

Appendix 6.5-B

*Groundwater Quality Predictions for RES-2 –
Guideline Comparison Tables*

AJAX PROJECT

**Environmental Assessment Certificate Application / Environmental Impact Statement
for a Comprehensive Study**

TABLE 1

KGHM AJAX INC.
AJAX PROJECT

GROUNDWATER QUALITY PREDICTIONS AT RES-2
COMPARISON TO GUIDELINES FOR DRINKING WATER QUALITY

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	Baseline	Predicted		BCWQG - DRINKING WATER	HC - DRINKING WATER	
		MIN	MAX			
Conventional Parameters and Major Ions						
Baseline Hardness	mg/L CaCO ₃	1,100	1,100	1,100	-	-
Hardness - Dissolved	mg/L CaCO ₃	1,100	1,131	1,175	-	-
Bromide (Br ⁻)	mg/L	0.50	0.52	0.54	-	-
Chloride (Cl ⁻)	mg/L	14	17	21	250	250
Fluoride (F ⁻)	mg/L	0.32	0.33	0.35	1.5	1.5
Sulphate (SO ₄ ²⁻)	mg/L	1,010	1,027	1,050	500	500
Calcium (Ca)	mg/L	242	249	258	-	-
Magnesium (Mg)	mg/L	121	124	129	-	-
Potassium (K)	mg/L	14	15	16	-	-
Sodium (Na)	mg/L	82	85	89	-	200
Nutrients						
Ammonia	mg/L N	0.00	0.01	0.03	-	-
Nitrate	mg/L N	0.05	0.12	0.19	10	10
Nitrite	mg/L	0.010	0.012	0.014	1	1
Phosphorus	mg/L	0.00	0.00	0.01	-	-
Dissolved Metals						
Aluminum (Al)	mg/L	0.0015	0.0021	0.0030	0.2	0.2
Antimony (Sb)	mg/L	0.00011	0.00041	0.00076	-	0.006
Arsenic (As)	mg/L	0.0009	0.0013	0.0018	0.025	0.010
Barium (Ba)	mg/L	0.029	0.032	0.037	-	1
Boron (B)	mg/L	0.172	0.175	0.180	5	5
Cadmium (Cd)	mg/L	0.000015	0.000016	0.000017	-	0.0050
Chromium (Cr)	mg/L	0.00011	0.00017	0.00026	-	0.050
Cobalt (Co)	mg/L	0.00012	0.00014	0.00017	-	-
Copper (Cu)	mg/L	0.0913	0.0915	0.0919	0.5	1.0
Iron (Fe)	mg/L	0.314	0.318	0.323	-	0.3
Lead (Pb)	mg/L	0.000519	0.000524	0.000533	0.05	0.01
Lithium (Li)	mg/L	0.0109	0.0114	0.0120	-	-
Manganese (Mn)	mg/L	0.037	0.043	0.051	-	0.05
Molybdenum (Mo)	mg/L	0.016	0.019	0.023	0.25	-
Nickel (Ni)	mg/L	0.0019	0.0022	0.0025	-	-
Selenium (Se)	mg/L	0.00011	0.00049	0.00095	0.01	0.05
Silicon (Si)	mg/L	11.4	11.9	12.6	-	-
Silver (Ag)	mg/L	0.0000050	0.0000054	0.0000059	-	-
Strontium (Sr)	mg/L	2.98	3.03	3.10	-	-
Thallium (Tl)	mg/L	0.0000050	0.0000067	0.0000089	-	-
Tin (Sn)	mg/L	0.000050	0.000055	0.000061	-	-
Uranium (U)	mg/L	0.0018	0.0019	0.0021	-	0.02
Vanadium (V)	mg/L	0.0018	0.0020	0.0023	-	-
Zinc (Zn)	mg/L	0.0484	0.0487	0.0491	5	5

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NOTES:

1. - = VALUE NOT EXISTING OR APPLICABLE
2. BRITISH COLUMBIA WATER QUALITY GUIDELINES (BCWQG - APPROVED AND WORKING) - MAXIMUM OR 30-DAY AVERAGE (LOWEST VALUE SELECTED) - RAW DRINKING WATER.
3. HEALTH CANADA (HC) - GUIDELINES FOR CANADIAN DRINKING WATER QUALITY.
4. GROUNDWATER QUALITY PREDICTIONS FOR RES-2 PROVIDED BY BGC ENGINEERING INC. - AJAX PROJECT EA - PLUME MIGRATION ANALYSES TO RES-2 (2015).
5. RED HIGHLIGHTING INDICATES THAT THE VALUE EXCEEDS THE BCWQG FOR RAW DRINKING WATER.
6. BOLD NUMBERS INDICATE THAT THE VALUE EXCEEDS THE HC GUIDELINE FOR CANADIAN DRINKING WATER QUALITY.
7. THE TRIVALENT CHROMIUM GUIDELINE HAS BEEN APPLIED TO THE MODEL RESULTS AS THIS IS THE FORM IDENTIFIED IN THE DUSTFALL FROM MINE SOURCES.
8. GUIDELINES IN ITALICS ARE AESTHETIC OR OPERATIONAL GUIDELINES - NOT HEALTH-BASED.

TABLE 2

KGHM AJAX INC.
AJAX PROJECT

GROUNDWATER QUALITY PREDICTIONS AT RES-2
COMPARISON TO GUIDELINES FOR IRRIGATION WATER QUALITY

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	Baseline	Predicted		BCWQG - IRRIGATION	CEQG - IRRIGATION	
		MIN	MAX			
Conventional Parameters and Major Ions						
Baseline Hardness	mg/L CaCO ₃	1,100	1,100	1,100	-	-
Hardness - Dissolved	mg/L CaCO ₃	1,100	1,131	1,175	-	-
Bromide (Br ⁻)	mg/L	0.50	0.52	0.54	-	-
Chloride (Cl ⁻)	mg/L	14	17	21	100	100
Fluoride (F ⁻)	mg/L	0.32	0.33	0.35	1	1
Sulphate (SO ₄ ²⁻)	mg/L	1,010	1,027	1,050	-	-
Calcium (Ca)	mg/L	242	249	258	-	-
Magnesium (Mg)	mg/L	121	124	129	-	-
Potassium (K)	mg/L	14	15	16	-	-
Sodium (Na)	mg/L	82	85	89	-	-
Nutrients						
Ammonia	mg/L N	0.003	0.014	0.028	-	-
Nitrate	mg/L N	0.05	0.12	0.19	-	-
Nitrite	mg/L	0.010	0.012	0.014	-	-
Phosphorus	mg/L	0.0025	0.0049	0.0088	-	-
Dissolved Metals						
Aluminum (Al)	mg/L	0.0015	0.0021	0.0030	5	5
Antimony (Sb)	mg/L	0.00011	0.00041	0.00076	-	-
Arsenic (As)	mg/L	0.0009	0.0013	0.0018	0.100	0.100
Barium (Ba)	mg/L	0.029	0.032	0.037	-	-
Boron (B)	mg/L	0.17	0.18	0.18	0.5	0.5
Cadmium (Cd)	mg/L	0.000015	0.000016	0.000017	0.0051	0.0051
Chromium (Cr)	mg/L	0.00011	0.00017	0.00026	0.0049	0.0049
Cobalt (Co)	mg/L	0.00012	0.00014	0.00017	0.05	0.05
Copper (Cu)	mg/L	0.091	0.092	0.092	0.2	0.2
Iron (Fe)	mg/L	0.31	0.32	0.32	-	5.0
Lead (Pb)	mg/L	0.00052	0.00052	0.00053	0.2	0.2
Lithium (Li)	mg/L	0.011	0.011	0.012	0.75	2.50
Manganese (Mn)	mg/L	0.037	0.043	0.051	0.2	0.2
Molybdenum (Mo)	mg/L	0.016	0.019	0.023	0.02	0.01
Nickel (Ni)	mg/L	0.0019	0.0022	0.0025	0.2	0.2
Selenium (Se)	mg/L	0.00011	0.00049	0.00095	0.01	0.02
Silicon (Si)	mg/L	11.4	11.9	12.6	-	-
Silver (Ag)	mg/L	0.0000050	0.0000054	0.0000059	-	-
Strontium (Sr)	mg/L	2.98	3.03	3.10	-	-
Thallium (Tl)	mg/L	0.0000050	0.0000067	0.0000089	-	-
Tin (Sn)	mg/L	0.000050	0.000055	0.000061	-	-
Uranium (U)	mg/L	0.0018	0.0019	0.0021	0.01	0.01
Vanadium (V)	mg/L	0.0018	0.0020	0.0023	0.1	0.1
Zinc (Zn)	mg/L	0.048	0.049	0.049	1	1

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NOTES:

1. "-" VALUE NOT EXISTING OR APPLICABLE.
2. BRITISH COLUMBIA WATER QUALITY GUIDELINES (BCWQG - APPROVED AND WORKING) - MAXIMUM OR 30-DAY AVERAGE (LOWEST VALUES SELECTED) - IRRIGATION.
3. CANADIAN ENVIRONMENTAL QUALITY GUIDELINES (CEQG) - WATER QUALITY GUIDELINES FOR THE PROTECTION OF AGRICULTURE - IRRIGATION.
4. GROUNDWATER QUALITY PREDICTIONS FOR RES-2 PROVIDED BY BGC ENGINEERING INC. - AJAX PROJECT EA - PLUME MIGRATION ANALYSES TO RES-2 (2015).
5. RED HIGHLIGHTING INDICATES THAT THE VALUE EXCEEDS THE BCWQG FOR IRRIGATION.
6. BOLD NUMBERS INDICATE THAT THE VALUE EXCEEDS THE CEQG FOR IRRIGATION.
7. THE TRIVALENT CHROMIUM GUIDELINE HAS BEEN APPLIED TO THE MODEL RESULTS AS THIS IS THE FORM IDENTIFIED IN THE DUSTFALL FROM MINE SOURCES.
8. WHEN APPLICABLE, THE GUIDELINE SELECTED FOR IRRIGATION USE WAS THAT CORRESPONDING TO THE MOST SENSITIVE CROP OR SOIL TYPE LISTED.

TABLE 3

KGHM AJAX INC.
AJAX PROJECT

GROUNDWATER QUALITY PREDICTIONS AT RES-2
COMPARISON TO GUIDELINES FOR LIVESTOCK WATER QUALITY

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		Baseline	Predicted		BCWQG - LIVESTOCK	CEQG - LIVESTOCK
			MIN	MAX		
Conventional Parameters and Major Ions						
Baseline Hardness	mg/L CaCO ₃	1,100	1,100	1,100	-	-
Hardness - Dissolved	mg/L CaCO ₃	1,100	1,131	1,175	-	-
Bromide (Br ⁻)	mg/L	0.50	0.52	0.54	-	-
Chloride (Cl ⁻)	mg/L	14	17	21	600	-
Fluoride (F ⁻)	mg/L	0.32	0.33	0.35	1	1
Sulphate (SO ₄ ²⁻)	mg/L	1,010	1,027	1,050	1,000	1,000
Calcium (Ca)	mg/L	242	249	258	1,000	1,000
Magnesium (Mg)	mg/L	121	124	129	-	-
Potassium (K)	mg/L	14	15	16	-	-
Sodium (Na)	mg/L	82	85	89	-	-
Nutrients						
Ammonia	mg/L N	0.00	0.01	0.03	-	-
Nitrate	mg/L N	0.05	0.12	0.19	100	-
Nitrite	mg/L	0.0100	0.0118	0.0141	10	10
Phosphorus	mg/L	0.003	0.005	0.009	-	-
Dissolved Metals						
Aluminum (Al)	mg/L	0.0015	0.0021	0.0030	5	5
Antimony (Sb)	mg/L	0.000110	0.000412	0.000762	-	-
Arsenic (As)	mg/L	0.0009	0.0013	0.0018	0.025	0.025
Barium (Ba)	mg/L	0.029	0.032	0.037	-	-
Boron (B)	mg/L	0.172	0.175	0.180	5.0	5.0
Cadmium (Cd)	mg/L	0.0000150	0.0000159	0.0000170	0.0800	0.0800
Chromium (Cr)	mg/L	0.00011	0.00017	0.00026	0.05000	0.050
Cobalt (Co)	mg/L	0.00012	0.00014	0.00017	1	1
Copper (Cu)	mg/L	0.0913	0.0915	0.0919	0.3	1.0
Iron (Fe)	mg/L	0.314	0.318	0.323	-	-
Lead (Pb)	mg/L	0.000519	0.000524	0.000533	0.1	0.1
Lithium (Li)	mg/L	0.0109	0.0114	0.0120	-	-
Manganese (Mn)	mg/L	0.037	0.043	0.051	-	-
Molybdenum (Mo)	mg/L	0.0156	0.0188	0.0230	0.05	0.50
Nickel (Ni)	mg/L	0.00191	0.00216	0.00247	1	1
Selenium (Se)	mg/L	0.00011	0.00049	0.00095	0.03	0.05
Silicon (Si)	mg/L	11.4	11.9	12.6	-	-
Silver (Ag)	mg/L	0.0000050	0.0000054	0.0000059	-	-
Strontium (Sr)	mg/L	2.98	3.03	3.10	-	-
Thallium (Tl)	mg/L	0.0000050	0.0000067	0.0000089	-	-
Tin (Sn)	mg/L	0.000050	0.000055	0.000061	-	-
Uranium (U)	mg/L	0.0018	0.0019	0.0021	0.2	0.2
Vanadium (V)	mg/L	0.0018	0.0020	0.0023	0.1	0.1
Zinc (Zn)	mg/L	0.0484	0.0487	0.0491	2	50

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NOTES:

1. - = VALUE NOT EXISTING OR APPLICABLE
2. BRITISH COLUMBIA WATER QUALITY GUIDELINES (BCWQG - APPROVED AND WORKING) - MAXIMUM OR 30-DAY AVERAGE (LOWEST VALUE SELECTED) - LIVESTOCK WATERING.
3. CANADIAN ENVIRONMENTAL QUALITY GUIDELINES (CEQG) - WATER QUALITY GUIDELINES FOR THE PROTECTION OF AGRICULTURE - LIVESTOCK.
4. GROUNDWATER QUALITY PREDICTIONS FOR RES-2 PROVIDED BY BGC ENGINEERING INC. - AJAX PROJECT EA - PLUME MIGRATION ANALYSES TO RES-2 (2015).
5. RED HIGHLIGHTING INDICATES THAT THE VALUE EXCEEDS THE BCWQG FOR LIVESTOCK.
6. BOLD NUMBERS INDICATE THAT THE VALUE EXCEEDS THE CEQG FOR LIVESTOCK.
7. THE TRIVALENT CHROMIUM GUIDELINE HAS BEEN APPLIED TO THE MODEL RESULTS AS THIS IS THE FORM IDENTIFIED IN THE DUSTFALL FROM MINE SOURCES.
8. WHEN APPLICABLE, THE GUIDELINE SELECTED FOR LIVESTOCK WATERING USE WAS THAT CORRESPONDING TO CATTLE.

TABLE 4

KGHM AJAX INC.
AJAX PROJECT

GROUNDWATER QUALITY PREDICTIONS AT RES-2
COMPARISON TO WATER QUALITY GUIDELINES FOR THE PROTECTION OF AQUATIC LIFE

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		Baseline	Predicted		CEQG - PAL	BCWQG-30 D	BCWQG-MAX
			MIN	MAX			
Conventional Parameters and Major Ions							
Baseline Hardness	mg/L CaCO ₃	1,100	1,100	1,100	-	-	-
Hardness - Dissolved	mg/L CaCO ₃	1,100	1,131	1,175	-	-	-
Bromide (Br ⁻)	mg/L	0.50	0.52	0.54	1.5	-	-
Chloride (Cl ⁻)	mg/L	14	17	21	120	150	600
Fluoride (F ⁻)	mg/L	0.32	0.33	0.35	0.12	-	1.57
Sulphate (SO ₄ ²⁻)	mg/L	1,010	1,027	1,050	-	429	-
Calcium (Ca)	mg/L	242	249	258	-	-	-
Magnesium (Mg)	mg/L	121	124	129	-	-	-
Potassium (K)	mg/L	14	15	16	-	-	-
Sodium (Na)	mg/L	82	85	89	-	-	-
Nutrients							
Ammonia	mg/L N	0.003	0.014	0.028	0.65	0.66	-
Nitrate	mg/L N	0.05	0.12	0.19	3	3	32.8
Nitrite	mg/L	0.010	0.012	0.014	0.06	0.2	0.6
Phosphorus	mg/L	0.0025	0.0049	0.0088	-	-	-
Dissolved Metals							
Aluminum (Al)	mg/L	0.0015	0.0021	0.0030	0.1	0.05	0.1
Antimony (Sb)	mg/L	0.00011	0.00041	0.00076	-	0.009	-
Arsenic (As)	mg/L	0.0009	0.0013	0.0018	0.005	-	0.005
Barium (Ba)	mg/L	0.029	0.032	0.037	-	1	-
Boron (B)	mg/L	0.17	0.18	0.18	-	-	1.2
Cadmium (Cd)	mg/L	0.000015	0.000016	0.000017	0.000036	0.000457	0.001796
Chromium (Cr)	mg/L	0.00011	0.00017	0.00026	0.0089	0.0089	-
Cobalt (Co)	mg/L	0.00012	0.00014	0.00017	-	0.004	0.11
Copper (Cu)	mg/L	0.091	0.092	0.092	0.004	0.01	0.026
Iron (Fe)	mg/L	0.31	0.32	0.32	0.3	-	0.35
Lead (Pb)	mg/L	0.00052	0.00052	0.00053	0.001	0.016	0.324
Lithium (Li)	mg/L	0.011	0.011	0.012	-	-	-
Manganese (Mn)	mg/L	0.037	0.043	0.051	-	1.905	3.796
Molybdenum (Mo)	mg/L	0.016	0.019	0.023	0.073	1	2
Nickel (Ni)	mg/L	0.0019	0.0022	0.0025	0.15	-	0.15
Selenium (Se)	mg/L	0.00011	0.00049	0.00095	0.001	0.002	-
Silicon (Si)	mg/L	11.4	11.9	12.6	-	-	-
Silver (Ag)	mg/L	0.0000050	0.0000054	0.0000059	0.0001	0.0015	-
Strontium (Sr)	mg/L	3.0	3.0	3.1	-	-	-
Thallium (Tl)	mg/L	0.0000050	0.0000067	0.0000089	0.0008	0.0008	-
Tin (Sn)	mg/L	0.000050	0.000055	0.000061	-	-	-
Uranium (U)	mg/L	0.0018	0.0019	0.0021	0.015	0.0085	-
Vanadium (V)	mg/L	0.0018	0.0020	0.0023	-	-	-
Zinc (Zn)	mg/L	0.048	0.049	0.049	0.030	0.162	0.187

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NOTES:

1. - = VALUE NOT EXISTING OR APPLICABLE.

2. BRITISH COLUMBIA WATER QUALITY GUIDELINES (APPROVED AND WORKING) - MAXIMUM (BCWQG-MAX) OR 30-DAY AVERAGE (BCWQG-30 D) - FRESHWATER AQUATIC LIFE.

3. CANADIAN ENVIRONMENTAL QUALITY GUIDELINES (CEQG) - PROTECTION OF AQUATIC LIFE (PAL).

4. GROUNDWATER QUALITY PREDICTIONS FOR RES-2 PROVIDED BY BGC ENGINEERING INC. - AJAX PROJECT EA - PLUME MIGRATION ANALYSES TO RES-2 (2015).

5. RED HIGHLIGHTING INDICATES THAT THE VALUE EXCEEDS THE CEQG PAL.

6. BOLD NUMBERS INDICATE THAT THE VALUE EXCEEDS THE BCWQG-30 D OR THE BCWQ-MAX.

7. GUIDELINES THAT ARE HARDNESS DEPENDENT WERE CALCULATED USING BASELINE HARDNESS; BASELINE HARDNESS EXCEEDS THE UPPER HARDNESS THRESHOLD FOR ALL HARDNESS DEPENDENT GUIDELINES SO GUIDELINES ARE AT THEIR MAXIMUM VALUES.

8. THE AMMONIA GUIDELINE IS TEMPERATURE AND pH DEPENDENT; pH 8.25 AND TEMPERATURE 6.35 DEGREES CELSIUS ASSUMED, BASED ON BASELINE OBSERVATIONS IN THE WATERSHED.

9. THE TRIVALENT CHROMIUM GUIDELINE HAS BEEN APPLIED TO THE MODEL RESULTS AS THIS IS THE FORM IDENTIFIED IN THE DUSTFALL FROM MINE SOURCES.

10. MERCURY AND BERYLLIUM MODELLED DATA HAVE BEEN EXCLUDED FROM THE RESULTS TABLES; THESE PARAMETERS ARE UNDERSTOOD TO BE MODELLED BASED ON DETECTION LIMITS THAT ARE NEAR TO THE GUIDELINES, RESULTING IN PREDICTED EXCEEDANCES THAT ARE NOT EXPECTED.

TABLE 5

KGHM AJAX INC.
AJAX PROJECT

GROUNDWATER QUALITY PREDICTIONS AT RES-2
COMPARISON TO WATER QUALITY GUIDELINES FOR
RECREATION AND AESTHETICS

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	Baseline	Predicted		BCWQG - REC & AES	
		MIN	MAX		
Conventional Parameters and Major Ions					
Baseline Hardness	mg/L CaCO ₃	1,100	1,100	1,100	-
Hardness - Dissolved	mg/L CaCO ₃	1,100	1,131	1,175	-
Bromide (Br ⁻)	mg/L	0.50	0.52	0.54	-
Chloride (Cl ⁻)	mg/L	14	17	21	-
Fluoride (F ⁻)	mg/L	0.32	0.33	0.35	-
Sulphate (SO ₄ ²⁻)	mg/L	1,010	1,027	1,050	-
Calcium (Ca)	mg/L	242	249	258	-
Magnesium (Mg)	mg/L	121	124	129	-
Potassium (K)	mg/L	14	15	16	-
Sodium (Na)	mg/L	82	85	89	-
Nutrients					
Ammonia	mg/L N	0.003	0.014	0.028	-
Nitrate	mg/L N	0.050	0.116	0.195	10
Nitrite	mg/L	0.0100	0.0118	0.0141	1
Phosphorus	mg/L	0.003	0.005	0.009	-
Dissolved Metals					
Aluminum (Al)	mg/L	0.0015	0.0021	0.0030	0.2
Antimony (Sb)	mg/L	0.00011	0.00041	0.00076	-
Arsenic (As)	mg/L	0.0009	0.0013	0.0018	-
Barium (Ba)	mg/L	0.029	0.032	0.037	-
Boron (B)	mg/L	0.172	0.175	0.180	-
Cadmium (Cd)	mg/L	0.000015	0.000016	0.000017	-
Chromium (Cr)	mg/L	0.00011	0.00017	0.00026	-
Cobalt (Co)	mg/L	0.00012	0.00014	0.00017	-
Copper (Cu)	mg/L	0.0913	0.0915	0.0919	1
Iron (Fe)	mg/L	0.314	0.318	0.323	-
Lead (Pb)	mg/L	0.000519	0.000524	0.000533	0.05
Lithium (Li)	mg/L	0.0109	0.0114	0.0120	-
Manganese (Mn)	mg/L	0.037	0.043	0.051	-
Molybdenum (Mo)	mg/L	0.016	0.019	0.023	-
Nickel (Ni)	mg/L	0.0019	0.0022	0.0025	-
Selenium (Se)	mg/L	0.00011	0.00049	0.00095	-
Silicon (Si)	mg/L	11.4	11.9	12.6	-
Silver (Ag)	mg/L	0.000005	0.000005	0.000006	-
Strontium (Sr)	mg/L	2.98	3.03	3.10	-
Thallium (Tl)	mg/L	0.000005	0.000007	0.000009	-
Tin (Sn)	mg/L	0.00005	0.00005	0.00006	-
Uranium (U)	mg/L	0.0018	0.0019	0.0021	-
Vanadium (V)	mg/L	0.0018	0.0020	0.0023	-
Zinc (Zn)	mg/L	0.0484	0.0487	0.0491	5

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NOTES:

1. - = VALUE NOT EXISTING OR APPLICABLE.
2. BRITISH COLUMBIA WATER QUALITY GUIDELINES (BCWQG - APPROVED AND WORKING) - RECREATION AND AESTHETIC (REC & AES) USES.
3. GROUNDWATER QUALITY PREDICTIONS FOR RES-2 PROVIDED BY BGC ENGINEERING INC. - AJAX PROJECT EA - PLUME MIGRATION ANALYSES TO RES-2 (2015).

TABLE 6

**KGHM AJAX INC.
AJAX PROJECT**

**GROUNDWATER QUALITY PREDICTIONS AT RES-2
COMPARISON TO WATER QUALITY GUIDELINES FOR WILDLIFE**

Print Jul/06/15 19:11:06

		Baseline	Predicted		BCWQG - WILDLIFE
			MIN	MAX	
Conventional Parameters and Major Ions					
Baseline Hardness	mg/L CaCO ₃	1,100	1,100	1,100	-
Hardness - Dissolved	mg/L CaCO ₃	1,100	1,131	1,175	-
Bromide (Br ⁻)	mg/L	0.50	0.52	0.54	-
Chloride (Cl ⁻)	mg/L	14	17	21	600
Fluoride (F ⁻)	mg/L	0.32	0.33	0.35	1
Sulphate (SO ₄ ²⁻)	mg/L	1,010	1,027	1,050	-
Calcium (Ca)	mg/L	242	249	258	-
Magnesium (Mg)	mg/L	121	124	129	-
Potassium (K)	mg/L	14	15	16	-
Sodium (Na)	mg/L	82	85	89	-
Nutrients					
Ammonia	mg/L N	0.003	0.014	0.028	-
Nitrate	mg/L N	0.050	0.116	0.195	-
Nitrite	mg/L	0.0100	0.0118	0.0141	-
Phosphorus	mg/L	0.003	0.005	0.009	-
Dissolved Metals					
Aluminum (Al)	mg/L	0.0015	0.0021	0.0030	5
Antimony (Sb)	mg/L	0.00011	0.00041	0.00076	-
Arsenic (As)	mg/L	0.0009	0.0013	0.0018	0.025
Barium (Ba)	mg/L	0.029	0.032	0.037	-
Boron (B)	mg/L	0.172	0.175	0.180	5
Cadmium (Cd)	mg/L	0.000015	0.000016	0.000017	-
Chromium (Cr)	mg/L	0.00011	0.00017	0.00026	-
Cobalt (Co)	mg/L	0.00012	0.00014	0.00017	-
Copper (Cu)	mg/L	0.0913	0.0915	0.0919	0.3
Iron (Fe)	mg/L	0.314	0.318	0.323	-
Lead (Pb)	mg/L	0.000519	0.000524	0.000533	0.1
Lithium (Li)	mg/L	0.0109	0.0114	0.0120	-
Manganese (Mn)	mg/L	0.037	0.043	0.051	-
Molybdenum (Mo)	mg/L	0.016	0.019	0.023	0.05
Nickel (Ni)	mg/L	0.0019	0.0022	0.0025	-
Selenium (Se)	mg/L	0.00011	0.00049	0.00095	0.002
Silicon (Si)	mg/L	11.4	11.9	12.6	-
Silver (Ag)	mg/L	0.000005	0.000005	0.000006	-
Strontium (Sr)	mg/L	2.98	3.03	3.10	-
Thallium (Tl)	mg/L	0.000005	0.000007	0.000009	-
Tin (Sn)	mg/L	0.00005	0.00005	0.00006	-
Uranium (U)	mg/L	0.0018	0.0019	0.0021	-
Vanadium (V)	mg/L	0.0018	0.0020	0.0023	-
Zinc (Zn)	mg/L	0.0484	0.0487	0.0491	-

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NOTES:

1. - = VALUE NOT EXISTING OR APPLICABLE.
2. BRITISH COLUMBIA WATER QUALITY GUIDELINES (BCWQG - APPROVED AND WORKING) - WILDLIFE.
3. GROUNDWATER QUALITY PREDICTIONS FOR RES-2 PROVIDED BY BGC ENGINEERING INC. - AJAX PROJECT EA - PLUME MIGRATION ANALYSES TO RES-2 (2015).