.

Table D3.10. Particle Size Experiment drainage quality from Solid RK4, reactor 6 (+10 mesh/ -1/4", 1000 grams).

Week	Volume (mL)	S.C. (μ S/cm)	pH	Alk. (mg/L)	Acv. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Sample	Volume 1 (mL)	Volume 2 (mL)	Volume 3 (mL)	Month	Day	Year
1	401.2	780.	4.47	.	20.0	410.0	90.00	37.00	0.15	0.37	70026.	67.6	22.3	13.4	12	9	93
2	290.5	1400.	3.76	.	138.0	790.0	175.00	60.00	0.35	0.35	70052.	67.7	19.7	49.0	12	16	93
3	389.2	1100.	4.17	.	45.0	.	.	.	.	.	.	55.0	49.7	48.9	12	23	93
4	388.5	900.	4.20	.	.	480.0	105.00	44.50	0.60	0.80	70072.	55.2	50.3	50.2	12	30	93
5	390.1	1000.	4.05	.	35.0	.	.	.	.	.	.	65.1	50.9	50.7	1	6	94
6	389.8	1000.	4.00	.	.	504.0	110.00	45.20	1.80	1.40	70101.	57.5	.	51.3	1	13	94
7	388.5	1000.	3.91	.	38.0	.	.	.	.	.	.	56.4	50.1	49.7	1	20	94
8	386.7	1100.	3.79	.	.	554.0	115.00	50.50	0.90	0.90	70129.	54.9	50.6	50.5	1	27	94
9	380.3	1220.	3.68	.	39.0	.	.	.	.	.	.	55.0	50.4	50.4	2	3	94
10	383.3	1325.	3.67	.	.	759.3	155.00	70.00	0.95	1.00	70154.	59.2	52.4	52.0	2	10	94
11	386.4	1860.	3.41	.	118.0	.	.	.	.	.	.	59.9	54.0	54.0	2	17	94
12	384.3	2320.	3.32	.	.	1240.0	270.00	110.00	0.70	1.15	70180.	61.8	54.2	53.3	2	24	94
13	378.6	2600.	3.30	.	205.0	.	.	.	.	.	.	66.5	54.7	54.7	3	3	94
14	374.5	2510.	3.25	.	.	1680.0	310.00	120.00	0.55	1.00	70205.	71.1	55.8	54.8	3	10	94
15	332.1	2700.	3.16	.	250.0	.	.	.	.	.	.	115.0	56.9	60.0	3	17	94
16	379.2	2410.	3.23	.	.	1629.5	287.00	152.00	0.65	0.80	70231.	70.3	55.2	55.2	3	24	94
17	346.2	2700.	3.15	.	210.0	.	.	.	.	.	.	87.8	56.4	56.2	3	31	94
18	361.7	2400.	3.24	.	.	1556.4	269.00	148.00	0.55	0.75	70256.	85.2	56.7	56.4	4	7	94
19	357.5	2600.	3.12	.	205.0	.	.	.	.	.	.	89.0	57.2	57.2	4	14	94
20	370.0	2400.	3.17	.	.	1498.0	270.00	126.50	.	.	70282.	70.9	57.2	56.2	4	20	94
21	359.0	2400.	3.15	.	220.0	.	.	.	.	.	.	83.1	56.7	55.9	4	28	94
22	344.8	2220.	3.30	.	.	1370.0	245.00	115.00	.	.	70308.	103.4	58.2	58.2	5	5	94
23	326.8	2200.	3.20	.	210.0	.	.	.	.	.	.	118.9	56.7	56.7	5	12	94
24	331.7	1900.	3.13	.	.	1223.3	233.00	112.00	2.40	1.00	70333.	116.7	57.2	56.2	5	19	94
25	342.4	2050.	3.19	.	205.0	.	.	.	.	.	.	127.6	56.2	55.5	5	26	94
26	356.5	1900.	3.16	.	170.0	.	.	.	.	.	.	96.2	54.7	54.2	6	2	94
27	359.3	1800.	3.17	.	.	1174.1	210.00	105.00	0.70	2.45	70359.	103.2	55.2	54.2	6	9	94
28	375.0	1700.	3.18	.	.	963.0	164.00	79.00	0.35	0.90	70384.	82.2	55.2	53.2	6	16	94
29	347.5	1800.	3.11	.	205.0	.	.	.	.	.	.	92.2	55.2	54.2	6	23	94
30	332.0	1850.	3.12	.	.	1199.2	200.00	103.00	1.05	4.00	70410.	102.2	.	53.2	6	30	94

Table D3.11. Particle Size Experiment drainage quality from Solid RK4, reactor 7 (+1/4" / -3/4", 1000 grams).

Week	Volume (mL)	S.C. (μ /S/cm)	pH	Alk. (mg/L)	AcY. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Sample	Volume 1 (mL)	Volume 2 (mL)	Volume 3 (mL)	Month	Day	Year
1	409.3	560.	4.02	-	40.0	257.0	42.90	28.65	0.12	0.30	70027.	47.0	13.5	6.1	12	9	93
2	365.7	600.	3.78	-	50.0	274.0	65.00	17.10	0.25	0.16	70053.	39.1	35.5	34.0	12	16	93
3	389.1	1100.	3.77	-	100.0	-	-	-	-	-	-	39.8	38.4	37.5	12	23	93
4	389.6	575.	3.94	-	-	275.0	38.30	30.25	0.75	0.40	70073.	41.4	41.1	41.1	12	30	93
5	395.2	800.	3.79	-	65.0	-	-	-	-	-	-	42.8	41.9	41.7	1	6	94
6	394.1	830.	3.67	-	-	376.0	75.00	33.80	1.00	0.65	70102.	40.8	-	40.4	1	13	94
7	392.0	800.	3.51	-	68.0	-	-	-	-	-	-	42.6	42.3	41.7	1	20	94
8	390.4	1000.	3.36	-	-	450.0	91.00	39.10	1.10	0.55	70130.	40.9	41.1	41.1	1	27	94
9	386.6	750.	3.31	-	76.0	-	-	-	-	-	-	42.7	42.3	42.3	2	3	94
10	388.0	1100.	3.23	-	-	563.3	85.50	45.40	0.95	0.50	70155.	47.3	46.6	46.2	2	10	94
11	390.3	1290.	3.04	-	205.0	-	-	-	-	-	-	48.7	48.8	47.7	2	17	94
12	388.1	1050.	3.09	-	-	375.0	36.50	50.00	0.40	0.60	70181.	52.2	48.8	48.7	2	24	94
13	386.9	1100.	3.08	-	210.0	-	-	-	-	-	-	55.5	51.5	51.0	3	3	94
14	385.1	1080.	3.05	-	-	540.0	34.50	60.00	0.35	0.25	70206.	56.5	48.5	47.4	3	10	94
15	383.4	810.	3.11	-	163.0	-	-	-	-	-	-	55.9	48.4	48.0	3	17	94
16	385.4	850.	3.13	-	-	397.6	33.85	39.00	0.35	0.20	70232.	57.0	49.2	48.2	3	24	94
17	384.4	1000.	3.05	-	150.0	-	-	-	-	-	-	55.1	49.5	48.3	3	31	94
18	383.6	1100.	3.07	-	-	517.0	35.95	53.00	0.45	0.25	70257.	57.2	53.7	53.1	4	7	94
19	383.1	1680.	2.87	-	268.0	-	-	-	-	-	-	61.0	-	56.7	4	14	94
20	381.9	1650.	2.92	-	-	890.8	115.00	76.50	-	-	70283.	89.3	56.3	56.3	4	20	94
21	383.9	1420.	2.94	-	240.0	-	-	-	-	-	-	59.3	55.3	54.8	4	28	94
22	385.9	1300.	3.01	-	-	602.8	80.00	59.50	-	-	70309.	63.1	57.3	56.3	5	5	94
23	391.2	1325.	3.02	-	200.0	-	-	-	-	-	-	60.1	54.8	54.9	5	12	94
24	384.8	1300.	2.99	-	-	624.9	92.00	56.00	1.45	0.60	70334.	60.1	56.3	54.8	5	19	94
25	377.6	1200.	3.02	-	170.0	-	-	-	-	-	-	64.3	52.3	51.8	5	26	94
26	388.2	1250.	3.00	-	-	544.4	84.00	44.00	1.50	3.20	70360.	59.3	51.6	51.1	6	2	94
27	400.5	1100.	3.04	-	150.0	-	-	-	-	-	-	59.3	51.3	50.3	6	9	94
28	394.4	1050.	2.97	-	-	438.0	56.00	34.00	0.15	0.35	70385.	60.3	54.3	52.3	6	16	94
29	380.9	1150.	2.95	-	185.0	-	-	-	-	-	-	62.3	54.8	54.2	6	23	94
30	385.4	1000.	3.03	-	-	407.7	41.00	37.00	0.80	0.30	70411.	63.3	-	55.3	6	30	94

Table D3.12. Particle Size Experiment drainage quality from Solid RK5, reactor 14 (-270 mesh, 75 grams).

Week	Volume (mL)	S.C. (μ S/cm)	pH	Alk. (mg/L)	Acy. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Sample	Volume 1 (mL)	Volume 2 (mL)	Volume 3 (mL)	Month	Day	Year
1	167.1	272.	7.11	7.5	.	100.0	31.70	7.20	0.90	2.75	70060.	31.1	27.9	26.2	12	16	93
2	197.7	240.	7.42	15.0	.	78.0	24.65	5.90	0.80	2.40	70090.	25.7	25.4	24.9	12	23	93
3	197.3	140.	7.35	6.5	.	.	.	.	.	.	.	27.4	26.5	26.2	12	30	93
4	195.7	128.	7.16	.	.	43.4	12.35	3.85	0.75	2.05	70095.	27.5	25.3	24.8	1	6	94
5	194.9	160.	7.01	5.0	.	.	.	.	.	.	.	27.4	.	25.5	1	13	94
6	196.3	162.	7.05	.	.	65.0	15.60	5.65	1.20	2.50	70121.	27.0	25.0	24.5	1	20	94
7	196.7	190.	6.41	1.5	.	.	.	.	.	.	.	26.5	24.6	23.7	1	27	94
8	197.5	179.	6.13	.	.	73.6	15.20	6.60	1.20	3.05	70149.	25.9	24.4	23.9	2	3	94
9	196.5	160.	5.89	.	5.0	.	.	.	.	.	.	26.0	24.9	24.2	2	10	94
10	195.5	130.	5.96	.	.	40.0	9.75	4.85	0.70	7.90	70174.	25.9	24.0	23.0	2	17	94
11	196.0	128.	6.10	.	10.0	.	.	.	.	.	.	26.3	24.3	22.9	2	24	94
12	194.8	122.	6.20	.	.	63.0	8.35	4.75	0.70	3.00	70200.	26.1	24.9	23.7	3	3	94
13	196.1	105.	6.33	2.5	.	.	.	.	.	.	.	25.6	24.9	24.7	3	10	94
14	195.8	98.	6.35	.	.	40.8	6.50	3.05	0.75	2.55	70225.	25.3	24.3	24.1	3	17	94
15	197.6	93.	6.05	.	5.0	.	.	.	.	.	.	25.8	25.0	24.6	3	24	94
16	196.8	100.	6.01	.	.	39.9	6.45	3.95	0.80	2.40	70251.	25.7	24.9	24.4	3	31	94
17	197.8	98.	5.74	.	5.0	40.7	9.50	3.95	.	.	70277.	25.3	24.3	23.2	4	7	94
18	195.2	110.	5.49	.	.	.	.	.	.	.	.	25.6	.	24.7	4	14	94
19	198.6	82.	5.84	.	5.0	33.8	5.55	3.15	.	.	.	25.5	24.6	24.4	4	20	94
20	197.4	90.	5.15	.	.	.	.	.	.	.	70302.	25.5	24.8	24.5	4	28	94
21	197.4	95.	5.72	.	5.0	33.5	5.50	3.15	0.50	1.90	70328.	24.8	24.3	23.1	5	5	94
22	196.6	85.	5.22	.	<5.0	.	.	.	.	.	.	25.8	25.1	24.8	5	12	94
23	196.8	82.	6.06	.	.	32.9	5.45	3.35	0.95	2.35	70354.	24.7	24.6	24.5	5	19	94
24	199.0	90.	5.47	.	.	.	.	.	.	.	.	25.5	24.6	24.5	5	26	94
25	199.1	90.	5.22	.	5.0	34.2	5.65	3.90	0.40	1.40	70379.	25.6	24.2	23.3	6	2	94
26	196.1	90.	4.90	.	.	.	.	.	.	.	.	25.8	24.6	24.4	6	9	94
27	199.9	90.	5.18	.	<5.0	35.1	5.25	3.00	0.60	1.55	70405.	25.7	24.9	24.7	6	16	94
28	197.2	95.	5.20	.	.	.	.	.	.	.	.	27.1	24.8	24.4	6	23	94
29	197.4	90.	5.11	.	5.0	34.9	5.55	3.35	0.90	1.20	70430.	25.5	24.1	24.1	6	30	94
30	196.1	100.	4.92	.	.	.	.	.	.	.	.	24.8	20.9	19.8	7	7	94

Table D3.13. Particle Size Experiment drainage quality from Solid RK5, reactor 15 (+270/-100 mesh, 75 grams).

Week	Volume (mL)	S.C. (μ S/cm)	pH	Alk. (mg/L)	Acy. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Sample	Volume 1 (mL)	Volume 2 (mL)	Volume 3 (mL)	Month	Day	Year
1	199.7	75.	7.66	11.0	.	16.5	5.35	3.45	0.15	0.35	70035.	27.3	0.0	0.0	12	9	93
2	168.9	90.	6.93	2.5	.	31.2	6.60	4.65	0.55	1.90	70061.	27.8	25.3	24.6	12	16	93
3	195.9	182.	7.08	5.0	.	.	.	.	.	.	.	27.6	26.8	26.3	12	23	93
4	196.4	112.	7.06	.	.	43.6	9.25	4.25	0.65	2.35	70079.	30.2	28.6	28.0	12	30	93
5	197.1	112.	7.06	5.0	.	48.0	10.65	4.65	0.95	3.15	70108.	28.7	26.3	25.9	1	6	94
6	195.7	135.	6.65	.	.	.	.	.	.	.	.	29.1	.	26.5	1	13	94
7	196.5	120.	6.44	2.5	.	52.0	8.65	4.55	0.85	2.85	70136.	28.7	26.9	26.0	1	20	94
8	196.1	122.	6.02	.	.	36.5	6.00	3.75	0.70	2.05	70161.	28.3	26.5	25.3	1	27	94
9	196.0	100.	5.96	.	2.5	29.8	4.90	3.40	0.25	2.05	70187.	28.4	26.7	26.0	2	3	94
10	195.4	91.	5.94	.	5.0	27.0	4.15	2.65	0.45	1.65	70212.	27.4	26.5	25.9	2	10	94
11	197.1	79.	5.84	.	.	26.0	3.50	2.70	0.40	1.40	70238.	27.3	25.6	25.3	2	17	94
12	196.5	85.	5.96	.	<5.0	25.3	3.95	3.65	.	.	70263.	27.3	26.3	25.2	2	24	94
13	195.4	82.	5.95	.	10.0	27.1	3.35	2.50	.	.	70289.	27.2	26.7	26.4	3	3	94
14	196.8	68.	5.96	.	.	24.6	3.40	2.80	1.75	1.60	70340.	26.9	26.0	25.7	3	10	94
15	196.2	62.	5.99	.	.	24.9	3.35	2.60	0.20	1.50	70366.	27.2	26.3	26.0	3	17	94
16	197.4	62.	6.01	.	<5.0	25.0	3.80	3.40	1.95	2.00	70315.	27.3	26.4	25.8	3	24	94
17	197.0	69.	5.85	.	.	27.1	3.35	3.65	.	.	70263.	27.0	25.9	25.5	3	31	94
18	198.0	69.	5.81	.	<5.0	24.6	3.40	2.80	1.75	1.60	70340.	26.8	26.6	26.4	4	7	94
19	198.2	80.	5.72	.	.	24.9	3.35	2.60	0.20	1.50	70366.	28.1	27.1	26.9	4	14	94
20	198.6	64.	5.57	.	.	25.0	3.80	3.40	1.95	2.00	70315.	28.1	26.3	26.1	4	20	94
21	196.3	65.	5.80	.	<5.0	24.6	3.40	2.80	1.75	1.60	70340.	29.1	28.1	27.3	4	28	94
22	198.3	72.	5.81	.	.	24.6	3.40	2.80	1.75	1.60	70340.	27.7	26.8	26.5	5	5	94
23	197.8	64.	5.46	.	<5.0	24.6	3.40	2.80	1.75	1.60	70340.	27.8	26.6	26.6	5	12	94
24	195.4	63.	5.20	.	2.5	24.9	3.35	2.60	0.20	1.50	70366.	28.3	27.1	26.9	5	19	94
25	196.7	65.	5.57	.	.	24.9	3.35	2.60	0.20	1.50	70366.	28.4	27.6	27.3	5	26	94
26	196.2	70.	5.34	.	<2.5	25.1	3.25	2.60	0.40	1.40	70391.	28.6	26.2	25.7	6	2	94
27	197.8	80.	4.80	.	.	26.5	3.25	2.60	0.85	1.60	70417.	93.0	24.4	23.6	6	9	94
28	199.0	75.	5.10	.	<5.0	26.5	3.25	2.90	0.85	1.60	70417.	27.7	25.4	24.8	6	16	94
29	196.8	95.	5.00	.	.	26.5	3.25	2.90	0.85	1.60	70417.	27.4	.	24.9	6	23	94
30	196.8	70.	5.12	.	.	26.5	3.25	2.90	0.85	1.60	70417.	27.4	.	24.9	6	30	94

Table D3.16. Particle Size Experiment drainage quality from Solid RK5, reactor 19 (+10 mesh/ -1/4", 1000 grams).

Week	Volume (mL)	S.C. (μS/cm)	pH	Alk. (mg/L)	Acy. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Sample	Volume 1 (mL)	Volume 2 (mL)	Volume 3 (mL)	Month	Day	Year
1	295.4	95.	6.58	3.0	.	33.0	5.35	4.15	0.27	0.16	70039.	25.3	1.3	0.6	12	9	93
2	281.0	67.	6.35	<2.5	.	20.7	3.80	2.55	0.85	0.35	70065.	17.1	16.2	15.4	12	16	93
3	290.9	102.	6.41	2.5	.	.	.	.	.	.	.	20.0	17.6	16.4	12	23	93
4	248.9	82.	6.48	.	.	26.9	4.55	3.60	1.25	1.95	70083.	24.8	24.8	24.6	12	30	93
5	295.6	70.	6.66	5.0	.	.	.	.	.	.	.	26.3	22.9	22.3	1	6	94
6	266.1	72.	6.87	.	.	22.8	4.10	3.10	1.50	0.50	70112.	47.3	.	23.0	1	13	94
7	293.6	59.	6.50	3.8	.	.	.	.	.	.	.	25.7	21.7	21.0	1	20	94
8	290.3	63.	6.40	.	.	20.6	3.20	2.05	1.05	0.60	70140.	24.0	22.9	22.9	1	27	94
9	290.4	62.	6.40	5.0	.	.	.	.	.	.	.	26.6	23.9	23.9	2	3	94
10	273.8	62.	6.38	.	.	23.5	3.75	2.80	0.75	0.65	70165.	43.5	25.4	25.2	2	10	94
11	292.0	70.	6.49	5.0	.	.	.	.	.	.	.	27.3	25.1	24.9	2	17	94
12	221.8	75.	6.55	.	.	33.6	4.30	3.25	0.90	2.15	70191.	97.8	71.6	66.4	2	24	94
13	246.0	82.	6.26	.	<5.0	.	.	.	.	.	.	115.7	81.8	66.0	3	3	94
14	241.8	68.	6.40	.	.	29.5	4.35	2.65	0.90	0.45	70216.	117.5	71.5	64.1	3	10	94
15	251.8	65.	6.38	.	5.0	.	.	.	.	.	.	78.4	59.4	52.8	3	17	94
16	226.9	58.	6.55	.	.	21.2	3.55	2.45	0.75	1.00	70242.	118.3	48.3	47.1	3	24	94
17	220.1	65.	6.40	<2.5	.	.	.	.	.	.	.	111.1	33.9	26.4	3	31	94
18	205.2	58.	6.25	.	.	22.7	3.65	2.30	.	.	70267.	115.6	48.4	39.6	4	7	94
19	238.0	71.	6.14	.	<5.0	.	.	.	.	.	.	98.1	.	40.3	4	14	94
20	279.3	58.	6.14	.	.	19.7	3.60	2.35	.	.	70293.	49.5	29.8	29.4	4	20	94
21	269.1	72.	6.21	.	5.0	.	.	.	.	.	.	53.7	28.9	28.4	4	28	94
22	.	58.	6.04	.	.	22.3	4.15	3.20	2.95	0.50	70319.	85.4	30.9	29.9	5	5	94
23	223.4	65.	6.12	.	<5.0	.	.	.	.	.	.	102.5	33.9	29.3	5	12	94
24	208.9	67.	5.96	.	.	22.1	3.70	2.70	2.35	0.65	70344.	116.4	48.4	29.9	5	19	94
25	192.3	65.	6.20	.	<5.0	.	.	.	.	.	.	112.9	28.9	24.2	5	26	94
26	212.4	62.	6.11	.	.	18.7	3.20	1.85	0.45	0.55	70370.	115.4	34.9	30.1	6	2	94
27	193.3	60.	5.96	.	<5.0	.	.	.	.	.	.	134.9	33.4	29.9	6	9	94
28	206.3	60.	6.05	.	.	21.4	4.20	4.10	0.55	0.55	70395.	129.0	36.9	27.9	6	16	94
29	191.3	55.	5.96	.	2.5	.	.	.	.	.	.	122.9	32.4	28.9	6	23	94
30	176.3	65.	6.06	.	.	22.1	3.70	2.50	0.75	0.50	70421.	139.9	.	34.9	6	30	94

Table D3.17. Particle Size Experiment drainage quality from Solid RK5, reactor 20 (+1/4" / -3/4", 1000 grams).

Week	Volume (mL)	S.C. (µS/cm)	pH	Alk. (mg/L)	AcY. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Sample	Volume 1 (mL)	Volume 2 (mL)	Volume 3 (mL)	Month	Day	Year
1	321.2	73.	5.89	.	<3.0	23.8	3.80	3.35	0.18	0.12	70040.	12.7	0.0	0.0	12	9	93
2	289.2	50.	5.96	.	<3.0	15.3	2.45	1.65	0.55	0.35	70066.	8.9	8.4	7.8	12	16	93
3	292.9	70.	5.75	.	<5.0	.	.	.	.	.	.	11.8	10.5	8.5	12	23	93
4	289.8	57.	6.00	.	.	19.0	3.35	3.45	0.75	1.30	70084.	12.7	11.8	11.8	12	30	93
5	296.6	49.	6.32	2.5	.	14.0	2.60	1.80	1.25	0.50	70113.	13.6	12.7	12.1	1	6	94
6	295.3	50.	6.27	3.0	.	.	.	.	.	.	.	14.4	.	13.2	1	13	94
7	296.4	37.	6.48	.	.	11.8	1.70	1.30	0.95	0.60	70141.	14.2	13.1	12.3	1	20	94
8	291.8	37.	6.32	5.0	.	10.3	1.60	1.15	0.45	0.45	70166.	13.8	13.5	13.2	1	27	94
9	292.2	34.	6.37	.	.	.	.	.	.	.	.	14.5	13.2	13.2	2	3	94
10	271.4	31.	6.48	5.0	.	13.1	1.85	1.35	0.50	0.75	70192.	35.0	15.4	15.2	2	10	94
11	295.5	39.	6.53	.	.	.	.	.	.	.	.	16.3	14.3	14.3	2	17	94
12	240.4	36.	6.59	.	<5.0	9.4	1.65	0.95	0.55	0.30	70217.	67.7	31.2	25.0	2	24	94
13	208.2	34.	6.29	.	.	7.0	1.35	0.90	0.50	0.20	70243.	111.5	65.0	43.2	3	3	94
14	242.0	29.	6.49	.	<5.0	10.1	1.80	1.10	.	.	.	94.5	36.6	18.3	3	10	94
15	242.3	25.	6.50	.	.	9.6	1.90	1.15	.	.	70294.	36.1	17.8	17.5	3	17	94
16	269.8	24.	6.66	2.5	.	5.9	1.20	0.90	1.25	0.35	70320.	98.3	17.0	15.5	3	24	94
17	217.9	25.	6.44	.	.	6.6	1.25	0.90	2.60	0.40	70345.	82.5	16.0	15.0	3	31	94
18	219.1	27.	6.35	.	<5.0	7.1	1.15	0.70	0.25	0.45	70371.	91.1	36.5	27.9	4	7	94
19	302.4	31.	6.28	.	.	6.6	1.25	0.90	2.60	0.40	70396.	20.4	16.6	16.6	4	14	94
20	199.5	31.	6.16	.	.	6.6	1.25	0.90	2.60	0.40	70422.	105.8	61.3	44.5	4	20	94
21	318.1	24.	6.18	.	.	5.9	1.20	0.90	1.25	0.35	70320.	22.6	20.5	19.4	4	28	94
22	.	21.	6.28	.	.	6.6	1.25	0.90	2.60	0.40	70345.	21.0	19.3	19.0	5	5	94
23	278.2	23.	6.24	.	.	6.6	1.25	0.90	2.60	0.40	70345.	34.8	18.8	18.5	5	12	94
24	272.8	23.	6.15	.	.	7.1	1.15	0.70	0.25	0.45	70371.	33.0	22.0	19.5	5	19	94
25	284.9	22.	6.27	.	.	7.0	1.30	1.05	0.40	0.35	70396.	25.0	17.5	18.3	5	26	94
26	276.3	23.	6.21	.	.	7.3	1.25	0.90	0.60	0.20	70422.	39.0	18.0	17.7	6	2	94
27	254.1	22.	6.08	.	.	.	.	.	.	.	.	201.4	19.5	18.0	6	9	94
28	242.0	23.	6.16	.	.	.	.	.	.	.	.	84.0	20.0	16.0	6	16	94
29	233.7	23.	6.10	.	2.5	.	.	.	.	.	.	68.0	19.0	17.0	6	23	94
30	198.2	25.	6.16	.	.	.	.	.	.	.	.	104.0	.	18.0	6	30	94

Table D3.14. Particle Size Experiment drainage quality from Solid RK5, reactor 16 (+100/-35 mesh, 75 grams).

Week	Volume (mL)	S.C. (μS/cm)	pH	Alk. (mg/L)	ACV. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Sample	Volume 1 (mL)	Volume 2 (mL)	Volume 3 (mL)	Month	Day	Year
1	196.5	80.	7.55	5.0	.	23.8	5.35	3.95	0.14	0.12	70036.	29.4	0.0	0.0	12	9	93
2	167.6	62.	6.83	5.0	.	19.0	3.65	2.80	0.50	0.55	70062.	29.5	26.3	26.1	12	16	93
3	196.3	125.	6.71	5.0	.	.	.	.	.	.	.	29.0	27.9	27.1	12	23	93
4	195.8	80.	6.81	.	.	29.2	5.25	3.25	0.55	0.90	70080.	32.1	30.2	29.6	12	30	93
5	198.4	98.	6.72	2.5	.	.	.	.	.	.	.	29.7	27.1	26.5	1	6	94
6	194.6	105.	6.00	.	.	38.0	7.10	4.00	0.85	1.70	70109.	29.9	.	26.9	1	13	94
7	195.3	98.	6.20	.	<5.0	.	.	.	.	.	.	28.5	26.0	25.3	1	20	94
8	195.7	99.	5.92	.	<5.0	34.4	5.85	3.80	0.85	2.05	70137.	28.4	26.7	26.0	1	27	94
9	196.1	76.	5.98	.	.	29.1	3.80	2.95	0.30	2.15	70162.	28.5	27.4	26.9	2	3	94
10	199.1	70.	5.90	.	5.0	.	.	.	.	.	.	28.4	26.2	25.8	2	10	94
11	195.5	65.	5.85	.	.	21.7	3.05	3.00	0.30	1.90	70188.	28.1	26.4	25.6	2	17	94
12	196.7	68.	5.95	.	<5.0	.	.	.	.	.	.	27.7	25.9	24.8	2	24	94
13	195.7	60.	5.94	.	.	21.5	2.55	2.15	0.40	1.55	70213.	27.9	27.3	27.1	3	3	94
14	194.8	53.	6.01	.	<5.0	18.2	2.10	2.05	0.35	1.35	70239.	28.0	27.1	26.6	3	10	94
15	196.5	52.	6.02	.	.	17.9	2.10	2.25	.	.	.	27.8	26.6	26.2	3	17	94
16	196.7	52.	6.02	.	<5.0	.	.	.	.	.	.	28.9	28.0	27.6	3	24	94
17	195.2	51.	5.92	.	.	15.0	1.70	1.90	.	.	70264.	27.9	26.7	26.3	3	31	94
18	198.3	51.	5.89	.	<5.0	15.8	1.70	2.10	0.85	1.45	70316.	28.2	26.9	26.9	4	7	94
19	196.4	53.	5.78	.	.	16.2	1.75	2.25	1.85	1.60	70341.	30.0	28.9	28.2	4	14	94
20	197.3	45.	5.74	.	<5.0	14.8	1.50	1.80	0.05	1.45	70367.	30.1	29.1	28.6	4	20	94
21	196.8	50.	5.85	.	.	26.7	2.65	3.35	0.55	2.65	70392.	30.0	28.5	27.2	4	28	94
22	196.8	51.	5.87	.	<5.0	19.4	1.75	2.65	0.45	1.30	70418.	29.8	27.3	27.0	5	5	94
23	196.1	45.	5.73	.	.	.	.	.	.	.	.	28.8	27.2	27.2	5	12	94
24	197.0	37.	5.59	.	2.5	.	.	.	.	.	.	28.9	27.2	27.2	5	19	94
25	197.8	45.	5.84	.	.	14.8	1.50	1.80	0.05	1.45	70367.	28.8	27.2	27.2	5	26	94
26	197.7	46.	5.77	.	.	26.7	2.65	3.35	0.55	2.65	70392.	28.9	27.8	27.5	6	2	94
27	198.0	50.	5.02	.	2.5	.	.	.	.	.	.	20.4	184.0	17.7	6	9	94
28	188.2	75.	5.26	.	.	.	.	.	.	.	.	30.3	27.9	27.6	6	16	94
29	198.4	70.	5.39	.	2.5	.	.	.	.	.	.	28.5	27.1	26.1	6	23	94
30	196.5	55.	5.50	.	.	19.4	1.75	2.65	0.45	1.30	70418.	29.1	.	26.8	6	30	94

Table D3.15. Particle Size Experiment drainage quality from Solid RK5, reactor 18 (+35/-10 mesh, 1000 grams).

Week	Volume (mL)	S.C. (μ S/cm)	pH	Alk. (mg/L)	AcY. (mg/L)	SO ₄ (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Sample	Volume 1 (mL)	Volume 2 (mL)	Volume 3 (mL)	Day	Year
1	320.3	200.	6.99	8.0	.	66.4	14.00	9.35	0.52	0.22	70038.	148.7	57.0	20.1	12	93
2	176.7	132.	6.56	<2.5	.	43.2	8.30	5.55	1.35	0.75	70064.	138.7	124.5	122.3	12	93
3	278.7	310.	6.79	5.0	.	.	.	.	.	.	.	139.6	124.5	122.7	12	93
4	271.9	230.	6.62	.	.	43.6	17.05	10.60	2.50	1.50	70082.	142.2	128.4	127.6	12	93
5	278.0	182.	6.59	4.0	.	.	.	.	.	.	.	146.8	134.4	133.0	1	94
6	278.9	200.	6.42	.	.	77.2	15.45	8.49	1.85	1.30	70111.	147.7	.	127.2	1	94
7	273.9	168.	6.40	3.8	.	.	.	.	.	.	.	148.7	135.7	134.5	1	94
8	276.2	180.	6.43	.	.	67.0	13.05	7.15	1.80	1.55	70139.	148.5	135.9	135.2	1	94
9	280.0	158.	6.37	5.0	.	.	.	.	.	.	.	148.1	145.1	145.1	2	94
10	286.5	157.	6.39	.	.	64.6	12.00	6.80	1.00	1.30	70164.	152.4	143.9	143.6	2	94
11	300.2	175.	6.61	5.0	.	.	.	.	.	.	.	139.3	134.4	133.6	2	94
12	283.9	169.	6.10	.	.	57.0	11.55	6.75	1.10	1.30	70190.	145.0	133.7	132.0	2	94
13	283.5	160.	6.24	.	<5.0	.	.	.	.	.	.	144.9	137.9	136.7	3	94
14	289.3	152.	6.26	.	.	66.4	11.50	6.00	1.00	1.05	70215.	142.9	137.1	127.4	3	94
15	279.9	125.	6.25	.	5.0	53.9	9.05	5.40	0.90	1.05	70241.	141.6	134.3	124.7	3	94
16	281.6	128.	6.16	.	.	.	.	.	.	.	.	139.9	124.0	122.6	3	94
17	278.6	135.	6.30	.	<5.0	.	.	.	.	.	.	136.5	120.5	118.7	3	94
18	278.5	135.	6.25	.	.	52.8	9.60	5.35	.	.	70266.	134.5	121.5	119.9	4	94
19	279.7	168.	5.94	.	5.0	66.5	12.15	7.80	.	.	.	133.9	.	120.7	4	94
20	277.1	170.	5.92	.	.	.	.	.	.	.	70292.	162.7	121.9	120.7	4	94
21	282.4	170.	5.86	.	5.0	59.7	10.15	6.55	2.05	1.50	70318.	133.1	119.0	117.7	4	94
22	279.4	158.	5.90	.	.	.	.	.	.	.	.	134.9	127.7	118.5	5	94
23	278.7	158.	5.89	.	5.0	60.6	9.85	7.25	1.15	1.70	70343.	133.8	119.5	118.3	5	94
24	281.3	152.	5.78	.	.	.	.	.	.	.	.	135.5	126.0	125.7	5	94
25	274.9	160.	6.02	.	5.0	57.2	9.05	5.60	0.90	1.80	70369.	133.6	115.5	116.0	5	94
26	281.8	150.	5.88	.	.	.	.	.	.	.	.	132.5	118.0	117.0	6	94
27	283.4	145.	5.73	.	<5.0	59.4	9.05	7.30	0.85	1.85	70394.	129.5	117.0	115.5	6	94
28	291.4	160.	5.81	.	2.5	.	.	.	.	.	.	130.5	117.2	115.5	6	94
29	277.3	150.	5.69	.	.	65.3	9.45	7.05	1.40	2.35	70420.	127.5	116.5	114.5	6	94
30	283.6	160.	5.65	.	.	.	.	.	.	.	.	128.5	.	.	6	94

APPENDIX E
QUALITY ASSURANCE
AND
QUALITY CONTROL

Table E1.1.	EPA quality assurance summary, weeks 0 - 134.
Table E1.2.	Stem and leaf plot summary.
Table E1.3.	Particle Size Experiment quality assurance summary (weeks 0 - 30).
Table E1.4.	Particle Size Experiment: Stem and leaf plot summary (weeks 0-30).
Tables E1.5-E1.6.	Masked chemical standards.

Table E1.1. EPA quality assurance summary, weeks 0 - 134.

Statistic	Calcium		Magnesium		Sulfate	
	% RR ¹	% Recovery ²	% RR	% Recovery	% RR	% Recovery
n ³	121	121	121	120	36	59
min	0	95.3	0	95.3	0	83
max	28.57	111.8	66.67	109.0	40.80	137
mean	2.65	101.03	3.09	100.57	5.01	99.12
SD ⁴	4.23	2.42	8.06	2.21	7.12	12.02
95% CI ⁵	6.65	96.2-105.8	7.76	96.2-105.0	12.56	75.0-123.3

¹ % RR = percent relative range of duplicate samples

² % Recovery = percent recovery of laboratory spikes

³ n = number of samples in data set

⁴ SD = standard deviation

⁵ 95% CI = 95% confidence level

Table E1.2. Stem and leaf plot summary.

Statistic	Calcium	Magnesium	Sulfate
sample size	121	121	59
minimum	0.01	0.01	3.6
25th percentile	0.18	0.12	21.2
median	0.32	0.18	60.7
75th percentile	2.43	0.25	124.0
maximum	9.32	3.40	1900.0

Table E1.3. Particle Size Experiment quality assurance summary (weeks 0 - 30).

Statistics	Calcium		Magnesium		Sodium		Potassium		Sulfate	
	% RR ¹	% Recovery ²	% RR	% Recovery	% RR	% Recovery	% RR	% Recovery	% RR	% Recovery
n ³	42	41	42	41	36	35	34	33	33	35
min	0	93.30	0	93.80	0	97.00	0	87.00	0	93.00
max	100.0	104.0	21.92	104.7	33.33	104.6	66.67	103.6	9.375	116.0
mean	4.053	99.99	2.236	99.89	8.379	100.1	5.407	99.44	2.562	100.7
sd ⁴	15.571	2.036	4.276	2.062	10.03	1.596	11.71	2.659	2.628	3.997
95% CI ⁵	10.17	95.9-104.1	5.612	95.7-104.1	21.03	96.9-103.3	13.57	94.04-104.8	6.431	92.6-108.8

¹ % RR = percent relative range of duplicate samples

² % recovery = percent recovery of laboratory spikes

³ n = number of samples in data set

⁴ sd = standard deviation

⁵ 95% CI = 95% confidence level

Table E1.4. Particle Size Experiment: Stem and leaf plot summary (weeks 0-30).

Statistic	Calcium	Magnesium	Sodium	Potassium	Sulfate
sample size	42	42	36	34	35
minimum	0.010	0.010	0.010	0.010	3.200
25th percentile	0.680	0.037	0.040	0.080	14.35
median	1.100	0.715	0.080	0.265	31.20
75th percentile	2.280	1.410	0.160	0.470	60.70
maximum	38.00	17.50	0.360	1.220	850.0

Table E1.5. Masked chemical standards.

A suite of metals in a range of known concentrations were sent with the water samples collected from the EPA prediction experiments as the masked standard portion of the quality control program. The following tables list the element, the known concentration in the standard, and the analytical result obtained by the independent laboratory (X-Ray Assay Laboratory).

Element	Std 1 ¹	Lab	Std 2	Lab	Std 3	Lab	Std 4	Lab
antimony	20	30	40	20	100	30	200	180
cadmium	2	< 2	4	< 2	10	11	20	26
calcium	800	454	1600	2110	4000	4740	8000	9240
chromium	6	< 5	12	9	30	26	60	58
cobalt	6	8	12	< 5	30	13	60	43
copper	2	< 2	4	< 2	10	< 2	20	10
iron	10	15	20	< 10	50	23	100	140
lead	30	38	60	< 30	150	49	300	300
magnesium	400	120	800	820	2000	2460	4000	4550
manganese	6	< 5	12	< 5	30	< 5	60	32
molybdenum	6	21	12	8	30	15	60	17
nickel	6	16	12	< 5	30	22	60	35
silver	10	< 5	20	< 5	100	< 5	200	< 5
sodium	20	40	40	60	100	240	200	740
titanium	6	< 5	12	< 5	30	31	60	59
vanadium	10	< 10	20	11	50	49	100	107
zinc	6	6	12	< 5	30	28	60	76

¹ concentrations in parts per billion

Table E1.6. Masked chemical standards (continued).

Element	Std 5 ¹	Lab	Std 6	Lab	Std 7	Lab
antimony	400	417	1000	958	2000	2130
cadmium	40	44	100	127	200	271
calcium	16000	15800	40000	38300	80000	77800
chromium	120	115	300	294	600	598
cobalt	120	123	300	291	600	578
copper	40	34	100	95	200	184
iron	200	190	500	510	1000	1050
lead	600	585	1500	1570	3000	3140
magnesium	8000	8200	20000	20100	40000	40500
manganese	120	74	300	266	600	569
molybdenum	120	81	300	235	600	501
nickel	120	123	300	307	600	569
silver	200	< 5	500	< 5	1000	< 5
sodium	400	540	1000	1040	2000	2040
titanium	120	109	300	309	600	585
vanadium	200	216	500	499	1000	1020
zinc	120	130	300	309	600	586

¹ concentrations in parts per billion

APPENDIX F

CONTRACT AND MODIFICATIONS

Original Contract

Letters related to contract modifications



Original Contract

FOR YOUR FILE

I-2396

Page 1

U.S. ENVIRONMENTAL PROTECTION AGENCY				1. ASSISTANCE ID NO. X 820322-01-0		2. LOG NUMBER	
EPA ASSISTANCE AGREEMENT / AMENDMENT				3. DATE OF AWARD SEP 21 1992		4. MAILING DATE	
PART I - ASSISTANCE NOTIFICATION INFORMATION							
5. AGREEMENT TYPE				6. PAYMENT METHOD			
Cooperative Agreement				☒ Advance ☐ Reimbursement ☐ Letter of Credit			
Grant Agreement ☒				Send Payment Request to: LAS VEGAS, FINANCIAL MANAGEMENT CENTER		7. TYPE OF ACTION NEW	
Assistance Amendment							
R E C I P I E N T O R G E P A C O N T A C T	8. RECIPIENT MINNESOTA DEPT OF NAT RESOURCES 500 LAFAYETTE ROAD, BOX 45 ST. PAUL, MN 55155			9. PAYEE ASST COMMISSIONER, ADMIN MINNESOTA DEPT OF NAT RESOURCES 500 LAFAYETTE ROAD, BOX 45 ST. PAUL, MN 55155			
	EIN NO. 416007162		CONGRESSIONAL DISTRICT ALL		10. RECIPIENT TYPE STATE/Commonwealth/Terr. Govt.		
	11. PROJECT MANAGER AND TELEPHONE NO. (218) 262-6767 KIM LAPAKKO MINNESOTA DEPT OF NAT RESOURCES ST. PAUL, MN 55155			12. ADMINISTERING OFFICE / LAB OSWER/HQ			
	13. ISSUING OFFICE (CITY / STATE) WASHINGTON, DC 20460 Grant Specialist for this project: CHERIE BARRY (202) 260-6292			14. EPA PROJECT / STATE OFFICER AND TELEPHONE NO. PAT WHITING (OS323W) OFFICE OF SOLID WASTE US ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460 (703) 308-8421			
15. EPA CONGRESSIONAL LIAISON & PHONE BARBARA BROOKS, (202) 260-5660			16. STATE APPL ID (Clearinghouse) N/A		17. SCIENCE FIELD 99		18. PROJECT STEP (WWT Construction Grants Only) N/A
19. STATUTORY AUTHORITY SOLID WASTE DISPOSAL ACT: SEC. 8001			20. REGULATORY AUTHORITY 40 CFR PART 31		21. STEP 2 + 3 & STEP 3 (WWT Construction Grants Only)		
					a. Treatment Level		
					b. Project Type N/A		
					c. Treatment Process		
					d. Studies Desired		
22. PROJECT TITLE AND DESCRIPTION LONG TERM DISSOLUTION TESTING OF MINE WASTE This project will provide a description of the longer term dissolution behavior of mine wastes to provide data which will aid interpretation of shorter term predictive tests and examine the extent to which acid producing and acid consuming components of mine wastes will dissolve.							
23. PROJECT LOCATION (Areas Impacted by Project)							
City / Place ST. PAUL			County N/A		State MN		Congressional District ALL
24. ASSISTANCE PROGRAM (CFDA Program No. & Title) SURVEYS, STUDIES, INVESTIGATIONS			25. PROJECT PERIOD 10/01/92 - 03/31/94		26. BUDGET PERIOD 10/01/92 - 03/31/94		
27. COMMUNITY POPULATION (WWT Construction Grants Only) N/A			28. TOTAL BUDGET PERIOD COST \$50,000		29. TOTAL PROJECT PERIOD COST \$50,000		
FUNDS		FORMER AWARD		THIS ACTION		AMENDED TOTAL	
30. EPA Amount This Action		\$0		\$50,000		\$50,000	
31. EPA In-Kind Amount		0		0		0	
32. Unexpended Prior Year Balance		0		0		0	
33. Other Federal Funds		0		0		0	
34. Recipient Contribution		0		0		0	
35. State Contribution		0		0		0	
36. Local Contribution		0		0		0	
37. Other Contribution		0		0		0	
38. Allowable Project Cost		\$0		\$50,000		\$50,000	
F I S C A L	Program Element 01) B80D2D	FY 92	Appropriation 682/30108	Doc. Control No. MW0005	Account Number 2B8031W002	Object Class 4183	Obligation / Disobligation \$50,000

PART II - APPROVED BUDGET

ASSISTANCE IDENTIFICATION: X 820322-01-0

Page

TABLE A - OBJECT CLASS CATEGORY (Non-construction)		TOTAL APPROVED ALLOWANCE BUDGET PERIOD COST
1. PERSONNEL		\$18,050
2. FRINGE BENEFITS		2,023
3. TRAVEL		3,916
4. EQUIPMENT		3,000
5. SUPPLIES		3,900
6. CONTRACTUAL		7,500
7. CONSTRUCTION		0
8. OTHER		892
9. TOTAL DIRECT CHARGES		\$39,281
10. INDIRECT COSTS: RATE 53.40% BASE SW & FB		10,719
11. TOTAL (Share: Recipient 0.00 % Federal 100.00 %)		\$50,000
12. TOTAL APPROVED ASSISTANCE AMOUNT		\$50,000

TABLE B - PROGRAM ELEMENT CLASSIFICATION (Non-construction)		
1.		0
2.		0
3.		0
4.		0
5.		0
6.		0
7.		0
8.		0
9.		0
10.		0
11.		0
12. TOTAL (Share: Recipient 0.00 % Federal 0.00 %)		0
13. TOTAL APPROVED ASSISTANCE AMOUNT		0

TABLE C - PROGRAM ELEMENT CLASSIFICATION (Construction)		
1. ADMINISTRATION EXPENSE		
2. PRELIMINARY EXPENSE		
3. LAND STRUCTURES, RIGHT-OF-WAY		
4. ARCHITECTURAL ENGINEERING BASIC FEES		
5. OTHER ARCHITECTURAL ENGINEERING FEES		
6. PROJECT INSPECTION FEES		
7. LAND DEVELOPMENT		
8. RELOCATION EXPENSE		
9. RELOCATION PAYMENTS TO INDIVIDUALS AND BUSINESS		
10. DEMOLITION AND REMOVAL		
11. CONSTRUCTION AND PROJECT IMPROVEMENT		
12. EQUIPMENT		
13. MISCELLANEOUS		
14. TOTAL (Lines 1 thru 13)		
15. ESTIMATED INCOME (if applicable)		
16. NET PROJECT AMOUNT (Line 14 minus 15)		
17. LESS: INELIGIBLE EXCLUSIONS		
18. ADD: CONTINGENCIES		
19. TOTAL (Share: Recipient _____ % Federal _____ %)		
20. TOTAL APPROVED ASSISTANCE AMOUNT		

SPECIAL CONDITIONS

1. In accordance with Section 2(d) of the Prompt Payment Act (P.L. 97-177), Federal funds may not be used by the recipient for the payment of interest penalties to contractors when bills are paid late nor may interest penalties be used to satisfy cost sharing requirements. Obligations to pay such interest penalties will not be obligations of the United States.
 2. As required by EPA regulations, the recipient agrees to submit a Financial Status Report (FSR) (Standard Form 269) within 90 days after the end of this budget period. When the recipient submits its final FSR, it will in one of the following ways make an adjustment for the amount of Federal funds, if any, received in excess of the EPA share of the reported total budget period costs:
 - (a) If the recipient is paid through EPA-ACH, it shall, in accordance with the enclosed payment instructions dated March 1991, refund excess assistance funds by either submitting a credit on a current EPA-ACH Payment Request or by sending a check to the lockbox address: U.S. Environmental Protection Agency, Financial Management Center, P.O. Box 371293M, Pittsburgh, Pennsylvania 15251.
 - (b) If the recipient is paid by treasury check, it shall, in accordance with the enclosed payment instructions dated March 1991, refund excess assistance funds by submitting a check to the lockbox address in (a) above.
- If funds are due to the recipient at the time of submission of the final FSR, the recipient shall follow the procedures as outlined on the enclosed payment instructions to request the appropriate amount of funds from EPA.
3. The recipient is authorized to charge allowable costs on this award effective October 1, 1992, provided this agreement is accepted without change within three calendar weeks of its receipt.
 4. EPA participation in the salary rate (excluding overhead) paid to individual consultants is limited to the maximum daily rate for a GS-18, which is currently \$401.72.
 5. Rights to inventions made under this assistance agreement are subject to the provisions of Title 37 Code of Federal Regulations (CFR), Part 401 (1988). (For Part 30 recipients, this regulation supersedes OMB Circular A-124 cited in the EPA patent regulation at 40 CFR Part 30, Subpart K.)
 6. The recipient understands that none of the funds for this project (including funds contributed by the recipient as cost sharing) may be used to pay for the travel of Federal employees or for other costs associated with Federal participation in this project.

7. Pursuant to EPA Order 1000.25, dated January 24, 1990, the recipient agrees to use recycled paper for all reports which are prepared as a part of this agreement and delivered to the Agency. This requirement does not apply to Standard Forms. These forms are printed on recycled paper as available through the General Services Administration.
8. If a contract is awarded under this assistance agreement, the recipient agrees and is required to utilize the following affirmative steps to the maximum extent practicable:
 - a) Placing Small Businesses in Rural Areas (SBRAs) on solicitation lists;
 - b) Making sure that SBRAs are solicited whenever they are potential sources;
 - c) Dividing total requirements, when economically feasible, into small tasks or quantities to permit maximum participation by SBRAs;
 - d) Establishing delivery schedules, where the requirements of work will permit, which would encourage participation by SBRAs;
 - e) Using the service of the Small Business Administration and the Minority Business Development Agency of the U.S. Department of Commerce, as appropriate; and
 - f) Requiring the contractor to take the affirmative steps in subparagraphs a. through e. of this part if subcontracts are awarded.
9. In accordance with EPA's policy on the utilization of socially and economically disadvantaged individuals and disadvantaged business enterprises (DBE) in procurement under assistance programs, the recipient agrees to:
 - a) Ensure to the fullest extent possible that at least 8% of Federal funds for prime contracts or subcontracts for supplies, construction, equipment or services are made available to organizations owned or controlled by socially and economically disadvantaged individuals.
 - b) Include in its bid documents a requirement that prime contractors and subcontractors meet the same 8% requirement as noted in the above paragraph.
 - c) Follow the six affirmative steps stated in 40 CFR 33.240 or 40 CFR 31.36(e), as appropriate.
 - d) Submit a SF-334 "MBE/WBE Utilization Under Federal Grants, Cooperative Agreements, and other Federal Financial Assistance", to the EPA award official by October 30 of each year to report on the progress made toward meeting the fair share objective.
10. The recipient agrees to submit to the EPA Project Officer within 90 days after the expiration or termination of the approved project period a final report and at least

SPECIAL CONDITIONS (continued)

one reproducible copy suitable for printing. The final report shall document project activities over the entire project period and shall describe the recipient's achievements with respect to stated project purposes and objectives.

PART IV

NOTE: The Agreement must be completed in duplicate and the Original returned to the Grants Administration Division for Headquarters awards and to the appropriate Grants Administration Office for State and local awards within 3 calendar weeks after receipt or within any extension of time as may be granted by EPA.

Receipt of a written refusal or failure to return the properly executed document within the prescribed time, may result in the withdrawal of the offer by the Agency. Any change to the Agreement by the recipient subsequent to the document being signed by the EPA Award Official, which the Award Official determines to materially alter the Agreement, shall void the Agreement.

OFFER AND ACCEPTANCE

The United States of America, acting by and through the U.S. Environmental Protection Agency (EPA), hereby offers assistance/amendment to the MINNESOTA DEPT OF NAT RESOURCES for 100.00% of all approved RECIPIENT ORGANIZATION costs incurred up to and not exceeding \$ 50,000 for the support of approved budget period effort described ASSISTANCE AMOUNT in application (including all application modifications) cited in Item 22 of this Agreement

Signed: 04/23/92

, included herein by reference.

DATE AND TITLE

ISSUING OFFICE (Grants Administration Office)

ORGANIZATION / ADDRESS

GRANTS ADMINISTRATION DIVISION
US ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

AWARD APPROVAL OFFICE

ORGANIZATION / ADDRESS

OFFICE OF SOLID WASTE
US ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

THE UNITED STATES OF AMERICA BY THE U.S ENVIRONMENTAL PROTECTION AGENCY

SIGNATURE OF AWARD OFFICIAL

Mildred Lee

TYPED NAME AND TITLE MILDRED LEE

CHIEF, GRANTS OPERATIONS BRANCH (PM-216F)

DATE

9/21/92

This agreement is subject to applicable U.S. Environmental Protection Agency statutory provisions and assistance regulations. In accepting this award or amendment and any payments made pursuant thereto, (1) the undersigned represents that he is duly authorized to act on behalf of the recipient organization, and (2) the recipient agrees (a) that the award is subject to the applicable provisions of 40 CFR Chapter I, Subchapter B and of the provisions of this agreement (Parts I thru IV), and (b) that acceptance of any payments constitutes an agreement by the payee that the amounts, if any found by EPA to have been overpaid will be refunded or credited in full to EPA.

BY AND ON BEHALF OF THE DESIGNATED RECIPIENT ORGANIZATION

SIGNATURE

TYPED NAME AND TITLE

DATE

Letters related to contract modifications



STATE OF
MINNESOTA
DEPARTMENT OF NATURAL RESOURCES

500 LAFAYETTE ROAD • ST. PAUL, MINNESOTA • 55155-40 45

DNR INFORMATION
(612) 296-6157

March 4, 1994

Ms. Patricia B. Whiting
Special Waste Branch
U.S. Environmental Protection Agency
Office of Solid Waste
401 M Street, S.W. (OS-320W)
Washington, D.C. 20460

Re: Contract modification for Grant X-820322-01-0, Long Term Dissolution Testing of Mine Waste.

Ms. Whiting:

I am requesting a contract modification, at no additional cost, for Grant X-820322-01-0. The project was proposed to extend for eighteen months, with an end date of March 31, 1994 specified in the contract. However, as mentioned in the May 1993 progress report, funding was not finalized until February 9, 1993. I request that the end date be changed to September 6, 1994. Although no additional cost will be incurred, the distribution of expenditures within the initial budget will be modified.

As is indicated in the January 1994 progress report, we have conducted the Wet-Dry Cycle Test and the Elevated Temperature Test for 112 weeks (a total of 132 weeks when including the 20 weeks for the WGA project), considerably longer than the 50 weeks experimental duration stated in the proposal. Water quality analyses described in the proposal have been completed for the extended duration. Data management and analysis described in the proposal is presently in progress.

Although data analysis is not presently complete, it is apparent that the lack of agreement between the laboratory and field results for waste rock is partly due to differences in the particle size used in the laboratory and field. The importance of particle size on the quality of drainage from waste rock was an issue raised at the EPA workshop in July 1992 (Predicting Acid Generation from Non-Coal Mining Wastes) and at the International Waste Rock Modelling Workshop in Toronto (September 29 to October 1, 1992).

Due to the influence of particle size in the present experiment and to prediction of waste rock drainage quality in general, an experiment was initiated to examine the effect of particle size on the quality of drainage from two of the waste rock samples examined (RK3, RK4). A rock similar to RK2 is also being examined in this experiment.

I believe the extension is justifiable for the following reasons.

1. The funding for the project was finalized much later than anticipated when the original end date of March 31, 1994 was proposed.
2. The amount of data presented on the long-term dissolution tests will be in excess of twice that proposed.
3. The extension will allow a longer period of record (30 vs 10 weeks) for the particle size experiment.

In order to affect these changes it will be necessary to reduce funding allotted to equipment (\$3000 allotted initially), supplies (\$3900), contracts (\$7500), travel (\$3916) and increase funding allotted to personnel (\$30,792) and supplies (\$3900). (Note: \$892 was initially budgeted for utilities, communications, and printing.) There will be no increase in the total cost.

If this is acceptable, please send the paperwork necessary to complete the modification to:

Phil Pippo
MN Department of Natural Resources
Division of Minerals
Box 45 500 Lafayette Road
St. Paul, MN 55155-4045

Any questions regarding this modification should also be directed to Phil.

Thank you.

Sincerely,

Kim Lapakko
Principal Engineer



STATE OF
MINNESOTA
DEPARTMENT OF NATURAL RESOURCES

500 LAFAYETTE ROAD • ST. PAUL, MINNESOTA • 55155-40 45

DNR INFORMATION
(612) 296-6157

May 3, 1994

Ms. Patricia B. Whiting
Special Waste Branch
U.S. Environmental Protection Agency
Office of Solid Waste
401 M Street, S.W. (OS-320W)
Washington, D.C. 20460

Re: Contract modification for Grant X-820322-01-0, Long Term Dissolution Testing of Mine Waste.

Ms. Whiting:

In a letter dated March 4, 1994 I requested a contract modification, at no additional cost, for Grant X-820322-01-0. This modification, a change of the end date from March 31, 1994 to September 6, 1994, was agreed to by telephone, however, we have received no written confirmation. We were recently informed by Anedia Feaster of the Las Vegas office that we could not bill for expenses incurred after March 31, 1994. Will you please contact Phil Pippo with the requirements for completing the modification.

Mr. Phil Pippo
MN Department of Natural Resources
Division of Minerals
500 Lafayette Road, Box 45
St. Paul, MN 55155-4045

Thank you.

Sincerely,

Kim Lapakko
Division of Minerals

cc: Phil Pippo
Jennifer Wessels

J:\kim\mdfy9405 epa



STATE OF
MINNESOTA

DEPARTMENT OF NATURAL RESOURCES

PHONE NO

1525 3rd Avenue East, Hibbing, Minnesota 55746-1461
218/262-6767 FAX: 218/263-5420

FILE NO

September 19, 1994

Mr. Steve Hoffman
Special Waste Branch
U.S. Environmental Protection Agency
Office of Solid Waste
401 M Street S.W. (OS-320W)
Washington, D.C. 20460

Dear Mr. Hoffman:

Re: Final Report on Long Term Dissolution Testing of Mine
Waste (Grant X-820322-01-0)

Due to unforeseen circumstances, the final report will be delayed. We only recently received the results of the analysis of leached solids and are presently incorporating these results into the report. I am requesting an extension, at no additional cost, until November 14, 1994. I will be out of the office this week; if you have any questions, please contact Jennifer Wessels at 612/296-1051 (FAX 612/296-5939).

Thank you.

Sincerely,

DIVISION OF MINERALS

Kim Lapakko/ck

Kim Lapakko
Principal Engineer

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