ATTACHMENTS

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Notes Utilized Throughout Tables	
DEQ-7 Human Health Standards	Montana Department of Environmental Quality- DEQ Circular 7 Human Health Standards
EPA	United States Environmental Protection Agency
EPA Drinking MCL	United States Environmental Protection Agency Risk Based Screening Level Drinking Water MCL
EPA Tapwater RSL	United StatesEnvironmental Protection Agency Risk Based Screening Level Tapwater RSL
DUP	Duplicate sample
NA	Compound was not analyzed by laboratory
µg/l	Micrograms per Liter
J-	Estimated Low Bias
J	Estimated value
J+	Estimated High Bias
R	Result is Rejected
U	Indicates that analyte was not detected at the limit reported

Preliminary – Under EPA and MDEQ Review

Table 1. Volatile Organic Compounds in Round 1 and Round 2 Surface Water
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFSWP-018	CFSWP-019	CFSWP-020
				Sample Date	6/6/2016	6/6/2016	6/6/2016
				Sample Designation	CFSWP-018-SW	CFSWP-019-SW	CFSWP-020-SW
				Round	Round 1	Round 1	Round 1
				Sample Type	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit			
1,1,1-Trichloroethane	200	200	800	ug/l	0.28 U	0.28 U	0.28 U
1,1,2,2-Tetrachloroethane	1.7	--	--	ug/l	0.19 U	0.19 U	0.19 U
1,1,2-Trichloro-1,2,2-trifluoroethane	--	--	5500	ug/l	0.34 U	0.34 U	0.34 U
1,1,2-Trichloroethane	3	--	--	ug/l	0.08 U	0.08 U	0.08 U
1,1-Dichloroethane	--	--	2.8	ug/l	0.24 U	0.24 U	0.24 U
1,1-Dichloroethene	7	--	--	ug/l	0.34 U	0.34 U	0.34 U
1,2,3-Trichlorobenzene	--	--	0.7	ug/l	0.35 U	0.35 U	0.35 U
1,2,4-Trichlorobenzene	35	--	0.4	ug/l	0.27 U	0.27 U	0.27 U
1,2-Dibromo-3-Chloropropane	0.2	0.2	0.00034	ug/l	0.23 U	0.23 U	0.23 U
1,2-Dichlorobenzene	420	600	30	ug/l	0.22 U	0.22 U	0.22 U
1,2-Dichloroethane	3.8	5	0.17	ug/l	0.25 U	0.25 U	0.25 U
1,2-Dichloropropane	5	5	0.44	ug/l	0.18 U	0.18 U	0.18 U
1,3-Dichlorobenzene	320	--	--	ug/l	0.33 U	0.33 U	0.33 U
1,4-Dichlorobenzene	75	75	0.48	ug/l	0.33 U	0.33 U	0.33 U
2-Butanone (MEK)	--	--	560	ug/l	2.2 U	2.2 U	2.2 U
2-Hexanone	--	--	3.8	ug/l	0.72 U	0.72 U	0.72 U
4-Methyl-2-pentanone (MIBK)	--	--	630	ug/l	0.63 U	0.63 U	0.63 U
Acetone	--	--	1400	ug/l	1.1 U	1.1 U	1.1 U
Benzene	5	5	0.46	ug/l	0.09 U	0.09 U	0.09 U
Bromoform	43	80	3.3	ug/l	0.18 U	0.18 U	0.18 U
Bromomethane	47	--	0.75	ug/l	0.18 UJ	0.18 UJ	0.18 UJ
Carbon disulfide	--	--	81	ug/l	0.22 U	0.22 U	0.22 U
Carbon tetrachloride	2.3	5	0.46	ug/l	0.33 U	0.33 U	0.33 U
Chlorobenzene	100	100	7.8	ug/l	0.24 U	0.24 U	0.24 U
Chlorobromomethane	--	--	8.3	ug/l	0.3 U	0.3 U	0.3 U
Chlorodibromomethane	4	80	0.87	ug/l	0.22 U	0.22 U	0.22 U
Chloroethane	--	--	2100	ug/l	0.37 U	0.37 U	0.37 U
Chloroform	57	80	0.22	ug/l	0.22 U	0.22 U	0.22 U
Chloromethane	30	--	19	ug/l	0.22 U	0.22 U	0.22 U
cis-1,2-Dichloroethene	70	--	--	ug/l	0.26 U	0.26 U	0.26 U
cis-1,3-Dichloropropene	3.4	--	--	ug/l	0.16 U	0.16 U	0.16 U
Cyclohexane	--	--	1300	ug/l	0.26 U	0.26 U	0.26 U
Dichlorobromomethane	5.5	80	0.13	ug/l	0.15 U	0.15 U	0.15 U
Dichlorodifluoromethane	--	--	20	ug/l	0.14 U	0.14 U	0.14 U
Ethylbenzene	530	700	1.5	ug/l	0.3 U	0.3 U	0.3 U
Ethylene Dibromide	--	--	--	ug/l	0.19 U	0.19 U	0.19 U
Isopropylbenzene	--	--	--	ug/l	0.32 U	0.32 U	0.32 U
Methyl acetate	--	--	2000	ug/l	0.58 U	0.58 U	0.58 U
Methyl tert-butyl ether	30	--	14	ug/l	0.13 U	0.13 U	0.13 U
Methylcyclohexane	--	--	--	ug/l	0.22 U	0.22 U	0.22 U

Preliminary Under EPA and MDEQ Review

Table 1. Volatile Organic Compounds in Round 1 and Round 2 Surface Water
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFSWP-018	CFSWP-019	CFSWP-020
				Sample Date	6/6/2016	6/6/2016	6/6/2016
				Sample Designation	CFSWP-018-SW	CFSWP-019-SW	CFSWP-020-SW
				Round	Round 1	Round 1	Round 1
				Sample Type	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit			
1,1,1-Trichloroethane	200	200	800	ug/l	0.28 U	0.28 U	0.28 U
Methylene Chloride	5	5	11	ug/l	0.47 J	0.21 U	0.9 J
m-Xylene & p-Xylene	--	--	--	ug/l	0.28 U	0.28 U	0.28 U
o-Xylene	10000	--	19	ug/l	0.32 U	0.32 U	0.32 U
Styrene	100	100	120	ug/l	0.17 U	0.17 U	0.17 U
Tetrachloroethene	5	--	--	ug/l	0.12 U	0.12 U	0.12 U
Toluene	1000	1000	110	ug/l	0.25 U	0.25 U	0.25 U
trans-1,2-Dichloroethene	100	--	--	ug/l	0.18 U	0.18 U	0.18 U
trans-1,3-Dichloropropene	2	--	--	ug/l	0.19 U	0.19 U	0.19 U
Trichloroethene	5	--	--	ug/l	0.22 U	0.22 U	0.22 U
Trichlorofluoromethane	10000	--	520	ug/l	0.15 U	0.15 U	0.15 U
Vinyl chloride	0.25	2	0.019	ug/l	0.06 U	0.06 U	0.06 U

Preliminary – Under EPA and MDEQ Review

Table 2. Semivolatile Organic Compounds in Round 1 and Round 2 Surface Water
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFSWP-018	CFSWP-019	CFSWP-020
				Sample Date	6/6/2016	6/6/2016	6/6/2016
				Sample Designation	CFSWP-018-SW	CFSWP-019-SW	CFSWP-020-SW
				Round	Round 1	Round 1	Round 1
				Sample Type	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit			
1,1'-Biphenyl	--	--	0.083	ug/l	0.66 U	0.63 U	0.68 U
1,2,4,5-Tetrachlorobenzene	0.97	--	0.17	ug/l	0.45 U	0.43 U	0.47 U
1,4-Dioxane	--	--	0.46	ug/l	3.2 U	3.1 U	3.4 U
2,2'-oxybis[1-chloropropane]	1400	--	--	ug/l	0.97 U	0.93 U	1 U
2,3,4,6-Tetrachlorophenol	--	--	24	ug/l	0.72 U	0.69 U	0.75 U
2,4,5-Trichlorophenol	1800	--	120	ug/l	0.51 U	0.49 U	0.53 U
2,4,6-Trichlorophenol	14	--	1.2	ug/l	0.55 U	0.53 U	0.58 U
2,4-Dichlorophenol	77	--	4.6	ug/l	0.66 U	0.63 U	0.68 U
2,4-Dimethylphenol	380	--	36	ug/l	0.95 U	0.91 U	0.99 U
2,4-Dinitrophenol	69	--	3.9	ug/l	2.5 U	2.4 U	2.6 U
2,4-Dinitrotoluene	1.1	--	0.24	ug/l	1.1 U	1 U	1.1 U
2,6-Dinitrotoluene	0.5	--	0.049	ug/l	0.92 U	0.88 U	0.96 U
2-Chloronaphthalene	1000	--	--	ug/l	0.64 U	0.61 U	0.66 U
2-Chlorophenol	81	--	9.1	ug/l	0.77 U	0.74 U	0.8 U
2-Methylnaphthalene	--	--	3.6	ug/l	0.92 U	0.88 U	0.96 U
2-Methylphenol	--	--	--	ug/l	1.3 U	1.3 U	1.4 U
2-Nitroaniline	--	--	19	ug/l	0.68 U	0.65 U	0.71 U
2-Nitrophenol	--	--	--	ug/l	0.61 U	0.59 U	0.64 U
3 & 4 Methylphenol	--	--	--	ug/l	0.92 U	0.88 U	0.96 U
3,3'-Dichlorobenzidine	0.21	--	0.13	ug/l	1.1 U	1 U	1.1 U
3-Nitroaniline	--	--	--	ug/l	0.85 U	0.82 U	0.89 U
4,6-Dinitro-2-methylphenol	13	--	--	ug/l	2.1 U	2 U	2.2 U
4-Bromophenyl phenyl ether	--	--	--	ug/l	1.1 U	1 U	1.1 U
4-Chloro-3-methylphenol	3000	--	--	ug/l	0.79 U	0.76 U	0.83 U
4-Chloroaniline	--	--	0.37	ug/l	0.76 U	0.73 U	0.79 U
4-Chlorophenyl phenyl ether	--	--	--	ug/l	1 U	0.96 U	1 U
4-Nitroaniline	--	--	3.8	ug/l	0.5 U	0.48 U	0.52 U
4-Nitrophenol	60	--	--	ug/l	4.8 U	4.7 U	5.1 U
Acenaphthene	670	--	53	ug/l	0.92 U	0.88 U	0.96 U
Acenaphthylene	--	--	--	ug/l	0.68 U	0.65 U	0.71 U
Acetophenone	--	--	190	ug/l	1.1 U	1 U	1.1 U
Anthracene	8300	--	180	ug/l	0.59 U	0.57 U	0.62 U
Atrazine	3	3	0.3	ug/l	0.8 U	0.77 U	0.84 U
Benzaldehyde	--	--	19	ug/l	0.9 U	0.86 U	0.93 U
Benzo[a]anthracene	0.038	--	--	ug/l	0.57 U	0.55 U	0.6 U
Benzo[a]pyrene	0.038	0.2	0.0034	ug/l	0.17 U	0.16 U	0.17 U
Benzo[b]fluoranthene	0.038	--	0.034	ug/l	0.46 U	0.44 U	0.48 U
Benzo[g,h,i]perylene	--	--	--	ug/l	0.78 U	0.75 U	0.82 U
Benzo[k]fluoranthene	0.038	--	0.34	ug/l	0.19 U	0.18 U	0.2 U
Bis(2-chloroethoxy)methane	--	--	5.9	ug/l	0.72 U	0.69 U	0.75 U

Preliminary Under EPA and MDEQ Review

Table 2. Semivolatile Organic Compounds in Round 1 and Round 2 Surface Water
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFSWP-018	CFSWP-019	CFSWP-020
				Sample Date	6/6/2016	6/6/2016	6/6/2016
				Sample Designation	CFSWP-018-SW	CFSWP-019-SW	CFSWP-020-SW
				Round	Round 1	Round 1	Round 1
				Sample Type	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit			
1,1'-Biphenyl	--	--	0.083	ug/l	0.66 U	0.63 U	0.68 U
Bis(2-chloroethyl)ether	0.3	--	0.014	ug/l	0.13 U	0.12 U	0.13 U
Bis(2-ethylhexyl) phthalate	6	6	5.6	ug/l	0.75 U	0.72 U	0.78 U
Butyl benzyl phthalate	1500	--	16	ug/l	0.63 U	0.6 U	0.65 U
Caprolactam	--	--	990	ug/l	1.1 U	1.1 U	1.1 U
Carbazole	--	--	--	ug/l	0.89 U	0.85 U	0.92 U
Chrysene	0.038	--	3.4	ug/l	0.7 U	0.67 U	0.73 U
Dibenz(a,h)anthracene	0.038	--	0.0034	ug/l	0.094 U	0.09 U	0.098 U
Dibenzofuran	--	--	0.79	ug/l	0.89 U	0.85 U	0.92 U
Diethyl phthalate	17000	--	--	ug/l	1 U	1 U	1.1 U
Dimethyl phthalate	270000	--	--	ug/l	1 U	0.98 U	1.1 U
Di-n-butyl phthalate	2000	--	--	ug/l	0.85 U	0.82 U	0.89 U
Di-n-octyl phthalate	--	--	20	ug/l	0.72 U	0.69 U	0.75 U
Fluoranthene	130	--	80	ug/l	0.75 U	0.72 U	0.78 U
Fluorene	1100	--	29	ug/l	0.83 U	0.8 U	0.87 U
Hexachlorobenzene	0.0028	1	0.0098	ug/l	0.49 U	0.47 U	0.51 U
Hexachlorobutadiene	4.4	--	0.14	ug/l	0.79 U	0.76 U	0.83 U
Hexachlorocyclopentadiene	40	50	0.041	ug/l	0.64 U	0.61 U	0.66 U
Hexachloroethane	14	--	0.33	ug/l	0.094 U	0.09 U	0.098 U
Indeno[1,2,3-cd]pyrene	0.038	--	0.034	ug/l	0.22 U	0.21 U	0.23 U
Isophorone	350	--	78	ug/l	0.7 U	0.67 U	0.73 U
Naphthalene	100	--	0.17	ug/l	0.83 U	0.8 U	0.87 U
Nitrobenzene	17	--	0.14	ug/l	0.51 U	0.49 U	0.53 U
N-Nitrosodi-n-propylamine	0.05	--	0.011	ug/l	0.86 U	0.83 U	0.9 U
N-Nitrosodiphenylamine	33	--	12	ug/l	0.77 U	0.74 U	0.8 U
Pentachlorophenol	1	1	0.041	ug/l	2.3 U	2.2 U	2.4 U
Phenanthrene	--	--	--	ug/l	0.68 U	0.65 U	0.71 U
Phenol	300	--	580	ug/l	0.43 U	0.41 U	0.45 U
Pyrene	830	--	12	ug/l	0.86 U	0.83 U	0.9 U

Preliminary Under EPA and MDEQ Review

Table 3. Metals in Round 1 and Round 2 Surface Water
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFSWP-001	CFSWP-001	CFSWP-002	CFSWP-002	CFSWP-003	CFSWP-003	CFSWP-004	CFSWP-004	CFSWP-005	CFSWP-005
				Sample Date	9/16/2016	12/2/2016	9/16/2016	12/2/2016	12/1/2016	9/9/2016	9/9/2016	12/1/2016	9/9/2016	12/1/2016
				Sample Designation	CFSWP-001-SW	CFSWP-001-SW	CFSWP-002-SW	CFSWP-002-SW	CFSWP-003-SW	CFSWP-003-SW	CFSWP-004-SW	CFSWP-004-SW	CFSWP-005-SW	CFSWP-005-SW
				Round	Round 1	Round 2	Round 1	Round 2	Round 2	Round 1	Round 1	Round 2	Round 1	Round 2
				Sample Type	N	N	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit										
Aluminum	--	--	2000	ug/l	23.7 J	25.6 J	28.8 J	23.7 J	172	63.5	522	53.3	143	94.3
Antimony	5.6	6	0.78	ug/l	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
Arsenic	10	10	0.052	ug/l	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.78 J	0.64 U	0.64 U	0.64 U
Barium	1000	2000	380	ug/l	107	102	102	101	118	117	197	173	192	179
Beryllium	4	4	2.5	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Cadmium	5	--	--	ug/l	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U
Calcium	--	--	--	ug/l	24200	25300	23200	24300	30000	27700	60700	52400	60200	62600
Chromium	100	100	--	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Cobalt	--	--	0.6	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 J	1.3 U	1.3 U	1.3 J
Copper	1300	1300	80	ug/l	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.5 J	1.8 J	1.6 J	1.4 U
Cyanide, Total	**140**	200	0.15	ug/l	2 U	2 U	2 U	2 U	36.2	18.8	209	**178**	213	**192**
Iron	--	--	1400	ug/l	42.4 U	42.4 U	42.4 U	42.4 U	294	135	827	238	256	266
Lead	15	15	15	ug/l	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.48 J	2.9	0.38 U	0.38 U
Magnesium	--	--	--	ug/l	6320	7060	6030	6750	8430	7650	18200	15100	17800	17900
Manganese	--	--	--	ug/l	2.5 U	2.5 U	2.5 U	2.5 U	30.4	10.9	57.1	57.9	15.7	212
Mercury	0.05	2	0.063	ug/l	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Nickel	100	--	--	ug/l	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Potassium	--	--	--	ug/l	330	341	306	319	476	398	1120	833	1020	1060
Selenium	50	50	10	ug/l	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U
Silver	100	--	9.4	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Sodium	--	--	--	ug/l	1070	1200	1030	1060	5990	3780	36400	26100	36900	35600
Thallium	0.24	2	0.02	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Vanadium	--	--	8.6	ug/l	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Zinc	2000	--	600	ug/l	7 U	7 U	7 U	7 U	7 U	7 U	7 U	7 U	19.9	7 U

Preliminary Under EPA and MDEQ Review

Table 3. Metals in Round 1 and Round 2 Surface Water
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFSWP-006	CFSWP-006	CFSWP-007	CFSWP-007	CFSWP-008	CFSWP-008	CFSWP-009	CFSWP-010	CFSWP-011	CFSWP-012
				Sample Date	9/9/2016	12/1/2016	9/16/2016	12/2/2016	9/16/2016	12/2/2016	6/7/2016	6/7/2016	6/7/2016	6/7/2016
				Sample Designation	CFSWP-006-SW	CFSWP-006-SW	CFSWP-007-SW	CFSWP-007-SW	CFSWP-008-SW	CFSWP-008-SW	CFSWP-009-SW	CFSWP-010-SW	CFSWP-011-SW	CFSWP-012-SW
				Round	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 1	Round 1	Round 1
				Sample Type	N	N	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit										
Aluminum	--	--	2000	ug/l	19.9 J	29.8 J	28.9 J	54.5	33.9 J	31 J	16.8 J	44.6	28.2 J	35.9 J
Antimony	5.6	6	0.78	ug/l	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.76 U	0.76 U	0.76 U	0.76 U
Arsenic	10	10	0.052	ug/l	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.95 J	0.71 U	0.71 U	0.8 J
Barium	1000	2000	380	ug/l	105	99.7	102	102	103	103	104	79.6	78.6	79
Beryllium	4	4	2.5	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.29 U	0.29 U	0.29 U	0.29 U
Cadmium	5	--	--	ug/l	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.72 U	0.72 U	0.72 U	0.72 U
Calcium	--	--	--	ug/l	24200	24500	23100	24500	23200	25400	50100	47000	47000	46800
Chromium	100	100	--	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.5 U	1.5 U	1.5 U	1.5 U
Cobalt	--	--	0.6	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.5 U	1.5 U	1.5 U	1.5 U
Copper	1300	1300	80	ug/l	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.6 U	1.6 U	2.1 J	4.1
Cyanide, Total	**140**	200	0.15	ug/l	3.2 J	2 U	2 U	2 U	2 U	2 U	4 U	4 U	4 U	4 U
Iron	--	--	1400	ug/l	42.4 U	42.4 U	42.4 U	42.4 U	42.4 U	42.4 U	49.1 U	49.3 J	49.1 U	72.8 J
Lead	15	15	15	ug/l	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.44 U	0.44 U	0.44 U	0.44 U
Magnesium	--	--	--	ug/l	6630	6750	6010	6780	6050	7110	12600	10900	10800	10900
Manganese	--	--	--	ug/l	2.5 U	2.5 U	2.5 U	3.9 J	2.5 U	2.5 U	3 U	7.8 J	6.3 J	8.6
Mercury	0.05	2	0.063	ug/l	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.14 U	0.14 U	0.14 U	0.14 U
Nickel	100	--	--	ug/l	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.6 U	1.6 U	1.6 U	1.6 U
Potassium	--	--	--	ug/l	328	315	311	313	317	309	560	535	540	537
Selenium	50	50	10	ug/l	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.79 U	0.79 U	0.79 U	0.79 U
Silver	100	--	9.4	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.5 U	1.5 U	1.5 U	1.5 U
Sodium	--	--	--	ug/l	1030	1150	951	1040	958	1140	2340	2080	2120	2080
Thallium	0.24	2	0.02	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.31 U	0.31 U	0.31 U	0.31 U
Vanadium	--	--	8.6	ug/l	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	2.2 J	2.1 J	2.1 J	2.1 J
Zinc	2000	--	600	ug/l	7 U	7 U	7 U	7 U	7 U	7 U	6.5 U	6.5 U	6.5 U	6.5 U

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Table 3. Metals in Round 1 and Round 2 Surface Water
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFSWP-013	CFSWP-013	CFSWP-013	CFSWP-014	CFSWP-014	CFSWP-014	CFSWP-015	CFSWP-015	CFSWP-015
				Sample Date	6/7/2016	6/7/2016	11/30/2016	8/29/2016	11/30/2016	11/30/2016	8/29/2016	8/29/2016	11/30/2016
				Sample Designation	CFSWP-013-SW	CFSWP-DUP1-SW	CFSWP-013-SW	CFSWP-014-SW	CFSWP-014-SW	CFSWP-DUP3-SW	CFSWP-015-SW	CFSWP-DUP2-SW	CFSWP-015-SW
				Round	Round 1	Round 1	Round 2	Round 1	Round 2	Round 2	Round 1	Round 1	Round 2
				Sample Type	N	FD	N	N	N	FD	N	FD	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
Aluminum	--	--	2000	ug/l	30 J	34.6 J	1610	37.6 J	18.2 UJ	27.4 J	44.9	39.7 J	18.2 U
Antimony	5.6	6	0.78	ug/l	0.76 U	0.76 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
Arsenic	10	10	0.052	ug/l	0.71 U	0.71 U	1.8 J	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
Barium	1000	2000	380	ug/l	78	81.2	183	98.1	101	103	103	101	106
Beryllium	4	4	2.5	ug/l	0.29 U	0.29 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Cadmium	5	--	--	ug/l	0.72 U	0.72 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U
Calcium	--	--	--	ug/l	46500	47700	40000	43100	52800	53300	47500	44600	53100
Chromium	100	100	--	ug/l	1.5 U	1.5 U	1.4 J	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Cobalt	--	--	0.6	ug/l	1.5 U	1.5 U	2.4 J	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Copper	1300	1300	80	ug/l	2.2 J	11.7 J	6.2	5.4	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Cyanide, Total	**140**	200	0.15	ug/l	4 U	4 U	2 U	2 U	15.3 J	2 UJ	2.3 J	2 U	10.6
Iron	--	--	1400	ug/l	49.1 U	49.1 U	2910	42.4 U	42.4 U	42.4 U	42.4 U	42.4 U	42.4 U
Lead	15	15	15	ug/l	0.44 U	0.44 U	2.1	0.41 J	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Magnesium	--	--	--	ug/l	10700	11100	11300	13500	13500	13900	13600	13400	13600
Manganese	--	--	--	ug/l	10.7	11	3750	13.2	5.2 J	3.9 J	8.6 J	5.9 J	4 J
Mercury	0.05	2	0.063	ug/l	0.14 U	0.14 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Nickel	100	--	--	ug/l	1.6 U	1.6 U	2.3 J	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Potassium	--	--	--	ug/l	530	556	778	377	481	486	405	357	484
Selenium	50	50	10	ug/l	0.79 U	0.79 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U
Silver	100	--	9.4	ug/l	1.5 U	1.5 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Sodium	--	--	--	ug/l	2030	2120	2340	3240	2590	2660	2870	2620	2610
Thallium	0.24	2	0.02	ug/l	0.31 U	0.31 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Vanadium	--	--	8.6	ug/l	1.9 J	1.8 J	1.9 J	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Zinc	2000	--	600	ug/l	6.5 U	6.5 U	18.9	16.4	7 U	7 U	7 U	7 U	7 U

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Table 3. Metals in Round 1 and Round 2 Surface Water
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFSWP-015	CFSWP-016	CFSWP-016	CFSWP-017	CFSWP-017	CFSWP-018	CFSWP-018	CFSWP-019	CFSWP-019	CFSWP-020
				Sample Date	12/20/2016	8/29/2016	11/30/2016	9/16/2016	12/2/2016	6/6/2016	12/1/2016	6/6/2016	12/1/2016	6/6/2016
				Sample Designation	CFSWP-015-SW	CFSWP-016-SW	CFSWP-016-SW	CFSWP-017-SW	CFSWP-017-SW	CFSWP-018-SW	CFSWP-018-SW	CFSWP-019-SW	CFSWP-019-SW	CFSWP-020-SW
				Round	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1
				Sample Type	N	N	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit										
Aluminum	--	--	2000	ug/l	20 J	59.2	19.5 J	33.2 J	26.3 J	13.5 U	583	18.7 J	61.7	15.3 J
Antimony	5.6	6	0.78	ug/l	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.76 U	0.62 U	0.76 U	0.62 U	0.76 U
Arsenic	10	10	0.052	ug/l	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.71 J	0.64 U	0.71 U	0.64 U	0.71 U
Barium	1000	2000	380	ug/l	118	99.5	105	190	103	268	225	265	156	305
Beryllium	4	4	2.5	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.29 U	0.24 U	0.29 U	0.24 U	0.29 U
Cadmium	5	--	--	ug/l	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.72 U	0.71 U	0.72 U	0.71 U	0.72 U
Calcium	--	--	--	ug/l	56800	44400	53100	33800	25400	48300	77000	49100	51000	45500
Chromium	100	100	--	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	3.9 J	1.3 U	1.8 J	1.3 U	1.5 U
Cobalt	--	--	0.6	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.5 U	1.3 U	1.5 U	1.3 U	1.5 U
Copper	1300	1300	80	ug/l	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	2 J	9.8	3.3 J	1.6 J	1.8 J
Cyanide, Total	**140**	200	0.15	ug/l	2 U	2 U	2 U	2 U	2 U	4 U	2 U	4 U	2 U	12.5
Iron	--	--	1400	ug/l	42.4 U	42.4 U	42.4 U	63.1 J	42.4 U	109 J	449	110 J	134	49.1 U
Lead	15	15	15	ug/l	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.44 U	1.7	0.44 U	0.38 U	0.44 U
Magnesium	--	--	--	ug/l	14000	13500	13900	9260	7090	16200	17200	16200	16500	15600
Manganese	--	--	--	ug/l	5.5 J	3.5 J	3.6 J	21.8	2.5 U	5.7 J	8.3	4.4 J	9.3	3 U
Mercury	0.05	2	0.063	ug/l	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.14 U	0.17 U	0.14 U	0.17 U	0.14 U
Nickel	100	--	--	ug/l	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.6 U	1.6 J	1.6 U	1.4 U	1.6 U
Potassium	--	--	--	ug/l	519	367	483	439	314	797	600	910	641	818
Selenium	50	50	10	ug/l	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.79 U	0.73 U	0.79 U	0.73 U	0.79 U
Silver	100	--	9.4	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.5 U	1.3 U	1.5 U	1.3 U	1.5 U
Sodium	--	--	--	ug/l	2940	3260	2630	1580	1100	5660	9290	5840	8710	5150
Thallium	0.24	2	0.02	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.31 U	0.26 U	0.31 U	0.26 U	0.31 U
Vanadium	--	--	8.6	ug/l	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	2.1 J	1.9 U	2.1 J	1.9 U	2.1 J
Zinc	2000	--	600	ug/l	7 U	7 U	7 U	7 U	7 U	6.5 U	18.2	6.5 U	7 U	6.5 U

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Table 3. Metals in Round 1 and Round 2 Surface Water
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFSWP-020	CFSWP-021	CFSWP-021	CFSWP-022	CFSWP-025
				Sample Date	12/1/2016	6/6/2016	11/30/2016	6/6/2016	12/20/2016
				Sample Designation	CFSWP-020-SW	CFSWP-021-SW	CFSWP-021-SW	CFSWP-022-SW	CFSWP-025-SW
				Round	Round 2	Round 1	Round 2	Round 1	Round 2
				Sample Type	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit					
Aluminum	--	--	2000	ug/l	615	95.3	5750	937	44.4
Antimony	5.6	6	0.78	ug/l	0.62 U	0.76 U	0.62 U	0.76 U	0.62 U
Arsenic	10	10	0.052	ug/l	0.64 U	1.2 J	3.7	0.88 J	0.64 U
Barium	1000	2000	380	ug/l	424	98	219	125	122
Beryllium	4	4	2.5	ug/l	0.24 U	0.29 U	0.24 U	0.29 U	0.24 U
Cadmium	5	--	--	ug/l	0.71 U	0.72 U	0.71 U	0.72 U	0.71 U
Calcium	--	--	--	ug/l	73300	50500	82100	43600	56700
Chromium	100	100	--	ug/l	1.3 U	1.5 U	3.4 J	1.5 U	1.3 U
Cobalt	--	--	0.6	ug/l	1.3 U	1.5 U	2 J	1.5 U	1.3 U
Copper	1300	1300	80	ug/l	4	1.6 U	5.7	2.6 J	1.4 U
Cyanide, Total	**140**	200	0.15	ug/l	16.4	4 U	2 U	4 U	2 U
Iron	--	--	1400	ug/l	451	79.5 J	4760	302	42.4 U
Lead	15	15	15	ug/l	0.91 J	0.44 U	4.5	0.44 U	0.38 U
Magnesium	--	--	--	ug/l	16500	11700	19500	10900	13900
Manganese	--	--	--	ug/l	10.1	4.1 J	127	17.8	8.9
Mercury	0.05	2	0.063	ug/l	0.17 U	0.14 U	0.17 U	0.14 U	0.17 U
Nickel	100	--	--	ug/l	1.4 U	1.6 U	3.9 J	1.6 U	1.4 U
Potassium	--	--	--	ug/l	894	578	1250	785	528
Selenium	50	50	10	ug/l	0.73 U	0.79 U	0.73 U	0.79 U	0.73 U
Silver	100	--	9.4	ug/l	1.3 U	1.5 U	1.3 U	1.5 U	1.3 U
Sodium	--	--	--	ug/l	4860	6150	31000	6900	2880
Thallium	0.24	2	0.02	ug/l	0.26 U	0.31 U	0.26 U	0.31 U	0.26 U
Vanadium	--	--	8.6	ug/l	1.9 U	2.1 J	3.9 J	2.2 J	1.9 U
Zinc	2000	--	600	ug/l	7 U	6.5 U	19.2	6.5 U	7 U

Preliminary Under EPA and MDEQ Review

Table 4. Polychlorinated Biphenyl in Round 1 and Round 2 Surface Water
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFSWP-018	CFSWP-019	CFSWP-020
				Sample Date	6/6/2016	6/6/2016	6/6/2016
				Sample Designation	CFSWP-018-SW	CFSWP-019-SW	CFSWP-020-SW
				Round	Round 1	Round 1	Round 1
				Sample Type	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit			
Aroclor 1016	0.00064	--	0.14	ug/l	0.098 U	0.098 U	0.098 U
Aroclor 1221	0.00064	--	0.0047	ug/l	0.098 U	0.098 U	0.098 U
Aroclor 1232	0.00064	--	0.0047	ug/l	0.098 U	0.098 U	0.098 U
Aroclor 1242	0.00064	--	0.0078	ug/l	0.098 U	0.098 U	0.098 U
Aroclor 1248	0.00064	--	0.0078	ug/l	0.098 U	0.098 U	0.098 U
Aroclor 1254	0.00064	--	0.0078	ug/l	0.084 U	0.084 U	0.084 U
Aroclor 1260	0.00064	--	0.0078	ug/l	0.084 U	0.084 U	0.084 U
Aroclor 1268	0.00064	--	--	ug/l	0.084 U	0.084 U	0.084 U
Aroclor-1262	--	--	--	ug/l	0.084 U	0.084 U	0.084 U
Polychlorinated biphenyls, Total	0.00064	--	--	ug/l	0.098 U	0.098 U	0.098 U

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Table 5. Organochlorine Pesticides in Round 1 and Round 2 Surface Water
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFSWP-018	CFSWP-019	CFSWP-020
				Sample Date	6/6/2016	6/6/2016	6/6/2016
				Sample Designation	CFSWP-018-SW	CFSWP-019-SW	CFSWP-020-SW
				Round	Round 1	Round 1	Round 1
				Sample Type	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit			
4,4'-DDD	0.0031	--	0.032	ug/l	0.005 U	0.005 U	0.005 U
4,4'-DDE	0.0022	--	0.046	ug/l	0.004 U	0.004 U	0.004 U
4,4'-DDT	0.0022	--	0.23	ug/l	0.004 U	0.004 U	0.004 U
Aldrin	0.00049	--	0.00092	ug/l	0.004 U	0.004 U	0.004 U
alpha-BHC	0.026	--	0.0072	ug/l	0.006 U	0.006 U	0.006 U
alpha-Chlordane	0.008	--	--	ug/l	0.004 U	0.004 U	0.004 U
beta-BHC	0.091	--	0.025	ug/l	0.005 U	0.005 U	0.005 U
delta-BHC	--	--	--	ug/l	0.006 U	0.006 U	0.006 U
Dieldrin	0.00052	--	0.0018	ug/l	0.004 U	0.004 U	0.004 U
Endosulfan I	62	--	--	ug/l	0.005 U	0.005 U	0.005 U
Endosulfan II	62	--	--	ug/l	0.004 U	0.004 U	0.004 U
Endosulfan sulfate	62	--	--	ug/l	0.005 U	0.005 U	0.005 U
Endrin	0.059	2	0.23	ug/l	0.004 U	0.004 U	0.004 U
Endrin aldehyde	0.29	--	--	ug/l	0.004 U	0.004 U	0.004 U
Endrin ketone	--	--	--	ug/l	0.004 U	0.004 U	0.004 U
gamma-BHC (Lindane)	0.2	0.2	0.042	ug/l	0.004 U	0.004 U	0.004 U
gamma-Chlordane	--	--	--	ug/l	0.005 U	0.005 U	0.005 U
Heptachlor	0.00079	0.4	0.0014	ug/l	0.004 U	0.004 U	0.004 U
Heptachlor epoxide	0.00039	0.2	0.0014	ug/l	0.004 U	0.004 U	0.004 U
Methoxychlor	40	40	3.7	ug/l	0.004 U	0.004 U	0.004 U
Toxaphene	0.0028	3	0.071	ug/l	0.06 U	0.06 U	0.06 U

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Table 6. General Chemistry in Round 1 and Round 2 Surface Water
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFSWP-001	CFSWP-001	CFSWP-002	CFSWP-002	CFSWP-003	CFSWP-003	CFSWP-004	CFSWP-004	CFSWP-005
				Sample Date	9/16/2016	12/2/2016	9/16/2016	12/2/2016	9/9/2016	12/1/2016	9/9/2016	12/1/2016	9/9/2016
				Sample Designation	CFSWP-001-SW	CFSWP-001-SW	CFSWP-002-SW	CFSWP-002-SW	CFSWP-003-SW	CFSWP-003-SW	CFSWP-004-SW	CFSWP-004-SW	CFSWP-005-SW
				Round	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1
				Sample Type	N	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
Ammonia	--	--	--	ug/l	72 U	72 UJ	72 U	72 UJ	72 UJ	72 UJ	72 UJ	72 UJ	72 UJ
Chloride	--	--	--	ug/l	379 J	1110 J-	342 J	1710 J-	500	904 J-	3060	2310 J-	2910
Fluoride	4000	4000	80	ug/l	35.8 J-	211 J-	35.9 J-	547 J-	181	615 J-	2560	1810 J-	2570
Hardness as calcium carbonate	--	--	--	ug/l	88000	90000	86000	92000	90000	108000	222000	216000	218000
Nitrate Nitrite as N	10000	10000	--	ug/l	898	100 U	100 U	100 U	122	283	1510	1340	1680
Orthophosphate as P	--	--	--	ug/l	42 R	48 U	42 R	48 U	42 U	48 UJ	42 U	48 UJ	42 U
Sulfate	--	--	--	ug/l	3570 J-	6620 J-	3610 J-	17400 J-	4620	7120 J-	18100	14400 J-	17800

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Table 6. General Chemistry in Round 1 and Round 2 Surface Water
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFSWP-005	CFSWP-006	CFSWP-006	CFSWP-007	CFSWP-007	CFSWP-008	CFSWP-008	CFSWP-009	CFSWP-010
				Sample Date	12/1/2016	9/9/2016	12/1/2016	9/16/2016	12/2/2016	9/16/2016	12/2/2016	6/7/2016	6/7/2016
				Sample Designation	CFSWP-005-SW	CFSWP-006-SW	CFSWP-006-SW	CFSWP-007-SW	CFSWP-007-SW	CFSWP-008-SW	CFSWP-008-SW	CFSWP-009-SW	CFSWP-010-SW
				Round	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 1
				Sample Type	N	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
Ammonia	--	--	--	ug/l	72 UJ	72 UJ	72 UJ	72 U	72 UJ	72 U	72 UJ	48.9 J	23 U
Chloride	--	--	--	ug/l	2910 J-	352	360 J-	348 J	351 J-	335 J	363 J-	1770 J+	1970 J+
Fluoride	4000	4000	80	ug/l	2100 J-	37.3 J	106 J-	33.8 J-	110 J-	33.5 J-	107 J-	80.3	39.4 J
Hardness as calcium carbonate	--	--	--	ug/l	252000	90000	150000	86000	90000	84000	92000	170000	164000
Nitrate Nitrite as N	10000	10000	--	ug/l	1620	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Orthophosphate as P	--	--	--	ug/l	48 UJ	42 U	48 UJ	42 R	48 U	42 R	48 U	NA	NA
Sulfate	--	--	--	ug/l	18400 J-	3680	3620 J-	3530 J-	3590 J-	3490 J-	4010 J-	2790	1930

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Table 6. General Chemistry in Round 1 and Round 2 Surface Water
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFSWP-011	CFSWP-012	CFSWP-013	CFSWP-013	CFSWP-013	CFSWP-014	CFSWP-014	CFSWP-014	CFSWP-015
				Sample Date	6/7/2016	6/7/2016	6/7/2016	6/7/2016	11/30/2016	8/29/2016	11/30/2016	11/30/2016	8/29/2016
				Sample Designation	CFSWP-011-SW	CFSWP-012-SW	CFSWP-013-SW	CFSWP-DUP1-SW	CFSWP-013-SW	CFSWP-014-SW	CFSWP-014-SW	CFSWP-DUP3-SW	CFSWP-015-SW
				Round	Round 1	Round 1	Round 1	Round 1	Round 2	Round 1	Round 2	Round 2	Round 1
				Sample Type	N	N	N	FD	N	N	N	FD	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
Ammonia	--	--	--	ug/l	23 U	23 U	23 U	27.9 J	72 U	72 U	72 U	72 U	72 U
Chloride	--	--	--	ug/l	1710 J+	1720 J+	1780 J+	1700 J+	577 J-	2670	1580 J-	1630 J-	2600
Fluoride	4000	4000	80	ug/l	38.7 J	39.5 J	39.2 J	38.3 J	43 J-	55.8 J	117 J-	123 J-	62.4 J
Hardness as calcium carbonate	--	--	--	ug/l	156000	152000	156000	156000	170000	164000	196000	192000	178000
Nitrate Nitrite as N	10000	10000	--	ug/l	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Orthophosphate as P	--	--	--	ug/l	NA	NA	NA	NA	48 UJ	42 UJ	48 UJ	48 UJ	42 UJ
Sulfate	--	--	--	ug/l	1910	1900	1910	1960	3020 J-	3320	2230 J-	2240 J-	2740

Preliminary – Under EPA and MDEQ Review

Table 6. General Chemistry in Round 1 and Round 2 Surface Water
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFSWP-015	CFSWP-015	CFSWP-015	CFSWP-016	CFSWP-016	CFSWP-017	CFSWP-017	CFSWP-018	CFSWP-018
				Sample Date	8/29/2016	11/30/2016	12/20/2016	8/29/2016	11/30/2016	9/16/2016	12/2/2016	6/6/2016	12/1/2016
				Sample Designation	CFSWP-DUP2-SW	CFSWP-015-SW	CFSWP-015-SW	CFSWP-016-SW	CFSWP-016-SW	CFSWP-017-SW	CFSWP-017-SW	CFSWP-018-SW	CFSWP-018-SW
				Round	Round 1	Round 2	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
				Sample Type	FD	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
Ammonia	--	--	--	ug/l	72 U	72 U	72 U	72 U	72 U	72 U	72 UJ	178	72 UJ
Chloride	--	--	--	ug/l	2610	1630 J-	1370	2800	1630 J-	864 J	370 J-	2160 J+	1910 J-
Fluoride	4000	4000	80	ug/l	62.3 J	119 J-	112 J-	58.8 J	123 J-	56.2 J-	106 J-	353	828 J-
Hardness as calcium carbonate	--	--	--	ug/l	170000	196000	208000	172000	200000	124000	92000	180000	260000
Nitrate Nitrite as N	10000	10000	--	ug/l	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Orthophosphate as P	--	--	--	ug/l	42 UJ	48 UJ	48 UJ	42 UJ	48 UJ	42 R	48 U	NA	48 UJ
Sulfate	--	--	--	ug/l	3100	2190 J-	2480 J-	2700	2270 J-	4300 J-	4810 J-	3390	4660 J-

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Table 6. General Chemistry in Round 1 and Round 2 Surface Water
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFSWP-019	CFSWP-019	CFSWP-020	CFSWP-020	CFSWP-021	CFSWP-021	CFSWP-022	CFSWP-025
				Sample Date	6/6/2016	12/1/2016	6/6/2016	12/1/2016	6/6/2016	11/30/2016	6/6/2016	12/20/2016
				Sample Designation	CFSWP-019-SW	CFSWP-019-SW	CFSWP-020-SW	CFSWP-020-SW	CFSWP-021-SW	CFSWP-021-SW	CFSWP-022-SW	CFSWP-025-SW
				Round	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
				Sample Type	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit								
Ammonia	--	--	--	ug/l	53 J	72 UJ	23 U	72 UJ	28.4 J	72 U	23 U	72 U
Chloride	--	--	--	ug/l	1930 J+	1860 J-	2240 J+	1590 J-	1590 J+	2250 J-	1640 J+	1400
Fluoride	4000	4000	80	ug/l	379	785 J-	250	265 J-	166	189 J-	177	115 J-
Hardness as calcium carbonate	--	--	--	ug/l	180000	208000	176000	256000	168000	304000	172000	206000
Nitrate Nitrite as N	10000	10000	--	ug/l	100 U	100 U	117	186	100 U	100 U	100 U	100 U
Orthophosphate as P	--	--	--	ug/l	NA	48 UJ	NA	48 UJ	NA`	48 UJ	NA	48 UJ
Sulfate	--	--	--	ug/l	3270	5110 J-	3590	3250 J-	7440	73100 J-	6540	2510 J-

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Table 7. Volatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-002	CFMW-003	CFMW-003	CFMW-007	CFMW-007	CFMW-008a	CFMW-008a	CFMW-010	CFMW-010
				Sample Date	9/12/2016	9/14/2016	12/9/2016	9/21/2016	12/12/2016	9/15/2016	12/16/2016	9/12/2016	12/15/2016
				Sample Designation	CFMW-002-GW	CFMW-003-GW	CFMW-003-GW	CFMW-007-GW	CFMW-007-GW	CFMW-008a-GW	CFMW-008a-GW	CFMW-010-GW	CFMW-010-GW
				Sample Round	Round 1	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
				Sample Type	N	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
1,1,1-Trichloroethane	200	200	800	ug/l	0.28 U	3.8	3.2	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
1,1,2,2-Tetrachloroethane	2	--	--	ug/l	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 UJ	0.19 U
1,1,2-Trichloro-1,2,2-trifluoroethane	--	--	5500	ug/l	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
1,1,2-Trichloroethane	3	--	--	ug/l	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
1,1-Dichloroethane	4	--	2.8	ug/l	0.24 U	0.71 J	0.95 J	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
1,1-Dichloroethene	7	--	--	ug/l	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
1,2,3-Trichlorobenzene	0.7	--	0.7	ug/l	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
1,2,4-Trichlorobenzene	70	--	0.4	ug/l	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
1,2-Dibromo-3-Chloropropane	0.2	0.2	0.00033	ug/l	0.23 U	0.23 U	0.23 U	0.23 UJ	0.23 U	0.23 U	0.23 U	0.23 U	0.23 UJ
1,2-Dichlorobenzene	600	600	30	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dichloroethane	4	5	0.17	ug/l	0.25 U	0.25 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2-Dichloropropane	5	5	0.44	ug/l	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
1,3-Dichlorobenzene	600	--	--	ug/l	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
1,4-Dichlorobenzene	75	75	0.48	ug/l	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
2-Butanone (MEK)	--	--	560	ug/l	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
2-Hexanone	--	--	3.8	ug/l	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U
4-Methyl-2-pentanone (MIBK)	--	--	630	ug/l	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
Acetone	--	--	1400	ug/l	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	8.3	3.2 J	1.1 U	1.1 UJ
Benzene	5	5	0.46	ug/l	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.15 J	0.09 U	0.09 U
Bromoform	80	80	3.3	ug/l	0.18 U	0.18 U	0.18 U	0.18 UJ	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Bromomethane	10	--	0.75	ug/l	0.18 UJ	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 UJ	0.18 U
Carbon disulfide	--	--	81	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Carbon tetrachloride	3	5	0.46	ug/l	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
Chlorobenzene	100	100	7.8	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Chlorobromomethane	--	--	8.3	ug/l	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Chlorodibromomethane	4	80	0.87	ug/l	0.22 U	0.22 U	0.22 U	0.22 UJ	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Chloroethane	--	--	2100	ug/l	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
Chloroform	70	80	0.22	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Chloromethane	30	--	19	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
cis-1,2-Dichloroethene	70	--	--	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
cis-1,3-Dichloropropene	4	--	--	ug/l	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Cyclohexane	--	--	1300	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Dichlorobromomethane	10	80	0.13	ug/l	0.15 U	0.15 U	0.15 U	0.15 UJ	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Dichlorodifluoromethane	1000	--	20	ug/l	0.14 UJ	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 UJ	0.14 U
Ethylbenzene	700	700	1.5	ug/l	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Ethylene Dibromide	0.004	--	--	ug/l	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Isopropylbenzene	--	--	--	ug/l	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Methyl acetate	--	--	2000	ug/l	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 UJ
Methyl tert-butyl ether	30	--	14	ug/l	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U

Preliminary - Under EPA Review

Table 7. Volatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

			Sample Location		CFMW-002	CFMW-003	CFMW-003	CFMW-007	CFMW-007	CFMW-008a	CFMW-008a	CFMW-010	CFMW-010
			Sample Date		9/12/2016	9/14/2016	12/9/2016	9/21/2016	12/12/2016	9/15/2016	12/16/2016	9/12/2016	12/15/2016
			Sample Designation		CFMW-002-GW	CFMW-003-GW	CFMW-003-GW	CFMW-007-GW	CFMW-007-GW	CFMW-008a-GW	CFMW-008a-GW	CFMW-010-GW	CFMW-010-GW
			Sample Round		Round 1	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
Methylcyclohexane	--	--	--	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Methylene Chloride	5	5	11	ug/l	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
m-Xylene & p-Xylene	--	--	--	ug/l	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
o-Xylene	10000	--	19	ug/l	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Styrene	100	100	120	ug/l	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Tetrachloroethene	5	--	--	ug/l	0.12 U	0.38 J	0.26 J	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Toluene	1000	1000	110	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.42 J	0.25 U	0.25 U
trans-1,2-Dichloroethene	100	--	--	ug/l	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
trans-1,3-Dichloropropene	2	--	--	ug/l	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Trichloroethene	5	--	--	ug/l	0.22 U	0.76 J	0.62 J	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Trichlorofluoromethane	10000	--	520	ug/l	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 UJ
Vinyl chloride	0.2	2	0.019	ug/l	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U

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Table 7. Volatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-011	CFMW-011	CFMW-012	CFMW-012	CFMW-014	CFMW-014	CFMW-015	CFMW-015	CFMW-019
				Sample Date	9/13/2016	12/8/2016	9/12/2016	12/14/2016	9/12/2016	12/15/2016	9/12/2016	12/15/2016	9/12/2016
				Sample Designation	CFMW-011-GW	CFMW-011-GW	CFMW-012-GW	CFMW-012-GW	CFMW-014-GW	CFMW-014-GW	CFMW-015-GW	CFMW-015-GW	CFMW-019-GW
				Sample Round	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1
				Sample Type	N	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
1,1,1-Trichloroethane	200	200	800	ug/l	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
1,1,2,2-Tetrachloroethane	2	--	--	ug/l	0.19 U	0.19 U	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	--	--	5500	ug/l	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
1,1,2-Trichloroethane	3	--	--	ug/l	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
1,1-Dichloroethane	4	--	2.8	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
1,1-Dichloroethene	7	--	--	ug/l	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
1,2,3-Trichlorobenzene	0.7	--	0.7	ug/l	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
1,2,4-Trichlorobenzene	70	--	0.4	ug/l	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
1,2-Dibromo-3-Chloropropane	0.2	0.2	0.00033	ug/l	0.23 U	0.23 U	0.23 U	0.23 UJ	0.23 U	0.23 UJ	0.23 U	0.23 UJ	0.23 U
1,2-Dichlorobenzene	600	600	30	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dichloroethane	4	5	0.17	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2-Dichloropropane	5	5	0.44	ug/l	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
1,3-Dichlorobenzene	600	--	--	ug/l	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
1,4-Dichlorobenzene	75	75	0.48	ug/l	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
2-Butanone (MEK)	--	--	560	ug/l	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
2-Hexanone	--	--	3.8	ug/l	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U
4-Methyl-2-pentanone (MIBK)	--	--	630	ug/l	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
Acetone	--	--	1400	ug/l	1.1 U	1.1 U	1.1 U	1.1 UJ	1.1 U	1.1 UJ	1.1 U	1.1 UJ	1.1 U
Benzene	5	5	0.46	ug/l	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
Bromoform	80	80	3.3	ug/l	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Bromomethane	10	--	0.75	ug/l	0.18 UJ	0.18 U	0.18 UJ	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 UJ
Carbon disulfide	--	--	81	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Carbon tetrachloride	3	5	0.46	ug/l	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
Chlorobenzene	100	100	7.8	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Chlorobromomethane	--	--	8.3	ug/l	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Chlorodibromomethane	4	80	0.87	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Chloroethane	--	--	2100	ug/l	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
Chloroform	70	80	0.22	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Chloromethane	30	--	19	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
cis-1,2-Dichloroethene	70	--	--	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
cis-1,3-Dichloropropene	4	--	--	ug/l	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Cyclohexane	--	--	1300	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Dichlorobromomethane	10	80	0.13	ug/l	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Dichlorodifluoromethane	1000	--	20	ug/l	0.14 UJ	0.14 U	0.14 UJ	0.14 U	0.14 UJ	0.14 U	0.14 UJ	0.14 U	0.14 UJ
Ethylbenzene	700	700	1.5	ug/l	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Ethylene Dibromide	0.004	--	--	ug/l	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Isopropylbenzene	--	--	--	ug/l	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Methyl acetate	--	--	2000	ug/l	0.58 U	0.58 U	0.58 U	0.58 UJ	0.58 U	0.58 UJ	0.58 U	0.58 UJ	0.58 U
Methyl tert-butyl ether	30	--	14	ug/l	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U

Preliminary - Under EPA Review

Table 7. Volatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

			Sample Location		CFMW-011	CFMW-011	CFMW-012	CFMW-012	CFMW-014	CFMW-014	CFMW-015	CFMW-015	CFMW-019
			Sample Date		9/13/2016	12/8/2016	9/12/2016	12/14/2016	9/12/2016	12/15/2016	9/12/2016	12/15/2016	9/12/2016
			Sample Designation		CFMW-011-GW	CFMW-011-GW	CFMW-012-GW	CFMW-012-GW	CFMW-014-GW	CFMW-014-GW	CFMW-015-GW	CFMW-015-GW	CFMW-019-GW
			Sample Round		Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1
Methylcyclohexane	--	--	--	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Methylene Chloride	5	5	11	ug/l	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	1.8	0.21 U
m-Xylene & p-Xylene	--	--	--	ug/l	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
o-Xylene	10000	--	19	ug/l	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Styrene	100	100	120	ug/l	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Tetrachloroethene	5	--	--	ug/l	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.56 J+
Toluene	1000	1000	110	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
trans-1,2-Dichloroethene	100	--	--	ug/l	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
trans-1,3-Dichloropropene	2	--	--	ug/l	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Trichloroethene	5	--	--	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Trichlorofluoromethane	10000	--	520	ug/l	0.15 U	0.15 U	0.15 U	0.15 UJ	0.15 U	0.15 UJ	0.15 U	0.15 UJ	0.15 U
Vinyl chloride	0.2	2	0.019	ug/l	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U

Preliminary – Under EPA and MDEQ Review

Table 7. Volatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-019	CFMW-020	CFMW-020	CFMW-021	CFMW-021	CFMW-022	CFMW-022	CFMW-023	CFMW-023
				Sample Date	12/15/2016	9/20/2016	12/13/2016	9/12/2016	12/14/2016	9/13/2016	12/9/2016	9/21/2016	12/19/2016
				Sample Designation	CFMW-019-GW	CFMW-020-GW	CFMW-020-GW	CFMW-021-GW	CFMW-021-GW	CFMW-022-GW	CFMW-022-GW	CFMW-023-GW	CFMW-023-GW
				Sample Round	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
				Sample Type	N	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
1,1,1-Trichloroethane	200	200	800	ug/l	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
1,1,2,2-Tetrachloroethane	2	--	--	ug/l	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,1,2-Trichloro-1,2,2-trifluoroethane	--	--	5500	ug/l	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 UJ
1,1,2-Trichloroethane	3	--	--	ug/l	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
1,1-Dichloroethane	4	--	2.8	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
1,1-Dichloroethene	7	--	--	ug/l	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
1,2,3-Trichlorobenzene	0.7	--	0.7	ug/l	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
1,2,4-Trichlorobenzene	70	--	0.4	ug/l	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
1,2-Dibromo-3-Chloropropane	0.2	0.2	0.00033	ug/l	0.23 UJ	0.23 U	0.23 U	0.23 U	0.23 UJ	0.23 U	0.23 U	0.23 UJ	0.23 U
1,2-Dichlorobenzene	600	600	30	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dichloroethane	4	5	0.17	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 UJ	0.25 U
1,2-Dichloropropane	5	5	0.44	ug/l	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
1,3-Dichlorobenzene	600	--	--	ug/l	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
1,4-Dichlorobenzene	75	75	0.48	ug/l	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
2-Butanone (MEK)	--	--	560	ug/l	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
2-Hexanone	--	--	3.8	ug/l	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U
4-Methyl-2-pentanone (MIBK)	--	--	630	ug/l	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
Acetone	--	--	1400	ug/l	1.1 UJ	1.1 U	1.1 U	1.1 U	1.1 UJ	1.1 U	1.1 U	1.1 U	1.1 U
Benzene	5	5	0.46	ug/l	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
Bromoform	80	80	3.3	ug/l	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 UJ	0.18 U
Bromomethane	10	--	0.75	ug/l	0.18 U	0.18 UJ	0.18 U	0.18 U	0.18 U	0.18 UJ	0.18 U	0.18 U	0.18 UJ
Carbon disulfide	--	--	81	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Carbon tetrachloride	3	5	0.46	ug/l	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
Chlorobenzene	100	100	7.8	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Chlorobromomethane	--	--	8.3	ug/l	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Chlorodibromomethane	4	80	0.87	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 UJ	0.22 U
Chloroethane	--	--	2100	ug/l	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
Chloroform	70	80	0.22	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Chloromethane	30	--	19	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
cis-1,2-Dichloroethene	70	--	--	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
cis-1,3-Dichloropropene	4	--	--	ug/l	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Cyclohexane	--	--	1300	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Dichlorobromomethane	10	80	0.13	ug/l	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 UJ	0.15 U
Dichlorodifluoromethane	1000	--	20	ug/l	0.14 U	0.14 U	0.14 U	0.14 UJ	0.14 U	0.14 UJ	0.14 U	0.14 U	0.14 UJ
Ethylbenzene	700	700	1.5	ug/l	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Ethylene Dibromide	0.004	--	--	ug/l	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Isopropylbenzene	--	--	--	ug/l	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Methyl acetate	--	--	2000	ug/l	0.58 UJ	0.58 U	0.58 U	0.58 U	0.58 UJ	0.58 U	0.58 U	0.58 U	0.58 U
Methyl tert-butyl ether	30	--	14	ug/l	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U

Preliminary - Under EPA/MDEQ Review

Table 7. Volatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-019	CFMW-020	CFMW-020	CFMW-021	CFMW-021	CFMW-022	CFMW-022	CFMW-023	CFMW-023
				Sample Date	12/15/2016	9/20/2016	12/13/2016	9/12/2016	12/14/2016	9/13/2016	12/9/2016	9/21/2016	12/19/2016
				Sample Designation	CFMW-019-GW	CFMW-020-GW	CFMW-020-GW	CFMW-021-GW	CFMW-021-GW	CFMW-022-GW	CFMW-022-GW	CFMW-023-GW	CFMW-023-GW
				Sample Round	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
Methylcyclohexane	--	--	--	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 UJ
Methylene Chloride	5	5	11	ug/l	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
m-Xylene & p-Xylene	--	--	--	ug/l	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
o-Xylene	10000	--	19	ug/l	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Styrene	100	100	120	ug/l	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Tetrachloroethene	5	--	--	ug/l	0.29 J	0.12 U	0.12 U	0.18 J	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Toluene	1000	1000	110	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
trans-1,2-Dichloroethene	100	--	--	ug/l	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
trans-1,3-Dichloropropene	2	--	--	ug/l	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Trichloroethene	5	--	--	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Trichlorofluoromethane	10000	--	520	ug/l	0.15 UJ	0.15 U	0.15 U	0.15 U	0.15 UJ	0.15 U	0.15 U	0.15 U	0.15 U
Vinyl chloride	0.2	2	0.019	ug/l	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U

Preliminary – Under EPA and MDEQ Review

Table 7. Volatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-025b	CFMW-025b	CFMW-026	CFMW-026	CFMW-027	CFMW-027	CFMW-028	CFMW-028	CFMW-029
				Sample Date	9/13/2016	12/7/2016	9/13/2016	12/5/2016	9/13/2016	12/14/2016	9/13/2016	12/5/2016	9/13/2016
				Sample Designation	CFMW-025b-GW	CFMW-025b-GW	CFMW-026-GW	CFMW-026-GW	CFMW-027-GW	CFMW-027-GW	CFMW-028-GW	CFMW-028-GW	CFMW-029-GW
				Sample Round	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1
				Sample Type	N	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
1,1,1-Trichloroethane	200	200	800	ug/l	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
1,1,2,2-Tetrachloroethane	2	--	--	ug/l	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,1,2-Trichloro-1,2,2-trifluoroethane	--	--	5500	ug/l	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
1,1,2-Trichloroethane	3	--	--	ug/l	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
1,1-Dichloroethane	4	--	2.8	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
1,1-Dichloroethene	7	--	--	ug/l	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
1,2,3-Trichlorobenzene	0.7	--	0.7	ug/l	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
1,2,4-Trichlorobenzene	70	--	0.4	ug/l	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
1,2-Dibromo-3-Chloropropane	0.2	0.2	0.00033	ug/l	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 UJ	0.23 U	0.23 U	0.23 U
1,2-Dichlorobenzene	600	600	30	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dichloroethane	4	5	0.17	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2-Dichloropropane	5	5	0.44	ug/l	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
1,3-Dichlorobenzene	600	--	--	ug/l	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
1,4-Dichlorobenzene	75	75	0.48	ug/l	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
2-Butanone (MEK)	--	--	560	ug/l	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
2-Hexanone	--	--	3.8	ug/l	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U
4-Methyl-2-pentanone (MIBK)	--	--	630	ug/l	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
Acetone	--	--	1400	ug/l	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 UJ	1.1 U	1.1 U	1.1 U
Benzene	5	5	0.46	ug/l	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
Bromoform	80	80	3.3	ug/l	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Bromomethane	10	--	0.75	ug/l	0.18 UJ	0.18 U	0.18 UJ	0.18 U	0.18 UJ	0.18 U	0.18 UJ	0.18 U	0.18 UJ
Carbon disulfide	--	--	81	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Carbon tetrachloride	3	5	0.46	ug/l	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
Chlorobenzene	100	100	7.8	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Chlorobromomethane	--	--	8.3	ug/l	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Chlorodibromomethane	4	80	0.87	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Chloroethane	--	--	2100	ug/l	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
Chloroform	70	80	0.22	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Chloromethane	30	--	19	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
cis-1,2-Dichloroethene	70	--	--	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
cis-1,3-Dichloropropene	4	--	--	ug/l	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Cyclohexane	--	--	1300	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Dichlorobromomethane	10	80	0.13	ug/l	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Dichlorodifluoromethane	1000	--	20	ug/l	0.14 UJ	0.14 U	0.14 UJ	0.14 U	0.14 UJ	0.14 U	0.14 UJ	0.14 U	0.14 UJ
Ethylbenzene	700	700	1.5	ug/l	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Ethylene Dibromide	0.004	--	--	ug/l	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Isopropylbenzene	--	--	--	ug/l	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Methyl acetate	--	--	2000	ug/l	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 UJ	0.58 U	0.58 U	0.58 U
Methyl tert-butyl ether	30	--	14	ug/l	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U

Preliminary - Under EPA MDEQ Review

Table 7. Volatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

			Sample Location		CFMW-025b	CFMW-025b	CFMW-026	CFMW-026	CFMW-027	CFMW-027	CFMW-028	CFMW-028	CFMW-029
			Sample Date		9/13/2016	12/7/2016	9/13/2016	12/5/2016	9/13/2016	12/14/2016	9/13/2016	12/5/2016	9/13/2016
			Sample Designation		CFMW-025b-GW	CFMW-025b-GW	CFMW-026-GW	CFMW-026-GW	CFMW-027-GW	CFMW-027-GW	CFMW-028-GW	CFMW-028-GW	CFMW-029-GW
			Sample Round		Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1
Methylcyclohexane	--	--	--	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Methylene Chloride	5	5	11	ug/l	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
m-Xylene & p-Xylene	--	--	--	ug/l	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
o-Xylene	10000	--	19	ug/l	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Styrene	100	100	120	ug/l	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Tetrachloroethene	5	--	--	ug/l	0.12 U	0.12 U	0.12 U	0.12 U	0.21 J	0.12 U	0.12 U	0.12 U	0.12 U
Toluene	1000	1000	110	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
trans-1,2-Dichloroethene	100	--	--	ug/l	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
trans-1,3-Dichloropropene	2	--	--	ug/l	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Trichloroethene	5	--	--	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Trichlorofluoromethane	10000	--	520	ug/l	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 UJ	0.15 U	0.15 U	0.15 U
Vinyl chloride	0.2	2	0.019	ug/l	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U

Preliminary – Under EPA and MDEQ Review

Table 7. Volatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-029	CFMW-029	CFMW-031	CFMW-031	CFMW-032	CFMW-032	CFMW-033	CFMW-033	CFMW-034
				Sample Date	9/13/2016	12/14/2016	9/15/2016	12/9/2016	9/15/2016	12/13/2016	9/15/2016	12/6/2016	9/14/2016
				Sample Designation	CFMW-DUP1-GW	CFMW-029-GW	CFMW-031-GW	CFMW-031-GW	CFMW-032-GW	CFMW-032-GW	CFMW-033-GW	CFMW-033-GW	CFMW-034-GW
				Sample Round	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1
				Sample Type	FD	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
1,1,1-Trichloroethane	200	200	800	ug/l	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
1,1,2,2-Tetrachloroethane	2	--	--	ug/l	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,1,2-Trichloro-1,2,2-trifluoroethane	--	--	5500	ug/l	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
1,1,2-Trichloroethane	3	--	--	ug/l	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
1,1-Dichloroethane	4	--	2.8	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
1,1-Dichloroethene	7	--	--	ug/l	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
1,2,3-Trichlorobenzene	0.7	--	0.7	ug/l	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
1,2,4-Trichlorobenzene	70	--	0.4	ug/l	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
1,2-Dibromo-3-Chloropropane	0.2	0.2	0.00033	ug/l	0.23 U	0.23 UJ	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
1,2-Dichlorobenzene	600	600	30	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dichloroethane	4	5	0.17	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2-Dichloropropane	5	5	0.44	ug/l	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
1,3-Dichlorobenzene	600	--	--	ug/l	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
1,4-Dichlorobenzene	75	75	0.48	ug/l	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
2-Butanone (MEK)	--	--	560	ug/l	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
2-Hexanone	--	--	3.8	ug/l	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U
4-Methyl-2-pentanone (MIBK)	--	--	630	ug/l	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
Acetone	--	--	1400	ug/l	1.1 U	1.1 UJ	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Benzene	5	5	0.46	ug/l	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
Bromoform	80	80	3.3	ug/l	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Bromomethane	10	--	0.75	ug/l	0.18 UJ	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Carbon disulfide	--	--	81	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Carbon tetrachloride	3	5	0.46	ug/l	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
Chlorobenzene	100	100	7.8	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Chlorobromomethane	--	--	8.3	ug/l	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Chlorodibromomethane	4	80	0.87	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Chloroethane	--	--	2100	ug/l	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
Chloroform	70	80	0.22	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Chloromethane	30	--	19	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
cis-1,2-Dichloroethene	70	--	--	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
cis-1,3-Dichloropropene	4	--	--	ug/l	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Cyclohexane	--	--	1300	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Dichlorobromomethane	10	80	0.13	ug/l	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Dichlorodifluoromethane	1000	--	20	ug/l	0.14 UJ	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Ethylbenzene	700	700	1.5	ug/l	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Ethylene Dibromide	0.004	--	--	ug/l	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Isopropylbenzene	--	--	--	ug/l	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Methyl acetate	--	--	2000	ug/l	0.58 U	0.58 UJ	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U
Methyl tert-butyl ether	30	--	14	ug/l	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U

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Table 7. Volatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

			Sample Location		CFMW-029	CFMW-029	CFMW-031	CFMW-031	CFMW-032	CFMW-032	CFMW-033	CFMW-033	CFMW-034
			Sample Date		9/13/2016	12/14/2016	9/15/2016	12/9/2016	9/15/2016	12/13/2016	9/15/2016	12/6/2016	9/14/2016
			Sample Designation		CFMW-DUP1-GW	CFMW-029-GW	CFMW-031-GW	CFMW-031-GW	CFMW-032-GW	CFMW-032-GW	CFMW-033-GW	CFMW-033-GW	CFMW-034-GW
			Sample Round		Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1
Methylcyclohexane	--	--	--	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Methylene Chloride	5	5	11	ug/l	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
m-Xylene & p-Xylene	--	--	--	ug/l	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
o-Xylene	10000	--	19	ug/l	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Styrene	100	100	120	ug/l	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Tetrachloroethene	5	--	--	ug/l	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.16 J	0.12 U	0.12 U
Toluene	1000	1000	110	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
trans-1,2-Dichloroethene	100	--	--	ug/l	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
trans-1,3-Dichloropropene	2	--	--	ug/l	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Trichloroethene	5	--	--	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Trichlorofluoromethane	10000	--	520	ug/l	0.15 U	0.15 UJ	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Vinyl chloride	0.2	2	0.019	ug/l	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U

Preliminary – Under EPA and MDEQ Review

Table 7. Volatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-034	CFMW-035	CFMW-035	CFMW-037	CFMW-037	CFMW-038	CFMW-038	CFMW-040	CFMW-040
				Sample Date	12/13/2016	9/14/2016	12/13/2016	9/16/2016	12/8/2016	9/14/2016	12/9/2016	9/14/2016	12/13/2016
				Sample Designation	CFMW-034-GW	CFMW-035-GW	CFMW-035-GW	CFMW-037-GW	CFMW-037-GW	CFMW-038-GW	CFMW-038-GW	CFMW-040-GW	CFMW-040-GW
				Sample Round	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
				Sample Type	N	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
1,1,1-Trichloroethane	200	200	800	ug/l	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
1,1,2,2-Tetrachloroethane	2	--	--	ug/l	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,1,2-Trichloro-1,2,2-trifluoroethane	--	--	5500	ug/l	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
1,1,2-Trichloroethane	3	--	--	ug/l	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
1,1-Dichloroethane	4	--	2.8	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
1,1-Dichloroethene	7	--	--	ug/l	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
1,2,3-Trichlorobenzene	0.7	--	0.7	ug/l	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
1,2,4-Trichlorobenzene	70	--	0.4	ug/l	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
1,2-Dibromo-3-Chloropropane	0.2	0.2	0.00033	ug/l	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
1,2-Dichlorobenzene	600	600	30	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dichloroethane	4	5	0.17	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2-Dichloropropane	5	5	0.44	ug/l	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
1,3-Dichlorobenzene	600	--	--	ug/l	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
1,4-Dichlorobenzene	75	75	0.48	ug/l	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
2-Butanone (MEK)	--	--	560	ug/l	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
2-Hexanone	--	--	3.8	ug/l	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U
4-Methyl-2-pentanone (MIBK)	--	--	630	ug/l	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
Acetone	--	--	1400	ug/l	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Benzene	5	5	0.46	ug/l	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
Bromoform	80	80	3.3	ug/l	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Bromomethane	10	--	0.75	ug/l	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Carbon disulfide	--	--	81	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Carbon tetrachloride	3	5	0.46	ug/l	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
Chlorobenzene	100	100	7.8	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Chlorobromomethane	--	--	8.3	ug/l	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Chlorodibromomethane	4	80	0.87	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Chloroethane	--	--	2100	ug/l	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
Chloroform	70	80	0.22	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Chloromethane	30	--	19	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
cis-1,2-Dichloroethene	70	--	--	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
cis-1,3-Dichloropropene	4	--	--	ug/l	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Cyclohexane	--	--	1300	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Dichlorobromomethane	10	80	0.13	ug/l	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Dichlorodifluoromethane	1000	--	20	ug/l	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Ethylbenzene	700	700	1.5	ug/l	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Ethylene Dibromide	0.004	--	--	ug/l	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Isopropylbenzene	--	--	--	ug/l	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Methyl acetate	--	--	2000	ug/l	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U
Methyl tert-butyl ether	30	--	14	ug/l	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U

Preliminary - Under EPA/MDEQ Review

Table 7. Volatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

			Sample Location		CFMW-034	CFMW-035	CFMW-035	CFMW-037	CFMW-037	CFMW-038	CFMW-038	CFMW-040	CFMW-040
			Sample Date		12/13/2016	9/14/2016	12/13/2016	9/16/2016	12/8/2016	9/14/2016	12/9/2016	9/14/2016	12/13/2016
			Sample Designation		CFMW-034-GW	CFMW-035-GW	CFMW-035-GW	CFMW-037-GW	CFMW-037-GW	CFMW-038-GW	CFMW-038-GW	CFMW-040-GW	CFMW-040-GW
			Sample Round		Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
Methylcyclohexane	--	--	--	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Methylene Chloride	5	5	11	ug/l	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
m-Xylene & p-Xylene	--	--	--	ug/l	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
o-Xylene	10000	--	19	ug/l	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Styrene	100	100	120	ug/l	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Tetrachloroethene	5	--	--	ug/l	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Toluene	1000	1000	110	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
trans-1,2-Dichloroethene	100	--	--	ug/l	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
trans-1,3-Dichloropropene	2	--	--	ug/l	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Trichloroethene	5	--	--	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Trichlorofluoromethane	10000	--	520	ug/l	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Vinyl chloride	0.2	2	0.019	ug/l	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U

Preliminary – Under EPA and MDEQ Review

Table 7. Volatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-042	CFMW-043	CFMW-043	CFMW-044	CFMW-044	CFMW-044b	CFMW-044b	CFMW-045	CFMW-045
				Sample Date	9/14/2016	9/13/2016	12/14/2016	9/15/2016	12/9/2016	9/19/2016	12/19/2016	9/15/2016	12/14/2016
				Sample Designation	CFMW-042-GW	CFMW-043-GW	CFMW-043-GW	CFMW-044-GW	CFMW-044-GW	CFMW-044b-GW	CFMW-044b-GW	CFMW-045-GW	CFMW-045-GW
				Sample Round	Round 1	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
				Sample Type	N	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
1,1,1-Trichloroethane	200	200	800	ug/l	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
1,1,2,2-Tetrachloroethane	2	--	--	ug/l	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,1,2-Trichloro-1,2,2-trifluoroethane	--	--	5500	ug/l	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 UJ	0.34 U	0.34 U
1,1,2-Trichloroethane	3	--	--	ug/l	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
1,1-Dichloroethane	4	--	2.8	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
1,1-Dichloroethene	7	--	--	ug/l	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
1,2,3-Trichlorobenzene	0.7	--	0.7	ug/l	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
1,2,4-Trichlorobenzene	70	--	0.4	ug/l	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
1,2-Dibromo-3-Chloropropane	0.2	0.2	0.00033	ug/l	0.23 U	0.23 U	0.23 UJ	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 UJ
1,2-Dichlorobenzene	600	600	30	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dichloroethane	4	5	0.17	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.28 J	0.25 U	0.25 U	0.25 U
1,2-Dichloropropane	5	5	0.44	ug/l	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
1,3-Dichlorobenzene	600	--	--	ug/l	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
1,4-Dichlorobenzene	75	75	0.48	ug/l	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
2-Butanone (MEK)	--	--	560	ug/l	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
2-Hexanone	--	--	3.8	ug/l	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U
4-Methyl-2-pentanone (MIBK)	--	--	630	ug/l	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
Acetone	--	--	1400	ug/l	1.1 U	1.1 U	1.1 UJ	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 UJ
Benzene	5	5	0.46	ug/l	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
Bromoform	80	80	3.3	ug/l	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Bromomethane	10	--	0.75	ug/l	0.18 U	0.18 UJ	0.18 U	0.18 U	0.18 U	0.18 U	0.18 UJ	0.18 U	0.18 U
Carbon disulfide	--	--	81	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Carbon tetrachloride	3	5	0.46	ug/l	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
Chlorobenzene	100	100	7.8	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Chlorobromomethane	--	--	8.3	ug/l	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Chlorodibromomethane	4	80	0.87	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Chloroethane	--	--	2100	ug/l	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 UJ	0.37 U	0.37 U	0.37 U
Chloroform	70	80	0.22	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Chloromethane	30	--	19	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
cis-1,2-Dichloroethene	70	--	--	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
cis-1,3-Dichloropropene	4	--	--	ug/l	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Cyclohexane	--	--	1300	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Dichlorobromomethane	10	80	0.13	ug/l	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Dichlorodifluoromethane	1000	--	20	ug/l	0.14 U	0.14 UJ	0.14 U	0.14 U	0.14 U	3.1	3.5 J	0.14 U	0.14 U
Ethylbenzene	700	700	1.5	ug/l	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Ethylene Dibromide	0.004	--	--	ug/l	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Isopropylbenzene	--	--	--	ug/l	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Methyl acetate	--	--	2000	ug/l	0.58 U	0.58 U	0.58 UJ	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 UJ
Methyl tert-butyl ether	30	--	14	ug/l	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U

Preliminary - Under EPA/MDEQ Review

Table 7. Volatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

			Sample Location		CFMW-042	CFMW-043	CFMW-043	CFMW-044	CFMW-044	CFMW-044b	CFMW-044b	CFMW-045	CFMW-045
			Sample Date		9/14/2016	9/13/2016	12/14/2016	9/15/2016	12/9/2016	9/19/2016	12/19/2016	9/15/2016	12/14/2016
			Sample Designation		CFMW-042-GW	CFMW-043-GW	CFMW-043-GW	CFMW-044-GW	CFMW-044-GW	CFMW-044b-GW	CFMW-044b-GW	CFMW-045-GW	CFMW-045-GW
			Sample Round		Round 1	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
Methylcyclohexane	--	--	--	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 UJ	0.22 U	0.22 U
Methylene Chloride	5	5	11	ug/l	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.51 J
m-Xylene & p-Xylene	--	--	--	ug/l	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
o-Xylene	10000	--	19	ug/l	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Styrene	100	100	120	ug/l	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Tetrachloroethene	5	--	--	ug/l	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Toluene	1000	1000	110	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
trans-1,2-Dichloroethene	100	--	--	ug/l	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
trans-1,3-Dichloropropene	2	--	--	ug/l	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Trichloroethene	5	--	--	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Trichlorofluoromethane	10000	--	520	ug/l	0.15 U	0.15 U	0.15 UJ	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 UJ
Vinyl chloride	0.2	2	0.019	ug/l	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U

Preliminary – Under EPA and MDEQ Review

Table 7. Volatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-047	CFMW-047	CFMW-049	CFMW-049	CFMW-049	CFMW-050	CFMW-050	CFMW-053	CFMW-053
				Sample Date	9/14/2016	12/15/2016	9/21/2016	12/15/2016	12/15/2016	9/19/2016	12/15/2016	9/14/2016	12/12/2016
				Sample Designation	CFMW-047-GW	CFMW-047-GW	CFMW-049-GW	CFMW-049-GW	CFMW-DUP6-GW	CFMW-050-GW	CFMW-050-GW	CFMW-053-GW	CFMW-053-GW
				Sample Round	Round 1	Round 2	Round 1	Round 2	Round 2	Round 1	Round 2	Round 1	Round 2
				Sample Type	N	N	N	N	FD	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
1,1,1-Trichloroethane	200	200	800	ug/l	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
1,1,2,2-Tetrachloroethane	2	--	--	ug/l	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,1,2-Trichloro-1,2,2-trifluoroethane	--	--	5500	ug/l	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
1,1,2-Trichloroethane	3	--	--	ug/l	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
1,1-Dichloroethane	4	--	2.8	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
1,1-Dichloroethene	7	--	--	ug/l	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
1,2,3-Trichlorobenzene	0.7	--	0.7	ug/l	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
1,2,4-Trichlorobenzene	70	--	0.4	ug/l	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
1,2-Dibromo-3-Chloropropane	0.2	0.2	0.00033	ug/l	0.23 U	0.23 UJ	0.23 UJ	0.23 UJ	0.23 UJ	0.23 U	0.23 UJ	0.23 U	0.23 U
1,2-Dichlorobenzene	600	600	30	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dichloroethane	4	5	0.17	ug/l	0.25 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2-Dichloropropane	5	5	0.44	ug/l	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
1,3-Dichlorobenzene	600	--	--	ug/l	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
1,4-Dichlorobenzene	75	75	0.48	ug/l	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
2-Butanone (MEK)	--	--	560	ug/l	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
2-Hexanone	--	--	3.8	ug/l	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U
4-Methyl-2-pentanone (MIBK)	--	--	630	ug/l	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
Acetone	--	--	1400	ug/l	10	1.1 UJ	1.1 U	1.1 UJ	1.1 UJ	1.1 U	1.1 UJ	1.1 U	1.1 U
Benzene	5	5	0.46	ug/l	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
Bromoform	80	80	3.3	ug/l	0.18 U	0.18 U	0.18 UJ	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Bromomethane	10	--	0.75	ug/l	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Carbon disulfide	--	--	81	ug/l	3	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Carbon tetrachloride	3	5	0.46	ug/l	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
Chlorobenzene	100	100	7.8	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Chlorobromomethane	--	--	8.3	ug/l	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Chlorodibromomethane	4	80	0.87	ug/l	0.22 U	0.22 U	0.22 UJ	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Chloroethane	--	--	2100	ug/l	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 UJ	0.37 U	0.37 U	0.37 U
Chloroform	70	80	0.22	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Chloromethane	30	--	19	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
cis-1,2-Dichloroethene	70	--	--	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
cis-1,3-Dichloropropene	4	--	--	ug/l	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Cyclohexane	--	--	1300	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Dichlorobromomethane	10	80	0.13	ug/l	0.15 U	0.15 U	0.15 UJ	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Dichlorodifluoromethane	1000	--	20	ug/l	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Ethylbenzene	700	700	1.5	ug/l	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Ethylene Dibromide	0.004	--	--	ug/l	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Isopropylbenzene	--	--	--	ug/l	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Methyl acetate	--	--	2000	ug/l	0.58 U	0.58 UJ	0.58 U	0.58 UJ	0.58 UJ	0.58 U	0.58 UJ	0.58 U	0.58 U
Methyl tert-butyl ether	30	--	14	ug/l	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U

Preliminary - Under EPA Review

Table 7. Volatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

			Sample Location		CFMW-047	CFMW-047	CFMW-049	CFMW-049	CFMW-049	CFMW-050	CFMW-050	CFMW-053	CFMW-053
			Sample Date		9/14/2016	12/15/2016	9/21/2016	12/15/2016	12/15/2016	9/19/2016	12/15/2016	9/14/2016	12/12/2016
			Sample Designation		CFMW-047-GW	CFMW-047-GW	CFMW-049-GW	CFMW-049-GW	CFMW-DUP6-GW	CFMW-050-GW	CFMW-050-GW	CFMW-053-GW	CFMW-053-GW
			Sample Round		Round 1	Round 2	Round 1	Round 2	Round 2	Round 1	Round 2	Round 1	Round 2
Methylcyclohexane	--	--	--	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Methylene Chloride	5	5	11	ug/l	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
m-Xylene & p-Xylene	--	--	--	ug/l	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
o-Xylene	10000	--	19	ug/l	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Styrene	100	100	120	ug/l	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Tetrachloroethene	5	--	--	ug/l	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.14 J	0.12 U	0.12 U	0.12 U
Toluene	1000	1000	110	ug/l	2.2	0.66 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
trans-1,2-Dichloroethene	100	--	--	ug/l	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
trans-1,3-Dichloropropene	2	--	--	ug/l	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Trichloroethene	5	--	--	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Trichlorofluoromethane	10000	--	520	ug/l	0.15 U	0.15 UJ	0.15 U	0.15 UJ	0.15 UJ	0.15 U	0.15 UJ	0.15 U	0.15 U
Vinyl chloride	0.2	2	0.019	ug/l	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U

Preliminary – Under EPA and MDEQ Review

Table 7. Volatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-054	CFMW-054	CFMW-061	CFMW-061	CFMW-061	CFMW-064	CFMW-064
				Sample Date	9/14/2016	12/12/2016	9/15/2016	12/7/2016	12/7/2016	9/15/2016	12/7/2016
				Sample Designation	CFMW-054-GW	CFMW-054-GW	CFMW-061-GW	CFMW-061-GW	CFMW-DUP5-GW	CFMW-064-GW	CFMW-064-GW
				Sample Round	Round 1	Round 2	Round 1	Round 2	Round 2	Round 1	Round 2
				Sample Type	N	N	N	N	FD	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit							
1,1,1-Trichloroethane	200	200	800	ug/l	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
1,1,2,2-Tetrachloroethane	2	--	--	ug/l	0.19 U	0.19 U	0.19 U	0.19 UJ	0.19 UJ	0.19 U	0.19 U
1,1,2-Trichloro-1,2,2-trifluoroethane	--	--	5500	ug/l	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
1,1,2-Trichloroethane	3	--	--	ug/l	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
1,1-Dichloroethane	4	--	2.8	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
1,1-Dichloroethene	7	--	--	ug/l	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
1,2,3-Trichlorobenzene	0.7	--	0.7	ug/l	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
1,2,4-Trichlorobenzene	70	--	0.4	ug/l	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
1,2-Dibromo-3-Chloropropane	0.2	0.2	0.00033	ug/l	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
1,2-Dichlorobenzene	600	600	30	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dichloroethane	4	5	0.17	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2-Dichloropropane	5	5	0.44	ug/l	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
1,3-Dichlorobenzene	600	--	--	ug/l	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
1,4-Dichlorobenzene	75	75	0.48	ug/l	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
2-Butanone (MEK)	--	--	560	ug/l	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
2-Hexanone	--	--	3.8	ug/l	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U
4-Methyl-2-pentanone (MIBK)	--	--	630	ug/l	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
Acetone	--	--	1400	ug/l	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Benzene	5	5	0.46	ug/l	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
Bromoform	80	80	3.3	ug/l	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Bromomethane	10	--	0.75	ug/l	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Carbon disulfide	--	--	81	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Carbon tetrachloride	3	5	0.46	ug/l	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
Chlorobenzene	100	100	7.8	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Chlorobromomethane	--	--	8.3	ug/l	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Chlorodibromomethane	4	80	0.87	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Chloroethane	--	--	2100	ug/l	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
Chloroform	70	80	0.22	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Chloromethane	30	--	19	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
cis-1,2-Dichloroethene	70	--	--	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
cis-1,3-Dichloropropene	4	--	--	ug/l	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Cyclohexane	--	--	1300	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Dichlorobromomethane	10	80	0.13	ug/l	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Dichlorodifluoromethane	1000	--	20	ug/l	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Ethylbenzene	700	700	1.5	ug/l	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Ethylene Dibromide	0.004	--	--	ug/l	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Isopropylbenzene	--	--	--	ug/l	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Methyl acetate	--	--	2000	ug/l	0.58 U	0.58 U	0.58 U	0.58 UJ	0.58 UJ	0.58 U	0.58 U
Methyl tert-butyl ether	30	--	14	ug/l	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U

Preliminary - Under EPA/MDEQ Review

Table 7. Volatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-054	CFMW-054	CFMW-061	CFMW-061	CFMW-061	CFMW-064	CFMW-064
				Sample Date	9/14/2016	12/12/2016	9/15/2016	12/7/2016	12/7/2016	9/15/2016	12/7/2016
				Sample Designation	CFMW-054-GW	CFMW-054-GW	CFMW-061-GW	CFMW-061-GW	CFMW-DUP5-GW	CFMW-064-GW	CFMW-064-GW
				Sample Round	Round 1	Round 2	Round 1	Round 2	Round 2	Round 1	Round 2
Methylcyclohexane	--	--	--	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Methylene Chloride	5	5	11	ug/l	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
m-Xylene & p-Xylene	--	--	--	ug/l	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
o-Xylene	10000	--	19	ug/l	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Styrene	100	100	120	ug/l	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Tetrachloroethene	5	--	--	ug/l	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Toluene	1000	1000	110	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
trans-1,2-Dichloroethene	100	--	--	ug/l	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
trans-1,3-Dichloropropene	2	--	--	ug/l	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Trichloroethene	5	--	--	ug/l	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Trichlorofluoromethane	10000	--	520	ug/l	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Vinyl chloride	0.2	2	0.019	ug/l	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U

Preliminary – Under EPA and MDEQ Review

Table 8. Semivolatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-002	CFMW-003	CFMW-003	CFMW-007	CFMW-007	CFMW-008a	CFMW-008a	CFMW-010	CFMW-010
				Sample Date	9/12/2016	9/14/2016	12/9/2016	9/21/2016	12/12/2016	9/15/2016	12/16/2016	9/12/2016	12/15/2016
				Sample Designation	CFMW-002-GW	CFMW-003-GW	CFMW-003-GW	CFMW-007-GW	CFMW-007-GW	CFMW-008a-GW	CFMW-008a-GW	CFMW-010-GW	CFMW-010-GW
				Sample Round	Round 1	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
				Sample Type	N	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
1,1'-Biphenyl	--	--	0.083	ug/l	0.63 U	0.66 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 UJ
1,2,4,5-Tetrachlorobenzene	0.97	--	0.17	ug/l	0.43 U	0.45 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 UJ
1,4-Dioxane	--	--	0.46	ug/l	3.1 U	3.3 U	3.1 U	3.1 UJ	3.1 U	3.1 U	3.1 U	3.1 U	3.1 U
2,2'-oxybis[1-chloropropane]	1400	--	--	ug/l	0.93 U	0.97 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U
2,3,4,6-Tetrachlorophenol	--	--	24	ug/l	0.69 U	0.72 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
2,4,5-Trichlorophenol	1800	--	120	ug/l	0.49 U	0.51 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U
2,4,6-Trichlorophenol	30	--	1.2	ug/l	0.53 U	0.55 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U
2,4-Dichlorophenol	77	--	4.6	ug/l	0.63 U	0.66 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
2,4-Dimethylphenol	380	--	36	ug/l	0.91 U	0.95 U	0.91 U	0.91 U	0.91 UJ	0.91 U	0.91 U	0.91 U	0.91 U
2,4-Dinitrophenol	69	--	3.9	ug/l	2.4 U	2.5 UJ	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U
2,4-Dinitrotoluene	1.1	--	0.24	ug/l	1 U	1.1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,6-Dinitrotoluene	0.5	--	0.049	ug/l	0.88 U	0.92 U	0.88 U	0.88 U	0.88 U	0.88 U	0.88 U	0.88 U	0.88 U
2-Chloronaphthalene	1000	--	--	ug/l	0.61 U	0.64 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U
2-Chlorophenol	81	--	9.1	ug/l	0.74 U	0.77 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U
2-Methylnaphthalene	--	--	3.6	ug/l	0.88 U	0.92 U	0.88 U	0.88 U	0.88 U	0.88 U	0.88 U	0.88 U	0.88 U
2-Methylphenol	--	--	--	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
2-Nitroaniline	--	--	19	ug/l	0.65 U	0.68 UJ	0.65 U	0.65 U	0.65 U	0.65 UJ	0.65 U	0.65 U	0.65 U
2-Nitrophenol	--	--	--	ug/l	0.59 U	0.62 U	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U
3 & 4 Methylphenol	--	--	--	ug/l	0.88 U	0.92 UJ	0.88 U	0.88 U	0.88 U	0.88 UJ	0.88 U	0.88 U	0.88 U
3,3'-Dichlorobenzidine	0.21	--	0.13	ug/l	1 U	1.1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
3-Nitroaniline	--	--	--	ug/l	0.82 U	0.86 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U
4,6-Dinitro-2-methylphenol	13	--	--	ug/l	2 U	2.1 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
4-Bromophenyl phenyl ether	--	--	--	ug/l	1 U	1.1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Chloro-3-methylphenol	3000	--	--	ug/l	0.76 U	0.79 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
4-Chloroaniline	--	--	0.37	ug/l	0.73 U	0.76 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U
4-Chlorophenyl phenyl ether	--	--	--	ug/l	0.96 U	1 U	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U
4-Nitroaniline	--	--	3.8	ug/l	0.48 U	0.5 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
4-Nitrophenol	60	--	--	ug/l	4.7 U	4.9 U	4.7 U	4.7 U	4.7 UJ	4.7 U	4.7 U	4.7 U	4.7 U
Acenaphthene	670	--	53	ug/l	0.88 U	0.92 U	0.88 U	0.88 U	0.88 U	0.88 U	0.88 U	0.88 U	0.88 UJ
Acenaphthylene	--	--	--	ug/l	0.65 U	0.68 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U
Acetophenone	--	--	190	ug/l	1 U	1.1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Anthracene	2100	--	180	ug/l	0.57 U	0.6 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
Atrazine	3	3	0.3	ug/l	0.77 U	0.81 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U
Benzaldehyde	--	--	190	ug/l	0.86 U	0.9 U	0.86 U	0.86 U	0.86 U	0.86 U	0.86 U	0.86 U	0.86 U
Benzo[a]anthracene	0.5	--	--	ug/l	0.55 U	0.58 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U
Benzo[a]pyrene	0.05	0.2	0.0034	ug/l	0.16 U	0.17 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Benzo[b]fluoranthene	0.5	--	0.034	ug/l	0.44 U	0.46 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
Benzo[g,h,i]perylene	--	--	--	ug/l	0.75 U	0.78 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Benzo[k]fluoranthene	5	--	0.34	ug/l	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U

Preliminary Under EPA and MDEQ Review

Table 8. Semivolatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-002	CFMW-003	CFMW-003	CFMW-007	CFMW-007	CFMW-008a	CFMW-008a	CFMW-010	CFMW-010
				Sample Date	9/12/2016	9/14/2016	12/9/2016	9/21/2016	12/12/2016	9/15/2016	12/16/2016	9/12/2016	12/15/2016
				Sample Designation	CFMW-002-GW	CFMW-003-GW	CFMW-003-GW	CFMW-007-GW	CFMW-007-GW	CFMW-008a-GW	CFMW-008a-GW	CFMW-010-GW	CFMW-010-GW
				Sample Round	Round 1	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
				Sample Type	N	N	N	N	N	N	N	N	N
Bis(2-chloroethoxy)methane	--	--	5.9	ug/l	0.69 U	0.72 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
Bis(2-chloroethyl)ether	0.3	--	0.014	ug/l	0.12 U	0.13 U	0.12 UJ	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 UJ
Bis(2-ethylhexyl) phthalate	6	6	5.6	ug/l	0.72 U	0.75 U	0.72 U	0.72 U	0.72 U	1.1 J	2.4	0.72 U	0.72 U
Butyl benzyl phthalate	1500	--	16	ug/l	0.6 U	0.63 U	0.6 U	0.6 U	0.6 UJ	0.6 U	0.6 U	0.6 U	0.6 U
Caprolactam	--	--	990	ug/l	1.1 U	1.1 U	1.1 U	1.1 UJ	1.1 UJ	1.1 U	1.1 U	1.1 U	1.1 U
Carbazole	--	--	--	ug/l	0.85 U	0.89 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U
Chrysene	50	--	3.4	ug/l	0.67 U	0.7 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U
Dibenz(a,h)anthracene	0.05	--	0.0034	ug/l	0.09 U	0.094 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
Dibenzofuran	--	--	0.79	ug/l	0.85 U	0.89 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U
Diethyl phthalate	17000	--	--	ug/l	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U
Dimethyl phthalate	270000	--	--	ug/l	0.98 U	1 U	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U
Di-n-butyl phthalate	2000	--	--	ug/l	0.82 U	0.86 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U
Di-n-octyl phthalate	--	--	20	ug/l	0.69 U	0.72 U	0.69 U	0.69 U	0.69 UJ	0.69 U	0.69 U	0.69 U	0.69 U
Fluoranthene	130	--	80	ug/l	0.72 U	0.75 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U
Fluorene	1100	--	29	ug/l	0.8 U	0.84 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
Hexachlorobenzene	0.2	1	0.0098	ug/l	0.47 U	0.49 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U
Hexachlorobutadiene	5	--	0.14	ug/l	0.76 U	0.79 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
Hexachlorocyclopentadiene	50	50	0.041	ug/l	0.61 U	0.64 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U
Hexachloroethane	30	--	0.33	ug/l	0.09 U	0.094 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
Indeno[1,2,3-cd]pyrene	0.5	--	0.034	ug/l	0.21 U	0.22 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Isophorone	400	--	78	ug/l	0.67 U	0.7 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U
Naphthalene	100	--	0.17	ug/l	0.8 U	0.84 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
Nitrobenzene	17	--	0.14	ug/l	0.49 U	0.51 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U
N-Nitrosodi-n-propylamine	0.5	--	0.011	ug/l	0.83 U	0.87 UJ	0.83 U	0.83 U	0.83 U	0.83 UJ	0.83 U	0.83 U	0.83 U
N-Nitrosodiphenylamine	33	--	12	ug/l	0.74 U	0.77 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U
Pentachlorophenol	1	1	0.041	ug/l	2.2 U	2.3 R	2.2 UJ	2.2 U	2.2 UJ	2.2 U	2.2 U	2.2 U	2.2 UJ
Phenanthrene	--	--	--	ug/l	0.65 U	0.68 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U
Phenol	300	--	580	ug/l	0.41 U	0.43 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U
Pyrene	830	--	12	ug/l	0.83 U	0.87 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U

Preliminary Under EPA and MDEQ Review

Table 8. Semivolatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-011	CFMW-011	CFMW-012	CFMW-012	CFMW-014	CFMW-014	CFMW-015	CFMW-015	CFMW-019
				Sample Date	9/13/2016	12/8/2016	9/12/2016	12/14/2016	9/12/2016	12/15/2016	9/12/2016	12/15/2016	9/12/2016
				Sample Designation	CFMW-011-GW	CFMW-011-GW	CFMW-012-GW	CFMW-012-GW	CFMW-014-GW	CFMW-014-GW	CFMW-015-GW	CFMW-015-GW	CFMW-019-GW
				Sample Round	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1
				Sample Type	N	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
1,1'-Biphenyl	--	--	0.083	ug/l	0.66 U	0.63 U	0.63 U	0.63 U	0.68 U	0.63 UJ	0.63 U	0.63 UJ	0.63 U
1,2,4,5-Tetrachlorobenzene	0.97	--	0.17	ug/l	0.45 U	0.43 U	0.43 U	0.43 U	0.47 U	0.43 UJ	0.43 U	0.43 UJ	0.43 U
1,4-Dioxane	--	--	0.46	ug/l	3.2 U	3.1 U	3.1 U	3.1 UJ	3.4 U	3.1 U	3.1 U	3.1 U	3.1 U
2,2'-oxybis[1-chloropropane]	1400	--	--	ug/l	0.97 U	0.93 U	0.93 U	0.93 U	1 U	0.93 U	0.93 U	0.93 U	0.93 U
2,3,4,6-Tetrachlorophenol	--	--	24	ug/l	0.72 U	0.69 U	0.69 U	0.69 U	0.75 U	0.69 U	0.69 U	0.69 U	0.69 U
2,4,5-Trichlorophenol	1800	--	120	ug/l	0.51 U	0.49 U	0.49 U	0.49 U	0.53 U	0.49 U	0.49 U	0.49 U	0.49 U
2,4,6-Trichlorophenol	30	--	1.2	ug/l	0.55 U	0.53 U	0.53 U	0.53 U	0.58 U	0.53 U	0.53 U	0.53 U	0.53 U
2,4-Dichlorophenol	77	--	4.6	ug/l	0.66 U	0.63 U	0.63 U	0.63 U	0.68 U	0.63 U	0.63 U	0.63 U	0.63 U
2,4-Dimethylphenol	380	--	36	ug/l	0.95 U	0.91 U	0.91 U	0.91 U	0.99 U	0.91 U	0.91 U	0.91 UJ	0.91 U
2,4-Dinitrophenol	69	--	3.9	ug/l	2.5 UJ	2.4 U	2.4 U	2.4 U	2.6 U	2.4 U	2.4 U	2.4 U	2.4 U
2,4-Dinitrotoluene	1.1	--	0.24	ug/l	1.1 U	1 U	1 U	1 U	1.1 U	1 U	1 U	1 U	1 U
2,6-Dinitrotoluene	0.5	--	0.049	ug/l	0.92 U	0.88 U	0.88 U	0.88 U	0.96 U	0.88 U	0.88 U	0.88 U	0.88 U
2-Chloronaphthalene	1000	--	--	ug/l	0.64 U	0.61 U	0.61 U	0.61 U	0.66 U	0.61 U	0.61 U	0.61 U	0.61 U
2-Chlorophenol	81	--	9.1	ug/l	0.77 U	0.74 U	0.74 U	0.74 U	0.8 U	0.74 U	0.74 U	0.74 U	0.74 U
2-Methylnaphthalene	--	--	3.6	ug/l	0.92 U	0.88 U	0.88 U	0.88 U	0.96 U	0.88 U	0.88 U	0.88 U	0.88 U
2-Methylphenol	--	--	--	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.4 U	1.3 U	1.3 U	1.3 U	1.3 U
2-Nitroaniline	--	--	19	ug/l	0.68 U	0.65 U	0.65 U	0.65 U	0.71 U	0.65 U	0.65 U	0.65 UJ	0.65 U
2-Nitrophenol	--	--	--	ug/l	0.61 U	0.59 U	0.59 U	0.59 U	0.64 U	0.59 U	0.59 U	0.59 U	0.59 U
3 & 4 Methylphenol	--	--	--	ug/l	0.92 U	0.88 U	0.88 U	0.88 U	0.96 U	0.88 U	0.88 UJ	0.88 U	0.88 U
3,3'-Dichlorobenzidine	0.21	--	0.13	ug/l	1.1 U	1 U	1 U	1 U	1.1 U	1 U	1 U	1 R	1 U
3-Nitroaniline	--	--	--	ug/l	0.85 U	0.82 U	0.82 U	0.82 U	0.89 U	0.82 U	0.82 U	0.82 R	0.82 U
4,6-Dinitro-2-methylphenol	13	--	--	ug/l	2.1 U	2 U	2 U	2 U	2.2 U	2 U	2 U	2 U	2 U
4-Bromophenyl phenyl ether	--	--	--	ug/l	1.1 U	1 U	1 U	1 U	1.1 U	1 U	1 U	1 U	1 U
4-Chloro-3-methylphenol	3000	--	--	ug/l	0.79 U	0.76 U	0.76 U	0.76 U	0.83 U	0.76 U	0.76 U	0.76 U	0.76 U
4-Chloroaniline	--	--	0.37	ug/l	0.76 U	0.73 U	0.73 U	0.73 U	0.79 U	0.73 U	0.73 U	0.73 UJ	0.73 U
4-Chlorophenyl phenyl ether	--	--	--	ug/l	1 U	0.96 U	0.96 U	0.96 U	1 U	0.96 U	0.96 U	0.96 U	0.96 U
4-Nitroaniline	--	--	3.8	ug/l	0.5 U	0.48 U	0.48 U	0.48 U	0.52 U	0.48 U	0.48 U	0.48 R	0.48 U
4-Nitrophenol	60	--	--	ug/l	4.8 U	4.7 U	4.7 U	4.7 U	5.1 U	4.7 U	4.7 U	4.7 U	4.7 U
Acenaphthene	670	--	53	ug/l	0.92 U	0.88 U	0.88 U	0.88 UJ	0.96 U	0.88 UJ	0.88 U	0.88 UJ	0.88 U
Acenaphthylene	--	--	--	ug/l	0.68 U	0.65 U	0.65 U	0.65 U	0.71 U	0.65 U	0.65 U	0.65 U	0.65 U
Acetophenone	--	--	190	ug/l	1.1 U	1 U	1 U	1 U	1.1 U	1 U	1 U	1 U	1 U
Anthracene	2100	--	180	ug/l	0.59 U	0.57 U	0.57 U	0.57 U	0.62 U	0.57 U	0.57 U	0.57 U	0.57 U
Atrazine	3	3	0.3	ug/l	0.8 U	0.77 U	0.77 U	0.77 U	0.84 U	0.77 U	0.77 U	0.77 U	0.77 U
Benzaldehyde	--	--	190	ug/l	0.9 U	0.86 U	0.86 U	0.86 U	0.93 U	0.86 U	0.86 U	0.86 U	0.86 U
Benzo[a]anthracene	0.5	--	--	ug/l	0.57 U	0.55 U	0.55 U	0.55 U	0.6 U	0.55 U	0.55 U	0.55 U	0.55 U
Benzo[a]pyrene	0.05	0.2	0.0034	ug/l	0.17 U	0.16 U	0.16 U	0.16 U	0.17 U	0.16 U	0.16 U	0.16 U	0.16 U
Benzo[b]fluoranthene	0.5	--	0.034	ug/l	0.46 U	0.44 U	0.44 U	0.44 U	0.48 U	0.44 U	0.44 U	0.44 U	0.44 U
Benzo[g,h,i]perylene	--	--	--	ug/l	0.78 U	0.75 U	0.75 U	0.75 U	0.82 U	0.75 U	0.75 U	0.75 U	0.75 U
Benzo[k]fluoranthene	5	--	0.34	ug/l	0.19 U	0.18 U	0.18 U	0.18 U	0.2 U	0.18 U	0.18 U	0.18 U	0.18 U

Preliminary Under EPA and MDEQ Review

Table 8. Semivolatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-011	CFMW-011	CFMW-012	CFMW-012	CFMW-014	CFMW-014	CFMW-015	CFMW-015	CFMW-019
				Sample Date	9/13/2016	12/8/2016	9/12/2016	12/14/2016	9/12/2016	12/15/2016	9/12/2016	12/15/2016	9/12/2016
				Sample Designation	CFMW-011-GW	CFMW-011-GW	CFMW-012-GW	CFMW-012-GW	CFMW-014-GW	CFMW-014-GW	CFMW-015-GW	CFMW-015-GW	CFMW-019-GW
				Sample Round	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1
				Sample Type	N	N	N	N	N	N	N	N	N
Bis(2-chloroethoxy)methane	--	--	5.9	ug/l	0.72 U	0.69 U	0.69 U	0.69 U	0.75 U	0.69 U	0.69 U	0.69 U	0.69 U
Bis(2-chloroethyl)ether	0.3	--	0.014	ug/l	0.13 U	0.12 UJ	0.12 U	0.12 UJ	0.13 U	0.12 UJ	0.12 U	0.12 UJ	0.12 U
Bis(2-ethylhexyl) phthalate	6	6	5.6	ug/l	0.75 U	0.72 U	0.72 U	0.72 U	0.78 U	0.72 U	0.72 U	0.72 U	0.72 U
Butyl benzyl phthalate	1500	--	16	ug/l	0.63 U	0.6 U	0.6 U	0.6 U	0.65 U	0.6 U	0.6 U	0.6 U	0.6 U
Caprolactam	--	--	990	ug/l	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Carbazole	--	--	--	ug/l	0.89 U	0.85 U	0.85 U	0.85 U	0.92 U	0.85 U	0.85 U	0.85 U	0.85 U
Chrysene	50	--	3.4	ug/l	0.7 U	0.67 U	0.67 U	0.67 U	0.73 U	0.67 U	0.67 U	0.67 U	0.67 U
Dibenz(a,h)anthracene	0.05	--	0.0034	ug/l	0.094 U	0.09 U	0.09 U	0.09 U	0.098 U	0.09 U	0.09 U	0.09 U	0.09 U
Dibenzofuran	--	--	0.79	ug/l	0.89 U	0.85 U	0.85 U	0.85 U	0.92 U	0.85 U	0.85 U	0.85 U	0.85 U
Diethyl phthalate	17000	--	--	ug/l	1 U	1 U	1 U	1 U	1.1 U	1 U	1 U	1 U	1 U
Dimethyl phthalate	270000	--	--	ug/l	1 U	0.98 U	0.98 U	0.98 U	1.1 U	0.98 U	0.98 U	0.98 U	0.98 U
Di-n-butyl phthalate	2000	--	--	ug/l	0.85 U	0.82 U	0.82 U	0.82 U	0.89 U	0.82 U	0.82 U	0.82 U	0.82 U
Di-n-octyl phthalate	--	--	20	ug/l	0.72 U	0.69 U	0.69 U	0.69 U	0.75 U	0.69 U	0.69 U	0.69 U	0.69 U
Fluoranthene	130	--	80	ug/l	0.75 U	0.72 U	0.72 U	0.72 U	0.78 U	0.72 U	0.72 U	0.72 U	0.72 U
Fluorene	1100	--	29	ug/l	0.83 U	0.8 U	0.8 U	0.8 U	0.87 U	0.8 U	0.8 U	0.8 U	0.8 U
Hexachlorobenzene	0.2	1	0.0098	ug/l	0.49 U	0.47 U	0.47 U	0.47 U	0.51 U	0.47 U	0.47 U	0.47 U	0.47 U
Hexachlorobutadiene	5	--	0.14	ug/l	0.79 U	0.76 U	0.76 U	0.76 U	0.83 U	0.76 U	0.76 U	0.76 U	0.76 U
Hexachlorocyclopentadiene	50	50	0.041	ug/l	0.64 U	0.61 U	0.61 U	0.61 U	0.66 U	0.61 U	0.61 U	0.61 U	0.61 U
Hexachloroethane	30	--	0.33	ug/l	0.094 U	0.09 U	0.09 U	0.09 U	0.098 U	0.09 U	0.09 U	0.09 U	0.09 U
Indeno[1,2,3-cd]pyrene	0.5	--	0.034	ug/l	0.22 U	0.21 U	0.21 U	0.21 U	0.23 U	0.21 U	0.21 U	0.21 U	0.21 U
Isophorone	400	--	78	ug/l	0.7 U	0.67 U	0.67 U	0.67 U	0.73 U	0.67 U	0.67 U	0.67 U	0.67 U
Naphthalene	100	--	0.17	ug/l	0.83 U	0.8 U	0.8 U	0.8 U	0.87 U	0.8 U	0.8 U	0.8 U	0.8 U
Nitrobenzene	17	--	0.14	ug/l	0.51 U	0.49 U	0.49 U	0.49 U	0.53 U	0.49 U	0.49 U	0.49 U	0.49 U
N-Nitrosodi-n-propylamine	0.5	--	0.011	ug/l	0.86 U	0.83 U	0.83 U	0.83 U	0.9 U	0.83 U	0.83 U	0.83 U	0.83 U
N-Nitrosodiphenylamine	33	--	12	ug/l	0.77 U	0.74 U	0.74 U	0.74 UJ	0.8 U	0.74 U	0.74 U	0.74 U	0.74 U
Pentachlorophenol	1	1	0.041	ug/l	2.3 R	2.2 U	2.2 U	2.2 UJ	2.4 U	2.2 UJ	2.2 U	2.2 UJ	2.2 U
Phenanthrene	--	--	--	ug/l	0.68 U	0.65 U	0.65 U	0.65 U	0.71 U	0.65 U	0.65 U	0.65 U	0.65 U
Phenol	300	--	580	ug/l	0.43 U	0.41 U	0.41 U	0.41 U	0.45 U	0.41 U	0.41 U	0.41 U	0.41 U
Pyrene	830	--	12	ug/l	0.86 U	0.83 U	0.83 U	0.83 U	0.9 U	0.83 U	0.83 U	0.83 U	0.83 U

Preliminary Under QA and MFG Review

Table 8. Semivolatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-019	CFMW-020	CFMW-020	CFMW-021	CFMW-021	CFMW-022	CFMW-022	CFMW-023	CFMW-023
				Sample Date	12/15/2016	9/20/2016	12/13/2016	9/12/2016	12/14/2016	9/13/2016	12/9/2016	9/21/2016	12/19/2016
				Sample Designation	CFMW-019-GW	CFMW-020-GW	CFMW-020-GW	CFMW-021-GW	CFMW-021-GW	CFMW-022-GW	CFMW-022-GW	CFMW-023-GW	CFMW-023-GW
				Sample Round	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
				Sample Type	N	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
1,1'-Biphenyl	--	--	0.083	ug/l	0.65 UJ	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.66 UJ
1,2,4,5-Tetrachlorobenzene	0.97	--	0.17	ug/l	0.44 UJ	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.45 U
1,4-Dioxane	--	--	0.46	ug/l	3.2 U	3.1 U	3.1 U	3.1 U	3.1 UJ	3.1 U	3.1 U	3.1 UJ	3.3 U
2,2'-oxybis[1-chloropropane]	1400	--	--	ug/l	0.96 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.98 U
2,3,4,6-Tetrachlorophenol	--	--	24	ug/l	0.71 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.72 U
2,4,5-Trichlorophenol	1800	--	120	ug/l	0.51 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.51 U
2,4,6-Trichlorophenol	30	--	1.2	ug/l	0.55 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.56 U
2,4-Dichlorophenol	77	--	4.6	ug/l	0.65 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.66 U
2,4-Dimethylphenol	380	--	36	ug/l	0.94 U	0.91 U	0.91 UJ	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.96 U
2,4-Dinitrophenol	69	--	3.9	ug/l	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 UJ	2.4 U	2.4 U	2.5 U
2,4-Dinitrotoluene	1.1	--	0.24	ug/l	1.1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.1 U
2,6-Dinitrotoluene	0.5	--	0.049	ug/l	0.91 U	0.88 U	0.88 U	0.88 U	0.88 U	0.88 U	0.88 U	0.88 U	0.92 U
2-Chloronaphthalene	1000	--	--	ug/l	0.63 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.64 U
2-Chlorophenol	81	--	9.1	ug/l	0.76 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.78 U
2-Methylnaphthalene	--	--	3.6	ug/l	0.91 U	0.88 U	0.88 U	0.88 U	0.88 U	0.88 U	0.88 U	0.88 U	0.92 U
2-Methylphenol	--	--	--	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.4 U
2-Nitroaniline	--	--	19	ug/l	0.67 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.68 U
2-Nitrophenol	--	--	--	ug/l	0.61 U	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	0.62 U
3 & 4 Methylphenol	--	--	--	ug/l	0.91 U	0.88 U	0.88 U	0.88 UJ	0.88 U	0.88 U	0.88 U	0.88 U	0.92 U
3,3'-Dichlorobenzidine	0.21	--	0.13	ug/l	1.1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.1 U
3-Nitroaniline	--	--	--	ug/l	0.85 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.86 U
4,6-Dinitro-2-methylphenol	13	--	--	ug/l	2.1 U	2 U	2 U	2 U	2 U	2 U	2 U	2.2 J	2.1 U
4-Bromophenyl phenyl ether	--	--	--	ug/l	1.1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.1 U
4-Chloro-3-methylphenol	3000	--	--	ug/l	0.79 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.8 U
4-Chloroaniline	--	--	0.37	ug/l	0.75 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.77 U
4-Chlorophenyl phenyl ether	--	--	--	ug/l	0.99 U	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U	1 U
4-Nitroaniline	--	--	3.8	ug/l	0.5 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.5 U
4-Nitrophenol	60	--	--	ug/l	4.8 U	4.7 U	4.7 UJ	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.9 U
Acenaphthene	670	--	53	ug/l	0.91 UJ	0.88 U	0.88 UJ	0.88 U	0.88 UJ	0.88 U	0.88 U	0.88 U	0.92 U
Acenaphthylene	--	--	--	ug/l	0.67 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.68 U
Acetophenone	--	--	190	ug/l	1.1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.1 U
Anthracene	2100	--	180	ug/l	0.59 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.6 U
Atrazine	3	3	0.3	ug/l	0.8 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.81 U
Benzaldehyde	--	--	190	ug/l	0.89 U	0.86 U	0.86 U	0.86 U	0.86 U	0.86 U	0.86 U	0.86 U	0.9 U
Benzo[a]anthracene	0.5	--	--	ug/l	0.57 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.58 U
Benzo[a]pyrene	0.05	0.2	0.0034	ug/l	0.17 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.17 U
Benzo[b]fluoranthene	0.5	--	0.034	ug/l	0.45 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.46 U
Benzo[g,h,i]perylene	--	--	--	ug/l	0.77 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.79 U
Benzo[k]fluoranthene	5	--	0.34	ug/l	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.19 U

Preliminary Under EPA and MDEQ Review

Table 8. Semivolatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

			Sample Location		CFMW-019	CFMW-020	CFMW-020	CFMW-021	CFMW-021	CFMW-022	CFMW-022	CFMW-023	CFMW-023
			Sample Date		12/15/2016	9/20/2016	12/13/2016	9/12/2016	12/14/2016	9/13/2016	12/9/2016	9/21/2016	12/19/2016
			Sample Designation		CFMW-019-GW	CFMW-020-GW	CFMW-020-GW	CFMW-021-GW	CFMW-021-GW	CFMW-022-GW	CFMW-022-GW	CFMW-023-GW	CFMW-023-GW
			Sample Round		Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
			Sample Type		N	N	N	N	N	N	N	N	N
Bis(2-chloroethoxy)methane	--	--	5.9	ug/l	0.71 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.72 U
Bis(2-chloroethyl)ether	0.3	--	0.014	ug/l	0.12 UJ	0.12 U	0.12 UJ	0.12 U	0.12 UJ	0.12 U	0.12 UJ	0.12 U	0.13 UJ
Bis(2-ethylhexyl) phthalate	6	6	5.6	ug/l	0.74 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	1.2 J	0.72 U	0.76 U
Butyl benzyl phthalate	1500	--	16	ug/l	0.62 U	0.6 U	0.6 UJ	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.63 U
Caprolactam	--	--	990	ug/l	1.1 U	1.1 U	1.1 UJ	1.1 U	1.1 U	1.1 U	1.1 U	1.1 UJ	1.1 U
Carbazole	--	--	--	ug/l	0.88 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.89 U
Chrysene	50	--	3.4	ug/l	0.69 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.7 U
Dibenz(a,h)anthracene	0.05	--	0.0034	ug/l	0.093 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.095 U
Dibenzofuran	--	--	0.79	ug/l	0.88 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.89 U
Diethyl phthalate	17000	--	--	ug/l	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1.1 UJ
Dimethyl phthalate	270000	--	--	ug/l	1 U	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U	1 UJ
Di-n-butyl phthalate	2000	--	--	ug/l	0.85 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	1.2 J	0.82 U	0.86 U
Di-n-octyl phthalate	--	--	20	ug/l	0.71 U	0.69 U	0.69 UJ	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.72 U
Fluoranthene	130	--	80	ug/l	0.74 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.76 U
Fluorene	1100	--	29	ug/l	0.83 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.84 U
Hexachlorobenzene	0.2	1	0.0098	ug/l	0.49 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.49 U
Hexachlorobutadiene	5	--	0.14	ug/l	0.79 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.8 U
Hexachlorocyclopentadiene	50	50	0.041	ug/l	0.63 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.64 U
Hexachloroethane	30	--	0.33	ug/l	0.093 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.095 U
Indeno[1,2,3-cd]pyrene	0.5	--	0.034	ug/l	0.22 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.22 U
Isophorone	400	--	78	ug/l	0.69 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.7 U
Naphthalene	100	--	0.17	ug/l	0.83 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.84 U
Nitrobenzene	17	--	0.14	ug/l	0.51 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.51 U
N-Nitrosodi-n-propylamine	0.5	--	0.011	ug/l	0.86 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.87 U
N-Nitrosodiphenylamine	33	--	12	ug/l	0.76 U	0.74 U	0.74 U	0.74 U	0.74 UJ	0.74 U	0.74 U	0.74 U	0.78 U
Pentachlorophenol	1	1	0.041	ug/l	2.3 UJ	2.2 U	2.2 UJ	2.2 U	2.2 UJ	2.2 R	2.2 UJ	2.2 U	2.3 U
Phenanthrene	--	--	--	ug/l	0.67 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.68 U
Phenol	300	--	580	ug/l	0.42 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.43 U
Pyrene	830	--	12	ug/l	0.86 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.87 U

Preliminary Under QA and QC Review

Table 8. Semivolatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-025b	CFMW-025b	CFMW-026	CFMW-026	CFMW-027	CFMW-027	CFMW-028	CFMW-028	CFMW-029
				Sample Date	9/13/2016	12/7/2016	9/13/2016	12/5/2016	9/13/2016	12/14/2016	9/13/2016	12/5/2016	9/13/2016
				Sample Designation	CFMW-025b-GW	CFMW-025b-GW	CFMW-026-GW	CFMW-026-GW	CFMW-027-GW	CFMW-027-GW	CFMW-028-GW	CFMW-028-GW	CFMW-029-GW
				Sample Round	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1
				Sample Type	N	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
1,1'-Biphenyl	--	--	0.083	ug/l	0.63 U	0.63 U	0.63 U	0.63 U	0.64 U	0.63 U	0.63 U	0.63 U	0.66 U
1,2,4,5-Tetrachlorobenzene	0.97	--	0.17	ug/l	0.43 U	0.43 U	0.43 U	0.43 U	0.44 U	0.43 U	0.43 U	0.43 U	0.45 U
1,4-Dioxane	--	--	0.46	ug/l	3.1 U	3.1 U	3.1 U	3.1 U	3.2 U	3.1 UJ	3.1 U	3.1 U	3.2 U
2,2'-oxybis[1-chloropropane]	1400	--	--	ug/l	0.93 U	0.93 U	0.93 U	0.93 U	0.95 U	0.93 U	0.93 U	0.93 U	0.97 U
2,3,4,6-Tetrachlorophenol	--	--	24	ug/l	0.69 U	0.69 U	0.69 U	0.69 U	0.7 U	0.69 U	0.69 U	0.69 U	0.72 U
2,4,5-Trichlorophenol	1800	--	120	ug/l	0.49 U	0.49 U	0.49 U	0.49 U	0.5 U	0.49 U	0.49 U	0.49 U	0.51 U
2,4,6-Trichlorophenol	30	--	1.2	ug/l	0.53 U	0.53 U	0.53 U	0.53 U	0.54 U	0.53 U	0.53 U	0.53 U	0.55 U
2,4-Dichlorophenol	77	--	4.6	ug/l	0.63 U	0.63 U	0.63 U	0.63 U	0.64 U	0.63 U	0.63 U	0.63 U	0.66 U
2,4-Dimethylphenol	380	--	36	ug/l	0.91 U	0.91 U	0.91 U	0.91 U	0.93 U	0.91 U	0.91 U	0.91 U	0.95 U
2,4-Dinitrophenol	69	--	3.9	ug/l	2.4 UJ	2.4 U	2.4 UJ	2.4 U	2.4 UJ	2.4 U	2.4 UJ	2.4 U	2.5 UJ
2,4-Dinitrotoluene	1.1	--	0.24	ug/l	1 U	1 U	1 U	1 U	1.1 U	1 U	1 U	1 U	1.1 U
2,6-Dinitrotoluene	0.5	--	0.049	ug/l	0.88 U	0.88 U	0.88 U	0.88 U	0.9 U	0.88 U	0.88 U	0.88 U	0.92 U
2-Chloronaphthalene	1000	--	--	ug/l	0.61 U	0.61 U	0.61 U	0.61 U	0.62 U	0.61 U	0.61 U	0.61 U	0.64 U
2-Chlorophenol	81	--	9.1	ug/l	0.74 U	0.74 U	0.74 U	0.74 U	0.76 U	0.74 U	0.74 U	0.74 U	0.77 U
2-Methylnaphthalene	--	--	3.6	ug/l	0.88 U	0.88 U	0.88 U	0.88 U	0.9 U	0.88 U	0.88 U	0.88 U	0.92 U
2-Methylphenol	--	--	--	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
2-Nitroaniline	--	--	19	ug/l	0.65 U	0.65 U	0.65 U	0.65 U	0.66 U	0.65 U	0.65 U	0.65 U	0.68 U
2-Nitrophenol	--	--	--	ug/l	0.59 U	0.59 U	0.59 U	0.59 U	0.6 U	0.59 U	0.59 U	0.59 U	0.61 U
3 & 4 Methylphenol	--	--	--	ug/l	0.88 U	0.88 U	0.88 U	0.88 U	0.9 U	0.88 U	0.88 U	0.88 U	0.92 U
3,3'-Dichlorobenzidine	0.21	--	0.13	ug/l	1 U	1 U	1 U	1 U	1.1 U	1 U	1 U	1 U	1.1 U
3-Nitroaniline	--	--	--	ug/l	0.82 U	0.82 U	0.82 U	0.82 U	0.84 U	0.82 U	0.82 U	0.82 U	0.85 U
4,6-Dinitro-2-methylphenol	13	--	--	ug/l	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U	2 U	2.1 U
4-Bromophenyl phenyl ether	--	--	--	ug/l	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.1 U
4-Chloro-3-methylphenol	3000	--	--	ug/l	0.76 U	0.76 U	0.76 U	0.76 U	0.78 U	0.76 U	0.76 U	0.76 U	0.79 U
4-Chloroaniline	--	--	0.37	ug/l	0.73 U	0.73 U	0.73 U	0.73 U	0.74 U	0.73 U	0.73 U	0.73 U	0.76 U
4-Chlorophenyl phenyl ether	--	--	--	ug/l	0.96 U	0.96 U	0.96 U	0.96 U	0.98 U	0.96 U	0.96 U	0.96 U	1 U
4-Nitroaniline	--	--	3.8	ug/l	0.48 U	0.48 U	0.48 U	0.48 U	0.49 U	0.48 U	0.48 U	0.48 U	0.5 U
4-Nitrophenol	60	--	--	ug/l	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.8 U
Acenaphthene	670	--	53	ug/l	0.88 U	0.88 U	0.88 U	0.88 U	0.9 U	0.88 UJ	0.88 U	0.88 U	0.92 U
Acenaphthylene	--	--	--	ug/l	0.65 U	0.65 U	0.65 U	0.65 U	0.66 U	0.65 U	0.65 U	0.65 U	0.68 U
Acetophenone	--	--	190	ug/l	1 U	1 U	1 U	1 U	1.1 U	1 U	1 U	1 U	1.1 U
Anthracene	2100	--	180	ug/l	0.57 U	0.57 U	0.57 U	0.57 U	0.58 U	0.57 U	0.57 U	0.57 U	0.59 U
Atrazine	3	3	0.3	ug/l	0.77 U	0.77 U	0.77 U	0.77 U	0.79 U	0.77 U	0.77 U	0.77 U	0.8 U
Benzaldehyde	--	--	190	ug/l	0.86 U	0.86 U	0.86 U	0.86 U	0.88 U	0.86 U	0.86 U	0.86 U	0.9 U
Benzo[a]anthracene	0.5	--	--	ug/l	0.55 U	0.55 U	0.55 U	0.55 U	0.56 U	0.55 U	0.55 U	0.55 U	0.57 U
Benzo[a]pyrene	0.05	0.2	0.0034	ug/l	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.17 U
Benzo[b]fluoranthene	0.5	--	0.034	ug/l	0.44 U	0.44 U	0.44 U	0.44 U	0.45 U	0.44 U	0.44 U	0.44 U	0.46 U
Benzo[g,h,i]perylene	--	--	--	ug/l	0.75 U	0.75 U	0.75 U	0.75 U	0.77 U	0.75 U	0.75 U	0.75 U	0.78 U
Benzo[k]fluoranthene	5	--	0.34	ug/l	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.19 U

Preliminary Under Final and MDEQ Review

Table 8. Semivolatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-025b	CFMW-025b	CFMW-026	CFMW-026	CFMW-027	CFMW-027	CFMW-028	CFMW-028	CFMW-029
				Sample Date	9/13/2016	12/7/2016	9/13/2016	12/5/2016	9/13/2016	12/14/2016	9/13/2016	12/5/2016	9/13/2016
				Sample Designation	CFMW-025b-GW	CFMW-025b-GW	CFMW-026-GW	CFMW-026-GW	CFMW-027-GW	CFMW-027-GW	CFMW-028-GW	CFMW-028-GW	CFMW-029-GW
				Sample Round	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1
				Sample Type	N	N	N	N	N	N	N	N	N
Bis(2-chloroethoxy)methane	--	--	5.9	ug/l	0.69 U	0.69 U	0.69 U	0.69 U	0.7 U	0.69 U	0.69 U	0.69 U	0.72 U
Bis(2-chloroethyl)ether	0.3	--	0.014	ug/l	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 UJ	0.12 U	0.12 U	0.13 U
Bis(2-ethylhexyl) phthalate	6	6	5.6	ug/l	0.72 U	0.72 U	0.72 U	0.72 U	0.73 U	0.72 U	0.72 U	0.72 U	0.75 U
Butyl benzyl phthalate	1500	--	16	ug/l	0.6 U	0.6 U	0.6 U	0.6 U	0.61 U	0.6 U	0.6 U	0.6 U	0.63 U
Caprolactam	--	--	990	ug/l	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Carbazole	--	--	--	ug/l	0.85 U	0.85 U	0.85 U	0.85 U	0.87 U	0.85 U	0.85 U	0.85 U	0.89 U
Chrysene	50	--	3.4	ug/l	0.67 U	0.67 U	0.67 U	0.67 U	0.68 U	0.67 U	0.67 U	0.67 U	0.7 U
Dibenz(a,h)anthracene	0.05	--	0.0034	ug/l	0.09 U	0.09 U	0.09 U	0.09 U	0.092 U	0.09 U	0.09 U	0.09 U	0.094 U
Dibenzofuran	--	--	0.79	ug/l	0.85 U	0.85 U	0.85 U	0.85 U	0.87 U	0.85 U	0.85 U	0.85 U	0.89 U
Diethyl phthalate	17000	--	--	ug/l	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dimethyl phthalate	270000	--	--	ug/l	0.98 U	0.98 U	0.98 U	0.98 U	1 U	0.98 U	0.98 U	0.98 U	1 U
Di-n-butyl phthalate	2000	--	--	ug/l	0.82 U	0.82 U	0.82 U	0.82 U	0.84 U	0.82 U	0.82 U	0.82 U	0.85 U
Di-n-octyl phthalate	--	--	20	ug/l	0.69 U	0.69 U	0.69 U	0.69 U	0.7 U	0.69 U	0.69 U	0.69 U	0.72 U
Fluoranthene	130	--	80	ug/l	0.72 U	0.72 U	0.72 U	0.72 U	0.73 U	0.72 U	0.72 U	0.72 U	0.75 U
Fluorene	1100	--	29	ug/l	0.8 U	0.8 U	0.8 U	0.8 U	0.82 U	0.8 U	0.8 U	0.8 U	0.83 U
Hexachlorobenzene	0.2	1	0.0098	ug/l	0.47 U	0.47 U	0.47 U	0.47 U	0.48 U	0.47 U	0.47 U	0.47 U	0.49 U
Hexachlorobutadiene	5	--	0.14	ug/l	0.76 U	0.76 U	0.76 U	0.76 U	0.78 U	0.76 U	0.76 U	0.76 U	0.79 U
Hexachlorocyclopentadiene	50	50	0.041	ug/l	0.61 U	0.61 U	0.61 U	0.61 U	0.62 U	0.61 U	0.61 U	0.61 U	0.64 U
Hexachloroethane	30	--	0.33	ug/l	0.09 U	0.09 U	0.09 U	0.09 U	0.092 U	0.09 U	0.09 U	0.09 U	0.094 U
Indeno[1,2,3-cd]pyrene	0.5	--	0.034	ug/l	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.22 U
Isophorone	400	--	78	ug/l	0.67 U	0.67 U	0.67 U	0.67 U	0.68 U	0.67 U	0.67 U	0.67 U	0.7 U
Naphthalene	100	--	0.17	ug/l	0.8 U	0.8 U	0.8 U	0.8 U	0.82 U	0.8 U	0.8 U	0.8 U	0.83 U
Nitrobenzene	17	--	0.14	ug/l	0.49 U	0.49 U	0.49 U	0.49 U	0.5 U	0.49 U	0.49 U	0.49 U	0.51 U
N-Nitrosodi-n-propylamine	0.5	--	0.011	ug/l	0.83 U	0.83 U	0.83 U	0.83 U	0.85 U	0.83 U	0.83 U	0.83 U	0.86 U
N-Nitrosodiphenylamine	33	--	12	ug/l	0.74 U	0.74 U	0.74 U	0.74 U	0.76 U	0.74 UJ	0.74 U	0.74 U	0.77 U
Pentachlorophenol	1	1	0.041	ug/l	2.2 R	2.2 U	2.2 R	2.2 U	2.2 R	2.2 UJ	2.2 R	2.2 U	
Phenanthrene	--	--	--	ug/l	0.65 U	0.65 U	0.65 U	0.65 U	0.66 U	0.65 U	0.65 U	0.65 U	0.68 U
Phenol	300	--	580	ug/l	0.41 U	0.41 U	0.41 U	0.41 U	0.42 U	0.41 U	0.41 U	0.41 U	0.43 U
Pyrene	830	--	12	ug/l	0.83 U	0.83 U	0.83 U	0.83 U	0.85 U	0.83 U	0.83 U	0.83 U	0.86 U

Preliminary Under Final and MDEQ Review

Table 8. Semivolatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-029	CFMW-029	CFMW-031	CFMW-031	CFMW-032	CFMW-032	CFMW-033	CFMW-033	CFMW-034
				Sample Date	9/13/2016	12/14/2016	9/15/2016	12/9/2016	9/15/2016	12/13/2016	9/15/2016	12/6/2016	9/14/2016
				Sample Designation	CFMW-DUP1-GW	CFMW-029-GW	CFMW-031-GW	CFMW-031-GW	CFMW-032-GW	CFMW-032-GW	CFMW-033-GW	CFMW-033-GW	CFMW-034-GW
				Sample Round	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1
				Sample Type	FD	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
1,1'-Biphenyl	--	--	0.083	ug/l	0.66 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.66 U
1,2,4,5-Tetrachlorobenzene	0.97	--	0.17	ug/l	0.45 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.45 U
1,4-Dioxane	--	--	0.46	ug/l	3.2 U	3.1 UJ	3.1 U	3.1 U	3.1 U	3.1 U	3.1 U	3.1 U	3.3 U
2,2'-oxybis[1-chloropropane]	1400	--	--	ug/l	0.97 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 UJ	0.97 U
2,3,4,6-Tetrachlorophenol	--	--	24	ug/l	0.72 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.72 U
2,4,5-Trichlorophenol	1800	--	120	ug/l	0.51 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.51 U
2,4,6-Trichlorophenol	30	--	1.2	ug/l	0.55 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.55 U
2,4-Dichlorophenol	77	--	4.6	ug/l	0.66 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.66 U
2,4-Dimethylphenol	380	--	36	ug/l	0.95 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 UJ	0.91 U	0.91 U	0.95 U
2,4-Dinitrophenol	69	--	3.9	ug/l	2.5 UJ	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.5 UJ
2,4-Dinitrotoluene	1.1	--	0.24	ug/l	1.1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.1 U
2,6-Dinitrotoluene	0.5	--	0.049	ug/l	0.92 U	0.88 U	0.88 U	0.88 U	0.88 U	0.88 U	0.88 U	0.88 U	0.92 U
2-Chloronaphthalene	1000	--	--	ug/l	0.64 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.64 U
2-Chlorophenol	81	--	9.1	ug/l	0.77 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.77 U
2-Methylnaphthalene	--	--	3.6	ug/l	0.92 U	0.88 U	0.88 U	0.88 U	0.88 U	0.88 U	0.88 U	0.88 U	0.92 U
2-Methylphenol	--	--	--	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 UJ	1.3 U
2-Nitroaniline	--	--	19	ug/l	0.68 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 UJ	0.65 U	0.68 UJ
2-Nitrophenol	--	--	--	ug/l	0.61 U	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	0.62 U
3 & 4 Methylphenol	--	--	--	ug/l	0.92 U	0.88 U	0.88 UJ	0.88 U	0.88 UJ	0.88 U	0.88 UJ	0.88 UJ	0.92 UJ
3,3'-Dichlorobenzidine	0.21	--	0.13	ug/l	1.1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.1 U
3-Nitroaniline	--	--	--	ug/l	0.85 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.86 U
4,6-Dinitro-2-methylphenol	13	--	--	ug/l	2.1 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2.1 U
4-Bromophenyl phenyl ether	--	--	--	ug/l	1.1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.1 U
4-Chloro-3-methylphenol	3000	--	--	ug/l	0.79 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.79 U
4-Chloroaniline	--	--	0.37	ug/l	0.76 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.76 U
4-Chlorophenyl phenyl ether	--	--	--	ug/l	1 U	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U	1 U
4-Nitroaniline	--	--	3.8	ug/l	0.5 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.5 U
4-Nitrophenol	60	--	--	ug/l	4.8 U	4.7 U	4.7 UJ	4.7 U	4.7 UJ	4.7 UJ	4.7 U	4.7 UJ	4.9 U
Acenaphthene	670	--	53	ug/l	0.92 U	0.88 UJ	0.88 U	0.88 U	0.88 U	0.88 UJ	0.88 U	0.88 U	0.92 U
Acenaphthylene	--	--	--	ug/l	0.68 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.68 U
Acetophenone	--	--	190	ug/l	1.1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.1 U
Anthracene	2100	--	180	ug/l	0.59 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.6 U
Atrazine	3	3	0.3	ug/l	0.8 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.81 U
Benzaldehyde	--	--	190	ug/l	0.9 U	0.86 U	0.86 U	0.86 U	0.86 U	0.86 U	0.86 U	0.86 U	0.9 U
Benzo[a]anthracene	0.5	--	--	ug/l	0.57 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.58 U
Benzo[a]pyrene	0.05	0.2	0.0034	ug/l	0.17 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.17 U
Benzo[b]fluoranthene	0.5	--	0.034	ug/l	0.46 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.46 U
Benzo[g,h,i]perylene	--	--	--	ug/l	0.78 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.78 U
Benzo[k]fluoranthene	5	--	0.34	ug/l	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.19 U

Preliminary Under Final and MDEQ Review

Table 8. Semivolatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-029	CFMW-029	CFMW-031	CFMW-031	CFMW-032	CFMW-032	CFMW-033	CFMW-033	CFMW-034
				Sample Date	9/13/2016	12/14/2016	9/15/2016	12/9/2016	9/15/2016	12/13/2016	9/15/2016	12/6/2016	9/14/2016
				Sample Designation	CFMW-DUP1-GW	CFMW-029-GW	CFMW-031-GW	CFMW-031-GW	CFMW-032-GW	CFMW-032-GW	CFMW-033-GW	CFMW-033-GW	CFMW-034-GW
				Sample Round	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1
				Sample Type	FD	N	N	N	N	N	N	N	N
Bis(2-chloroethoxy)methane	--	--	5.9	ug/l	0.72 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.72 U
Bis(2-chloroethyl)ether	0.3	--	0.014	ug/l	0.13 U	0.12 UJ	0.12 U	0.12 UJ	0.12 U	0.12 UJ	0.12 U	0.12 UJ	0.13 U
Bis(2-ethylhexyl) phthalate	6	6	5.6	ug/l	0.75 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.75 U
Butyl benzyl phthalate	1500	--	16	ug/l	0.63 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 UJ	0.6 U	0.6 U	0.63 U
Caprolactam	--	--	990	ug/l	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 UJ	1.1 U	1.1 U	1.1 U
Carbazole	--	--	--	ug/l	0.89 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.89 U
Chrysene	50	--	3.4	ug/l	0.7 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 UJ	0.7 U
Dibenz(a,h)anthracene	0.05	--	0.0034	ug/l	0.094 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.094 U
Dibenzofuran	--	--	0.79	ug/l	0.89 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.89 U
Diethyl phthalate	17000	--	--	ug/l	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U
Dimethyl phthalate	270000	--	--	ug/l	1 U	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U	1 U
Di-n-butyl phthalate	2000	--	--	ug/l	0.85 U	0.82 U	0.82 U	1.3 J	0.82 U	0.82 U	0.82 U	0.82 U	0.86 U
Di-n-octyl phthalate	--	--	20	ug/l	0.72 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 UJ	0.69 U	0.69 U	0.72 U
Fluoranthene	130	--	80	ug/l	0.75 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.75 U
Fluorene	1100	--	29	ug/l	0.83 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.84 U
Hexachlorobenzene	0.2	1	0.0098	ug/l	0.49 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.49 U
Hexachlorobutadiene	5	--	0.14	ug/l	0.79 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.79 U
Hexachlorocyclopentadiene	50	50	0.041	ug/l	0.64 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.64 U
Hexachloroethane	30	--	0.33	ug/l	0.094 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.094 U
Indeno[1,2,3-cd]pyrene	0.5	--	0.034	ug/l	0.22 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.22 U
Isophorone	400	--	78	ug/l	0.7 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.7 U
Naphthalene	100	--	0.17	ug/l	0.83 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.84 U
Nitrobenzene	17	--	0.14	ug/l	0.51 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.51 U
N-Nitrosodi-n-propylamine	0.5	--	0.011	ug/l	0.86 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 UJ	0.83 U	0.87 UJ
N-Nitrosodiphenylamine	33	--	12	ug/l	0.77 U	0.74 UJ	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.77 U
Pentachlorophenol	1	1	0.041	ug/l	2.3 R	2.2 UJ	2.2 U	2.2 UJ	2.2 U	2.2 UJ	2.2 U	2.2 U	2.3 R
Phenanthrene	--	--	--	ug/l	0.68 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.68 U
Phenol	300	--	580	ug/l	0.43 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.43 U
Pyrene	830	--	12	ug/l	0.86 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.87 U

Preliminary Under Final and MDEQ Review

Table 8. Semivolatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-034	CFMW-035	CFMW-035	CFMW-037	CFMW-037	CFMW-038	CFMW-038	CFMW-040	CFMW-040
				Sample Date	12/13/2016	9/14/2016	12/13/2016	9/16/2016	12/8/2016	9/14/2016	12/9/2016	9/14/2016	12/13/2016
				Sample Designation	CFMW-034-GW	CFMW-035-GW	CFMW-035-GW	CFMW-037-GW	CFMW-037-GW	CFMW-038-GW	CFMW-038-GW	CFMW-040-GW	CFMW-040-GW
				Sample Round	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
				Sample Type	N	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
1,1'-Biphenyl	--	--	0.083	ug/l	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.66 U	0.63 U	0.64 U	0.63 U
1,2,4,5-Tetrachlorobenzene	0.97	--	0.17	ug/l	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.45 U	0.43 U	0.44 U	0.43 U
1,4-Dioxane	--	--	0.46	ug/l	3.1 U	3.1 U	3.1 U	3.1 U	3.1 U	3.2 U	3.1 U	3.2 U	3.1 U
2,2'-oxybis[1-chloropropane]	1400	--	--	ug/l	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.97 U	0.93 U	0.95 U	0.93 U
2,3,4,6-Tetrachlorophenol	--	--	24	ug/l	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.72 U	0.69 U	0.7 U	0.69 U
2,4,5-Trichlorophenol	1800	--	120	ug/l	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.51 U	0.49 U	0.5 U	0.49 U
2,4,6-Trichlorophenol	30	--	1.2	ug/l	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.55 U	0.53 U	0.54 U	0.53 U
2,4-Dichlorophenol	77	--	4.6	ug/l	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.66 U	0.63 U	0.64 U	0.63 U
2,4-Dimethylphenol	380	--	36	ug/l	0.91 UJ	0.91 U	0.91 UJ	0.91 U	0.91 U	0.95 U	0.91 U	0.93 U	0.91 UJ
2,4-Dinitrophenol	69	--	3.9	ug/l	2.4 U	2.4 UJ	2.4 U	2.4 U	2.4 U	2.5 UJ	2.4 U	2.4 UJ	2.4 U
2,4-Dinitrotoluene	1.1	--	0.24	ug/l	1 U	1 U	1 U	1 U	1 U	1.1 U	1 U	1.1 U	1 U
2,6-Dinitrotoluene	0.5	--	0.049	ug/l	0.88 U	0.88 U	0.88 U	0.88 U	0.88 U	0.92 U	0.88 U	0.9 U	0.88 U
2-Chloronaphthalene	1000	--	--	ug/l	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.64 U	0.61 U	0.62 U	0.61 U
2-Chlorophenol	81	--	9.1	ug/l	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.77 U	0.74 U	0.76 U	0.74 U
2-Methylnaphthalene	--	--	3.6	ug/l	0.88 U	0.88 U	0.88 U	0.88 U	0.88 U	0.92 U	0.88 U	0.9 U	0.88 U
2-Methylphenol	--	--	--	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
2-Nitroaniline	--	--	19	ug/l	0.65 U	0.65 UJ	0.65 U	0.65 UJ	0.65 U	0.68 UJ	0.65 U	0.66 UJ	0.65 U
2-Nitrophenol	--	--	--	ug/l	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	0.61 U	0.59 U	0.6 U	0.59 U
3 & 4 Methylphenol	--	--	--	ug/l	0.88 U	0.88 UJ	0.88 U	0.88 UJ	0.88 U	0.92 UJ	0.88 U	0.9 UJ	0.88 U
3,3'-Dichlorobenzidine	0.21	--	0.13	ug/l	1 U	1 U	1 U	1 U	1 U	1.1 U	1 U	1.1 U	1 U
3-Nitroaniline	--	--	--	ug/l	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.85 U	0.82 U	0.84 U	0.82 U
4,6-Dinitro-2-methylphenol	13	--	--	ug/l	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2.1 U	2 U
4-Bromophenyl phenyl ether	--	--	--	ug/l	1 U	1 U	1 U	1 U	1 U	1.1 U	1 U	1 U	1 U
4-Chloro-3-methylphenol	3000	--	--	ug/l	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.79 U	0.76 U	0.78 U	0.76 U
4-Chloroaniline	--	--	0.37	ug/l	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.76 U	0.73 U	0.74 U	0.73 U
4-Chlorophenyl phenyl ether	--	--	--	ug/l	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U	1 U	0.96 U	0.98 U	0.96 U
4-Nitroaniline	--	--	3.8	ug/l	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.5 U	0.48 U	0.49 U	0.48 U
4-Nitrophenol	60	--	--	ug/l	4.7 UJ	4.7 U	4.7 UJ	4.7 U	4.7 U	4.8 U	4.7 U	4.7 U	4.7 UJ
Acenaphthene	670	--	53	ug/l	0.88 UJ	0.88 U	0.88 UJ	0.88 U	0.88 U	0.92 U	0.88 UJ	0.9 U	0.88 UJ
Acenaphthylene	--	--	--	ug/l	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.68 U	0.65 U	0.66 U	0.65 U
Acetophenone	--	--	190	ug/l	1 U	1 U	1 U	1 U	1 U	1.1 U	1 U	1.1 U	1 U
Anthracene	2100	--	180	ug/l	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.59 U	0.57 U	0.58 U	0.57 U
Atrazine	3	3	0.3	ug/l	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.8 U	0.77 U	0.79 U	0.77 U
Benzaldehyde	--	--	190	ug/l	0.86 U	0.86 U	0.86 U	0.86 U	0.86 U	0.9 U	0.86 UJ	0.88 U	0.86 U
Benzo[a]anthracene	0.5	--	--	ug/l	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.57 U	0.55 U	0.56 U	0.55 U
Benzo[a]pyrene	0.05	0.2	0.0034	ug/l	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.17 U	0.16 U	0.16 U	0.16 U
Benzo[b]fluoranthene	0.5	--	0.034	ug/l	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.46 U	0.44 U	0.45 U	0.44 U
Benzo[g,h,i]perylene	--	--	--	ug/l	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.78 U	0.75 U	0.77 U	0.75 U
Benzo[k]fluoranthene	5	--	0.34	ug/l	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U

Preliminary Under EPA and MDEQ Review

Table 8. Semivolatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

			Sample Location		CFMW-034	CFMW-035	CFMW-035	CFMW-037	CFMW-037	CFMW-038	CFMW-038	CFMW-040	CFMW-040
			Sample Date		12/13/2016	9/14/2016	12/13/2016	9/16/2016	12/8/2016	9/14/2016	12/9/2016	9/14/2016	12/13/2016
			Sample Designation		CFMW-034-GW	CFMW-035-GW	CFMW-035-GW	CFMW-037-GW	CFMW-037-GW	CFMW-038-GW	CFMW-038-GW	CFMW-040-GW	CFMW-040-GW
			Sample Round		Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
			Sample Type		N	N	N	N	N	N	N	N	N
Bis(2-chloroethoxy)methane	--	--	5.9	ug/l	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.72 U	0.69 U	0.7 U	0.69 U
Bis(2-chloroethyl)ether	0.3	--	0.014	ug/l	0.12 UJ	0.12 U	0.12 UJ	0.12 U	0.12 UJ	0.13 U	0.12 UJ	0.12 U	0.12 UJ
Bis(2-ethylhexyl) phthalate	6	6	5.6	ug/l	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	1.1 J	0.72 U	0.73 U	0.72 U
Butyl benzyl phthalate	1500	--	16	ug/l	0.6 UJ	0.6 U	0.6 UJ	0.6 U	0.6 U	0.63 U	0.6 U	0.61 U	0.6 UJ
Caprolactam	--	--	990	ug/l	1.1 UJ	1.1 U	1.1 UJ	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 UJ
Carbazole	--	--	--	ug/l	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.89 U	0.85 U	0.87 U	0.85 U
Chrysene	50	--	3.4	ug/l	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.7 U	0.67 U	0.68 U	0.67 U
Dibenz(a,h)anthracene	0.05	--	0.0034	ug/l	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.094 U	0.09 U	0.092 U	0.09 U
Dibenzofuran	--	--	0.79	ug/l	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.89 U	0.85 U	0.87 U	0.85 U
Diethyl phthalate	17000	--	--	ug/l	1 UJ	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 UJ
Dimethyl phthalate	270000	--	--	ug/l	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U	1 U	0.98 U	1 U	0.98 U
Di-n-butyl phthalate	2000	--	--	ug/l	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.85 U	0.82 U	0.84 U	0.82 U
Di-n-octyl phthalate	--	--	20	ug/l	0.69 UJ	0.69 U	0.69 UJ	0.69 U	0.69 U	0.72 U	0.69 U	0.7 U	0.69 UJ
Fluoranthene	130	--	80	ug/l	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.75 U	0.72 U	0.73 U	0.72 U
Fluorene	1100	--	29	ug/l	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.83 U	0.8 U	0.82 U	0.8 U
Hexachlorobenzene	0.2	1	0.0098	ug/l	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.49 U	0.47 U	0.48 U	0.47 U
Hexachlorobutadiene	5	--	0.14	ug/l	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.79 U	0.76 U	0.78 U	0.76 U
Hexachlorocyclopentadiene	50	50	0.041	ug/l	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.64 U	0.61 U	0.62 U	0.61 U
Hexachloroethane	30	--	0.33	ug/l	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.094 U	0.09 U	0.092 U	0.09 U
Indeno[1,2,3-cd]pyrene	0.5	--	0.034	ug/l	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.22 U	0.21 U	0.21 U	0.21 U
Isophorone	400	--	78	ug/l	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.7 U	0.67 U	0.68 U	0.67 U
Naphthalene	100	--	0.17	ug/l	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.83 U	0.8 U	0.82 U	0.8 U
Nitrobenzene	17	--	0.14	ug/l	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.51 U	0.49 U	0.5 U	0.49 U
N-Nitrosodi-n-propylamine	0.5	--	0.011	ug/l	0.83 U	0.83 UJ	0.83 U	0.83 UJ	0.83 U	0.86 UJ	0.83 U	0.85 UJ	0.83 U
N-Nitrosodiphenylamine	33	--	12	ug/l	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.77 U	0.74 U	0.76 U	0.74 U
Pentachlorophenol	1	1	0.041	ug/l	2.2 UJ	2.2 R	2.2 UJ	2.2 U	2.2 U	2.3 R	2.2 U	2.2 R	2.2 UJ
Phenanthrene	--	--	--	ug/l	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.68 U	0.65 U	0.66 U	0.65 U
Phenol	300	--	580	ug/l	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.43 U	0.41 U	0.42 U	0.41 U
Pyrene	830	--	12	ug/l	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.86 U	0.83 U	0.85 U	0.83 U

Preliminary Under QA and QC Review

Table 8. Semivolatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

			Sample Location		CFMW-042	CFMW-043	CFMW-043	CFMW-044	CFMW-044	CFMW-044b	CFMW-044b	CFMW-045	CFMW-045
			Sample Date		9/14/2016	9/13/2016	12/14/2016	9/15/2016	12/9/2016	9/19/2016	12/19/2016	9/15/2016	12/14/2016
			Sample Designation		CFMW-042-GW	CFMW-043-GW	CFMW-043-GW	CFMW-044-GW	CFMW-044-GW	CFMW-044b-GW	CFMW-044b-GW	CFMW-045-GW	CFMW-045-GW
			Sample Round		Round 1	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
			Sample Type		N	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
1,1'-Biphenyl	--	--	0.083	ug/l	0.66 U	0.67 U	0.63 U	0.63 U	0.63 U	0.63 U	0.66 UJ	0.63 U	0.63 U
1,2,4,5-Tetrachlorobenzene	0.97	--	0.17	ug/l	0.45 U	0.46 U	0.43 U	0.43 U	0.43 U	0.43 U	0.45 U	0.43 U	0.43 U
1,4-Dioxane	--	--	0.46	ug/l	3.2 U	3.3 U	3.1 UJ	3.1 U	3.1 U	3.1 U	3.3 U	3.1 U	3.1 UJ
2,2'-oxybis[1-chloropropane]	1400	--	--	ug/l	0.97 U	0.99 U	0.93 U	0.93 U	0.93 U	0.93 U	0.98 U	0.93 U	0.93 U
2,3,4,6-Tetrachlorophenol	--	--	24	ug/l	0.72 U	0.73 U	0.69 U	0.69 U	0.69 U	0.69 U	0.73 U	0.69 U	0.69 U
2,4,5-Trichlorophenol	1800	--	120	ug/l	0.51 U	0.52 U	0.49 U	0.49 U	0.49 U	0.49 U	0.52 U	0.49 U	0.49 U
2,4,6-Trichlorophenol	30	--	1.2	ug/l	0.55 U	0.56 U	0.53 U	0.53 U	0.53 U	0.53 U	0.56 U	0.53 U	0.53 U
2,4-Dichlorophenol	77	--	4.6	ug/l	0.66 U	0.67 U	0.63 U	0.63 U	0.63 U	0.63 U	0.66 U	0.63 U	0.63 U
2,4-Dimethylphenol	380	--	36	ug/l	0.95 U	0.97 U	0.91 U	0.91 U	0.91 U	0.91 U	0.96 U	0.91 U	0.91 U
2,4-Dinitrophenol	69	--	3.9	ug/l	2.5 UJ	2.5 UJ	2.4 U	2.4 U	2.4 U	2.4 U	2.5 U	2.4 U	2.4 U
2,4-Dinitrotoluene	1.1	--	0.24	ug/l	1.1 U	1.1 U	1 U	1 U	1 U	1 U	1.1 U	1 U	1 U
2,6-Dinitrotoluene	0.5	--	0.049	ug/l	0.92 U	0.94 U	0.88 U	0.88 U	0.88 U	0.88 U	0.93 U	0.88 U	0.88 U
2-Chloronaphthalene	1000	--	--	ug/l	0.64 U	0.65 U	0.61 U	0.61 U	0.61 U	0.61 U	0.64 U	0.61 U	0.61 U
2-Chlorophenol	81	--	9.1	ug/l	0.77 U	0.79 U	0.74 U	0.74 U	0.74 U	0.74 U	0.78 U	0.74 U	0.74 U
2-Methylnaphthalene	--	--	3.6	ug/l	0.92 U	0.94 U	0.88 U	0.88 U	0.88 U	0.88 U	0.93 U	0.88 U	0.88 U
2-Methylphenol	--	--	--	ug/l	1.3 U	1.4 U	1.3 U	1.3 U	1.3 U	1.3 U	1.4 U	1.3 U	1.3 U
2-Nitroaniline	--	--	19	ug/l	0.68 UJ	0.69 U	0.65 U	0.65 U	0.65 U	0.65 U	0.69 U	0.65 UJ	0.65 U
2-Nitrophenol	--	--	--	ug/l	0.61 U	0.63 U	0.59 U	0.59 U	0.59 U	0.59 U	0.62 U	0.59 U	0.59 U
3 & 4 Methylphenol	--	--	--	ug/l	0.92 UJ	0.94 U	0.88 U	0.88 UJ	34	0.88 U	1.4 J	0.88 UJ	0.88 U
3,3'-Dichlorobenzidine	0.21	--	0.13	ug/l	1.1 U	1.1 U	1 U	1 U	1 U	1 U	1.1 U	1 U	1 U
3-Nitroaniline	--	--	--	ug/l	0.85 U	0.87 U	0.82 U	0.82 U	0.82 U	0.82 U	0.86 U	0.82 U	0.82 U
4,6-Dinitro-2-methylphenol	13	--	--	ug/l	2.1 U	2.1 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U
4-Bromophenyl phenyl ether	--	--	--	ug/l	1.1 U	1.1 U	1 U	1 U	1 U	1 U	1.1 U	1 U	1 U
4-Chloro-3-methylphenol	3000	--	--	ug/l	0.79 U	0.81 U	0.76 U	0.76 U	0.76 U	0.76 U	0.8 U	0.76 U	0.76 U
4-Chloroaniline	--	--	0.37	ug/l	0.76 U	0.78 U	0.73 U	0.73 U	0.73 U	0.73 U	0.77 U	0.73 U	0.73 U
4-Chlorophenyl phenyl ether	--	--	--	ug/l	1 U	1 U	0.96 U	0.96 U	0.96 U	0.96 U	1 U	0.96 U	0.96 U
4-Nitroaniline	--	--	3.8	ug/l	0.5 U	0.51 U	0.48 U	0.48 U	0.48 U	0.48 U	0.51 U	0.48 U	0.48 U
4-Nitrophenol	60	--	--	ug/l	4.8 U	4.9 U	4.7 U	4.7 UJ	4.7 U	4.7 U	4.9 U	4.7 U	4.7 U
Acenaphthene	670	--	53	ug/l	0.92 U	0.94 U	0.88 UJ	0.88 U	0.88 UJ	0.88 U	0.93 U	0.88 U	0.88 UJ
Acenaphthylene	--	--	--	ug/l	0.68 U	0.69 U	0.65 U	0.65 U	0.65 U	0.65 U	0.69 U	0.65 U	0.65 U
Acetophenone	--	--	190	ug/l	1.1 U	1.1 U	1 U	1 U	1 U	1 U	1.1 U	1 U	1 U
Anthracene	2100	--	180	ug/l	0.59 U	0.61 U	0.57 U	0.57 U	0.57 U	0.57 U	0.6 U	0.57 U	0.57 U
Atrazine	3	3	0.3	ug/l	0.8 U	0.82 U	0.77 U	0.77 U	0.77 U	0.77 U	0.81 U	0.77 U	0.77 U
Benzaldehyde	--	--	190	ug/l	0.9 U	0.91 U	0.86 U	0.86 U	0.86 UJ	0.86 U	0.91 U	0.86 U	0.86 U
Benzo[a]anthracene	0.5	--	--	ug/l	0.57 U	0.59 U	0.55 U	0.55 U	0.55 U	0.55 U	0.58 U	0.55 U	0.55 U
Benzo[a]pyrene	0.05	0.2	0.0034	ug/l	0.17 U	0.17 U	0.16 U	0.16 U	0.16 U	0.16 U	0.17 U	0.16 U	0.16 U
Benzo[b]fluoranthene	0.5	--	0.034	ug/l	0.46 U	0.47 U	0.44 U	0.44 U	0.44 U	0.44 U	0.46 U	0.44 U	0.44 U
Benzo[g,h,i]perylene	--	--	--	ug/l	0.78 U	0.8 U	0.75 U	0.75 U	0.75 U	0.75 U	0.79 U	0.75 U	0.75 U
Benzo[k]fluoranthene	5	--	0.34	ug/l	0.19 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.19 U	0.18 U	0.18 U

Preliminary Under EPA and MDEQ Review

Table 8. Semivolatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-042	CFMW-043	CFMW-043	CFMW-044	CFMW-044	CFMW-044b	CFMW-044b	CFMW-045	CFMW-045
				Sample Date	9/14/2016	9/13/2016	12/14/2016	9/15/2016	12/9/2016	9/19/2016	12/19/2016	9/15/2016	12/14/2016
				Sample Designation	CFMW-042-GW	CFMW-043-GW	CFMW-043-GW	CFMW-044-GW	CFMW-044-GW	CFMW-044b-GW	CFMW-044b-GW	CFMW-045-GW	CFMW-045-GW
				Sample Round	Round 1	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
				Sample Type	N	N	N	N	N	N	N	N	N
Bis(2-chloroethoxy)methane	--	--	5.9	ug/l	0.72 U	0.73 U	0.69 U	0.69 U	0.69 U	0.69 U	0.73 U	0.69 U	0.69 U
Bis(2-chloroethyl)ether	0.3	--	0.014	ug/l	0.13 U	0.13 U	0.12 UJ	0.12 U	0.12 UJ	0.12 U	0.13 UJ	0.12 U	0.12 UJ
Bis(2-ethylhexyl) phthalate	6	6	5.6	ug/l	0.75 U	0.77 U	0.72 U	0.72 U	0.72 U	0.72 U	0.76 U	0.72 U	0.72 U
Butyl benzyl phthalate	1500	--	16	ug/l	0.63 U	0.64 U	0.6 U	0.6 U	0.6 U	0.6 U	0.63 U	0.6 U	0.6 U
Caprolactam	--	--	990	ug/l	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Carbazole	--	--	--	ug/l	0.89 U	0.9 U	0.85 U	0.85 U	0.85 U	0.85 U	0.9 U	0.85 U	0.85 U
Chrysene	50	--	3.4	ug/l	0.7 U	0.71 U	0.67 U	0.67 U	0.67 U	0.67 U	0.71 U	0.67 U	0.67 U
Dibenz(a,h)anthracene	0.05	--	0.0034	ug/l	0.094 U	0.096 U	0.09 U	0.09 U	0.09 U	0.09 U	0.095 U	0.09 U	0.09 U
Dibenzofuran	--	--	0.79	ug/l	0.89 U	0.9 U	0.85 U	0.85 U	0.85 U	0.85 U	0.9 U	0.85 U	0.85 U
Diethyl phthalate	17000	--	--	ug/l	1 U	1.1 U	1 U	1 U	1 U	1 U	1.1 UJ	1 U	1 U
Dimethyl phthalate	270000	--	--	ug/l	1 U	1 U	0.98 U	0.98 U	0.98 U	0.98 U	1 UJ	0.98 U	0.98 U
Di-n-butyl phthalate	2000	--	--	ug/l	0.85 U	0.87 U	0.82 U	0.82 U	0.82 U	0.82 U	0.86 U	0.82 U	0.82 U
Di-n-octyl phthalate	--	--	20	ug/l	0.72 U	0.73 U	0.69 U	0.69 U	0.69 U	0.69 U	0.73 U	0.69 U	0.69 U
Fluoranthene	130	--	80	ug/l	0.75 U	0.77 U	0.72 U	0.72 U	0.72 U	0.72 U	0.76 U	0.72 U	0.72 U
Fluorene	1100	--	29	ug/l	0.83 U	0.85 U	0.8 U	0.8 U	0.8 U	0.8 U	0.84 U	0.8 U	0.8 U
Hexachlorobenzene	0.2	1	0.0098	ug/l	0.49 U	0.5 U	0.47 U	0.47 U	0.47 U	0.47 U	0.5 U	0.47 U	0.47 U
Hexachlorobutadiene	5	--	0.14	ug/l	0.79 U	0.81 U	0.76 U	0.76 U	0.76 U	0.76 U	0.8 U	0.76 U	0.76 U
Hexachlorocyclopentadiene	50	50	0.041	ug/l	0.64 U	0.65 U	0.61 U	0.61 U	0.61 U	0.61 U	0.64 U	0.61 U	0.61 U
Hexachloroethane	30	--	0.33	ug/l	0.094 U	0.096 U	0.09 U	0.09 U	0.09 U	0.09 U	0.095 U	0.09 U	0.09 U
Indeno[1,2,3-cd]pyrene	0.5	--	0.034	ug/l	0.22 U	0.22 U	0.21 U	0.21 U	0.21 U	0.21 U	0.22 U	0.21 U	0.21 U
Isophorone	400	--	78	ug/l	0.7 U	0.71 U	0.67 U	0.67 U	0.67 U	0.67 U	0.71 U	0.67 U	0.67 U
Naphthalene	100	--	0.17	ug/l	0.83 U	0.85 U	0.8 U	0.8 U	0.8 U	0.8 U	0.84 U	0.8 U	0.8 U
Nitrobenzene	17	--	0.14	ug/l	0.51 U	0.52 U	0.49 U	0.49 U	0.49 U	0.49 U	0.52 U	0.49 U	0.49 U
N-Nitrosodi-n-propylamine	0.5	--	0.011	ug/l	0.86 UJ	0.88 U	0.83 U	0.83 U	0.83 U	0.83 U	0.88 U	0.83 UJ	0.83 U
N-Nitrosodiphenylamine	33	--	12	ug/l	0.77 U	0.79 U	0.74 UJ	0.74 U	0.74 U	0.74 U	0.78 U	0.74 U	0.74 UJ
Pentachlorophenol	1	1	0.041	ug/l	2.3 R	2.3 R	2.2 UJ	2.2 U	2.2 U	2.2 U	2.3 U	2.2 U	2.2 UJ
Phenanthrene	--	--	--	ug/l	0.68 U	0.69 U	0.65 U	0.65 U	0.65 U	0.65 U	0.69 U	0.65 U	0.65 U
Phenol	300	--	580	ug/l	0.43 U	0.44 U	0.41 U	0.41 U	1.6 J	0.41 U	0.43 U	0.41 U	0.41 U
Pyrene	830	--	12	ug/l	0.86 U	0.88 U	0.83 U	0.83 U	0.83 U	0.83 U	0.88 U	0.83 U	0.83 U

Preliminary Under EPA and MDEQ Review

Table 8. Semivolatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-047	CFMW-047	CFMW-049	CFMW-049	CFMW-049	CFMW-050	CFMW-050	CFMW-053	CFMW-053
				Sample Date	9/14/2016	12/15/2016	9/21/2016	12/15/2016	12/15/2016	9/19/2016	12/15/2016	9/14/2016	12/12/2016
				Sample Designation	CFMW-047-GW	CFMW-047-GW	CFMW-049-GW	CFMW-049-GW	CFMW-DUP6-GW	CFMW-050-GW	CFMW-050-GW	CFMW-053-GW	CFMW-053-GW
				Sample Round	Round 1	Round 2	Round 1	Round 2	Round 2	Round 1	Round 2	Round 1	Round 2
				Sample Type	N	N	N	N	FD	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
1,1'-Biphenyl	--	--	0.083	ug/l	0.64 U	0.65 UJ	0.63 U	0.64 UJ	0.65 UJ	0.63 U	0.66 UJ	0.66 U	0.63 U
1,2,4,5-Tetrachlorobenzene	0.97	--	0.17	ug/l	0.44 U	0.45 UJ	0.43 U	0.44 UJ	0.44 UJ	0.43 U	0.45 UJ	0.45 U	0.43 U
1,4-Dioxane	--	--	0.46	ug/l	3.2 U	3.2 U	3.1 UJ	3.2 U	3.2 U	3.1 U	3.3 U	3.3 U	3.1 U
2,2'-oxybis[1-chloropropane]	1400	--	--	ug/l	0.95 U	0.96 U	0.93 U	0.95 U	0.96 U	0.93 U	0.97 U	0.97 U	0.93 U
2,3,4,6-Tetrachlorophenol	--	--	24	ug/l	0.7 U	0.72 U	0.69 U	0.7 U	0.71 U	0.69 U	0.72 U	0.72 U	0.69 U
2,4,5-Trichlorophenol	1800	--	120	ug/l	0.5 U	0.51 U	0.49 U	0.5 U	0.5 U	0.49 U	0.51 U	0.51 U	0.49 U
2,4,6-Trichlorophenol	30	--	1.2	ug/l	0.54 U	0.55 U	0.53 U	0.54 U	0.55 U	0.53 U	0.55 U	0.55 U	0.53 U
2,4-Dichlorophenol	77	--	4.6	ug/l	0.64 U	0.65 U	0.63 U	0.64 U	0.65 U	0.63 U	0.66 U	0.66 U	0.63 U
2,4-Dimethylphenol	380	--	36	ug/l	0.93 U	0.94 U	0.91 U	0.93 U	0.94 U	0.91 U	0.95 U	0.95 U	0.91 U
2,4-Dinitrophenol	69	--	3.9	ug/l	2.4 UJ	2.5 U	2.4 U	2.4 U	2.4 U	2.4 U	2.5 U	2.5 UJ	2.4 U
2,4-Dinitrotoluene	1.1	--	0.24	ug/l	1.1 U	1.1 U	1 U	1.1 U	1.1 U	1 U	1.1 U	1.1 U	1 U
2,6-Dinitrotoluene	0.5	--	0.049	ug/l	0.9 U	0.91 U	0.88 U	0.9 U	0.91 U	0.88 U	0.92 U	0.92 U	0.88 U
2-Chloronaphthalene	1000	--	--	ug/l	0.62 U	0.63 U	0.61 U	0.62 U	0.63 U	0.61 U	0.64 U	0.64 U	0.61 U
2-Chlorophenol	81	--	9.1	ug/l	0.76 U	0.77 U	0.74 U	0.76 U	0.76 U	0.74 U	0.77 U	0.77 U	0.74 U
2-Methylnaphthalene	--	--	3.6	ug/l	0.9 U	0.91 U	0.88 U	0.9 U	0.91 U	0.88 U	0.92 U	0.92 U	0.88 U
2-Methylphenol	--	--	--	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
2-Nitroaniline	--	--	19	ug/l	0.66 UJ	0.67 U	0.65 U	0.66 U	0.67 U	0.65 U	0.68 U	0.68 UJ	0.65 U
2-Nitrophenol	--	--	--	ug/l	0.6 U	0.61 U	0.59 U	0.6 U	0.61 U	0.59 U	0.62 U	0.62 U	0.59 U
3 & 4 Methylphenol	--	--	--	ug/l	0.9 UJ	0.91 U	0.88 U	0.9 U	0.91 U	0.88 U	0.92 U	0.92 UJ	0.88 U
3,3'-Dichlorobenzidine	0.21	--	0.13	ug/l	1.1 U	1.1 U	1 U	1.1 U	1.1 U	1 U	1.1 U	1.1 U	1 U
3-Nitroaniline	--	--	--	ug/l	0.84 U	0.85 U	0.82 U	0.84 U	0.84 U	0.82 U	0.86 U	0.86 U	0.82 U
4,6-Dinitro-2-methylphenol	13	--	--	ug/l	2.1 U	2.1 U	2 U	2.1 U	2.1 U	2 U	2.1 U	2.1 U	2 U
4-Bromophenyl phenyl ether	--	--	--	ug/l	1 U	1.1 U	1 U	1 U	1 U	1 U	1.1 U	1.1 U	1 U
4-Chloro-3-methylphenol	3000	--	--	ug/l	0.78 U	0.79 U	0.76 U	0.78 U	0.78 U	0.76 U	0.79 U	0.79 U	0.76 U
4-Chloroaniline	--	--	0.37	ug/l	0.74 U	0.76 U	0.73 U	0.74 U	0.75 U	0.73 U	0.76 U	0.76 U	0.73 U
4-Chlorophenyl phenyl ether	--	--	--	ug/l	0.98 U	1 U	0.96 U	0.98 U	0.99 U	0.96 U	1 U	1 U	0.96 U
4-Nitroaniline	--	--	3.8	ug/l	0.49 U	0.5 U	0.48 U	0.49 U	0.49 U	0.48 U	0.5 U	0.5 U	0.48 U
4-Nitrophenol	60	--	--	ug/l	4.7 U	4.8 U	4.7 U	4.7 U	4.8 U	4.7 U	4.9 U	4.9 U	4.7 U
Acenaphthene	670	--	53	ug/l	0.9 U	0.91 UJ	0.88 U	0.9 UJ	0.91 UJ	0.88 U	0.92 UJ	0.92 U	0.88 U
Acenaphthylene	--	--	--	ug/l	0.66 U	0.67 U	0.65 U	0.66 U	0.67 U	0.65 U	0.68 U	0.68 U	0.65 U
Acetophenone	--	--	190	ug/l	1.1 U	1.1 U	1 U	1.1 U	1.1 U	1 U	1.1 U	1.1 U	1 U
Anthracene	2100	--	180	ug/l	0.58 U	0.59 U	0.57 U	0.58 U	0.59 U	0.57 U	0.6 U	0.6 U	0.57 U
Atrazine	3	3	0.3	ug/l	0.79 U	0.8 U	0.77 U	0.79 U	0.79 U	0.77 U	0.81 U	0.81 U	0.77 U
Benzaldehyde	--	--	190	ug/l	0.88 U	0.89 U	0.86 U	0.88 U	0.88 U	0.86 U	0.9 U	0.9 U	0.86 U
Benzo[a]anthracene	0.5	--	--	ug/l	0.56 U	0.57 U	0.55 U	0.56 U	0.57 U	0.55 U	0.58 U	0.58 U	0.55 U
Benzo[a]pyrene	0.05	0.2	0.0034	ug/l	0.16 U	0.17 U	0.16 U	0.16 U	0.16 U	0.16 U	0.17 U	0.17 U	0.16 U
Benzo[b]fluoranthene	0.5	--	0.034	ug/l	0.45 U	0.46 U	0.44 U	0.45 U	0.45 U	0.44 U	0.46 U	0.46 U	0.44 U
Benzo[g,h,i]perylene	--	--	--	ug/l	0.77 U	0.78 U	0.75 U	0.77 U	0.77 U	0.75 U	0.78 U	0.78 U	0.75 U
Benzo[k]fluoranthene	5	--	0.34	ug/l	0.18 U	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U	0.19 U	0.19 U	0.18 U

Preliminary Under EPA and MDEQ Review

Table 8. Semivolatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

			Sample Location		CFMW-047	CFMW-047	CFMW-049	CFMW-049	CFMW-049	CFMW-050	CFMW-050	CFMW-053	CFMW-053
			Sample Date		9/14/2016	12/15/2016	9/21/2016	12/15/2016	12/15/2016	9/19/2016	12/15/2016	9/14/2016	12/12/2016
			Sample Designation		CFMW-047-GW	CFMW-047-GW	CFMW-049-GW	CFMW-049-GW	CFMW-DUP6-GW	CFMW-050-GW	CFMW-050-GW	CFMW-053-GW	CFMW-053-GW
			Sample Round		Round 1	Round 2	Round 1	Round 2	Round 2	Round 1	Round 2	Round 1	Round 2
			Sample Type		N	N	N	N	FD	N	N	N	N
Bis(2-chloroethoxy)methane	--	--	5.9	ug/l	0.7 U	0.72 U	0.69 U	0.7 U	0.71 U	0.69 U	0.72 U	0.72 U	0.69 U
Bis(2-chloroethyl)ether	0.3	--	0.014	ug/l	0.12 U	0.12 UJ	0.12 U	0.12 UJ	0.12 UJ	0.12 U	0.13 UJ	0.13 U	0.12 U
Bis(2-ethylhexyl) phthalate	6	6	5.6	ug/l	0.73 U	0.75 U	0.72 U	0.73 U	0.74 U	0.72 U	0.75 U	0.75 U	0.72 U
Butyl benzyl phthalate	1500	--	16	ug/l	0.61 U	0.62 U	0.6 U	0.61 U	0.62 U	0.6 U	0.63 U	0.63 U	0.6 U
Caprolactam	--	--	990	ug/l	1.1 U	1.1 U	1.1 UJ	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Carbazole	--	--	--	ug/l	0.87 U	0.88 U	0.85 U	0.87 U	0.87 U	0.85 U	0.89 U	0.89 U	0.85 U
Chrysene	50	--	3.4	ug/l	0.68 U	0.7 U	0.67 U	0.68 U	0.69 U	0.67 U	0.7 U	0.7 U	0.67 U
Dibenz(a,h)anthracene	0.05	--	0.0034	ug/l	0.092 U	0.093 U	0.09 U	0.092 U	0.093 U	0.09 U	0.094 U	0.094 U	0.09 U
Dibenzofuran	--	--	0.79	ug/l	0.87 U	0.88 U	0.85 U	0.87 U	0.87 U	0.85 U	0.89 U	0.89 U	0.85 U
Diethyl phthalate	17000	--	--	ug/l	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dimethyl phthalate	270000	--	--	ug/l	1 U	1 U	0.98 U	1 U	1 U	0.98 U	1 U	1 U	0.98 U
Di-n-butyl phthalate	2000	--	--	ug/l	0.84 U	0.85 U	0.82 U	0.84 U	0.84 U	0.82 U	0.86 U	0.86 U	0.82 U
Di-n-octyl phthalate	--	--	20	ug/l	0.7 U	0.72 U	0.69 U	0.7 U	0.71 U	0.69 U	0.72 U	0.72 U	0.69 U
Fluoranthene	130	--	80	ug/l	0.73 U	0.75 U	0.72 U	0.73 U	0.74 U	0.72 U	0.75 U	0.75 U	0.72 U
Fluorene	1100	--	29	ug/l	0.82 U	0.83 U	0.8 U	0.82 U	0.82 U	0.8 U	0.84 U	0.84 U	0.8 U
Hexachlorobenzene	0.2	1	0.0098	ug/l	0.48 U	0.49 U	0.47 U	0.48 U	0.48 U	0.47 U	0.49 U	0.49 U	0.47 U
Hexachlorobutadiene	5	--	0.14	ug/l	0.78 U	0.79 U	0.76 U	0.78 U	0.78 U	0.76 U	0.79 U	0.79 U	0.76 U
Hexachlorocyclopentadiene	50	50	0.041	ug/l	0.62 U	0.63 U	0.61 U	0.62 U	0.63 U	0.61 U	0.64 U	0.64 U	0.61 U
Hexachloroethane	30	--	0.33	ug/l	0.092 U	0.093 U	0.09 U	0.092 U	0.093 U	0.09 U	0.094 U	0.094 U	0.09 U
Indeno[1,2,3-cd]pyrene	0.5	--	0.034	ug/l	0.21 U	0.22 U	0.21 U	0.21 U	0.22 U	0.21 U	0.22 U	0.22 U	0.21 U
Isophorone	400	--	78	ug/l	0.68 U	0.7 U	0.67 U	0.68 U	0.69 U	0.67 U	0.7 U	0.7 U	0.67 U
Naphthalene	100	--	0.17	ug/l	0.82 U	0.83 U	0.8 U	0.82 U	0.82 U	0.8 U	0.84 U	0.84 U	0.8 U
Nitrobenzene	17	--	0.14	ug/l	0.5 U	0.51 U	0.49 U	0.5 U	0.5 U	0.49 U	0.51 U	0.51 U	0.49 U
N-Nitrosodi-n-propylamine	0.5	--	0.011	ug/l	0.85 UJ	0.86 U	0.83 U	0.85 U	0.85 U	0.83 U	0.87 U	0.87 UJ	0.83 U
N-Nitrosodiphenylamine	33	--	12	ug/l	0.76 U	0.77 U	0.74 U	0.76 U	0.76 U	0.74 U	0.77 U	0.77 U	0.74 U
Pentachlorophenol	1	1	0.041	ug/l	2.2 R	2.3 UJ	2.2 U	2.2 UJ	2.2 UJ	2.2 U	2.3 UJ	2.3 R	2.2 U
Phenanthrene	--	--	--	ug/l	0.66 U	0.67 U	0.65 U	0.66 U	0.67 U	0.65 U	0.68 U	0.68 U	0.65 U
Phenol	300	--	580	ug/l	0.42 U	0.43 U	0.41 U	0.42 U	0.42 U	0.41 U	0.43 U	0.43 U	0.41 U
Pyrene	830	--	12	ug/l	0.85 U	0.86 U	0.83 U	0.85 U	0.85 U	0.83 U	0.87 U	0.87 U	0.83 U

Preliminary Under QA and IVEQ Review

Table 8. Semivolatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-054	CFMW-054	CFMW-061	CFMW-061	CFMW-061	CFMW-064	CFMW-064
				Sample Date	9/14/2016	12/12/2016	9/15/2016	12/7/2016	12/7/2016	9/15/2016	12/7/2016
				Sample Designation	CFMW-054-GW	CFMW-054-GW	CFMW-061-GW	CFMW-061-GW	CFMW-DUP5-GW	CFMW-064-GW	CFMW-064-GW
				Sample Round	Round 1	Round 2	Round 1	Round 2	Round 2	Round 1	Round 2
				Sample Type	N	N	N	N	FD	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit							
1,1'-Biphenyl	--	--	0.083	ug/l	0.66 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
1,2,4,5-Tetrachlorobenzene	0.97	--	0.17	ug/l	0.45 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U
1,4-Dioxane	--	--	0.46	ug/l	3.2 U	3.1 U	3.1 U	3.1 U	3.1 U	3.1 U	3.1 U
2,2'-oxybis[1-chloropropane]	1400	--	--	ug/l	0.97 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U
2,3,4,6-Tetrachlorophenol	--	--	24	ug/l	0.72 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
2,4,5-Trichlorophenol	1800	--	120	ug/l	0.51 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U
2,4,6-Trichlorophenol	30	--	1.2	ug/l	0.55 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U
2,4-Dichlorophenol	77	--	4.6	ug/l	0.66 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
2,4-Dimethylphenol	380	--	36	ug/l	0.95 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U
2,4-Dinitrophenol	69	--	3.9	ug/l	2.5 UJ	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U
2,4-Dinitrotoluene	1.1	--	0.24	ug/l	1.1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,6-Dinitrotoluene	0.5	--	0.049	ug/l	0.92 U	0.88 U	0.88 U	0.88 U	0.88 U	0.88 U	0.88 U
2-Chloronaphthalene	1000	--	--	ug/l	0.64 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U
2-Chlorophenol	81	--	9.1	ug/l	0.77 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U
2-Methylnaphthalene	--	--	3.6	ug/l	0.92 U	0.88 U	0.88 U	0.88 U	0.88 U	0.88 U	0.88 U
2-Methylphenol	--	--	--	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
2-Nitroaniline	--	--	19	ug/l	0.68 UJ	0.65 U	0.65 UJ	0.65 U	0.65 U	0.65 UJ	0.65 U
2-Nitrophenol	--	--	--	ug/l	0.61 U	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U
3 & 4 Methylphenol	--	--	--	ug/l	0.92 UJ	0.88 U	0.88 UJ	0.88 U	0.88 U	0.88 UJ	0.88 U
3,3'-Dichlorobenzidine	0.21	--	0.13	ug/l	1.1 U	1 U	1 U	1 U	1 U	1 U	1 U
3-Nitroaniline	--	--	--	ug/l	0.85 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U
4,6-Dinitro-2-methylphenol	13	--	--	ug/l	2.1 U	2 U	2 U	2 U	2 U	2 U	2 U
4-Bromophenyl phenyl ether	--	--	--	ug/l	1.1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Chloro-3-methylphenol	3000	--	--	ug/l	0.79 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
4-Chloroaniline	--	--	0.37	ug/l	0.76 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U
4-Chlorophenyl phenyl ether	--	--	--	ug/l	1 U	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U
4-Nitroaniline	--	--	3.8	ug/l	0.5 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
4-Nitrophenol	60	--	--	ug/l	4.8 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U
Acenaphthene	670	--	53	ug/l	0.92 U	0.88 U	0.88 U	0.88 U	0.88 U	0.88 U	0.88 U
Acenaphthylene	--	--	--	ug/l	0.68 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U
Acetophenone	--	--	190	ug/l	1.1 U	1 U	1 U	1 U	1 U	1 U	1 U
Anthracene	2100	--	180	ug/l	0.59 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
Atrazine	3	3	0.3	ug/l	0.8 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U
Benzaldehyde	--	--	190	ug/l	0.9 U	0.86 U	0.86 U	0.86 U	0.86 U	0.86 U	0.86 U
Benzo[a]anthracene	0.5	--	--	ug/l	0.57 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U
Benzo[a]pyrene	0.05	0.2	0.0034	ug/l	0.17 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Benzo[b]fluoranthene	0.5	--	0.034	ug/l	0.46 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
Benzo[g,h,i]perylene	--	--	--	ug/l	0.78 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Benzo[k]fluoranthene	5	--	0.34	ug/l	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U

Preliminary Under EPA and MDEQ Review

Table 8. Semivolatile Organic Compounds in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

			Sample Location		CFMW-054	CFMW-054	CFMW-061	CFMW-061	CFMW-061	CFMW-064	CFMW-064
			Sample Date		9/14/2016	12/12/2016	9/15/2016	12/7/2016	12/7/2016	9/15/2016	12/7/2016
			Sample Designation		CFMW-054-GW	CFMW-054-GW	CFMW-061-GW	CFMW-061-GW	CFMW-DUP5-GW	CFMW-064-GW	CFMW-064-GW
			Sample Round		Round 1	Round 2	Round 1	Round 2	Round 2	Round 1	Round 2
			Sample Type		N	N	N	N	FD	N	N
Bis(2-chloroethoxy)methane	--	--	5.9	ug/l	0.72 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
Bis(2-chloroethyl)ether	0.3	--	0.014	ug/l	0.13 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Bis(2-ethylhexyl) phthalate	6	6	5.6	ug/l	0.75 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U
Butyl benzyl phthalate	1500	--	16	ug/l	0.63 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
Caprolactam	--	--	990	ug/l	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Carbazole	--	--	--	ug/l	0.89 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U
Chrysene	50	--	3.4	ug/l	0.7 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U
Dibenz(a,h)anthracene	0.05	--	0.0034	ug/l	0.094 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
Dibenzofuran	--	--	0.79	ug/l	0.89 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U
Diethyl phthalate	17000	--	--	ug/l	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dimethyl phthalate	270000	--	--	ug/l	1 U	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U
Di-n-butyl phthalate	2000	--	--	ug/l	0.85 U	0.82 U	0.82 U	1.1 J	0.82 U	0.82 U	0.82 U
Di-n-octyl phthalate	--	--	20	ug/l	0.72 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
Fluoranthene	130	--	80	ug/l	0.75 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U
Fluorene	1100	--	29	ug/l	0.83 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
Hexachlorobenzene	0.2	1	0.0098	ug/l	0.49 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U
Hexachlorobutadiene	5	--	0.14	ug/l	0.79 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
Hexachlorocyclopentadiene	50	50	0.041	ug/l	0.64 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U
Hexachloroethane	30	--	0.33	ug/l	0.094 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
Indeno[1,2,3-cd]pyrene	0.5	--	0.034	ug/l	0.22 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Isophorone	400	--	78	ug/l	0.7 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U
Naphthalene	100	--	0.17	ug/l	0.83 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
Nitrobenzene	17	--	0.14	ug/l	0.51 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U
N-Nitrosodi-n-propylamine	0.5	--	0.011	ug/l	0.86 UJ	0.83 U	0.83 UJ	0.83 U	0.83 U	0.83 UJ	0.83 U
N-Nitrosodiphenylamine	33	--	12	ug/l	0.77 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U
Pentachlorophenol	1	1	0.041	ug/l	2.3 R	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
Phenanthrene	--	--	--	ug/l	0.68 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U
Phenol	300	--	580	ug/l	0.43 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U
Pyrene	830	--	12	ug/l	0.86 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U

Preliminary Under QA and QC Review

Table 9. Metals in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-001	CFMW-001	CFMW-002	CFMW-003	CFMW-003	CFMW-003a	CFMW-003a	CFMW-007	CFMW-007	CFMW-008
				Sample Date	9/20/2016	12/12/2016	9/12/2016	9/14/2016	12/9/2016	9/20/2016	12/12/2016	9/21/2016	12/12/2016	9/21/2016
				Sample Designation	CFMW-001-GW	CFMW-001-GW	CFMW-002-GW	CFMW-003-GW	CFMW-003-GW	CFMW-003a-GW	CFMW-003a-GW	CFMW-007-GW	CFMW-007-GW	CFMW-008-GW
				Sample Round	Round 1	Round 2	Round 1	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1
				Sample Type	N	N	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit										
Aluminum	--	--	2000	ug/l	18.2 U	18.2 U	254	18.2 U	18.2 U	33.8 J	18.2 U	18.2 U	18.2 U	18.2 U
Antimony	6	6	0.78	ug/l	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 J	0.62 U	0.62 U	0.62 U	0.62 U
Arsenic	**10**	10	0.052	ug/l	0.64 U	1.2 J	0.96 J	0.64 U	0.64 U	5.2	3.5	0.64 U	0.64 U	0.64 U
Barium	**1000**	2000	380	ug/l	228	76.6	243	28.6	24.3	53.3	39.9	163	184	140
Beryllium	4	4	2.5	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Cadmium	5	--	--	ug/l	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U
Calcium	--	--	--	ug/l	60300	54900	31800	178000	184000	31000	28500	50200	56600	6370
Chromium	100	100	--	ug/l	1.3 U	1.3 U	1.9 J	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Cobalt	--	--	0.6	ug/l	1.3 U	1.3 U	6.1	1.3 J	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Copper	1300	1300	80	ug/l	3.2 J	1.8 J	4.2	4.8	1.8 J	1.4 U	1.4 U	1.4 U	1.4 U	1.4 J
Cyanide, Total	**200**	200	0.15	ug/l	2.4 J	2 U	2060 J	15.4	19.1	2.1 J	2 U	2.1 J	2 U	2 U
Iron	--	--	1400	ug/l	42.4 U	42.4 U	871	42.4 U	42.4 U	42.4 U	42.4 U	42.4 U	104 J	42.4 U
Lead	15	15	15	ug/l	0.38 U	0.38 U	0.53 J	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Magnesium	--	--	--	ug/l	14100	13100	10900	45800	49800	5380	4870	12800	14100	4320
Manganese	--	--	--	ug/l	2.5 U	15.7	26.8	306	209	56.2	52.6	11.4	80.9	11.1
Mercury	2	2	0.063	ug/l	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Nickel	100	--	--	ug/l	1.4 U	1.4 U	1.4 U	3 J	3.1 J	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Potassium	--	--	--	ug/l	740	737	1020	2100	2040	3270	4960	579	668	1190
Selenium	50	50	10	ug/l	0.73 U	0.73 U	0.84 J	7.5 J	8.9 J	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U
Silver	100	--	9.4	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Sodium	--	--	--	ug/l	8360	4380	173000	322000	360000	17500	19500	3050	5970	138000
Thallium	2	2	0.02	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Vanadium	--	--	8.6	ug/l	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	3.7 J	1.9 U	1.9 U	1.9 U	1.9 U
Zinc	2000	--	600	ug/l	7 U	7 U	7 U	7 U	7 U	7 U	7 U	7 U	7 U	11.5 J

Preliminary - Under EPA and MDEQ Review

Table 9. Metals in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-008	CFMW-008a	CFMW-008a	CFMW-010	CFMW-010	CFMW-011	CFMW-011	CFMW-011a	CFMW-011a	CFMW-012
				Sample Date	12/16/2016	9/15/2016	12/16/2016	9/12/2016	12/15/2016	9/13/2016	12/8/2016	9/20/2016	12/14/2016	9/12/2016
				Sample Designation	CFMW-008-GW	CFMW-008a-GW	CFMW-008a-GW	CFMW-010-GW	CFMW-010-GW	CFMW-011-GW	CFMW-011-GW	CFMW-011a-GW	CFMW-011a-GW	CFMW-012-GW
				Sample Round	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1
				Sample Type	N	N	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit										
Aluminum	--	--	2000	ug/l	18.2 U	107	97.6	1850	18.2 U	18.2 U	18.2 U	27.2 J	60.9	25.7 J
Antimony	6	6	0.78	ug/l	0.62 U	0.68 J	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
Arsenic	**10**	10	0.052	ug/l	0.64 U	0.64 U	0.64 U	5.2	6.8	0.64 U	0.64 U	3.3	1.7 J	15.5
Barium	**1000**	2000	380	ug/l	516	701	970	239	107	186	209	42.7	48.8	79.6
Beryllium	4	4	2.5	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Cadmium	5	--	--	ug/l	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U
Calcium	--	--	--	ug/l	38100	388000	431000	35500	14800	47600	52400	24600	21700	8660
Chromium	100	100	--	ug/l	1.3 U	1.3 U	1.3 U	3.6 J	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Cobalt	--	--	0.6	ug/l	1.3 U	1.3 U	1.3 U	23.7	6.9	1.3 U	1.3 U	1.3 U	1.3 U	7.9
Copper	1300	1300	80	ug/l	1.4 U	3.7 J	3 J	16.8	10	3.2 J	1.4 U	1.4 U	1.4 U	12.6
Cyanide, Total	**200**	200	0.15	ug/l	2 U	2.2 J	2 U	7320 J	2120	80.7	132	2 U	2 U	2280 J
Iron	--	--	1400	ug/l	99600	42.4 U	42.4 U	4710	844	42.4 U	42.4 U	42.4 U	42.4 U	717
Lead	15	15	15	ug/l	0.38 U	0.82 J	0.65 J	2.8	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Magnesium	--	--	--	ug/l	16300	63.6 U	63.6 U	16500	9810	14100	16000	9010	8910	4130
Manganese	--	--	--	ug/l	741	2.5 U	2.5 U	110	2.5 U	2.5 U	2.5 U	13.7	30.7	2.5 U
Mercury	2	2	0.063	ug/l	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Nickel	100	--	--	ug/l	1.8 J	1.4 U	1.4 U	5	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.5 J
Potassium	--	--	--	ug/l	2220	18000	23200	1460	890	657	709	2070	3120	817
Selenium	50	50	10	ug/l	0.73 U	0.73 U	0.73 U	3.3 J	1.4 J	0.73 U	0.73 U	0.73 U	0.73 U	4.4 J
Silver	100	--	9.4	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Sodium	--	--	--	ug/l	86000	49600	66400	445000	231000	9950	11200	19900	24100	226000
Thallium	2	2	0.02	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Vanadium	--	--	8.6	ug/l	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	2.8 J	1.9 U	19.8
Zinc	2000	--	600	ug/l	20.4	12.3 J	23.6	7.5 J	7 U	7 U	7 U	7 U	7 U	7 U

Preliminary - Under EPA and MDEQ Review

Table 9. Metals in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-012	CFMW-012a	CFMW-012a	CFMW-012a	CFMW-014	CFMW-014	CFMW-015	CFMW-015	CFMW-016a
				Sample Date	12/14/2016	9/15/2016	9/15/2016	12/13/2016	9/12/2016	12/15/2016	9/12/2016	12/15/2016	9/21/2016
				Sample Designation	CFMW-012-GW	CFMW-012a-GW	CFMW-DUP2-GW	CFMW-012a-GW	CFMW-014-GW	CFMW-014-GW	CFMW-015-GW	CFMW-015-GW	CFMW-016a-GW
				Sample Round	Round 2	Round 1	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1
				Sample Type	N	N	FD	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
Aluminum	--	--	2000	ug/l	18.2 U	18.2 U	18.2 U	18.2 U	18.2 U	18.2 U	18.2 U	18.2 U	64.8
Antimony	6	6	0.78	ug/l	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.69 J	0.62 U	0.62 U
Arsenic	**10**	10	0.052	ug/l	10.7	0.64 U	0.64 U	0.64 U	0.64 U	0.82 J	47.7	50.8	1.3 J
Barium	**1000**	2000	380	ug/l	133	78.2	77.7	84.1	336	354	62	34	99.5
Beryllium	4	4	2.5	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Cadmium	5	--	--	ug/l	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U
Calcium	--	--	--	ug/l	11700	51300	50800	52900	44900	42000	2710	1410	38100
Chromium	100	100	--	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 J	2 J	1.3 U	1.8 J
Cobalt	--	--	0.6	ug/l	2.4 J	1.3 U	1.3 U	1.3 U	5.3	8.2	27.8	17.2	1.3 U
Copper	1300	1300	80	ug/l	4.6	1.4 UJ	3.3 J	1.4 U	5.7	10.5	46.8	29.2	3.6 J
Cyanide, Total	**200**	200	0.15	ug/l	972	2 U	2 U	2 U	2750 J	3360	6240 J	3100	2.8 J
Iron	--	--	1400	ug/l	427	42.4 U	42.4 U	42.4 U	927	1200	2550	1330	42.4 U
Lead	15	15	15	ug/l	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Magnesium	--	--	--	ug/l	6070	13000	13000	12900	16800	16100	4010	1640	4060
Manganese	--	--	--	ug/l	2.5 U	21.6	21.3	5.9 J	2.5 U	2.5 U	4.1 J	3.3 J	2.5 U
Mercury	2	2	0.063	ug/l	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Nickel	100	--	--	ug/l	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	7.7	4.8	1.4 U
Potassium	--	--	--	ug/l	937	721	726	767	1120	1160	2400	1520	2780
Selenium	50	50	10	ug/l	1.4 J	0.73 U	0.73 U	0.73 U	1.7 J	1.4 J	13.5	9.6 J	0.73 U
Silver	100	--	9.4	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Sodium	--	--	--	ug/l	234000	6380	6190	6490	168000	239000	620000	365000	18600
Thallium	2	2	0.02	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Vanadium	--	--	8.6	ug/l	15.4	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	50.4	108	1.9 J
Zinc	2000	--	600	ug/l	7 U	7 U	7 U	7.6 J	7 U	7 U	7 U	7 U	7 U

Preliminary - Under EPA/MDEQ Review

Table 9. Metals in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-016a	CFMW-019	CFMW-019	CFMW-019a	CFMW-019a	CFMW-020	CFMW-020	CFMW-021	CFMW-021	CFMW-022
				Sample Date	12/14/2016	9/12/2016	12/15/2016	9/20/2016	12/14/2016	9/20/2016	12/13/2016	9/12/2016	12/14/2016	9/13/2016
				Sample Designation	CFMW-016a-GW	CFMW-019-GW	CFMW-019-GW	CFMW-019a-GW	CFMW-019a-GW	CFMW-020-GW	CFMW-020-GW	CFMW-021-GW	CFMW-021-GW	CFMW-022-GW
				Sample Round	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1
				Sample Type	N	N	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit										
Aluminum	--	--	2000	ug/l	18.2 U	18.2 U	18.2 U	82.3	29.5 J	18.2 U	18.2 U	18.2 U	18.2 U	9.1 U
Antimony	6	6	0.78	ug/l	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.31 U
Arsenic	**10**	10	0.052	ug/l	1.3 J	0.64 U	0.64 U	8.3	2.2	2.1	0.64 U	0.64 U	0.81 J	0.32 U
Barium	**1000**	2000	380	ug/l	143	104	113	56.9	56.6	74.2	266	193	189	102
Beryllium	4	4	2.5	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.12 U
Cadmium	5	--	--	ug/l	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.36 U
Calcium	--	--	--	ug/l	31400	55100	54600	15100	40100	54400	65300	62300	45700	27700
Chromium	100	100	--	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.66 U
Cobalt	--	--	0.6	ug/l	1.3 U	3.3 J	5.1	1.3 U	1.3 U	1.3 U	1.3 U	1.5 J	7.2	0.65 U
Copper	1300	1300	80	ug/l	1.4 U	1.4 U	1.6 J	1.4 U	2.6 J	2.4 J	1.4 U	4.2	2.9 J	1.6 J
Cyanide, Total	**200**	200	0.15	ug/l	2 J	961 J	791	2 U	2 U	2.9 J	2 U	400 J	1560	155
Iron	--	--	1400	ug/l	42.4 U	1160	260	42.4 U	42.4 U	42.4 U	42.4 U	85.9 J	660	36.1 J
Lead	15	15	15	ug/l	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.19 U
Magnesium	--	--	--	ug/l	9330	17200	17800	3700	14900	13900	14700	18800	14000	6720
Manganese	--	--	--	ug/l	6.1 J	35.8	61.2	9.4	88.6	37.5	2.5 U	2.5 U	2.5 U	1.2 U
Mercury	2	2	0.063	ug/l	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Nickel	100	--	--	ug/l	1.4 U	1.4 U	6.8	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.68 U
Potassium	--	--	--	ug/l	1360	1520	1840	8880	1520	774	676	1000	1070	318
Selenium	50	50	10	ug/l	0.73 U	0.84 J	0.77 J	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	1.6 J	0.37 U
Silver	100	--	9.4	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.64 U
Sodium	--	--	--	ug/l	13100	104000	120000	50900	10000	4810	6680	54300	142000	5090
Thallium	2	2	0.02	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.13 U
Vanadium	--	--	8.6	ug/l	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	0.95 U
Zinc	2000	--	600	ug/l	7 U	27.8	9.3 J	7 U	7 U	7 U	7 U	7 U	7 U	3.5 U

Preliminary - Under EPA and MDEQ Review

Table 9. Metals in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-022	CFMW-023	CFMW-023	CFMW-025a	CFMW-025a	CFMW-025b	CFMW-025b	CFMW-026	CFMW-026	CFMW-027
				Sample Date	12/9/2016	9/21/2016	12/19/2016	9/13/2016	12/5/2016	9/13/2016	12/7/2016	9/13/2016	12/5/2016	9/13/2016
				Sample Designation	CFMW-022-GW	CFMW-023-GW	CFMW-023-GW	CFMW-025a-GW	CFMW-025a-GW	CFMW-025b-GW	CFMW-025b-GW	CFMW-026-GW	CFMW-026-GW	CFMW-027-GW
				Sample Round	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1
				Sample Type	N	N	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit										
Aluminum	--	--	2000	ug/l	18.2 U	18.2 U	18.2 U	18.2 U	22.9 J	18.2 U	18.2 U	18.2 U	18.2 U	9.1 U
Antimony	6	6	0.78	ug/l	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.31 U
Arsenic	**10**	10	0.052	ug/l	0.64 U	0.64 J	0.71 J	0.93 J	2.7	0.64 U	0.64 U	0.64 U	0.64 U	0.32 U
Barium	**1000**	2000	380	ug/l	233	235	212	128	336	320	314	260	289	89.1
Beryllium	4	4	2.5	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.12 U
Cadmium	5	--	--	ug/l	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.36 U
Calcium	--	--	--	ug/l	59800	60700	61100	38300	137000	50700	46200	59900	66400	24500
Chromium	100	100	--	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.66 U
Cobalt	--	--	0.6	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	2.7 J	1.3 U	1.3 U	1.3 U	1.3 U	0.85 J
Copper	1300	1300	80	ug/l	1.4 J	4.3	1.4 U	2.4 J	1.4 U	1.4 U	3.1 J	1.4 U	2.7 J	1.9 J
Cyanide, Total	**200**	200	0.15	ug/l	279	2.7 J	2 U	2 U	2 U	2 U	2 U	3.9 J	3.4 J	603
Iron	--	--	1400	ug/l	119 J	42.4 U	42.4 U	174	4350	101 J	42.4 U	42.4 U	42.4 U	147
Lead	15	15	15	ug/l	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.19 U
Magnesium	--	--	--	ug/l	14400	17700	17700	24100	33000	20000	20200	14600	15700	7890
Manganese	--	--	--	ug/l	2.5 U	2.5 U	2.5 U	297	1540	111	69.2	65	97.6	1.2 J
Mercury	2	2	0.063	ug/l	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Nickel	100	--	--	ug/l	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.68 U
Potassium	--	--	--	ug/l	685	600	532	2090	2500	932	1040	858	905	520
Selenium	50	50	10	ug/l	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.37 U
Silver	100	--	9.4	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.64 U
Sodium	--	--	--	ug/l	15600	4100	2870	8850	9180	6430	6590	11600	10700	31000
Thallium	2	2	0.02	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.13 U
Vanadium	--	--	8.6	ug/l	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	0.95 U
Zinc	2000	--	600	ug/l	7 U	7 U	7 U	7 U	7 U	7 U	7 U	7 U	7 U	3.5 U

Preliminary - Under EPA and MDEQ Review

Table 9. Metals in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-027	CFMW-028	CFMW-028	CFMW-028a	CFMW-028a	CFMW-029	CFMW-029	CFMW-029	CFMW-031	CFMW-031
				Sample Date	12/14/2016	9/13/2016	12/5/2016	9/20/2016	12/9/2016	9/13/2016	9/13/2016	12/14/2016	9/15/2016	12/9/2016
				Sample Designation	CFMW-027-GW	CFMW-028-GW	CFMW-028-GW	CFMW-028a-GW	CFMW-028a-GW	CFMW-029-GW	CFMW-DUP1-GW	CFMW-029-GW	CFMW-031-GW	CFMW-031-GW
				Sample Round	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 1	Round 2	Round 1	Round 2
				Sample Type	N	N	N	N	N	N	FD	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit										
Aluminum	--	--	2000	ug/l	18.2 U	18.2 U	18.2 U	34.6 J	310	18.2 U	18.2 U	18.2 U	18.2 U	18.2 U
Antimony	6	6	0.78	ug/l	0.62 U	0.62 U	0.62 U	1 J	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
Arsenic	**10**	10	0.052	ug/l	0.64 U	0.64 U	0.64 U	1.7 J	8.2	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
Barium	**1000**	2000	380	ug/l	187	141	152	48	35.5	233	225	220	164	217
Beryllium	4	4	2.5	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Cadmium	5	--	--	ug/l	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U
Calcium	--	--	--	ug/l	51500	44100	48700	12200	43200	52700	51100	52800	47700	60300
Chromium	100	100	--	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 J	1.3 U	1.3 U
Cobalt	--	--	0.6	ug/l	2 J	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.6 J
Copper	1300	1300	80	ug/l	1.4 U	4.2	1.4 U	2.2 J	1.4 U	4.5 J	1.4 UJ	1.4 U	1.4 U	1.7 J
Cyanide, Total	**200**	200	0.15	ug/l	793	104	195	2 J	2.9 J	366	357	186	233	690
Iron	--	--	1400	ug/l	341	46.6 J	80.1 J	42.4 U	42.4 U	172	164	115 J	99.8 J	300
Lead	15	15	15	ug/l	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Magnesium	--	--	--	ug/l	16100	15900	15800	8100	282	18700	17800	17700	13200	17300
Manganese	--	--	--	ug/l	2.5 U	366	10.7	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Mercury	2	2	0.063	ug/l	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Nickel	100	--	--	ug/l	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Potassium	--	--	--	ug/l	1090	4230	2730	3260	2080	898	864	923	736	842
Selenium	50	50	10	ug/l	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U
Silver	100	--	9.4	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Sodium	--	--	--	ug/l	56500	26000	24900	13600	9320	35400	34200	21500	29800	32200
Thallium	2	2	0.02	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Vanadium	--	--	8.6	ug/l	1.9 U	1.9 U	1.9 U	7.2	22.1	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Zinc	2000	--	600	ug/l	7 U	7 U	7 U	7 U	7 U	7 U	7 U	7 U	7 U	7 U

Preliminary - Under EPA and MDEQ Review

Table 9. Metals in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-032	CFMW-032	CFMW-032a	CFMW-032a	CFMW-033	CFMW-033	CFMW-034	CFMW-034	CFMW-035	CFMW-035
				Sample Date	9/15/2016	12/13/2016	9/16/2016	12/16/2016	9/15/2016	12/6/2016	9/14/2016	12/13/2016	9/14/2016	12/13/2016
				Sample Designation	CFMW-032-GW	CFMW-032-GW	CFMW-032a-GW	CFMW-032a-GW	CFMW-033-GW	CFMW-033-GW	CFMW-034-GW	CFMW-034-GW	CFMW-035-GW	CFMW-035-GW
				Sample Round	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
				Sample Type	N	N	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit										
Aluminum	--	--	2000	ug/l	18.2 U	18.2 U	69.3	20.5 J	18.2 U	18.2 U	18.2 U	18.2 U	18.2 U	18.2 U
Antimony	6	6	0.78	ug/l	0.62 U	0.62 U	0.62 U	0.86 J	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
Arsenic	**10**	10	0.052	ug/l	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	5.8	10.4
Barium	**1000**	2000	380	ug/l	147	297	890	269	176	172	199	300	546	582
Beryllium	4	4	2.5	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Cadmium	5	--	--	ug/l	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U
Calcium	--	--	--	ug/l	38800	88000	628000	253000	53600	53600	59100	82500	76700	77200
Chromium	100	100	--	ug/l	1.3 U	1.3 U	3.1 J	8.1	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Cobalt	--	--	0.6	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Copper	1300	1300	80	ug/l	2.1 J	2.9 J	1.7 J	1.7 J	4.1	1.4 U	4.5	1.4 U	1.4 U	1.4 U
Cyanide, Total	**200**	200	0.15	ug/l	412 J-	152	2 U	2 U	478	483	327	255	57.1	51.7
Iron	--	--	1400	ug/l	198	52.2 J	42.4 U	42.4 U	210	223	148	86.2 J	502	1230
Lead	15	15	15	ug/l	0.38 U	0.38 U	0.6 J	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Magnesium	--	--	--	ug/l	11700	22100	63.6 U	69 J	16600	15600 J	15500	19200	32700	31100
Manganese	--	--	--	ug/l	536	211	2.5 U	2.5 U	2.5 U	2.5 U	9.4	20.5	1450	1320
Mercury	2	2	0.063	ug/l	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Nickel	100	--	--	ug/l	1.4 J	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Potassium	--	--	--	ug/l	2630	3020	21600	3860	944	1040	918	970	2430	1930
Selenium	50	50	10	ug/l	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U
Silver	100	--	9.4	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Sodium	--	--	--	ug/l	155000	153000	25400	11900	43500	39500	27400	31500	34500	32700
Thallium	2	2	0.02	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Vanadium	--	--	8.6	ug/l	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Zinc	2000	--	600	ug/l	7 U	7 U	7 U	7 U	7 U	7 U	7 U	7 U	7 U	7 U

Preliminary - Under EPA and MDEQ Review

Table 9. Metals in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-037	CFMW-037	CFMW-038	CFMW-038	CFMW-040	CFMW-040	CFMW-042	CFMW-043	CFMW-043	CFMW-044
				Sample Date	9/16/2016	12/8/2016	9/14/2016	12/9/2016	9/14/2016	12/13/2016	9/14/2016	9/13/2016	12/14/2016	9/15/2016
				Sample Designation	CFMW-037-GW	CFMW-037-GW	CFMW-038-GW	CFMW-038-GW	CFMW-040-GW	CFMW-040-GW	CFMW-042-GW	CFMW-043-GW	CFMW-043-GW	CFMW-044-GW
				Sample Round	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 1	Round 2	Round 1
				Sample Type	N	N	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit										
Aluminum	--	--	2000	ug/l	18.2 U	18.2 U	18.2 U	18.2 U	18.2 U	18.2 U	18.2 U	18.2 U	20.2 J	18.2 U
Antimony	6	6	0.78	ug/l	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
Arsenic	**10**	10	0.052	ug/l	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
Barium	**1000**	2000	380	ug/l	272	280	253	250	148	150	157	136	142	109
Beryllium	4	4	2.5	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Cadmium	5	--	--	ug/l	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U
Calcium	--	--	--	ug/l	49100	46700	60600	60000	55700	53600	56000	51600	51700	50100
Chromium	100	100	--	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Cobalt	--	--	0.6	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 J	1.3 J	1.3 U	1.4 J
Copper	1300	1300	80	ug/l	1.4 U	1.4 U	1.4 U	1.5 J	4	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Cyanide, Total	**200**	200	0.15	ug/l	66.7	40.7	260	286	304	288	402	510	423	430
Iron	--	--	1400	ug/l	42.4 U	42.4 U	115 J	128	140	96.4 J	184	207	185	370
Lead	15	15	15	ug/l	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Magnesium	--	--	--	ug/l	14200	14400	16300	16900	15600	15200	16200	15900	15600	16200
Manganese	--	--	--	ug/l	2.5 U	2.5 U	2.5 U	2.5 U	54.5	7.1 J	2.5 U	38.8	11.4	45.4
Mercury	2	2	0.063	ug/l	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Nickel	100	--	--	ug/l	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Potassium	--	--	--	ug/l	807	789	1030	961	1180	1020	1010	999	960	888
Selenium	50	50	10	ug/l	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U
Silver	100	--	9.4	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Sodium	--	--	--	ug/l	8930	9550	37300	36500	34700	32500	43900	44200	37900	45000
Thallium	2	2	0.02	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Vanadium	--	--	8.6	ug/l	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Zinc	2000	--	600	ug/l	7 U	7 U	7 U	7 U	7 U	7 U	7 U	7 U	7 U	7 U

Preliminary Under EPA and MDEQ Review

Table 9. Metals in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-044	CFMW-044a	CFMW-044a	CFMW-044b	CFMW-044b	CFMW-045	CFMW-045	CFMW-045a	CFMW-045a
				Sample Date	12/9/2016	9/19/2016	12/19/2016	9/19/2016	12/19/2016	9/15/2016	12/14/2016	9/19/2016	12/9/2016
				Sample Designation	CFMW-044-GW	CFMW-044a-GW	CFMW-044a-GW	CFMW-044b-GW	CFMW-044b-GW	CFMW-045-GW	CFMW-045-GW	CFMW-045a-GW	CFMW-045a-GW
				Sample Round	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
				Sample Type	N	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
Aluminum	--	--	2000	ug/l	18.2 U	108	41.1	18.2 U	18.2 U	18.2 U	18.5 J	18.2 U	18.2 U
Antimony	6	6	0.78	ug/l	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
Arsenic	**10**	10	0.052	ug/l	0.64 U	0.64 U	2	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
Barium	**1000**	2000	380	ug/l	119	75	18.7	87.4	251	150	155	88.5	18.9
Beryllium	4	4	2.5	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Cadmium	5	--	--	ug/l	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U
Calcium	--	--	--	ug/l	45200	155000	24600	13700	31300	53700	52900	45800	4500
Chromium	100	100	--	ug/l	1.3 U	4.2	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	5
Cobalt	--	--	0.6	ug/l	1.3 J	1.3 U	1.5 J	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Copper	1300	1300	80	ug/l	1.4 U	1.9 J	2.9 J	1.4 U	1.4 U	3.8 J	2.8 J	1.4 U	1.4 U
Cyanide, Total	**200**	200	0.15	ug/l	220	32.8	125	5.9 J	8.2 J	365	392	56	34.8
Iron	--	--	1400	ug/l	5120	42.4 U	42.4 U	732	2200	152	170	42.4 U	42.4 U
Lead	15	15	15	ug/l	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Magnesium	--	--	--	ug/l	17000	121 J	9190	16500	21500	15600	15500	13000	4800
Manganese	--	--	--	ug/l	209	2.5 U	2.5 U	86.2	155	8.8	6.6 J	23.6	2.5 U
Mercury	2	2	0.063	ug/l	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Nickel	100	--	--	ug/l	2.6 J	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Potassium	--	--	--	ug/l	1980	1660	1120	2520	1440	936	986	2300	3590
Selenium	50	50	10	ug/l	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U
Silver	100	--	9.4	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Sodium	--	--	--	ug/l	48100	40700	38700	3900	4060	39000	40700	31100	27700
Thallium	2	2	0.02	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Vanadium	--	--	8.6	ug/l	1.9 U	10.3	8.6	1.9 U	1.9 U	1.9 U	1.9 U	2.3 J	4
Zinc	2000	--	600	ug/l	7 U	7 U	7 U	7 U	7 U	7 U	7 U	7 U	7 U

Preliminary - Under EPA and MDEQ Review

Table 9. Metals in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-047	CFMW-047	CFMW-049	CFMW-049	CFMW-049	CFMW-049a	CFMW-049a	CFMW-050	CFMW-050	CFMW-053
				Sample Date	9/14/2016	12/15/2016	9/21/2016	12/15/2016	12/15/2016	9/16/2016	12/15/2016	9/19/2016	12/15/2016	9/14/2016
				Sample Designation	CFMW-047-GW	CFMW-047-GW	CFMW-049-GW	CFMW-049-GW	CFMW-DUP6-GW	CFMW-049a-GW	CFMW-049a-GW	CFMW-050-GW	CFMW-050-GW	CFMW-053-GW
				Sample Round	Round 1	Round 2	Round 1	Round 2	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1
				Sample Type	N	N	N	N	FD	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit										
Aluminum	--	--	2000	ug/l	18.2 U	18.2 U	18.2 U	18.2 U	18.2 U	18.2 U	21.9 J	18.2 U	18.2 U	18.2 U
Antimony	6	6	0.78	ug/l	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
Arsenic	**10**	10	0.052	ug/l	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
Barium	**1000**	2000	380	ug/l	232	244	273	278	278	520	224	255	257	147
Beryllium	4	4	2.5	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Cadmium	5	--	--	ug/l	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U
Calcium	--	--	--	ug/l	57100	58400	47600	47200	47500	198000	41100	46800	46600	58200
Chromium	100	100	--	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	4	1.4 J	1.3 U	1.3 U	1.3 U
Cobalt	--	--	0.6	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 J
Copper	1300	1300	80	ug/l	4.1	1.4 J	4	1.4 U	1.4 U	1.4 U	3.8 J	3.8 J	4.2	4.6
Cyanide, Total	**200**	200	0.15	ug/l	120	145	93.2	82.9	84.6	47.1	71.5	51.7	51.6	363
Iron	--	--	1400	ug/l	55.1 J	42.4 U	42.4 U	42.4 U	42.4 U	42.4 U	42.4 U	42.4 U	42.4 U	179
Lead	15	15	15	ug/l	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Magnesium	--	--	--	ug/l	15600	16600	15500	15400	15300	291	13600	15300	15400	16600
Manganese	--	--	--	ug/l	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	3.1 J	3.7 J	2.5 U
Mercury	2	2	0.063	ug/l	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Nickel	100	--	--	ug/l	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Potassium	--	--	--	ug/l	1200	972	857	783	804	19700	3480	845	844	1070
Selenium	50	50	10	ug/l	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U
Silver	100	--	9.4	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Sodium	--	--	--	ug/l	18500	21100	10100	10200	10200	25200	12000	11700	10700	44000
Thallium	2	2	0.02	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Vanadium	--	--	8.6	ug/l	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 J	1.9 U	1.9 U	1.9 U	1.9 U
Zinc	2000	--	600	ug/l	7 U	7 U	7 U	7 U	7 U	7 U	7 U	7 U	7 U	7 U

Preliminary - Under EPA and MDEQ Review

Table 9. Metals in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-053	CFMW-053a	CFMW-053a	CFMW-054	CFMW-054	CFMW-056	CFMW-056	CFMW-056	CFMW-056a
				Sample Date	12/12/2016	9/19/2016	12/19/2016	9/14/2016	12/12/2016	9/20/2016	9/20/2016	12/13/2016	9/20/2016
				Sample Designation	CFMW-053-GW	CFMW-053a-GW	CFMW-053a-GW	CFMW-054-GW	CFMW-054-GW	CFMW-056-GW	CFMW-DUP3-GW	CFMW-056-GW	CFMW-056a-GW
				Sample Round	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 1	Round 2	Round 1
				Sample Type	N	N	N	N	N	N	FD	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
Aluminum	--	--	2000	ug/l	18.2 U	90.6	115	18.2 U	18.2 U	18.2 U	18.2 U	18.2 U	43
Antimony	6	6	0.78	ug/l	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.87 J
Arsenic	**10**	10	0.052	ug/l	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	2.2
Barium	**1000**	2000	380	ug/l	143	4430	2390	153	153	144	142	5.8	73.3
Beryllium	4	4	2.5	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Cadmium	5	--	--	ug/l	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U
Calcium	--	--	--	ug/l	55100	922000	593000	59400	56200	48700	49700	4800	18600
Chromium	100	100	--	ug/l	1.3 U	11.4	1.7 J	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Cobalt	--	--	0.6	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Copper	1300	1300	80	ug/l	1.4 U	2.4 J	4.5	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	3 J
Cyanide, Total	**200**	200	0.15	ug/l	386	2 U	2 U	327	382	2 U	2 U	2 U	2 U
Iron	--	--	1400	ug/l	135	42.4 U	42.4 U	156	126	516	514	42.4 U	42.4 U
Lead	15	15	15	ug/l	0.38 U	0.62 J	0.89 J	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.42 J
Magnesium	--	--	--	ug/l	15600	63.6 U	63.6 U	16500	15600	18700	19000	7440	7470
Manganese	--	--	--	ug/l	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	36.7	37.4	15.6	73.3
Mercury	2	2	0.063	ug/l	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Nickel	100	--	--	ug/l	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Potassium	--	--	--	ug/l	918	65200	13500	1050	931	1570	1590	1590	10800
Selenium	50	50	10	ug/l	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U
Silver	100	--	9.4	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Sodium	--	--	--	ug/l	41900	102000	47500	38800	38900	4100	4280	4590	26700
Thallium	2	2	0.02	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Vanadium	--	--	8.6	ug/l	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	5.4
Zinc	2000	--	600	ug/l	7 U	7 U	7 U	7 U	7 U	7 U	7.1 J	7 U	7 U

Preliminary - Under EPA/MDEQ Review

Table 9. Metals in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-056a	CFMW-056a	CFMW-056b	CFMW-056b	CFMW-057	CFMW-057	CFMW-057a	CFMW-057a	CFMW-059
				Sample Date	12/6/2016	12/6/2016	9/13/2016	12/12/2016	9/19/2016	12/5/2016	9/19/2016	12/16/2016	9/15/2016
				Sample Designation	CFMW-056a-GW	CFMW-DUP4-GW	CFMW-056b-GW	CFMW-056b-GW	CFMW-057-GW	CFMW-057-GW	CFMW-057a-GW	CFMW-057a-GW	CFMW-059-GW
				Sample Round	Round 2	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1
				Sample Type	N	FD	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
Aluminum	--	--	2000	ug/l	21.4 J	24.6 J	18.2 U	18.2 U	18.2 U	18.2 U	168	417	18.2 U
Antimony	6	6	0.78	ug/l	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
Arsenic	**10**	10	0.052	ug/l	2.2	2.3	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
Barium	**1000**	2000	380	ug/l	111	116	132	132	46.3	43.6	924	364	140
Beryllium	4	4	2.5	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Cadmium	5	--	--	ug/l	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U
Calcium	--	--	--	ug/l	26400	27000	69000	64900	20500	19400	581000	344000	69300
Chromium	100	100	--	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	16	22.3	1.3 U
Cobalt	--	--	0.6	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Copper	1300	1300	80	ug/l	1.4 U	1.4 U	3.7 J	1.4 U	1.4 U	1.4 U	7.1	3.6 J	1.4 U
Cyanide, Total	**200**	200	0.15	ug/l	3.3 J	2 UJ	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Iron	--	--	1400	ug/l	42.4 U	42.4 U	42.4 U	42.4 U	2290	2440	42.4 U	42.4 U	42.4 U
Lead	15	15	15	ug/l	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	1.3	0.38 U	0.38 U
Magnesium	--	--	--	ug/l	10400 J	10800 J	17500	15400	15600	15700	63.6 U	63.6 U	14100
Manganese	--	--	--	ug/l	241	248	83.2	11.2	65.6	59.1	2.5 U	2.5 U	88.4
Mercury	2	2	0.063	ug/l	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Nickel	100	--	--	ug/l	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Potassium	--	--	--	ug/l	6160	6500	925	771	1730	1690	18100	6500	1150
Selenium	50	50	10	ug/l	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U
Silver	100	--	9.4	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Sodium	--	--	--	ug/l	18300	18200	9450	7000	3700	3800	48100	28200	20600
Thallium	2	2	0.02	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Vanadium	--	--	8.6	ug/l	3.4 J	3.6 J	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Zinc	2000	--	600	ug/l	7 U	7 U	7 U	7 U	7 U	7 U	7 U	7 U	7 U

Preliminary - Under EPA and MDEQ Review

Table 9. Metals in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-059	CFMW-059a	CFMW-059a	CFMW-061	CFMW-061	CFMW-061	CFMW-064	CFMW-064
				Sample Date	12/12/2016	9/19/2016	12/16/2016	9/15/2016	12/7/2016	12/7/2016	9/15/2016	12/7/2016
				Sample Designation	CFMW-059-GW	CFMW-059a-GW	CFMW-059a-GW	CFMW-061-GW	CFMW-061-GW	CFMW-DUP5-GW	CFMW-064-GW	CFMW-064-GW
				Sample Round	Round 2	Round 1	Round 2	Round 1	Round 2	Round 2	Round 1	Round 2
				Sample Type	N	N	N	N	N	FD	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit								
Aluminum	--	--	2000	ug/l	18.2 U	137	18.2 U	18.2 U	18.2 U	18.2 U	18.2 U	18.2 U
Antimony	6	6	0.78	ug/l	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
Arsenic	**10**	10	0.052	ug/l	0.64 U	0.64 U	4	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
Barium	**1000**	2000	380	ug/l	154	268	121	220	300	297	312	339
Beryllium	4	4	2.5	ug/l	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Cadmium	5	--	--	ug/l	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U
Calcium	--	--	--	ug/l	72100	340000	29000	50100	60700	60600	47100	46400
Chromium	100	100	--	ug/l	1.3 U	1.3 J	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Cobalt	--	--	0.6	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Copper	1300	1300	80	ug/l	1.4 U	3.7 J	1.4 U	3.1 J	1.4 U	1.4 U	1.4 U	1.4 J
Cyanide, Total	**200**	200	0.15	ug/l	2 U	2 U	2 U	7.7 J	4 J	3.8 J	42.7	62.4
Iron	--	--	1400	ug/l	42.4 U	42.4 U	42.4 U	42.4 U	42.4 U	42.4 U	42.4 U	42.4 U
Lead	15	15	15	ug/l	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Magnesium	--	--	--	ug/l	14100	63.6 U	10500	16200	20600	20100	17900	18700
Manganese	--	--	--	ug/l	16.8	2.5 U	29.8	68	15.6	15.3	19.3	6.2 J
Mercury	2	2	0.063	ug/l	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Nickel	100	--	--	ug/l	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Potassium	--	--	--	ug/l	1000	7920	1210	837	871	861	948	982
Selenium	50	50	10	ug/l	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U
Silver	100	--	9.4	ug/l	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Sodium	--	--	--	ug/l	15200	15400	3430 J+	8660	11400	11100	9020	10400
Thallium	2	2	0.02	ug/l	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Vanadium	--	--	8.6	ug/l	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Zinc	2000	--	600	ug/l	7 U	7 U	7 U	7 U	7 UJ	18.2 J	7 U	7 U

Preliminary - Under EPA and MDEQ Review

Table 10. General Chemistry in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-001	CFMW-001	CFMW-002	CFMW-003	CFMW-003	CFMW-003a	CFMW-003a	CFMW-007	CFMW-007
				Sample Date	9/20/2016	12/12/2016	9/12/2016	9/14/2016	12/9/2016	9/20/2016	12/12/2016	9/21/2016	12/12/2016
				Sample Designation	CFMW-001-GW	CFMW-001-GW	CFMW-002-GW	CFMW-003-GW	CFMW-003-GW	CFMW-003a-GW	CFMW-003a-GW	CFMW-007-GW	CFMW-007-GW
				Sample Round	Round 1	Round 2	Round 1	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
				Sample Type	N	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
Ammonia	--	--	--	ug/l	72 U	72 U	93 J	154	362	72 U	99 J+	72 U	95.6 J+
Chloride	--	--	--	ug/l	611	799 J+	4130	39100 J-	33400	8600	8600	1860 J-	1480
Fluoride	**4000**	4000	80	ug/l	91.7	132	**18900**	15 U	536 J-	312	337	77 J	123
Hardness as calcium carbonate	--	--	--	ug/l	206000	228000	140000	134000	736000	164000	96000	184000	220000
Nitrate Nitrite as N	**10000**	10000	--	ug/l	100 U	100 UJ	**14300**	5730	9560	100 U	108 J-	100 U	100 UJ
Orthophosphate as P	--	--	--	ug/l	42 U		42 U	42 UJ		42 U	48 UJ	42 UJ	48 UJ
Sulfate	--	--	--	ug/l	6600	4980 J-	14400	694000 J-	618000 J	36700	34700 J-	5530	16100 J-

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Table 10. General Chemistry in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-008	CFMW-008	CFMW-008a	CFMW-008a	CFMW-010	CFMW-010	CFMW-011	CFMW-011	CFMW-011a
				Sample Date	9/21/2016	12/16/2016	9/15/2016	12/16/2016	9/12/2016	12/15/2016	9/13/2016	12/8/2016	9/20/2016
				Sample Designation	CFMW-008-GW	CFMW-008-GW	CFMW-008a-GW	CFMW-008a-GW	CFMW-010-GW	CFMW-010-GW	CFMW-011-GW	CFMW-011-GW	CFMW-011a-GW
				Sample Round	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1
				Sample Type	N	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
Ammonia	--	--	--	ug/l	322	838	199	639	1240	477	72 U	72 U	72 U
Chloride	--	--	--	ug/l	2020	3650 J	8430 J-	4930 J	4630	442	1590	681 J	4070
Fluoride	**4000**	4000	80	ug/l	777	456 J	180	179 J	30900	3190	207	241 J	200
Hardness as calcium carbonate	--	--	--	ug/l	28000	180000	1000000	1150000	168000	124000	190000	210000	118000
Nitrate Nitrite as N	**10000**	10000	--	ug/l	100 U	100 U	104	121	**46200**	**21000**	1260	1770	100 U
Orthophosphate as P	--	--	--	ug/l	42 UJ	48 U	42 UJ	48 U	42 U	48 U	42 UJ	48 UJ	42 U
Sulfate	--	--	--	ug/l	7030	15300 J	20200	5440 J	48000	17900	4630	7350 J-	12500

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Table 10. General Chemistry in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-011a	CFMW-012	CFMW-012	CFMW-012a	CFMW-012a	CFMW-012a	CFMW-014	CFMW-014	CFMW-015
				Sample Date	12/14/2016	9/12/2016	12/14/2016	9/15/2016	9/15/2016	12/13/2016	9/12/2016	12/15/2016	9/12/2016
				Sample Designation	CFMW-011a-GW	CFMW-012-GW	CFMW-012-GW	CFMW-012a-GW	CFMW-DUP2-GW	CFMW-012a-GW	CFMW-014-GW	CFMW-014-GW	CFMW-015-GW
				Sample Round	Round 2	Round 1	Round 2	Round 1	Round 1	Round 2	Round 1	Round 2	Round 1
				Sample Type	N	N	N	N	FD	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
Ammonia	--	--	--	ug/l	72 U	224	111	72 U	72 U	72 U	110	72 U	23600
Chloride	--	--	--	ug/l	1130 J	3490	494 J-	571 J-	570 J-	1730	2450	1610 J	5770
Fluoride	**4000**	4000	80	ug/l	194 J-	12400	5750 J	54.6 J	55.8 J	119	8300	17300 J-	38400
Hardness as calcium carbonate	--	--	--	ug/l	118000	48000	60000	194000	196000	200000	200000	192000	70000
Nitrate Nitrite as N	**10000**	10000	--	ug/l	100 U	**16500**	8170	100 U	100 U	100 UJ	**18100**	**33500**	**41100**
Orthophosphate as P	--	--	--	ug/l	48 UJ	42 U	48 UJ	42 UJ	42 UJ	48 UJ	42 U	48 U	267
Sulfate	--	--	--	ug/l	4740	21500	13100	5260	5740	4490 J-	35000	45000 J-	87400

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Table 10. General Chemistry in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-015	CFMW-016a	CFMW-016a	CFMW-019	CFMW-019	CFMW-019a	CFMW-019a	CFMW-020	CFMW-020
				Sample Date	12/15/2016	9/21/2016	12/14/2016	9/12/2016	12/15/2016	9/20/2016	12/14/2016	9/20/2016	12/13/2016
				Sample Designation	CFMW-015-GW	CFMW-016a-GW	CFMW-016a-GW	CFMW-019-GW	CFMW-019-GW	CFMW-019a-GW	CFMW-019a-GW	CFMW-020-GW	CFMW-020-GW
				Sample Round	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
				Sample Type	N	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
Ammonia	--	--	--	ug/l	17500	674	72 U	72 U	72 U	97.7 J	72 U	72 U	72 U
Chloride	--	--	--	ug/l	1570 J	2280	1320 J-	5930	4220 J	3180	1080 J-	2250	640
Fluoride	**4000**	4000	80	ug/l	16800 J-	304	293 J-	2860	2890	361	182 J-	281	301
Hardness as calcium carbonate	--	--	--	ug/l	30000	116000	142000	228000	224000	132000	192000	208000	240000
Nitrate Nitrite as N	**10000**	10000	--	ug/l	**18600**	100 U	202	7230	6910	100 U	129	256	159 J-
Orthophosphate as P	--	--	--	ug/l	48 U	42 UJ	48 UJ	42 U	48 U	42 U	48 UJ	42 U	48 UJ
Sulfate	--	--	--	ug/l	44800 J-	5880	6220	95000	115000 J-	14300	7370	20100	5470 J-

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Table 10. General Chemistry in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-021	CFMW-021	CFMW-022	CFMW-022	CFMW-023	CFMW-023	CFMW-025a	CFMW-025a	CFMW-025b
				Sample Date	9/12/2016	12/14/2016	9/13/2016	12/9/2016	9/21/2016	12/19/2016	9/13/2016	12/5/2016	9/13/2016
				Sample Designation	CFMW-021-GW	CFMW-021-GW	CFMW-022-GW	CFMW-022-GW	CFMW-023-GW	CFMW-023-GW	CFMW-025a-GW	CFMW-025a-GW	CFMW-025b-GW
				Sample Round	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1
				Sample Type	N	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
Ammonia	--	--	--	ug/l	72 U	72 U	171	72.3 J	72 U	72 U	72 U	72 U	72 U
Chloride	--	--	--	ug/l	3730	4210 J-	1590	500	669 J-	1860	1890	1470	1940
Fluoride	**4000**	4000	80	ug/l	1950	3120 J-	432	558 J-	395	452	399	334 J-	585
Hardness as calcium carbonate	--	--	--	ug/l	244000	188000	196000	224000	236000	234000	200000	540000	220000
Nitrate Nitrite as N	**10000**	10000	--	ug/l	2590	9440	702	1460	264	100 U	100 U	221	145
Orthophosphate as P	--	--	--	ug/l	42 U	48 UJ	42 UJ		42 UJ	48 U	42 UJ	48 U	42 UJ
Sulfate	--	--	--	ug/l	57100	81000 J-	5470	4870 J-	5400	4250	13500	10700 J-	13800

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Table 10. General Chemistry in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-025b	CFMW-026	CFMW-026	CFMW-027	CFMW-027	CFMW-028	CFMW-028	CFMW-028a	CFMW-028a
				Sample Date	12/7/2016	9/13/2016	12/5/2016	9/13/2016	12/14/2016	9/13/2016	12/5/2016	9/20/2016	12/9/2016
				Sample Designation	CFMW-025b-GW	CFMW-026-GW	CFMW-026-GW	CFMW-027-GW	CFMW-027-GW	CFMW-028-GW	CFMW-028-GW	CFMW-028a-GW	CFMW-028a-GW
				Sample Round	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
				Sample Type	N	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
Ammonia	--	--	--	ug/l	72 U	72 U	112	77.5 J	259	72 U	72 U	72 U	111
Chloride	--	--	--	ug/l	1960 J	2720	2370 J-	2220	2030 J-	2090	1650 J-	16900	8950
Fluoride	**4000**	4000	80	ug/l	970 J-	1650	1440 J-	2390	1970 J-	3170 J+	3130 J-	1020	557 J-
Hardness as calcium carbonate	--	--	--	ug/l	360000	220000	250000	198000	260000	178000	200000	66000	138000
Nitrate Nitrite as N	**10000**	10000	--	ug/l	241	367	415	3970	4310	542	930	100 U	100 U
Orthophosphate as P	--	--	--	ug/l	48 UJ	42 UJ	48 U	42 UJ	48 UJ	42 UJ	48 U	84 U	
Sulfate	--	--	--	ug/l	12300 J-	20300	15800 J-	27300	24700	8380	7810 J-	34200	38200 J

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Table 10. General Chemistry in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-029	CFMW-029	CFMW-029	CFMW-031	CFMW-031	CFMW-032	CFMW-032	CFMW-032a	CFMW-032a
				Sample Date	9/13/2016	9/13/2016	12/14/2016	9/15/2016	12/9/2016	9/15/2016	12/13/2016	9/16/2016	12/16/2016
				Sample Designation	CFMW-029-GW	CFMW-DUP1-GW	CFMW-029-GW	CFMW-031-GW	CFMW-031-GW	CFMW-032-GW	CFMW-032-GW	CFMW-032a-GW	CFMW-032a-GW
				Sample Round	Round 1	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
				Sample Type	N	FD	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
Ammonia	--	--	--	ug/l	113 J	72.1 J	72 U	72 U	115	72 U	72 U	95.7 J	72 U
Chloride	--	--	--	ug/l	1000	999	623 J-	1700 J-	1220	2260	1930	1650 J-	2150 J
Fluoride	**4000**	4000	80	ug/l	3370 J+	3370 J+	4180 J	2440	2100 J-	5210 J-	2490	49 J-	225 J
Hardness as calcium carbonate	--	--	--	ug/l	214000	214000	200000	184000	240000	152000	344000	1600000	990000
Nitrate Nitrite as N	**10000**	10000	--	ug/l	1850	1830	1230	1280	3260	2810	1700 J-	100 U	104
Orthophosphate as P	--	--	--	ug/l	42 UJ	42 UJ	48 UJ	42 UJ		42 UJ	48 UJ	42 R	48 U
Sulfate	--	--	--	ug/l	18300	18300	13900	8390	21200 J-	10900	10400 J-	2820 J-	8740 J

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Table 10. General Chemistry in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-033	CFMW-033	CFMW-034	CFMW-034	CFMW-035	CFMW-035	CFMW-037	CFMW-037	CFMW-038
				Sample Date	9/15/2016	12/6/2016	9/14/2016	12/13/2016	9/14/2016	12/13/2016	9/16/2016	12/8/2016	9/14/2016
				Sample Designation	CFMW-033-GW	CFMW-033-GW	CFMW-034-GW	CFMW-034-GW	CFMW-035-GW	CFMW-035-GW	CFMW-037-GW	CFMW-037-GW	CFMW-038-GW
				Sample Round	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1
				Sample Type	N	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
Ammonia	--	--	--	ug/l	72 U	72 U	142	72 U	72 U	72 U	72 U	87.7 J+	72 U
Chloride	--	--	--	ug/l	2390 J-	1940	1810 J-	1140	6880 J-	4670	2760	1170 J-	2810 J
Fluoride	**4000**	4000	80	ug/l	2340	2040 J-	4530 J-	60 U	415	305	1030 J-	1060 J	2590
Hardness as calcium carbonate	--	--	--	ug/l	208000	228000	220000	304000	336000	640000	194000	196000	226000
Nitrate Nitrite as N	**10000**	10000	--	ug/l	2920	3140	1520	1050 J-	100 U	100 UJ	1580	781	2230
Orthophosphate as P	--	--	--	ug/l	42 UJ	48 UJ	42 UJ	48 UJ	42 UJ	48 UJ	42 R	48 UJ	42 UJ
Sulfate	--	--	--	ug/l	22600 J-	18800 J	13800 J+	11700 J-	29500 J-	24000 J-	8810 J-	6120 J-	16700 J+

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Table 10. General Chemistry in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-038	CFMW-040	CFMW-040	CFMW-042	CFMW-043	CFMW-043	CFMW-044	CFMW-044	CFMW-044a
				Sample Date	12/9/2016	9/14/2016	12/13/2016	9/14/2016	9/13/2016	12/14/2016	9/15/2016	12/9/2016	9/19/2016
				Sample Designation	CFMW-038-GW	CFMW-040-GW	CFMW-040-GW	CFMW-042-GW	CFMW-043-GW	CFMW-043-GW	CFMW-044-GW	CFMW-044-GW	CFMW-044a-GW
				Sample Round	Round 2	Round 1	Round 2	Round 1	Round 1	Round 2	Round 1	Round 2	Round 1
				Sample Type	N	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
Ammonia	--	--	--	ug/l	72 U	72 U	72 U	72 U	72 U	79.3 J	110	7520	72 U
Chloride	--	--	--	ug/l	2200	3240 J	2350	2940 J-	2470	1880 J-	2960 J-	2260	5340
Fluoride	**4000**	4000	80	ug/l	2400 J-	2650	2360	2410	2280	2050 J-	2150	1670 J-	1720
Hardness as calcium carbonate	--	--	--	ug/l	228000	214000	212000	208000	206000	220000	202000	194000	408000
Nitrate Nitrite as N	**10000**	10000	--	ug/l	1960	2190	2280 J-	2910	3000	1990	2830	1880	2640
Orthophosphate as P	--	--	--	ug/l		42 UJ	48 UJ	42 UJ	42 UJ	48 UJ	42 UJ		42 R
Sulfate	--	--	--	ug/l	10000 J-	16700 J+	14200 J-	25500 J-	26000	18600	26200 J-	21900 J-	63000

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Table 10. General Chemistry in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-044a	CFMW-044b	CFMW-044b	CFMW-045	CFMW-045	CFMW-045a	CFMW-045a	CFMW-047	CFMW-047
				Sample Date	12/19/2016	9/19/2016	12/19/2016	9/15/2016	12/14/2016	9/19/2016	12/9/2016	9/14/2016	12/15/2016
				Sample Designation	CFMW-044a-GW	CFMW-044b-GW	CFMW-044b-GW	CFMW-045-GW	CFMW-045-GW	CFMW-045a-GW	CFMW-045a-GW	CFMW-047-GW	CFMW-047-GW
				Sample Round	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
				Sample Type	N	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
Ammonia	--	--	--	ug/l	72 U	6400	207	72 U	72 U	72 U	N/A	72 U	72 U
Chloride	--	--	--	ug/l	2890	3500	2030	2840 J-	2150 J-	2870	7770	2690 J	751 J
Fluoride	**4000**	4000	80	ug/l	2280	153	142	2300	1920 J-	2980	1650 J-	2160	1960
Hardness as calcium carbonate	--	--	--	ug/l	116000	108000	174000	208000	212000	214000	54000	208000	236000
Nitrate Nitrite as N	**10000**	10000	--	ug/l	1240	100 U	100 U	2730	3020	100 U	N/A	1300	1890
Orthophosphate as P	--	--	--	ug/l	48 U	42 R	48 U	42 UJ	48 UJ	42 R	N/A	42 UJ	48 U
Sulfate	--	--	--	ug/l	52000	826	4820	23100 J-	19300	21500	21000 J-	10300 J+	7730

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Table 10. General Chemistry in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-049	CFMW-049	CFMW-049	CFMW-049a	CFMW-049a	CFMW-050	CFMW-050	CFMW-053	CFMW-053
				Sample Date	9/21/2016	12/15/2016	12/15/2016	9/16/2016	12/15/2016	9/19/2016	12/15/2016	9/14/2016	12/12/2016
				Sample Designation	CFMW-049-GW	CFMW-049-GW	CFMW-DUP6-GW	CFMW-049a-GW	CFMW-049a-GW	CFMW-050-GW	CFMW-050-GW	CFMW-053-GW	CFMW-053-GW
				Sample Round	Round 1	Round 2	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
				Sample Type	N	N	FD	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
Ammonia	--	--	--	ug/l	72 U	72 U	72 U	74.6 J	72 U	72 U	72 U	72 U	72 U
Chloride	--	--	--	ug/l	1780 J-	637 J	639 J	2300 J-	1320	30 U	759 J	2900 J	2180
Fluoride	**4000**	4000	80	ug/l	861	834	827	470 J-	433	811	809	1990	1870
Hardness as calcium carbonate	--	--	--	ug/l	188000	196000	200000	700000	216000	192000	212000	212000	240000
Nitrate Nitrite as N	**10000**	10000	--	ug/l	759	568	551	442	518	307	447	2810	3670 J-
Orthophosphate as P	--	--	--	ug/l	42 UJ	48 U	48 U	42 R	48 U	42 R	48 U	42 UJ	48 UJ
Sulfate	--	--	--	ug/l	3550	3440	3440	4710 J-	2820	3320	3520	24800	20400 J-

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Table 10. General Chemistry in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-053a	CFMW-053a	CFMW-054	CFMW-054	CFMW-056	CFMW-056	CFMW-056	CFMW-056a	CFMW-056a
				Sample Date	9/19/2016	12/19/2016	9/14/2016	12/12/2016	9/20/2016	9/20/2016	12/13/2016	9/20/2016	12/6/2016
				Sample Designation	CFMW-053a-GW	CFMW-053a-GW	CFMW-054-GW	CFMW-054-GW	CFMW-056-GW	CFMW-DUP3-GW	CFMW-056-GW	CFMW-056a-GW	CFMW-056a-GW
				Sample Round	Round 1	Round 2	Round 1	Round 2	Round 1	Round 1	Round 2	Round 1	Round 2
				Sample Type	N	N	N	N	N	FD	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
Ammonia	--	--	--	ug/l	232	72 U	72 U	72 U	76.2 J	80.9 J	72 U	72 U	117
Chloride	--	--	--	ug/l	6360	5210	2600 J	2480	459 J+	386	2690 J-	17900	3470
Fluoride	**4000**	4000	80	ug/l	15 U	537	1920	1610	138	131	107	405	400 J-
Hardness as calcium carbonate	--	--	--	ug/l	2220000	2800000	220000	236000	202000	202000	48000	102000	124000
Nitrate Nitrite as N	**10000**	10000	--	ug/l	100 U	186	2620	1930 J-	100 U	100 U	100 UJ	100 U	100 U
Orthophosphate as P	--	--	--	ug/l	42 R	48 U	42 UJ	48 UJ	42 U	42 U	48 UJ	42 U	48 UJ
Sulfate	--	--	--	ug/l	1570	1510	22300	20000 J-	4530	4430	1030 J-	96400	21700 J

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Table 10. General Chemistry in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

				Sample Location	CFMW-056a	CFMW-056b	CFMW-056b	CFMW-057	CFMW-057	CFMW-057a	CFMW-057a	CFMW-059	CFMW-059
				Sample Date	12/6/2016	9/13/2016	12/12/2016	9/19/2016	12/5/2016	9/19/2016	12/16/2016	9/15/2016	12/12/2016
				Sample Designation	CFMW-DUP4-GW	CFMW-056b-GW	CFMW-056b-GW	CFMW-057-GW	CFMW-057-GW	CFMW-057a-GW	CFMW-057a-GW	CFMW-059-GW	CFMW-059-GW
				Sample Round	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
				Sample Type	FD	N	N	N	N	N	N	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit									
Ammonia	--	--	--	ug/l	89 J	72 U	72 U	209	323	500	1060	72 U	72 U
Chloride	--	--	--	ug/l	3360	3160	1880	630	620 J-	6520	3590 J	30400 J-	24600
Fluoride	**4000**	4000	80	ug/l	394 J-	156	194	66.6 J	127 J-	15 U	180 J	59.5 J	114
Hardness as calcium carbonate	--	--	--	ug/l	116000	250000	240000	124000	132000	1800000	1200000	236000	260000
Nitrate Nitrite as N	**10000**	10000	--	ug/l	100 U	443	377 J-	100 U	100 U	100 U	100 U	3180	2180 J-
Orthophosphate as P	--	--	--	ug/l	48 UJ	42 UJ	48 UJ	42 R	48 U	42 R	48 U	42 UJ	48 UJ
Sulfate	--	--	--	ug/l	21600 J	27000	9670 J-	797	848 J-	1080	1400 J	6980	4610 J-

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Table 10. General Chemistry in Round 1 and Round 2 Groundwater
Columbia Falls Aluminum Company, 2000 Aluminum Drive, Columbia Falls, MT

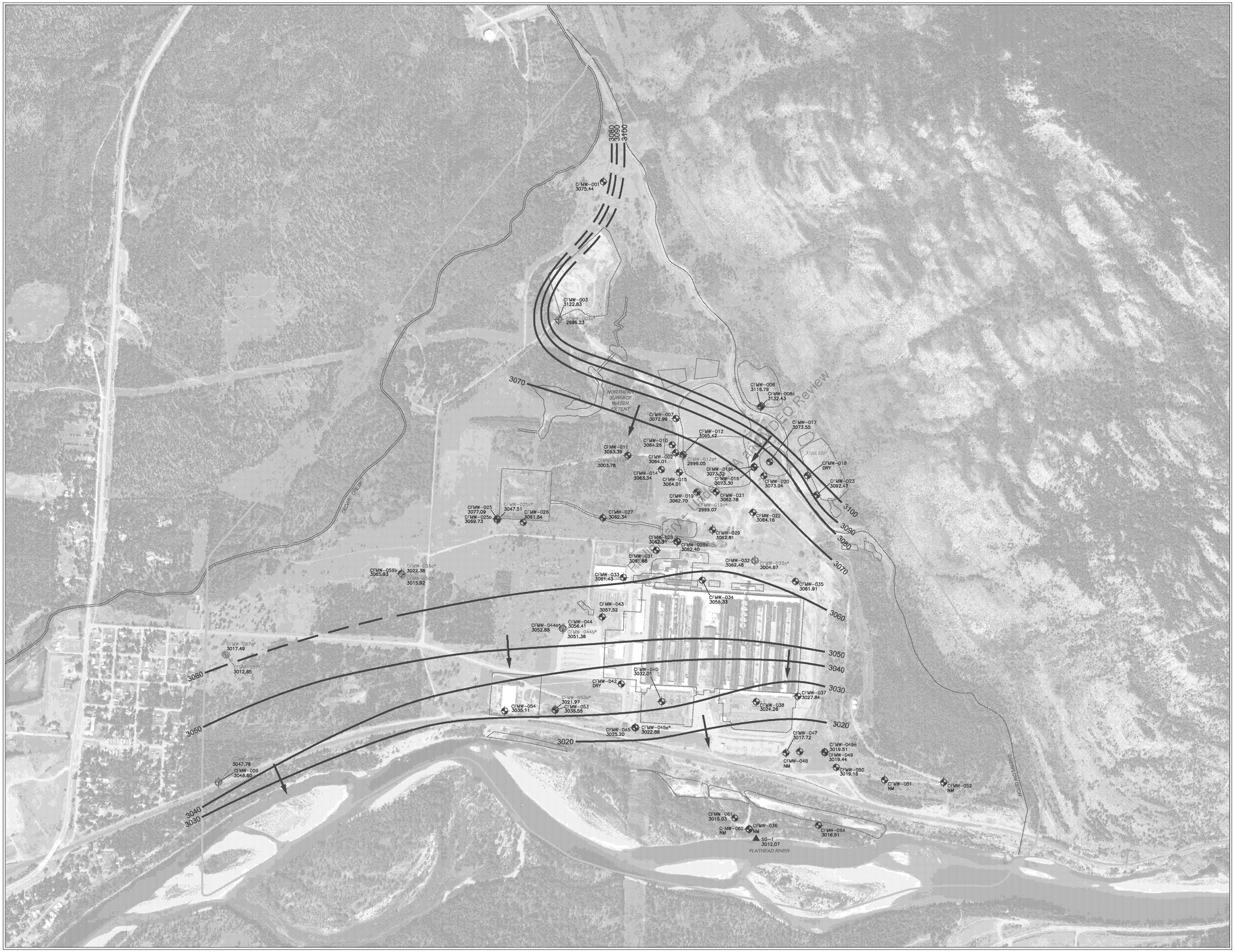
				Sample Location	CFMW-059a	CFMW-059a	CFMW-061	CFMW-061	CFMW-061	CFMW-064	CFMW-064
				Sample Date	9/19/2016	12/16/2016	9/15/2016	12/7/2016	12/7/2016	9/15/2016	12/7/2016
				Sample Designation	CFMW-059a-GW	CFMW-059a-GW	CFMW-061-GW	CFMW-061-GW	CFMW-DUP5-GW	CFMW-064-GW	CFMW-064-GW
				Sample Round	Round 1	Round 2	Round 1	Round 2	Round 2	Round 1	Round 2
				Sample Type	N	N	N	N	FD	N	N
Parameter	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	Unit							
Ammonia	--	--	--	ug/l	211	103	72 U	72 U	72 U	72 U	72 U
Chloride	--	--	--	ug/l	4270	205 J	2350 J-	2150 J-	2120 J-	2100 J-	1980 J-
Fluoride	**4000**	4000	80	ug/l	147	198 J	780	669 J-	640 J-	303	311 J-
Hardness as calcium carbonate	--	--	--	ug/l	1060000	124000	200000	264000	260000	198000	256000
Nitrate Nitrite as N	**10000**	10000	--	ug/l	100 U	100 U	113	100 U	134	346	507
Orthophosphate as P	--	--	--	ug/l	42 R	48 U	42 UJ	48 UJ	48 UJ	42 UJ	48 UJ
Sulfate	--	--	--	ug/l	12400	10900 J	7720	5410 J-	5440 J-	4560	4250 J-

Preliminary – Under EPA and MDEQ Review

PLATES

1. Potentiometric Surface Contour Map, Upper Hydrogeologic Unit, November 29, 2016
2. Concentrations of Total Cyanide in Round 1 and Round 2 Surface Water
3. Concentrations of Fluoride in Round 1 and Round 2 Surface Water
4. Concentrations of Total Cyanide in Round 1 and Round 2 Groundwater
5. Concentrations of Fluoride in Round 1 and Round 2 Groundwater
6. Concentrations of Total Cyanide in Groundwater
7. Concentrations of Fluoride in Groundwater

Preliminary – Under EPA and MDEQ Review



LEGEND

	RI/FS SITE BOUNDARY
	SURFACE WATER FEATURE
	SITE FEATURE
CFMW-035	LOCATION AND DESIGNATION OF MONITORING WELL SCREENED IN UPPER HYDROGEOLOGIC UNIT
CFMW-052	LOCATION AND DESIGNATION OF FORMER PRODUCTION WELL
CFMW-032s*	LOCATION AND DESIGNATION OF MONITORING WELL SCREENED BELOW UPPER HYDROGEOLOGIC UNIT
SG-1	LOCATION AND DESIGNATION OF SURFACE WATER STAFF GAUGE
3188.988	LOCATION WHERE SITE FEATURE WAS SURVEYED
30.52.88	POTENTIOMETRIC SURFACE IN FEET ABOVE MEAN SEA LEVEL
NM	NOT MEASURED
*	NOT USED IN CONTOURING
3080	CONTOUR LINE OF EQUAL POTENTIOMETRIC SURFACE (DASHED WHERE INFERRED)
	INFERRED FLOW DIRECTION

NOTE

MONITORING WELLS SCREENED BELOW THE UPPER HYDROGEOLOGIC UNIT ARE NOT USED IN CONTOURING.

500' 0 500'

Title:

POTENTIOMETRIC SURFACE CONTOUR MAP
UPPER HYDROGEOLOGIC UNIT
NOVEMBER 29, 2016

Prepared For:
COLUMBIA FALLS ALUMINUM COMPANY, LLC

ROUX
ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: L.J.	Date: 11APR17	PLATE
Prepared by: G.M.	Scale: AS SHOWN	
Project Mgr: M.R.	Project: 2476.0001Y002	1
File: 2476.0001Y154.03.DWG		

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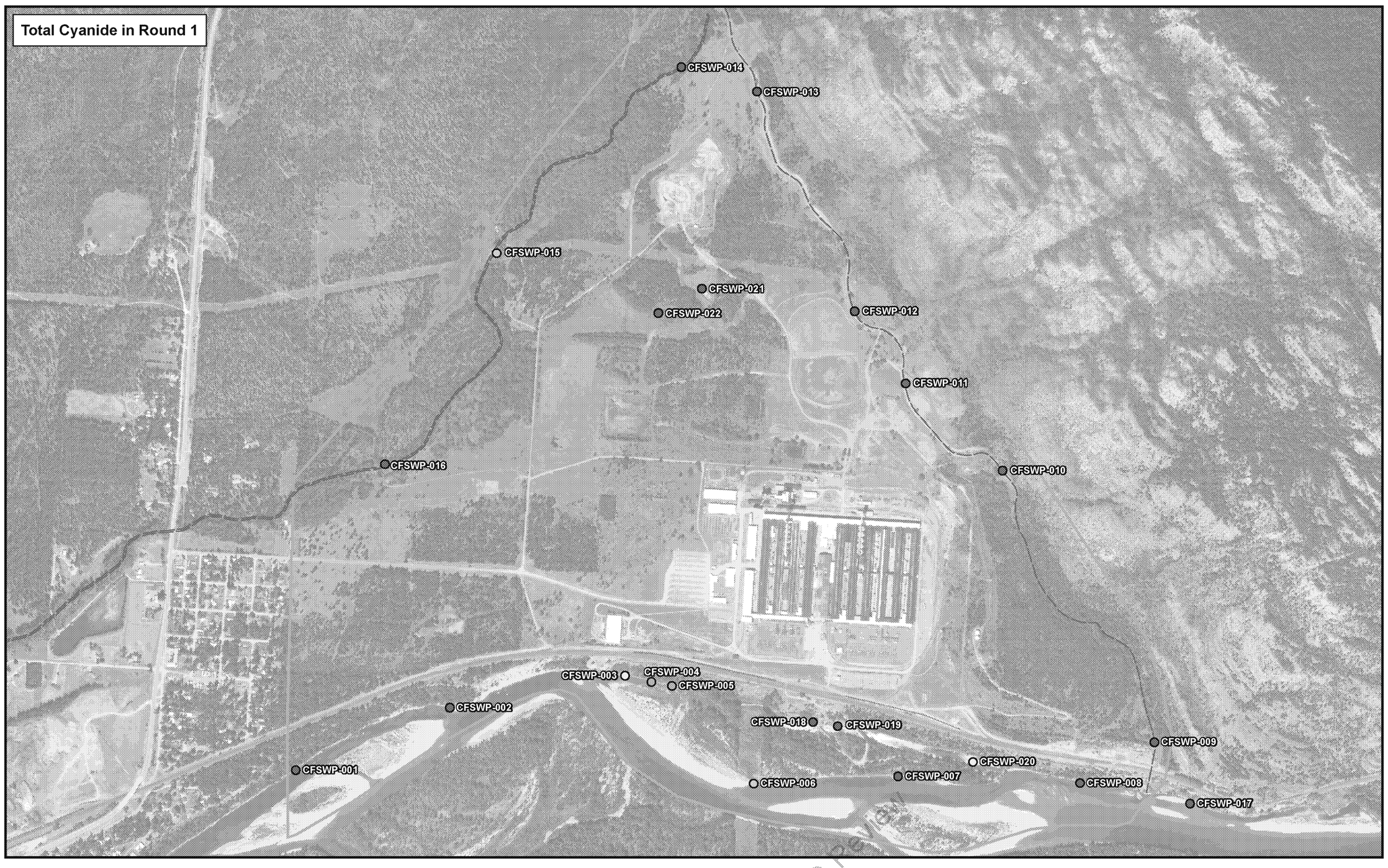

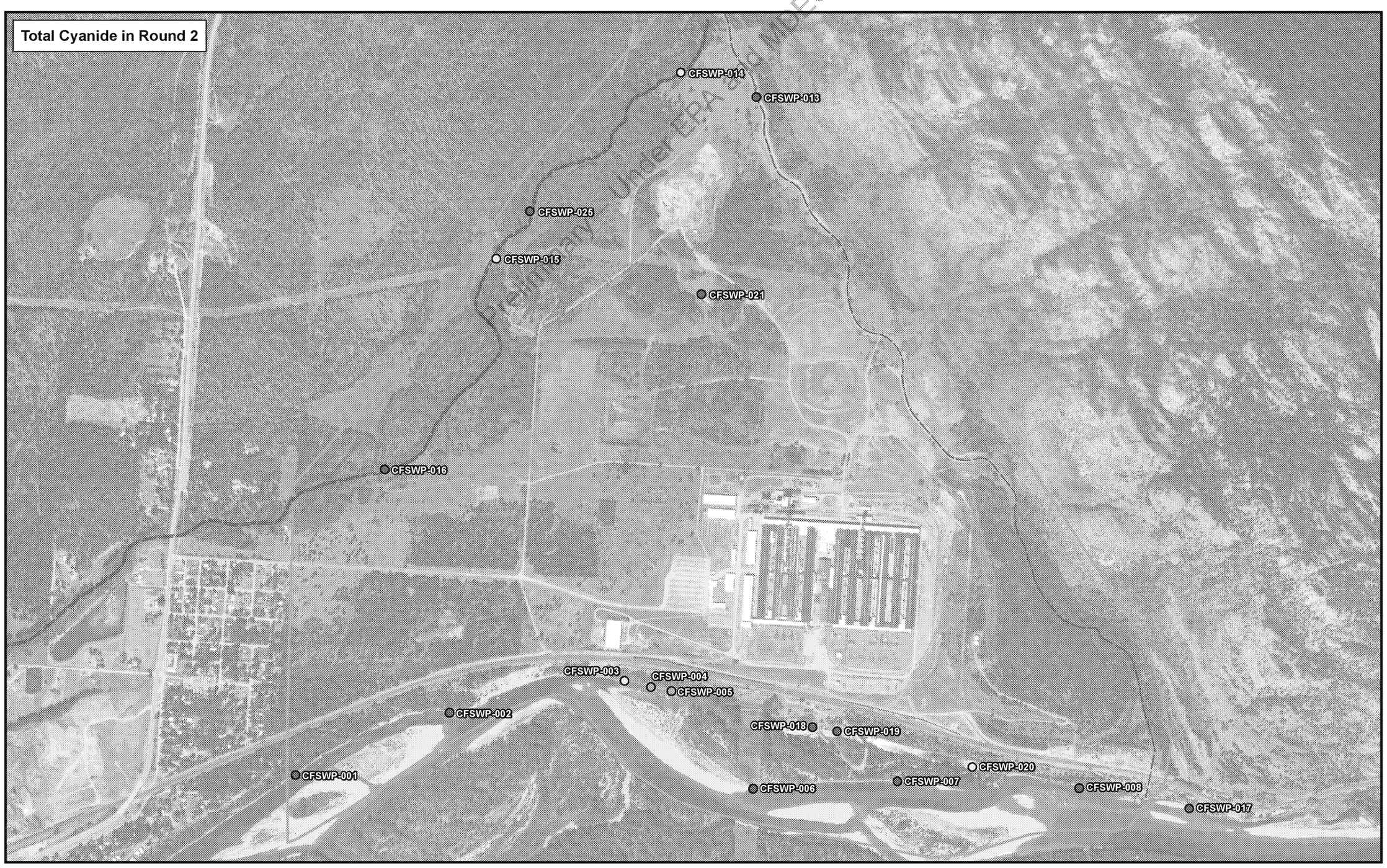

Preliminary Under EPA and MDEQ Review

Concentration Legend

- Analyte Not Detected (4U)
- ND – 5.2
- 5.2 – 140
- 140 – 2,000
- >2,000

Chemical Name	Total Cyanide
DEQ–7 Aquatic Life Standards Acute	22
DEQ–7 Aquatic Life Standards Chronic	5.2
DEQ–7 Human Health Standards	140
EPA MCL	200
EPA Risk Based Screening Level Tapwater RSL	0.15

Notes

DEQ – Department of Environmental Quality
EPA – Environmental Protection Agency
MCL – Maximum Contaminant Level
RSL – Regional Screening Levels
ND – Non Detect
All Samples are in micrograms per litres (ug/L)
4U – Highest Method Detection Limit (MDL) in Sample Set

N

500 0 500 1,000 Feet

Title:

CONCENTRATIONS OF TOTAL CYANIDE IN ROUND 1 AND ROUND 2 SURFACE WATER

2000 ALUMINUM DRIVE
COLUMBIA FALLS, MONTANA

Prepared For:

COLUMBIA FALLS ALUMINUM COMPANY, LLC

ROUX
ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: M.R.	Date: 13APR17	PLATE
Prepared by: M.R.	Scale: AS SHOWN	2
Project Mgr: M.R.	Project: 2476.0001Y002	
File: 2476.0002Y154.2.mxd		

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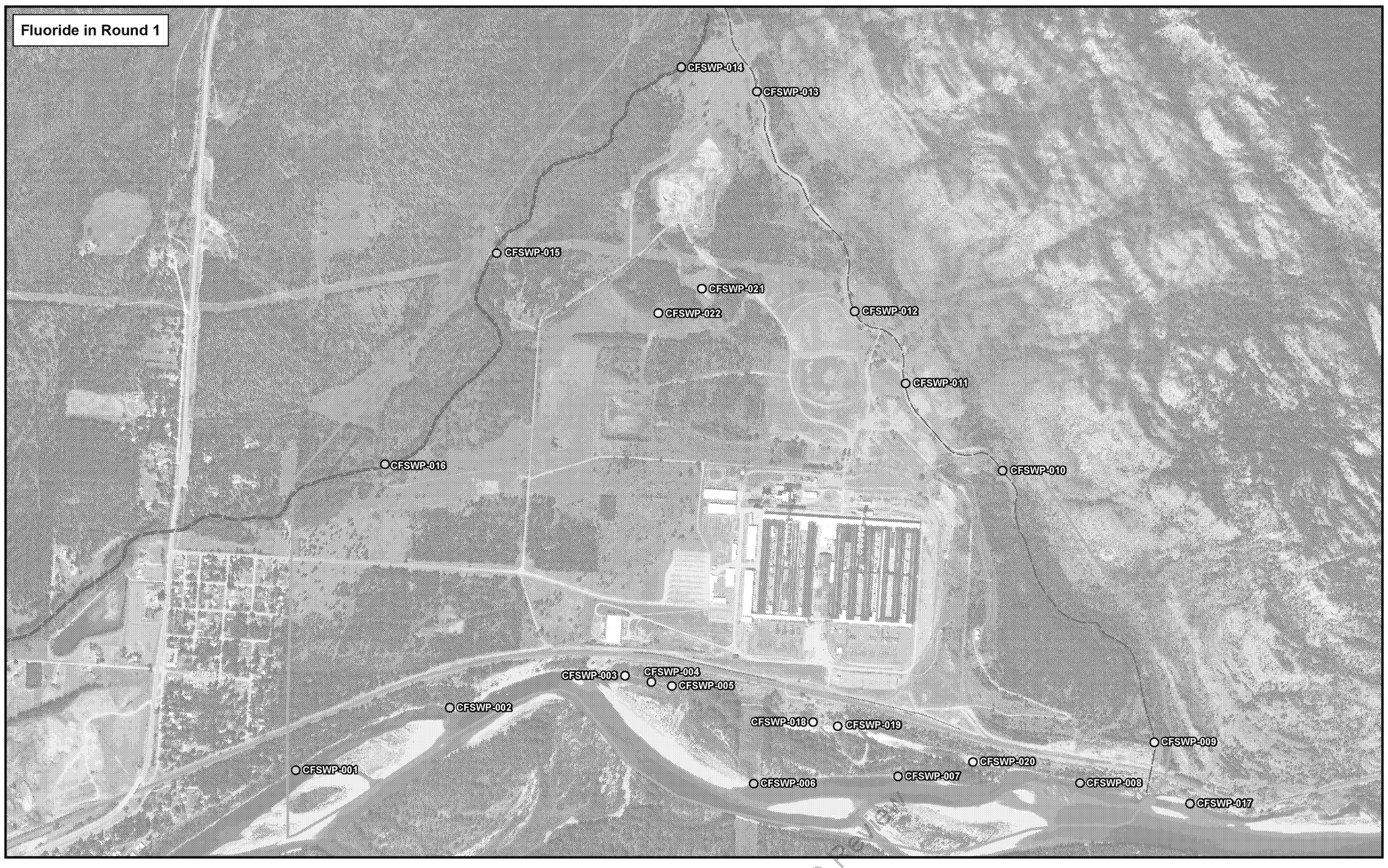

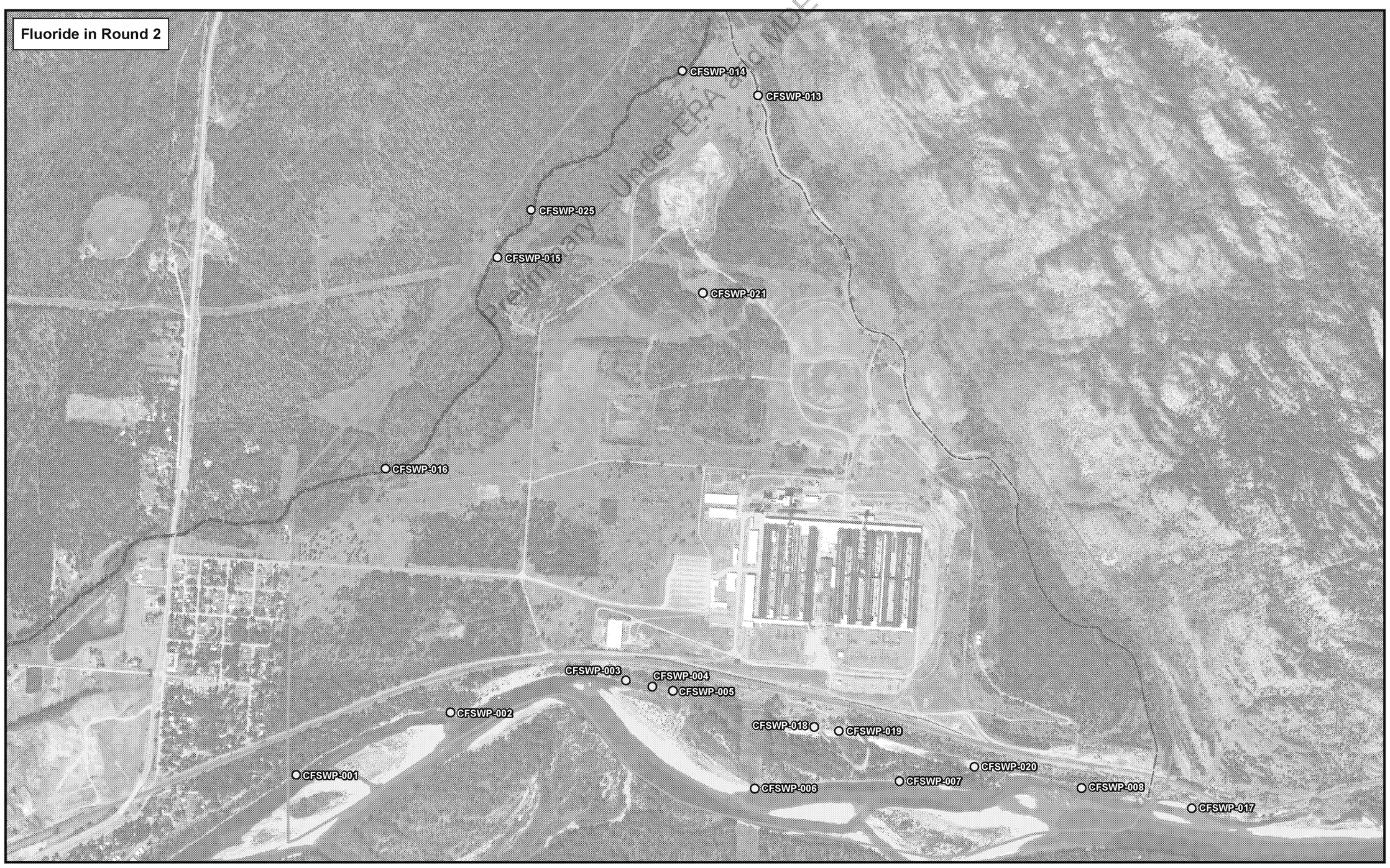

Preliminary Under EPA and MDEQ Review

Concentration Legend

- Analyte Not Detected
- ND – 80
- 80 – 4,000
- 4,000 – 40,000
- >40,000

Chemical Name	Fluoride
DEQ-7 Aquatic Life Standards Acute	--
DEQ-7 Aquatic Life Standards Chronic	--
DEQ-7 Human Health Standards	4,000
EPA MCL	4,000
EPA Risk Based Screening Level Tapwater RSL	80

Notes

DEQ – Department of Environmental Quality
EPA – Environmental Protection Agency
MCL – Maximum Contaminant Level
RSL – Regional Screening Levels
ND – Non Detect
All Samples are in micrograms per litres (ug/L)

N

500 0 500 1,000 Feet

Title:

CONCENTRATIONS OF FLUORIDE IN ROUND 1 AND ROUND 2 SURFACE WATER

2000 ALUMINUM DRIVE
COLUMBIA FALLS, MONTANA

Prepared For:

COLUMBIA FALLS ALUMINUM COMPANY, LLC

ROUX
ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: M.R.	Date: 13APR17	PLATE
Prepared by: M.R.	Scale: AS SHOWN	3
Project Mgr: M.R.	Project: 2476.0001Y002	
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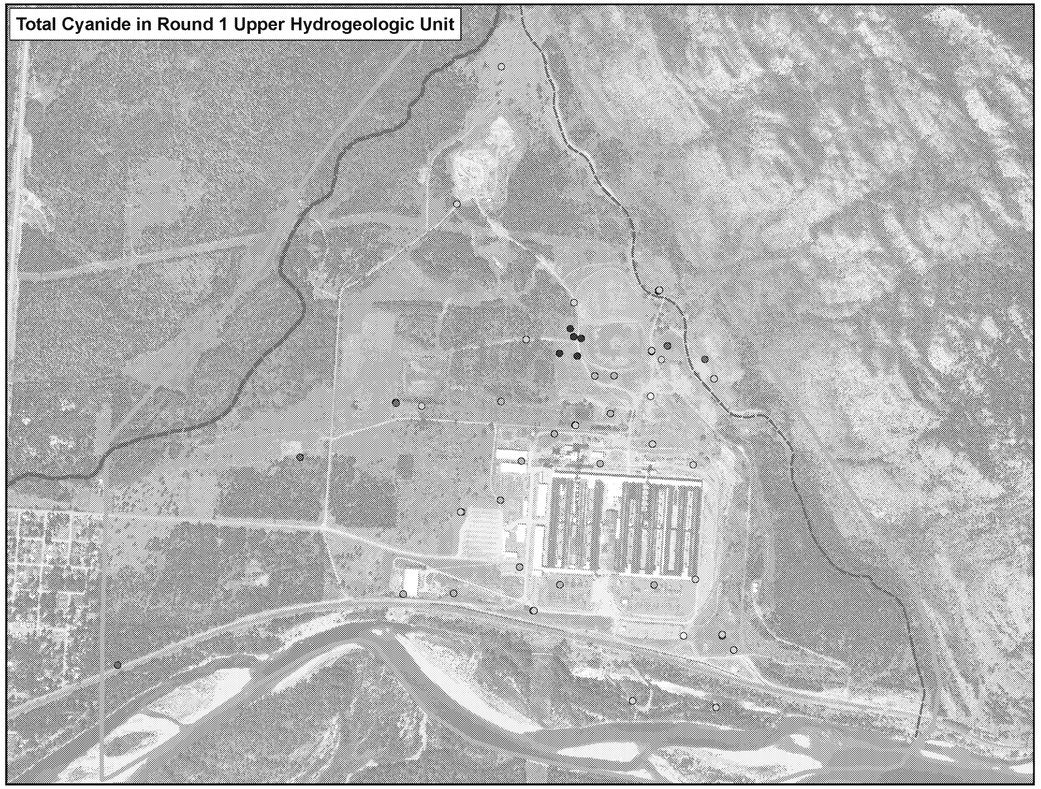

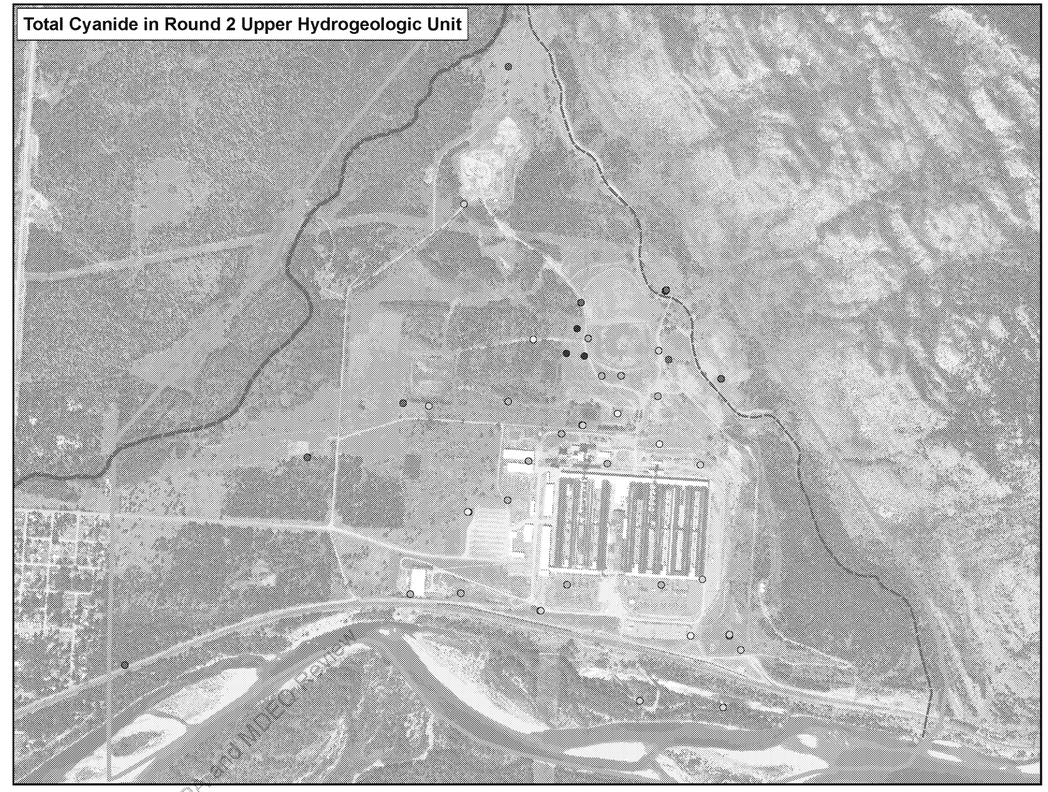

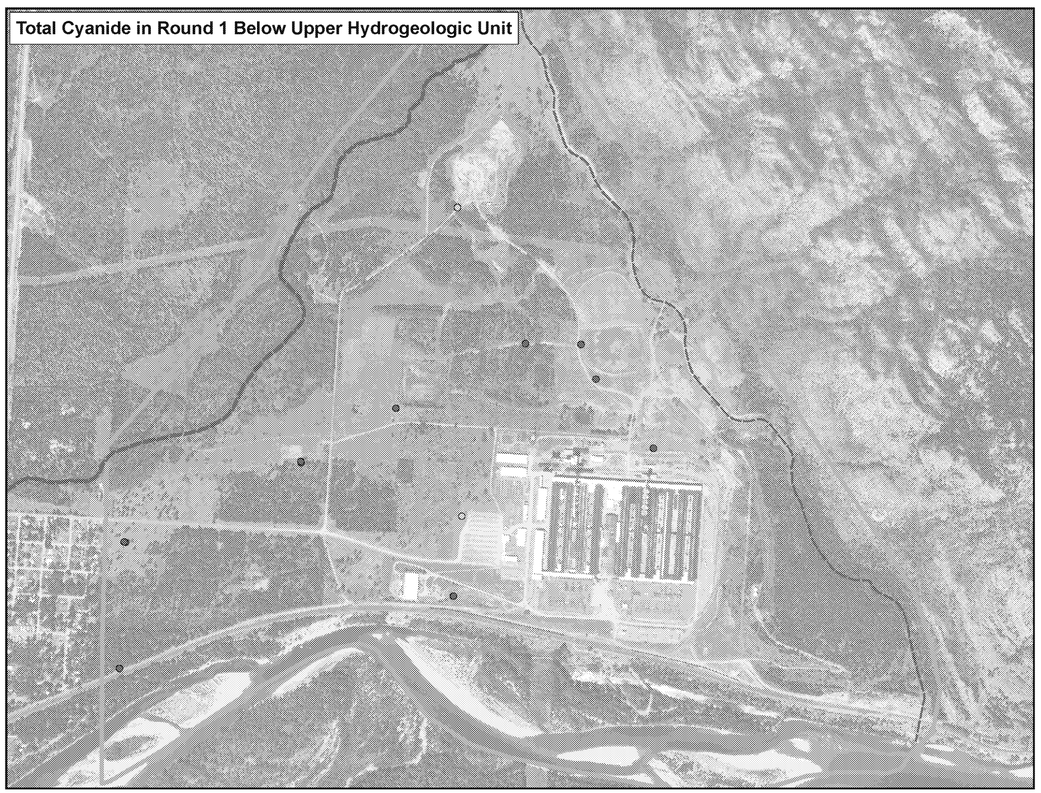

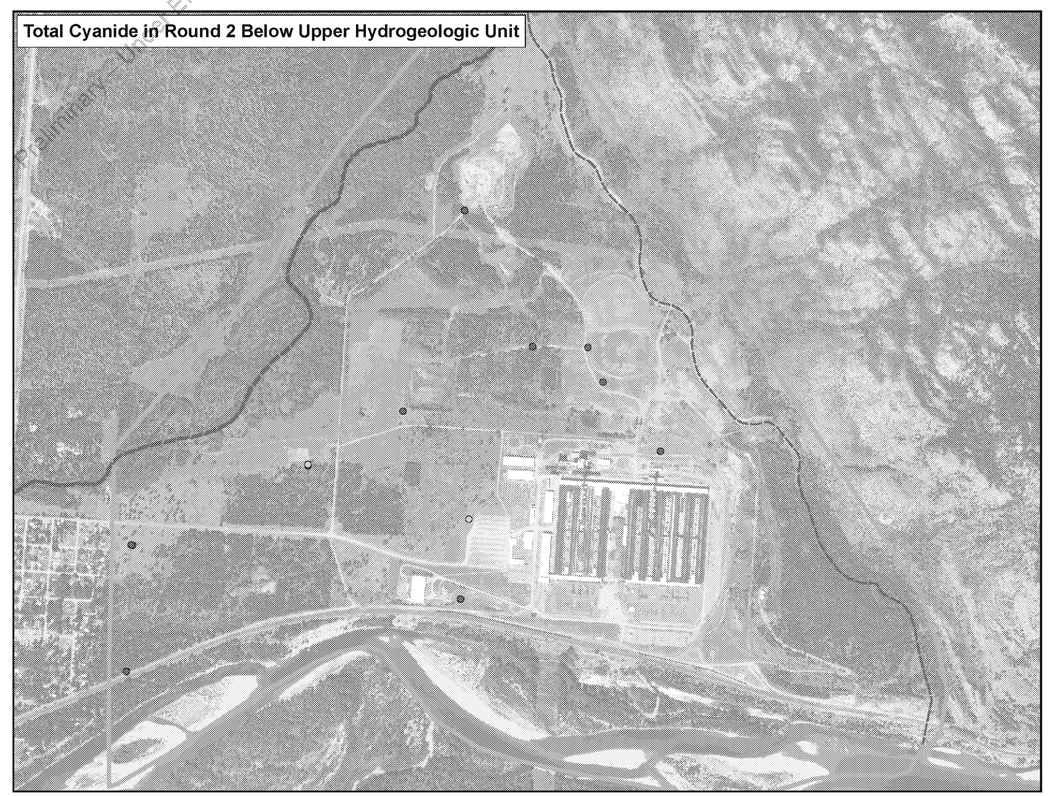

Preliminary - Under EPA and MDEQ Review

N

Concentration Legend

- Analyte Not Detected (2U)
- ND – 100
- 100 – 200
- 200 – 2,000
- >2,000

Chemical Name	DEQ-7 Human Health Standards	EPA MCL	EPA Risk Based Screening Level Tapwater RSL
Total Cyanide	200	200	0.15

Notes

DEQ – Department of Environmental Quality
EPA – Environmental Protection Agency
MCL – Maximum Contaminant Level
RSL – Regional Screening Levels
ND – Non Detect
2U – Highest Method Detection Limit (MDL) in Sample Set
All Samples are in micrograms per litres (ug/L)

850 0 850 1,700 Feet

Title:

CONCENTRATIONS OF TOTAL CYANIDE IN ROUND 1 AND ROUND 2 GROUNDWATER

2000 ALUMINUM DRIVE
COLUMBIA FALLS, MONTANA

Prepared For:

COLUMBIA FALLS ALUMINUM COMPANY, LLC

ROUX
ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: M.R.	Date: 13APR17	PLATE
Prepared by: M.R.	Scale: AS SHOWN	4
Project Mgr: M.R.	Project: 2476.0001Y002	
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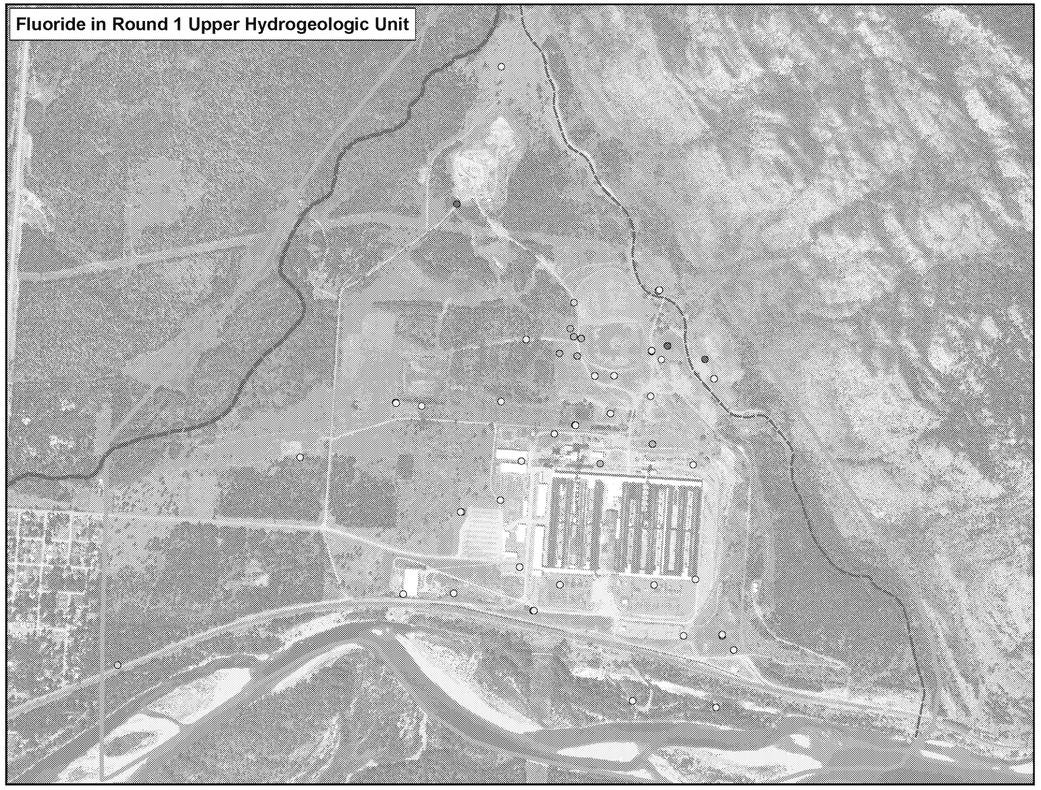

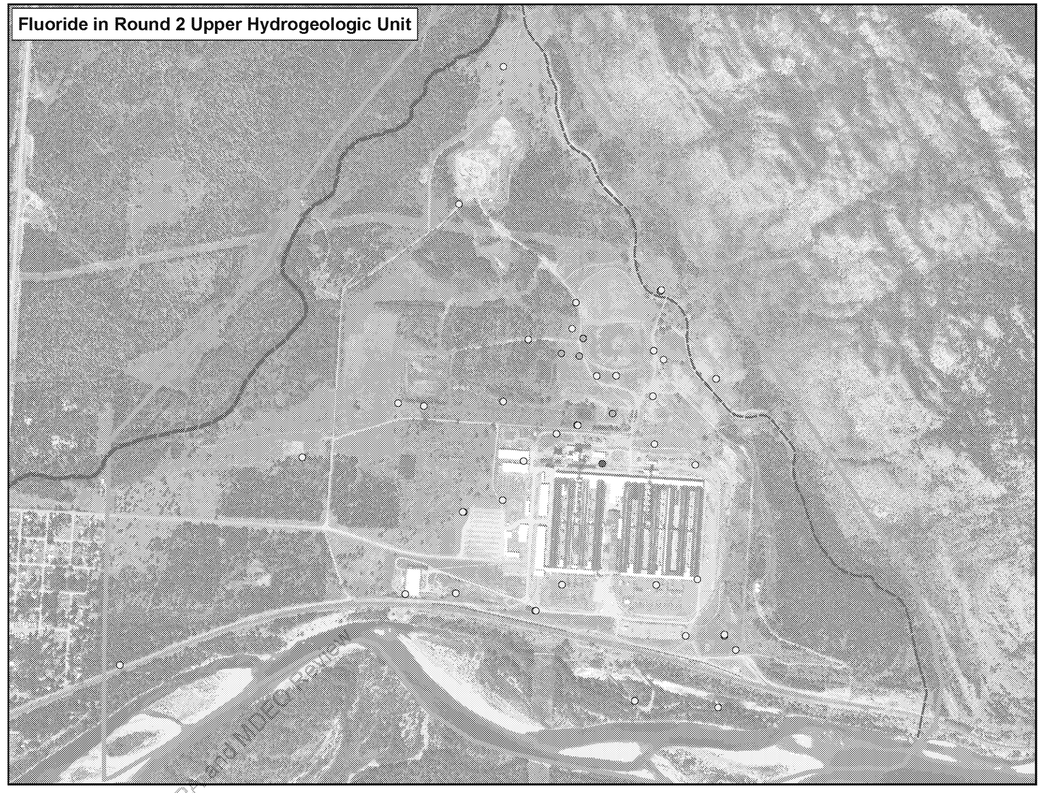

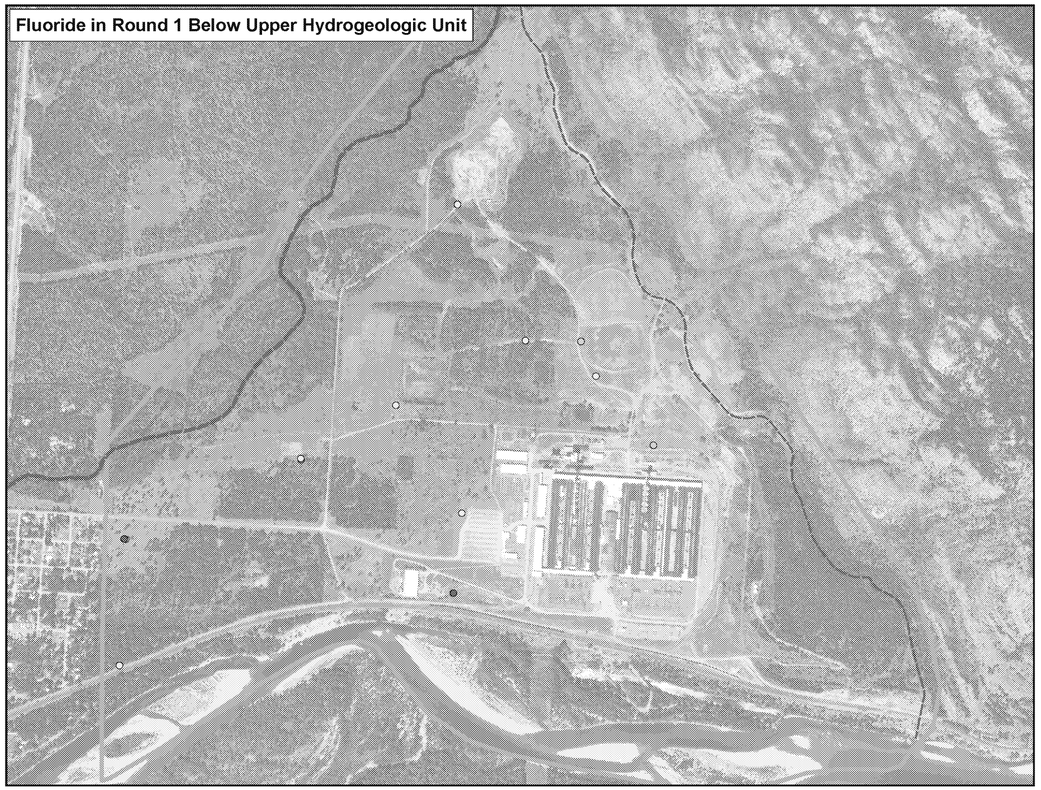

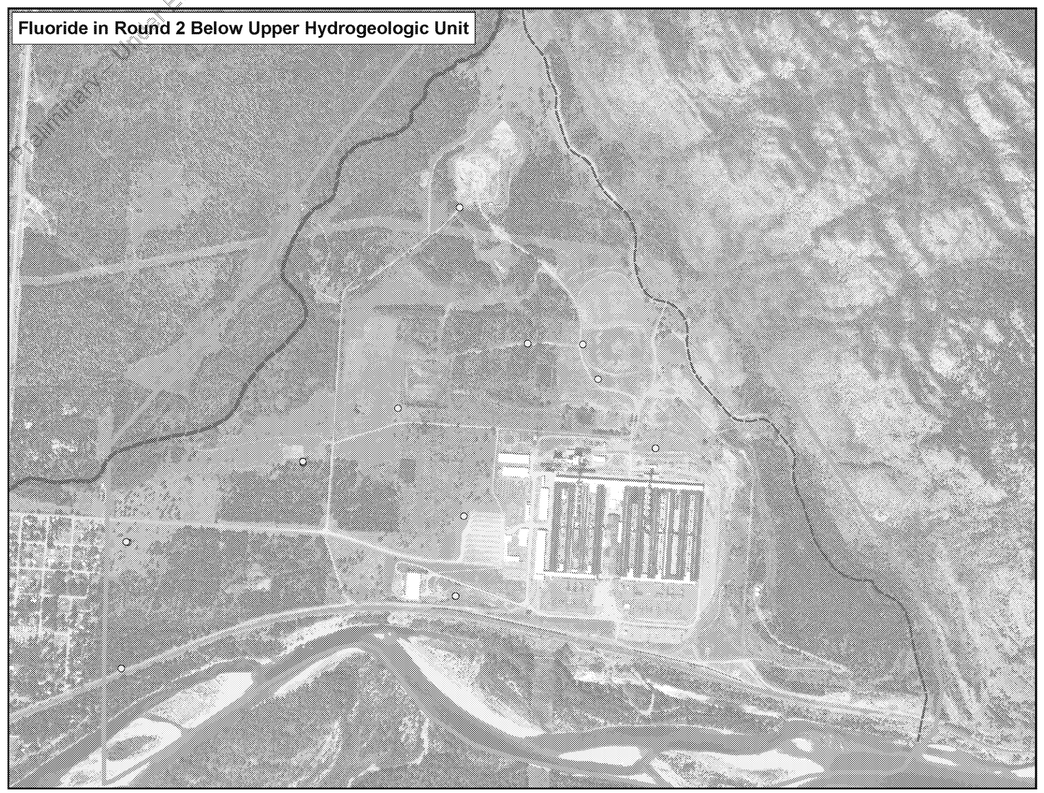

Preliminary - Under EPA and MDEQ Review

N

Concentration Legend

- Analyte Not Detected (1.5U)
- ND – 80
- 80 – 4,000
- 4,000 – 40,000
- >40,000

Chemical Name	DEQ-7 Human Health Standards	EPA MCL	EPA Risk Based Screening Level Tapwater RSL
Fluoride	4,000	4,000	80

Notes

DEQ – Department of Environmental Quality
EPA – Environmental Protection Agency
MCL – Maximum Contaminant Level
RSL – Regional Screening Levels
ND – Non Detect
1.5U – Highest Method Detection Limit (MDL) in Sample Set
All Samples are in micrograms per litres (ug/L)

850 0 850 1,700 Feet

Title:

CONCENTRATIONS OF FLUORIDE IN ROUND 1 AND ROUND 2 GROUNDWATER

2000 ALUMINUM DRIVE
COLUMBIA FALLS, MONTANA

Prepared For:

COLUMBIA FALLS ALUMINUM COMPANY, LLC

ROUX
ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: M.R.	Date: 13APR17	PLATE
Prepared by: M.R.	Scale: AS SHOWN	5
Project Mgr: M.R.	Project: 2476.0001Y002	
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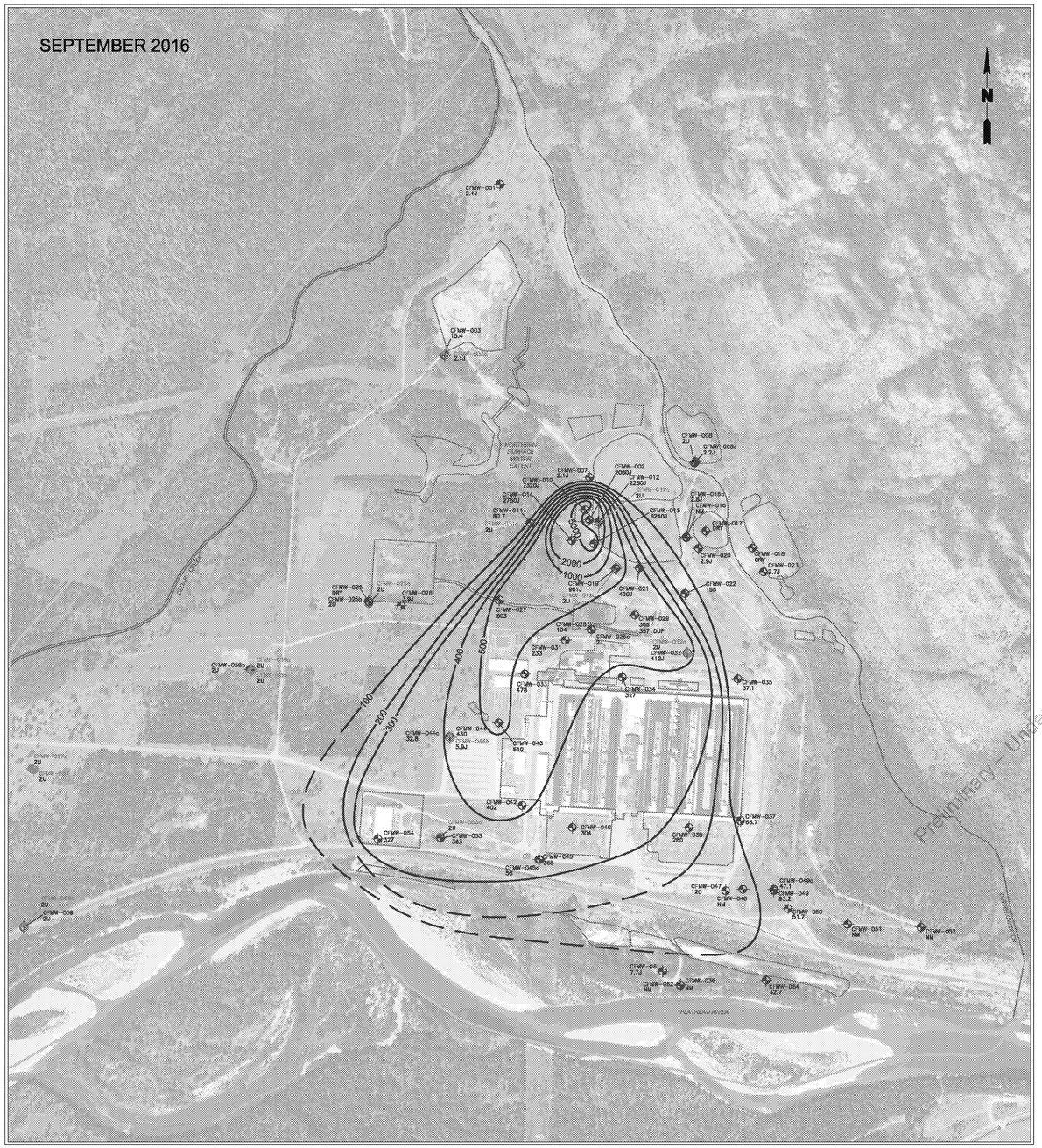

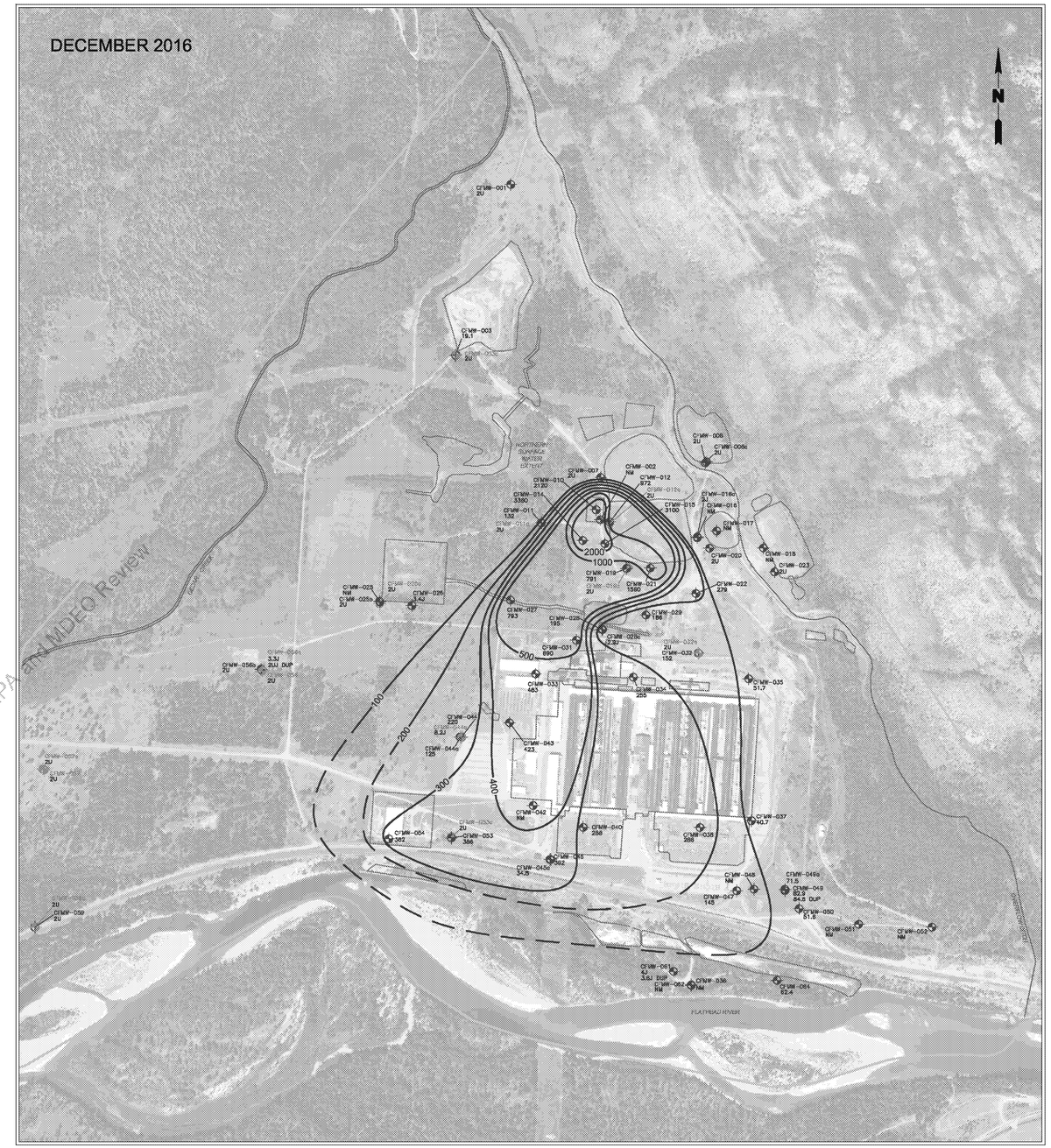

Preliminary – Under EPA and MDEQ Review

LEGEND

- RI/FS SITE BOUNDARY
- SURFACE WATER FEATURE
- SITE FEATURE
- CFMW-035 — LOCATION AND DESIGNATION OF MONITORING WELL SCREENED IN UPPER HYDROGEOLOGIC UNIT
- CFMW-052 — LOCATION AND DESIGNATION OF FORMER PRODUCTION WELL
- CFMW-032c" — LOCATION AND DESIGNATION OF MONITORING WELL SCREENED BELOW UPPER HYDROGEOLOGIC UNIT
- 327 — TOTAL CYANIDE CONCENTRATIONS IN GROUNDWATER (UNITS IN ug/L)
- NM — NOT MEASURED
- 100 — CONTOUR LINE OF TOTAL CYANIDE CONCENTRATION (DASHED WHERE INFERRED)

NOTE

CONTOURS ARE FOR THE UPPER HYDROGEOLOGIC UNIT WELLS ONLY

600' 0 600'

Title:

CONCENTRATIONS OF TOTAL CYANIDE IN GROUNDWATER

Prepared For:

COLUMBIA FALLS ALUMINUM COMPANY, LLC

ROUX
ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: M.R.	Date: 11APR17	PLATE
Prepared by: G.M.	Scale: AS SHOWN	6
Project Mgr: M.R.	Project: 2476.0001Y002	
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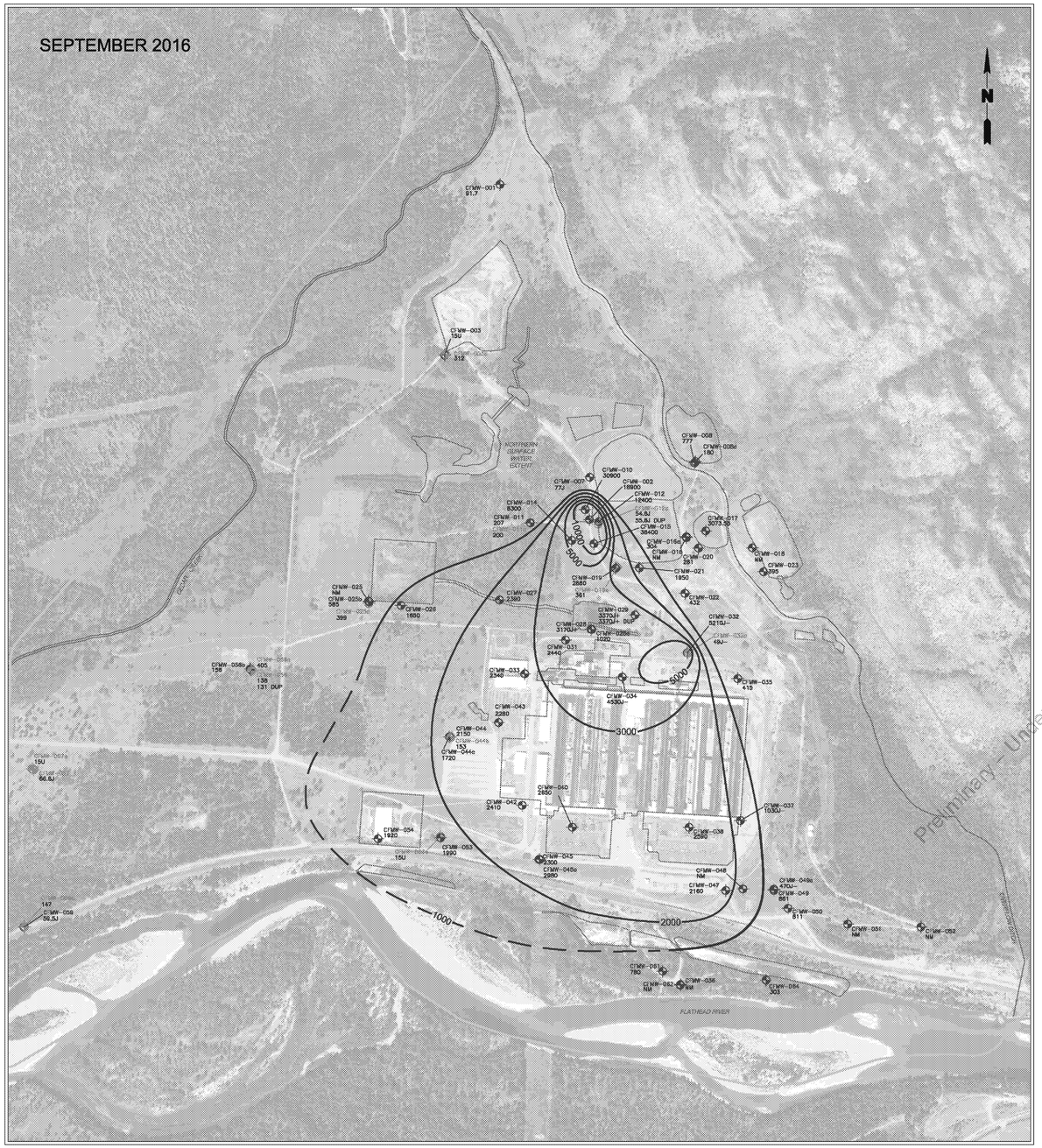

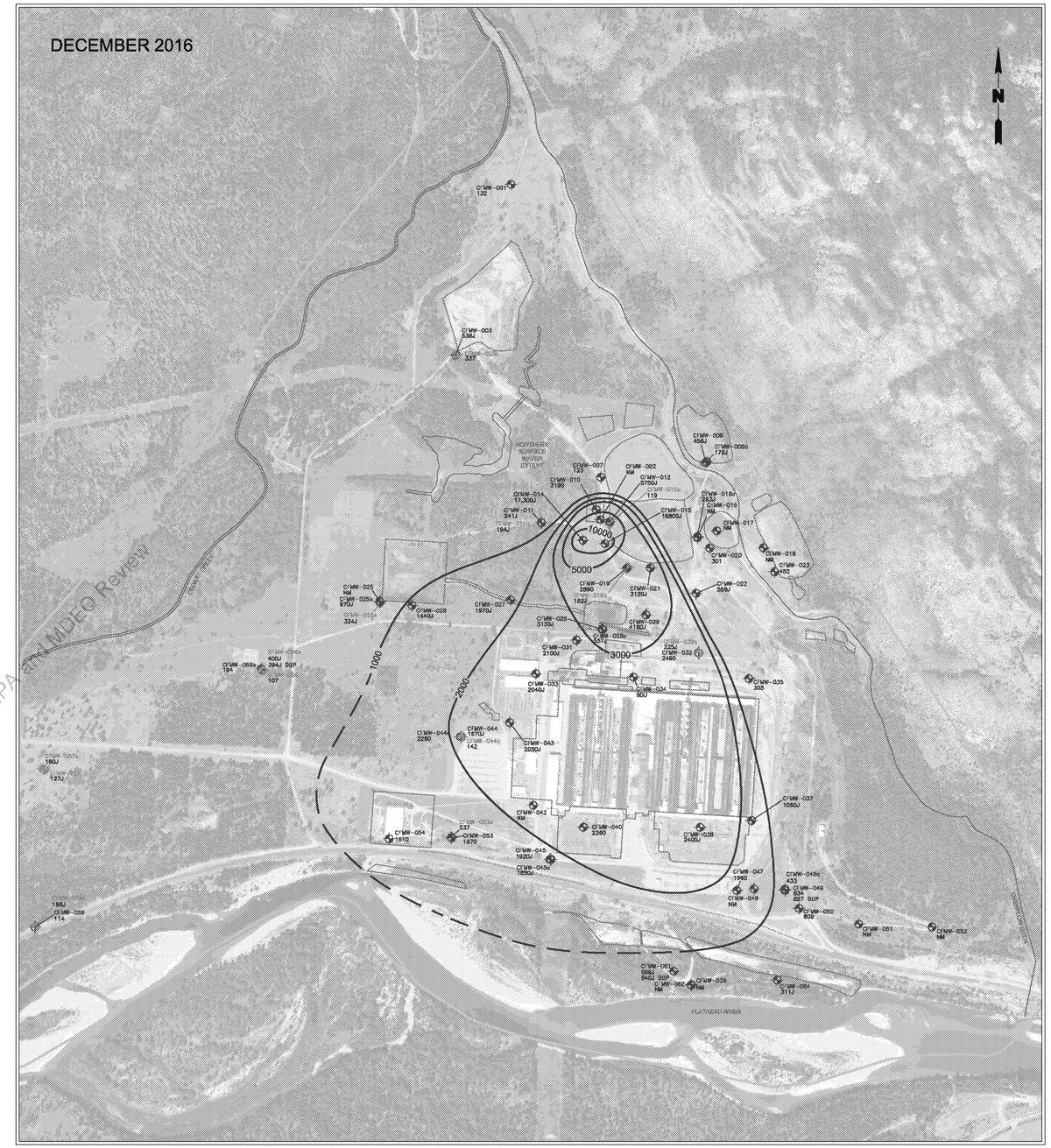

Preliminary – Under EPA and MDEQ Review

LEGEND

- RI/FS SITE BOUNDARY
- SURFACE WATER FEATURE
- SITE FEATURE
- CFMW-035 — LOCATION AND DESIGNATION OF MONITORING WELL SCREENED IN UPPER HYDROGEOLOGIC UNIT
- CFMW-052 — LOCATION AND DESIGNATION OF FORMER PRODUCTION WELL
- CFMW-032s* — LOCATION AND DESIGNATION OF MONITORING WELL SCREENED BELOW UPPER HYDROGEOLOGIC UNIT
- 405 — FLUORIDE CONCENTRATIONS IN GROUNDWATER (UNITS IN ug/L)
- NM — NOT MEASURED
- 100 — CONTOUR LINE OF FLUORIDE CONCENTRATION (DASHED WHERE INFERRED)

NOTE

CONTOURS ARE FOR THE UPPER HYDROGEOLOGIC UNIT WELLS ONLY

600' 0 600'

Title:

CONCENTRATIONS OF FLUORIDE IN GROUNDWATER

Prepared For:

COLUMBIA FALLS ALUMINUM COMPANY, LLC

ROUX
ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: M.R.	Date: 11APR17	PLATE
Prepared by: G.M.	Scale: AS SHOWN	7
Project Mgr: M.R.	Project: 2476.0001Y002	
File: 2476.0001Y154.02.DWG		

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