

**APPENDIX 31-A
KSM PROJECT NAVIGABLE WATERS SCOPING
AND MINOR WORKS, AND WATERS ORDER
SCREENING TABLES**

Appendix 31-A - Table 1. Interaction of KSM Project 'Works' with Potentially Navigable Waters for all Project Phases

Project Region	Project Area	ID #	Project Component	Phase				Interaction with Water
				Construction	Operation	Closure	Post-closure	
Mine Site	Camp 3: Eskay Staging Camp	1	Camp 3 incinerator	X	R			X
		2	Camp 3 helipad	X	R			
		3	Camp 3 equipment and material storage yard	X	R			
		4	Camp 3: Eskay Staging Camp	X	R			
		5	Camp 3 septic field	X	R			
	Camp 7: Unuk North Camp	6	Camp 7 equipment and material storage yard	X	R			
		7	Camp 7: Unuk North Camp	X	R			
		8	Camp 7 helipads	X	R			
		9	Camp 7 incinerator	X	R			
	Camp 8: Unuk South Camp	10	Camp 7 septic field	X	R			
		11	Camp 8 helipad	X	R			
		12	Camp 8 equipment and material storage yard	X	R			
		13	Camp 8 incinerator	X	R			
		14	Camp 8: Unuk South Camp	X	R			
	Coulter Creek Access Road (CCAR)	15	Camp 8 septic field	X	R			X
		16	Coulter Creek access road	X	X	X	R	
		17	CCAC borrow areas	X	PR			
		18	CCAC waste areas	X	R			
		19	CCAC log landings	X	R			
		20	creek crossing C012 (bridge)	X	X	X	R	
		21	creek crossing C043 (bridge)	X	X	X	R	
		22	creek crossing C044 (bridge)	X	X	X	R	
		23	Coulter Creek bridge (C006)	X	X	X	R	
		24	creek crossing C024 (bridge)	X	X	X	R	
		25	creek crossing C021 (bridge)	X	X	X	R	
		26	Unuk River bridge (C010) (88 m) (three-span bridge)	X	X	X	R	
		27	creek crossing C042 (bridge)	X	X	X	R	
		28	avalanche control structures (km 26-29)	X	X	X	D	
	29	Gingras Creek bridge (C011)	X	X	X	R		
	30	Mitchell Creek bridge (C007) (33.5 m)	X	X	X	X		
	Mitchell Operating Camp	31	Mitchell operating camp	X	X	PR	X	
		32	Mitchell operating camp helipad	X	X	X	X	
		33	Mitchell operating camp incinerator	X	X	X	X	
		34	Mitchell operating camp septic field	X	X	X	X	
	McTagg Rock Storage Facility (RSF)	35	McTagg access road	X	D			X
		36	McTagg Creek bridge	X	D			
		37	McTagg RSF snow storage		X	D		
		38	McTagg RSF		X	PR		
		39	West McTagg operation channel - North		X			
		40	West McTagg operation channel - South		X			
		41	West McTagg closure channel			X	X	
		42	West McTagg access road		X	X	X	
		43	East McTagg closure channel and access road			X	X	
		44	North McTagg Diversion Channel		X	X	X	
	McTagg Twinned Diversion Tunnels (MTDT)	45	McTagg Diversion access road	X	X	X	X	X
		46	McTagg phase 3 flood outlet		X	X	X	
		47	McTagg phase 2 flood outlet		X/R			
		48	McTagg phase 1 flood outlet	X	R			
		50	TWT 2 - sediment control pond	X/R				
		51	TWT 2 - unlined muck pad	X/R				
		52	TWT 2 - diversion ditch	X/R				
		53	McTagg Twinned Diversion Tunnels	X	X	X	X	
		54	Phase 3 West McTagg inlet		X	X	X	
		55	Phase 3 West McTagg dam		X	X	X	
		56	Phase 3 West McTagg dam spillway		X	X	X	
		57	Phase 3 East McTagg inlet		X	X	X	
		58	Phase 3 East McTagg dam		X	X	X	
		59	Phase 3 East McTagg dam spillway		X	X	X	
		60	Phase 2 McTagg inlet		X/D			
		61	Phase 2 McTagg dam		X/D			
	62	Phase 2 McTagg dam spillway		X/D				
	63	Phase 1 McTagg dam	X	D				
	64	Phase 1 McTagg inlet	X	D				
	65	Phase 1 McTagg dam spillway	X	D				
	McTagg Power Plant	66	McTagg penstock tunnel		X	X	X	X
		67	McTagg penstock		X	X	X	
		68	McTagg Power Plant		X	X	X	
	Mitchell Rock Storage Facility (RSF)	69	North Slope pipeline	X	D			X
		70	North Slope pipeline access road	X	D			
		71	North Slope diversion ditch		X	D		
		72	North Slope collection ditch		X	X	X	
		73	North Slope diversion buried pipeline	X	X	D		
		74	North Slope diversion ditch access road	X	X			
		75	Mitchell North closure channel			X	X	
		459	Mitchell North Closure Channel Access Road			X	X	
		76	Upper Mitchell Creek bridge	X	D			
		77	Mitchell RSF landbridge		X/D			
		79	TWT 6 - sediment control pond	X/D				
		80	TWT 6 - lined muck pad	X/D				
		81	TWT 6 - water treatment plant	X/D				
		82	TWT 6 - lined pond	X/D				

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Project Region	Project Area	ID #	Project Component	Phase				Interaction with Water
				Construction	Operation	Closure	Post-closure	
Mine Site (cont'd)	Mitchell Rock Storage Facility (RSF) (cont'd)	83	TWT 6 - diversion ditch	X/D				X
		84	TWT 6 - unlined muck pad	X/D				
		85	TWT 6 - buried pipeline	X/D				X
		86	Mitchell RSF pre-production ore stockpile	X				
		460	Mitchell Ore Stockpile Feed Conveyor		X	R		X
		87	Mitchell RSF ore stockpile		X/PR			
		88	Mitchell Batch Plant	X	D			
		89	Mitchell Batch Plant gravel stockpile	X	D			
		90	Mitchell RSF snow storage	X	D			
		91	Mitchell RSF fuel storage	X	X	X	X	
		92	Sulphurets waste conveyor 3		X	D		X
		93	Sulphurets waste conveyor 2		X	D		
		94	Sulphurets waste conveyor 1		X	D		X
		95	Sulphurets waste stockpile		X	D		
		96	Mitchell RSF	X	X	PR		X
		97	South Mitchell closure channel and access road			X	X	
		98	Mitchell Valley Drainage Tunnel		X	X/D		X
		Camp 4: Mitchell North Camp (for MTT construction)	99	Camp 4: Mitchell North Camp	X/D			
	100		Camp 4 helipad	X/D				
	101		Camp 4 incinerator	X/D				
	102		Camp 4 equipment and material storage yard	X/D				
	103		Camp 4 septic field	X/D				
	Mitchell Ore Preparation Complex (Mitchell OPC)	104	Mitchell OPC	X	X	PR		X
		105	MTT west portal	X	X			
		106	MTT closure portal			X	X	
		107	substation 2	X	X			
		108	Closure substation			X	X	X
		109	25 kV transmission lines	X	X	X	X	X
		110	Mitchell OPC ore stockpile	X	X	R		
		111	TWT 4 - sediment control pond	X/D				
		112	Mitchell OPC Primary Crusher	X	X	D		
		113	Mitchell OPC snow storage		X	R		X
	Mine Site Avalanche Control	114	fixed avalanche initiation exploders	X	X	X	X	
		115	fixed avalanche support structure	X	X	X	X	
		116	fixed avalanche support structure access road	X	X	X	X	
	Iron Cap Block Cave Mine	117	Iron Cap Underground Works		X	D		
		118	Iron Cap underground access ramp		X	D		
		119	Iron Cap conveyor 3		X	D		
		120	Iron Cap conveyor 2		X	D		
		121	Iron Cap conveyor 1		X	D		
		122	Iron Cap surface disturbance		X	X	X	
		123	Iron Cap return air portal		X	X	X	
		124	Iron Cap ventilation tunnels		X	D		
		125	Iron Cap fresh air portals (x2)		X	D		
	Mitchell Pit	126	Mitchell Pit north wall dewatering adits		X	D		X
		127	Mitchell Pit haul road		X	R		X
		128	Mitchell Pit closure dam			X	X	X
		129	Mitchell Pit closure dam spillway			X	X	X
		130	Mitchell Pit Lake discharge pipe			X	X	X
		131	Mitchell Pit pre-production ore stockpile	X				X
		132	Mitchell Pit	X	X	D		X
		133	Mitchell Pit Lake			X	X	
		134	Mitchell Pit North diversion ditch		X	X/D		X
		135	Mitchell Pit East diversion ditch		X	X/D		X
		136	Mitchell Pit South diversion ditch		X	X/D		
	Mitchell Block Cave Mine	137	Mitchell Underground Works		X	D		
		138	Mitchell surface disturbance		X	X	X	X
		139	Mitchell underground access portal		X	D		
		140	Mitchell underground access ramp		X	D		
		141	Mitchell underground conveyor tunnel portal		X	D		
		142	Mitchell underground conveyor		X	D		
		143	Mitchell underground fresh air raises (x2)		X	D		
		144	Mitchell underground return air raises (x2)		X	D		
		145	Mitchell underground drainage tunnels		X	D		
		Mitchell Diversion Tunnels (MDT)	146	Mitchell diversion contact water ditch	X			
	147		North Mitchell Glacier collection ditch	X	X	X	X	
	148		North Mitchell Glacier collection ditch access road	X				
	149		North Mitchell Glacier access road	X	X	X	X	
	150		Mitchell diversion phase1 surface inlet	X	X			
	151		Mitchell Diversion Tunnel access	X	X	X	X	
	152		Mitchell diversion phase 2 surface inlet		X	D		
	153		South Mitchell Glacier slope contact water collection ditch			X	X	
	154		Mitchell flood overflow drainage tunnel	X	X	X	X	X
	155		Mitchell Diversion access road	X				X
	156		open pit phase sub-glacial inlet	X	X	X	X	
	157		underground phase sub-glacial inlet		X	X	X	
	159		TWT 5 - lined muck pad	X/D				
	160		TWT 5 - unlined muck pad	X/D				
	161		TWT 5 - sediment control pond	X/D				
	162		TWT 5 - diversion ditch	X/D				

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Mine Site (cont'd)	Mitchell Diversion Tunnels (MDT) (cont'd)	163	Open Pit Phase Mitchell Diversion Tunnel	X	X	X	X		
		164	Underground Phase Mitchell Diversion Tunnel		X	X	X		
		166	TWT 3 - unlined muck pad	X/R					
		167	TWT 3 - lined muck pad	X/R					
		168	TWT 3 - water treatment facility	X/R					
		169	TWT 3 - sediment control pond	X/R					
		170	TWT 3 - diversion ditch	X/R					
		171	MDT temporary diversion construction road	X	R				
		172	rock cut stepped spillway	X	X	X	X		
		173	underground phase outlet portal		X	X	X		
		174	Mitchell Diversion outlet access road	X	X	X	X	X	
		Upper Sulphurets Power Plant	175	surface penstock on pillars	X	X	X	X	
			176	penstock buried in road bed	X	X	X	X	
			177	Upper Sulphurets Power Plant access road	X	X	X	X	X
			178	Upper Sulphurets Power Plant	X	X	X	X	X
		Mitchell Truck Shop	179	Mitchell Truck Shop	X	X	R		
		Water Storage Facility (WSF)	180	WSF bypass buried pipeline	X	X	X	X	X
			181	WSF snow storage		X	D		X
			182	WSF borrow pits/Upstream Rockfill Quarry Area	X	X			
			183	water storage pond	X	X	X	X	X
			184	buried HDPE lined penstock	X	X	X	X	
			185	lined pumping header pond	X	X	X	X	
			186	downstream rockfill quarry area	X	X	R		
			187	Selenium Treatment Plant		X	X	X	
			188	WSF diversion tunnel	X	X	X	X	X
			189	Temporary Water Treatment 7	X/R				
			190	WSF construction access road	X/D				X
			191	WSF construction cofferdams	X/D				X
			192	Water Storage Dam (WSD)	X	PR	X	X	X
			193	WSD west lower seepage interception tunnel	X	X	X	X	
			194	WSD west upper seepage interception tunnel	X	X	X	X	
			195	WSD east lower seepage interception tunnel	X	X	X	X	
			196	WSD east upper seepage interception tunnel	X	X	X	X	
			197	WSD southeast seepage interception tunnel	X	X	X	X	
			198	WSD southwest seepage interception tunnel	X	X	X	X	
			199	WSF pipeline	X	X	X	X	X
			200	WSF spillway	X	X	X	X	
			201	WSF seepage dam	X	X	X	X	X
			202	WSF seepage collection pond	X	X	X	X	X
			203	WSF seepage dam spillway	X	X	X	X	
			204	southeast WSF diversion	X	X	X	X	
			205	temporary construction bridge	X/D				X
			206	Lower Mitchell closure channel access road			X	X	
			207	Lower Mitchell closure channel			X	X	
		Camp 9: Mitchell Initial Camp	208	Camp 9: Mitchell Initial Camp	X/R				
			209	Camp 9 septic field	X/R				
		Camp 10: Mitchell Secondary Camp	210	Camp 10: Mitchell Secondary Camp	X	R			
		211	Camps 9 and 10 helipad	X	R				
		212	Camp 9 and 10 incinerator	X	R				
		213	Camp 10 septic field	X	R				
	Water Treatment and Energy Recovery Area	214	penstock to WTP	X	X	X	X		
		215	Energy Recovery Facility	X	X	X	X		
		216	Water Treatment Plant (WTP)	X	X	X	X		
		217	Temporary Water Treatment 1	X/R					
	Sludge Management Facilities	218	sludge warehouse	X	X	X	X		
		219	sludge landfill	X/R					
		220	sludge storage			X	X	X	
	Sulphurets Laydown Area	221	Sulphurets access road	X	X	PR	X	X	
		222	Satellite Maintenance Facility		X	R			
		223	Sulphurets snow storage	X	X	R			
		224	Sulphurets diversion ditch	X	X	R			
		225	Sulphurets collection ditch	X	X			X	
		226	landfarm/landfill	X	R				
		227	Sulphurets laydown Area	X	X/R				
	Sulphurets-Mitchell Conveyor Tunnel	228	Sulphurets-Mitchell Conveyor Tunnel		X	D			
		229	Sulphurets-Mitchell Conveyor Tunnel portals		X	R			
		230	conveyor stockpile		X	R			
		231	conveyor 1 to Sulphurets portal		X	R			
		232	conveyor 2 to Sulphurets portal		X	R			
	Sulphurets Pit	233	Sulphurets Pit crusher		X	R			
		234	Sulphurets Pit	X	X	D			
		235	Sulphurets Pit Backfill			X	PR		
		236	Sulphurets Pit drainage collection ditch	X/D					
		237	Sulphurets Pit drainage pipeline to Selenium Treatment		X	X	X	X	
		238	Sulphurets Pit drainage pipeline to WSF	X	X	X	X	X	
		239	Sulphurets Pit diversion and collection system		X	X	X		
	Kerr rope conveyor	240	Kerr rope conveyor		X	R		X	
		241	conveyor stockpile		X	R			
	Kerr Pit	242	Kerr Pit access road		X	PR	X	X	
		243	Kerr Pit snow storage		X	R		X	
		244	Kerr Pit crusher		X	R			

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				Construction	Operation	Closure	Post-closure	
Mine Site (cont'd)	Kerr Pit (cont'd)	245	Kerr Pit		X	D		X
		247	South Kerr Pit Lake			X	X	
		248	Kerr Pit dewatering pipeline		X	X	X	X
	Camp 2: Ted Morris Camp	249	Camp 2: Ted Morris Camp	X/R				
		250	Camp 2 equipment and material storage yard	X/R				
		251	Camp 2 helipad	X/R				
		252	Camp 2 incinerator	X/R				
		253	Camp 2 septic field	X/R				
	Explosives Manufacturing Facility	254	Sulphurets Valley access road	X	X	PR	X	X
		255	Sulphurets bridge	X	X	X	X	
		256	initial construction borrow and spoil area	X	X	R		
		257	secondary construction borrow and spoil area			X/R		
		258	closure cover borrow and till storage areas	X	X	X/R		X
		461	Till Storage Access Road	X	X	R		X
		259	secondary closure cover borrow and till storage area		X	X/R		
		260	explosives access road	X	X	R		X
		261	explosives magazine	X	X	R		
		262	AN Prill Storage access road	X	X	R		
	263	AN prill storage area	X	X	R			
	264	Explosives Manufacturing Facility	X	X	R			
	Temporary Frank Mackie Glacier Access Route	265	Temporary Frank Mackie Glacier access route	X/D				X
	Camp 1: Granduc Staging Camp	266	Camp 1: Granduc Staging Camp	X				
		267	Camp 1 helipad	X				
		268	Camp 1 equipment and material storage yard	X				
		269	Camp 1 septic field	X				
	Misc	462	Minesite Roads	X	X	X	X	X
463		Minesite Water Diversions	X	X	X	X	X	
Processing and Tailing Management Area (PTMA)	Mitchell-Treaty Twinned Tunnels (MTT)	270	Mitchell-Treaty Conveyor Tunnel	X	X	X	X	
		271	Mitchell-Treaty Transportation Tunnel	X	X	X	X	
	Construction access adit	272	construction access portal	X	X	X	X	
		274	Adit TWT - unlined muck pad	X	D			
		275	Adit TWT - sediment control pond	X	D			
		276	Adit TWT - lined muck pad	X	D			
		277	Adit TWT - collection sump	X	D			
		278	Adit TWT - diversion ditch	X	D			X
		279	Treaty Adit road	X	X	X	X	X
		280	cable buried under road	X	D			X
	281	tunnel muck drainage pipeline buried under road	X	D			X	
	Mitchell-Treaty Saddle Area	282	Saddle portal	X	X	X	X	X
		283	Saddle wash plant	X	R			
		284	Saddle helipad	X	R			
		286	Saddle TWT - lined muck pad	X	R			X
		287	Saddle TWT - unlined muck pad	X	R			
		288	Saddle TWT - temporary treatment plant	X	R			
		289	Saddle TWT - sediment control ponds	X	R			X
		290	Saddle TWT - diversion ditch	X	R			
		291	Saddle fueling station and tank farm	X	R			
		292	Saddle laydown area	X	R			
		293	Saddle explosives magazine	X	R			X
		294	construction generator	X	R			
	295	Treaty Saddle road	X	X	X	X	X	
	296	Treaty Saddle road borrow areas	X	R			X	
	297	Treaty Saddle road waste areas	X	R				
	298	Treaty Saddle Road log landings	X	R				
	Camp 6: Treaty Saddle Camp	299	Camp 6 incinerator	X	R			
		300	Camp 6 helipad	X	R			
		301	Camp 6: Treaty Saddle Camp	X	R			
		302	Camp 6 equipment and material storage yard	X	R			
		303	Camp 6 septic field	X	R			
Camp 5: Treaty Plant Camp	304	Camp 5: Treaty Plant Camp	X	R			X	
Treaty Operating Camp	305	water supply well	X	X	X	X		
	306	construction explosives storage	X/R					
	307	water pipeline	X	X	X	X		
	308	water supply well access road	X	X	X	X	X	
	309	Treaty operating camp incinerator	X	X	X	X		
	310	Treaty operating camp	X	X	PR	X		
	311	Treaty operating camp septic field	X	X				
Treaty Ore Preparation Complex	313	TWT 8 - unlined muck pad	X	R				
	314	TWT 8 - sediment control pond	X	R				
	315	MTT process plant portal	X	X	X	X		
	316	MTT portal laydown area	X	X/R			X	
	317	Treaty runoff collection channel	X	X	X	R	X	
	318	Treaty helipad	X	X	R			
	319	Treaty construction laydown area	X	R				
	320	Treaty waste management facilities	X	X	R		X	
	321	Treaty warehouse and warehouse pad	X	X	R			
	322	Treaty maintenance shop	X	X	R			

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Processing and Tailing Management Area (PTMA) (cont'd)	Treaty Ore	323	Treaty lab	X	X	R				
	Preparation Complex (cont'd)	324	CIL Plant	X	X	R				
		325	substation 1	X	X	X	X			
			326	25 kV transmission line	X	X	X	X	X	
			327	Treaty Process Plant	X	X	R			
			328	TWT 10 - sediment control pond	X	X	X	R		
			329	TWT 10 - collection ditch and pipeline	X	R			X	
			330	High Pressure Grinding Rolls (HPGR) Mill	X	X	R			
			331	Treaty OPC fine ore stockpile		X	R			
			332	Treaty OPC stormwater runoff pipeline		X	X	R	X	
			333	Treaty OPC coarse ore stockpile		X	R		X	
			334	Treaty SEC Crusher Building	X	X	R			
			335	Treaty office complex	X	X	X	X	X	
			336	Treaty ambulance building	X	X	X	X	X	
			337	container storage area	X	X	R			
			338	cold storage	X	X	R			
			339	Treaty CSCF/landfarm/landfill	X	X	X	R		
			340	Treaty OPC Batch Plant stockpile	X	X	R			
			341	Treaty OPC Batch Plant	X	X	R			
			342	Treaty fuel storage	X	X	R			
			343	Treaty OPC access road	X	X	R		X	
			344	Treaty OPC site collection and diversion ditches	X	X	X	R	X	
			345	Treaty Administration Building	X	X	X	X		
		Concentrate Storage and Loadout	346	concentrate storage and loadout area		X	R			
		North Cell Tailing Management Facility	347	North Cell till stockpile	X	X	R			
			348	North Cell soil storage area	X	X	R		X	
			349	TWT 11 - sediment control pond	X	X	X	R		
			350	TWT 11 - collection ditch and pipeline	X	X	X	R		
			351	TWT 9 - sediment control pond	X	X	R		X	
			352	TWT 9 - pipeline	X	X	R		X	
			353	North Cell seepage collection dam	X	PR	X	X	X	
			354	North Cell seepage collection dam spillway	X	X	X	X	X	
			355	North Cell seepage collection pond	X	X	X	X	X	
			356	North Cell seepage reclaim pipeline	X	X	X	X	X	
			357	North Cell construction berms and sediment fences	X/D					X
			358	North Cell starter dam	X/-					X
			359	North Dam construction pipeline and cofferdam	X/D					X
			360	North Cell dam	X	PR	X	R		X
			361	North Cell borrow area	X/D					X
			362	North Cell quarry	X/D					X
			363	North Cell waste pile	X/D					X
			364	North Cell construction access road and transmission line	X/D					X
			365	North Cell		X/PR	X	R		X
			366	North Cell closure pond		X	PR			X
			367	reclaim barge		X	D			
			368	gravel beach cover		X	X	R		X
	369		pump house with potential clarification system	X	X	X				
	370	Northwest Diversion	X	X	X	R		X		
	371	TMF Discharge Pipeline	X	X	X	D		X		
	464	Ultimate North Dam Closure Spillway				X		X		
	East Catchment Diversion	372	East Catchment diversion tunnel portal access road	X	X	X	X	X		
		373	East Catchment diversion tunnel portal		X	R		X		
		374	northeast buried pipeline	X	X	X	R	X		
		375	northeast service road	X	X	X	R	X		
		376	northeast diversion ditch	X	X	X	PR	X		
		377	East Catchment diversion tunnel phase 1	X	X	D				
		378	East Catchment diversion tunnel phase 2		X	X	D			
		379	East Catchment diversion dam	X	PR	X	R	X		
		380	East Catchment diversion dam spillway	X	X	X	R			
		381	East Catchment diversion pond	X	X	X	R	X		
		382	TWT 13 - sediment control pond	X	R					
		383	Upper East Catchment diversion dam	X	PR	X	R	X		
		384	Upper East Catchment diversion pond	X	X	X	R	X		
	385	Upper East Catchment diversion dam spillway	X	X	X	R				
	386	TWT 12 - sediment control pond	X	R			X			
	Centre Cell Tailing Management Facility	387	Centre Cell borrow area	X/D				X		
		388	Splitter starter dam	X				X		
		389	Splitter dam construction pipeline and cofferdam	X/D				X		
		390	Splitter dam	X	X	PR	R	X		
		391	CIL Lined Pond		X	X	R	X		
		392	reclaim barges (x2)		X	X	D	X		
		393	Saddle starter dam	X				X		
		394	Saddle dam construction diversion	X/D				X		
		395	Saddle dam construction southern diversion	X/D				X		
		396	Saddle dam construction diversion access road	X/D				X		
		397	Saddle seepage dam construction access road	X/D				X		
		398	Saddle dam	X	X	PR	R	X		
		399	Saddle seepage collection pond	X	X/D			X		
		400	Saddle seepage collection dam spillway	X	X/D			X		
		401	Saddle seepage collection dam	X	X/D			X		

Appendix 31-A - Table 1. Interaction of KSM Project 'Works' with Potentially Navigable Waters for all Project Phases

Project Region	Project Area	ID #	Project Component	Phase				Interaction with Water
				Construction	Operation	Closure	Post-closure	
Processing and Tailing Management Area (PTMA) (cont'd)	Centre Cell Tailing Management Facility (cont'd)	402	Saddle dam collection ditch	X/D				
		403	TWT 14 - sediment control pond	X/D				
		404	TWT 14 - pipeline	X/D				X
		405	Saddle seepage reclaim pipeline	X	X/D			
		406	post-closure pond				X/PR	X
		407	post-closure gravel beach cover				X/R	X
		408	post-closure cell				R	X
		South Cell Tailing Management Facility	409	southeast service road	X	X	X	R
	410		southeast diversion ditch	X	X	X	R	X
	411		South Cell quarry sediment fence		X/D			
	412		South Cell quarry		X/D			
	413		South Cell quarry construction berm		X/D			
	465		South Cell soil storage area access road		X	R		X
	414		North Treaty lower road	X	X/D			X
	415		South Cell		X	PR	R	X
	416		South Cell pond		X			X
	417		South Cell closure pond				X/PR	X
	418		gravel beach cover			X	R	X
	419		reclaim barge		X	X	D	
	420		southeast dam		X/PR	X	R	X
	421		southeast starter dam		X			X
	422		southeast dam diversion ditch		X	X	X	X
	423		South Cell seepage reclaim pipeline		X	X	X	X
	424		South Cell borrow area		X/R			X
	425		TWT 15 - sediment control structure		X/R			X
	426		TWT 15 - pipeline		X/R			
	427		Treaty Creek closure spillway				X	X
	428		southeast seepage collection dam		X	PR	X	X
	429		southeast seepage collection pond		X	X	X	X
	430		southeast seepage collection dam spillway		X	X	X	
	431		southeast seepage collection dam construction access road		X	X	X	
	432		South Cell soil storage area		X	R		
	Treaty Creek Access Corridor	433	North Treaty upper road	X	X	X	X	X
		434	Treaty Creek Transmission Line	X	X	X	X	X
		435	southwest diversion ditch	X	X	X	PR	X
		436	TCAR channel armouring and diversion dams	X	PR	X	X	
		437	southwest diversion access road	X	X	X	X	X
		438	Treaty Creek access road (TCAR)	X	X	X	X	X
		439	TCAR borrow areas	X	R			
		440	TCAR waste areas	X	R			
		441	TCAR log landings	X	R			X
		442	creek crossing R053 (bridge)	X	X	X	X	X
		443	creek crossing R049 (bridge)	X	X	X	X	X
444		creek crossing R047 (bridge)	X	X	X	X	X	
445		North Treaty Creek bridge (R045)	X	X	X	X	X	
446		creek crossing R037 (bridge)	X	X	X	X	X	
447		creek crossing R038 (bridge)	X	X	X	X	X	
448		creek crossing R036 (bridge)	X	X	X	X	X	
449		creek crossing R035 (bridge)	X	X	X	X	X	
451	Bell-Irving River bridge (R033)	X	X	X	X	X		
466	Creek Crossing R034a	X	X	X	X	X		
467	Creek Crossing R034b	X	X	X	X	X		
Camp 11: Treaty Creek Marshalling Camp	452	Camp 11: Treaty Marshalling Yard Camp	X	R				
	453	Camp 11 Treaty marshalling yard	X	R				
	454	Camp 11 incinerator	X	R				
Camp 12: Highway 37 Construction Camp	455	Camp 12: Highway 37 Construction Camp	X/R					
	456	Camp 12 incinerator	X/R					
PTMA	468	TMF Roads	X	X	X	X	X	
	469	TMF Water Diversions	X	X	X	X	X	
Off-site Transportation	Highway 37 and 37A	457	Highway 37	X	X	X	X	
		458	Highway 37A	X	X			
Fish habitat compensation works	Teigen Creek 1	470	intake pipe	X	X	X	X	X
	Glacier Creek 1	471	intake pipe	X	X	X	X	X
	Treaty Creek 1	472	intake pipe	X	X	X	X	X
	Taft Creek 1	473	intake pipe	X	X	X	X	X

Appendix 31-A - Table 2. Baseline Data Study Results- Assessment of Stream Characteristics Against the Minor Works and Waters Order

Project Region	Project Area	Table 1 (Project Component) ID #	Sampling Site No.	Project Work	Location		Waterway Name	Channel Measurements					Minor Water and Works Order Criteria										Minor Water? (Y/N)	Scope Into Effects Assessment (Y/N)	Count of Navigable Streams ¹	Total No. of Sampled Streams ²		
					Eastings	Northings		Stream Class	BF Channel Width (m)	BF Channel Depth (m)	Mean Gradient (%)	Sinuosity Ratio	Diversion / Ditch Width (m)	Minor Work?	Private Lake? (Y/N)	Drainage Ditch? (Y/N)	Initial Review Criteria		Second Review Criteria									
																	BF Width < 1.2 m? (Y/N)	BF Depth < 0.3 m? (Y/N)	BF Width (1.2 ≤ w ≤ 3 m) (Y/N)	BF Depth ≤ 0.6 m? (Y/N)	Slope > 4%? (Y/N)	Sinuosity Ratio > 2? (Y/N)					> 3 obstacles? (Y/N)	
Coulter Creek Access Road (CCAR)		16	2060	Coulter Creek access road (culvert)	407703	6266547	Unnamed	S3	1.9	0.3	0.5	-	-	N	N	N	N	N	Y	Y	N	-	-	Y	N		1	
		16	2064	Coulter Creek access road (culvert)	407274	6265770	Unnamed	S4	1.4	0.3	14.0	-	-	N	N	N	N	Y	Y	Y	-	-	Y	N		1		
		16	2066	Coulter Creek access road (culvert)	407324	6265677	Unnamed	S6	0.9	0.2	25.0	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1	
		16	2068	Coulter Creek access road (culvert)	407519	6264755	Unnamed	S6	0.8	0.1	2.5	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1	
		16	2072	Coulter Creek access road (culvert)	407689	6264501	Unnamed	S6	1.5	0.3	18.0	-	-	N	N	N	N	Y	-	-	-	-	-	Y	N		1	
		16	2075	Coulter Creek access road (culvert)	407949	6263901	Unnamed	S6	2.4	0.4	41.0	-	-	N	N	N	N	Y	Y	Y	-	-	Y	N		1		
		16	2078	Coulter Creek access road (culvert)	408324	6262820	Unnamed	S6	0.9	0.2	35.0	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1	
		16	2079	Coulter Creek access road (culvert)	408451	6262871	Unnamed	S6	2.9	0.5	21.0	-	-	N	N	N	N	Y	Y	Y	-	-	Y	N		1		
		16	2079(2)	Coulter Creek access road (culvert)	408747	6262507	Unnamed	S6	2.6	-	20.0	-	-	N	N	N	N	Y	-	Y	-	-	Y	N		1		
		16	2080	Coulter Creek access road (culvert)	408761	6262663	Unnamed	S6	0.9	0.2	31.0	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1	
		16	2080(2)	Coulter Creek access road (culvert)	408537	6262928	Unnamed	S6	1.7	0.9	79.0	-	-	N	N	N	N	Y	N	Y	-	-	Y	N		1		
		16	2081	Coulter Creek access road (culvert)	408650	6263160	Unnamed	S6	1.0	0.3	20.0	-	-	N	N	N	Y	N	-	-	-	-	-	Y	N		1	
		16	2081(2)	Coulter Creek access road (culvert)	408717	6263026	Unnamed	S6	1.5	0.4	25.0	-	-	N	N	N	Y	Y	Y	-	-	-	Y	N		1		
		16	2083	Coulter Creek access road (culvert)	408677	6262525	Unnamed	S6	2.2	0.5	42.0	-	-	N	N	N	N	Y	Y	Y	-	-	Y	N		1		
		16	5501	Coulter Creek access road (culvert)	409128	6278735	Unnamed	S6	0.6	0.2	12.7	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1	
		16	5502	Coulter Creek access road (culvert)	407772	6277071	Unnamed	S6	0.4	0.1	16.3	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1	
		16	5504	Coulter Creek access road (culvert)	407250	6276333	Unnamed	S6	2.5	0.2	2.2	-	-	N	N	N	N	Y	-	-	-	-	-	Y	N		1	
		16	5505	Coulter Creek access road (culvert)	407168	6276130	Unnamed	S6	1.1	0.2	2.5	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1	
		16	5507	Coulter Creek access road (culvert)	407020	6275742	Unnamed	S6	0.7	0.1	3.0	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1	
		16	5509	Coulter Creek access road (culvert)	407054	6275247	Unnamed	S6	1.0	0.2	20.7	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1	
		16	5510	Coulter Creek access road (culvert)	407021	6274999	Unnamed	S6	0.7	0.1	6.5	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1	
		16	5511	Coulter Creek access road (culvert)	407006	6274927	Unnamed	S6	1.2	-	0.0	-	-	N	N	N	Y	N	-	-	-	-	-	Y	N		1	
		16	5514	Coulter Creek access road (culvert)	407028	6273903	Unnamed	S6	0.5	-	5.0	-	-	N	N	N	Y	N	-	-	-	-	-	Y	N		1	
		16	5515	Coulter Creek access road (culvert)	407060	6273592	Unnamed	S6	0.4	0.1	5.0	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1	
		16	5516	Coulter Creek access road (culvert)	407090	6273429	Unnamed	S6	0.5	0.1	3.5	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1	
		16	5517	Coulter Creek access road (culvert)	407046	6272895	Unnamed	S6	0.5	0.1	7.0	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1	
		16	5519	Coulter Creek access road (culvert)	407325	6271906	Unnamed	S6	0.6	0.2	1.5	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1	
		16	5520	Coulter Creek access road (culvert)	407466	6271480	Unnamed	S6	0.4	0.2	4.0	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1	
		16	5521	Coulter Creek access road (culvert)	407317	6271289	Unnamed	S6	0.5	0.2	4.5	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1	
		16	5522	Coulter Creek access road (culvert)	407535	6271741	Unnamed	S6	0.4	0.2	13.0	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1	
		16	5526	Coulter Creek access road (culvert)	407650	6270702	Unnamed	S6	0.4	-	22.5	-	-	N	N	N	Y	-	-	-	-	-	-	Y	N		1	
		16	5527	Coulter Creek access road (culvert)	407668	6269997	Unnamed	S6	1.7	-	4.0	-	-	N	N	N	N	-	-	Y	-	-	-	Y	N		1	
		16	5529	Coulter Creek access road (culvert)	407801	6269764	Unnamed	S6	0.7	0.1	2.5	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1	
		16	5530	Coulter Creek access road (culvert)	407763	6269632	Unnamed	S6	0.5	<0.25	2.5	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1	
		16	5532	Coulter Creek access road (culvert)	-	-	Unnamed	S6	1.1	0.1	11.0	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1	
		16	5534	Coulter Creek access road (culvert)	-	-	Unnamed	S6	0.6	0.1	4.5	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1	
		16	5537	Coulter Creek access road (culvert)	407571	6267899	Unnamed	S6	0.7	0.1	5.0	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1	
		16	5540	Coulter Creek access road (culvert)	416525	6262827	Unnamed	S6	0.6	<0.25	7.0	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1	
		16	5541	Coulter Creek access road (culvert)	-	-	Unnamed	S6	0.4	<0.25	5.5	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1	
		16	5542	Coulter Creek access road (culvert)	416300	6262790	Unnamed	S5	8.9	0.4	5.5	-	-	N	N	N	N	Y	Y	Y	-	-	-	N	Y	1	1	
		16	5000	Coulter Creek access road (culvert)	408683	6262468	Unnamed	S6	1.6	0.3	40.0	-	-	N	N	N	N	Y	Y	Y	-	-	-	Y	N		1	
		16	5001	Coulter Creek access road (culvert)	408765	6267581	Unnamed	S6	2.0	0.4	35.5	-	-	N	N	N	N	Y	Y	Y	-	-	-	Y	N		1	
		16	5002	Coulter Creek access road (culvert)	408820	6262803	Unnamed	S6	0.8	0.2	33.3	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1	
		16	5003	Coulter Creek access road (culvert)	408910	6262939	Unnamed	S6	0.7	0.3	59.0	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1	
		16	5004	Coulter Creek access road (culvert)	408859	6263100	Unnamed	S6	3.0	0.4	57.5	-	-	N	N	N	N	Y	Y	Y	-	-	-	Y	N		1	
		16	5005	Coulter Creek access road (culvert)	408777	6263395	Unnamed	S5	8.7	-	40.0	-	-	N	N	N	N	-	-	Y	-	-	-	N	Y	1	1	
		16	5006	Coulter Creek access road (culvert)	408677	6263472	Unnamed	S6	1.3	0.2	25.5	-	-	N	N	N	N	Y	-	-	-	-	-	Y	N		1	
		16	5008	Coulter Creek access road (culvert)	408373	6263005	Unnamed	S6	0.8	0.2	5.0	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1	
		20	5500	creek crossing C012 (CCAR) (bridge)	409276	6278766	Unnamed	S5	11.3	0.3	3.3	-	-	N	N	N	N	Y	-	-	-	-	-	Y	N		1	
		21	5518	creek crossing C043 (CCAR) (bridge)	407137	6272593	Unnamed	S2	6.8	1.4	3.0	-	-	N	N	N	N	N	N	N	-	-	-	N	Y	1	1	
		22	5525	creek crossing C044 (CCAR) (bridge)	407506	6270888	Unnamed	S6	2.5	0.2	37.0	-	-	N	N	N	N	Y	-	-	-	-	-	Y	N		1	
		23	2061	Coulter Creek bridge (C006) (CCAR)	407561	6266553	Coulter Creek	S2	16.0	0.6	1.5	1.1	-	N	N	N	N	N	Y	N	N	-	-	N	Y	1	1	
		24	2063	creek crossing C024 (CCAR) (bridge)	407277	6265832	Unnamed	S2	12.7	-	3.5	-	-	N	N	N	N	-	-	-	-	-	-	N	Y	1	1	
		25	2067	creek crossing C021 (CCAR) (bridge)	407381	6264971	Unnamed	S6	3.0	0.5	16.0	-	-	N	N	N	N	Y	Y	Y	-	-	-	Y	N		1	
		26	1025	Unuk River bridge (C010) (CCAR)	408275	6263910	Unuk River	S1	71.0	1.9	1.0	-	-	N	N	N	N	N	N	N	N	-	-	N	Y	1	1	
		27	5007	creek crossing C042 (CCAR) (bridge)	408404	6263727	Unnamed	S2	7.7	0.4	0.8	-	-	N	N	N	N	Y	N	-	-	-	-	N	Y	1	1	
		29	5001	Gingras Creek bridge (C011) (CCAR)	416275	6262627	Gingras Creek	S5	17.2	5.5	1.2	-	-	N	N	N	N	N	N	N	-	-	-	N	Y	1	1	
		30	5538*	Mitchell Creek bridge (C007) (CCAR)	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	-	N	N	N	N	-	-	N	-	-	-	N	Y	1	1	
Sub-Total																										9	58	

Appendix 31-A - Table 2. Baseline Data Study Results- Assessment of Stream Characteristics Against the Minor Works and Waters Order

Project Region	Project Area	Table 1 (Project Component) ID #	Sampling Site No.	Project Work	Location		Waterway Name	Channel Measurements					Minor Water and Works Order Criteria										Minor Water? (Y/N)	Scope Into Effects Assessment (Y/N)	Count of Navigable Streams ¹	Total No. of Sampled Streams ²		
					Easting	Northing		Stream Class	Channel Width (m)	Channel Depth (m)	Mean Gradient (%)	Sinuosity Ratio	Diversion / Ditch Width (m)	Minor Work?	Private Lake? (Y/N)	Drainage Ditch? (Y/N)	Initial Review Criteria		Second Review Criteria									
																	BF Width < 1.2 m? (Y/N)	BF Depth < 0.3 m? (Y/N)	BF Width (1.2 ≤ w ≤ 3 m) (Y/N)	BF Depth ≤ 0.6 m? (Y/N)	Slope > 4%? (Y/N)	Sinuosity Ratio > 2? (Y/N)					> 3 obstacles? (Y/N)	
Mine Site	McTagg Rock Storage Facility (RSF)	35	MCT2 (2017)*	McTagg access road	417236	6267821	McTagg Creek	S5	10.0	-	10.0	-	n/a	N	N	N	N	-	N	-	Y	-	-	N	Y	1	1	
		36	MCT2 (2017)*	McTagg Creek bridge	417236	6267821	McTagg Creek	S5	10.0	-	10.0	-	n/a	N	N	N	N	-	N	-	Y	-	-	N	Y			
		38	MCT2 (2017)*	McTagg RSF	417236	6267821	McTagg Creek	S5	10.0	-	10.0	-	n/a	N	N	N	N	-	N	-	Y	-	-	N	Y			
		40	MCT2 (2017)*	West McTagg operation channel - South	417236	6267821	McTagg Creek	S5	10.0	-	10.0	-	n/a	N	N	N	N	-	N	-	Y	-	-	N	Y			
		41	MCT2 (2017)*	West McTagg closure channel	417236	6267821	McTagg Creek	S5	10.0	-	10.0	-	n/a	N	N	N	N	-	N	-	Y	-	-	N	Y			
		42	MCT2 (2017)*	West McTagg access road	417236	6267821	McTagg Creek	S5	10.0	-	10.0	-	n/a	N	N	N	N	-	N	-	Y	-	-	N	Y			
		43	MCT2 (2017)*	East McTagg closure channel and access road	417236	6267821	McTagg Creek	S5	10.0	-	10.0	-	n/a	N	N	N	N	-	N	-	Y	-	-	N	Y			
		44	MCT2 (2017)*	North McTagg Diversion Channel	417236	6267821	McTagg Creek	S5	10.0	-	10.0	-	n/a	N	N	N	N	-	N	-	Y	-	-	N	Y			
		46	5001	McTagg phase 3 flood outlet	416275	6262627	Gingras Creek	S5	17.2	5.5	1.2	-	-	N	N	N	N	N	N	N	N	-	-	-	N	Y		
		47	5001	McTagg phase 2 flood outlet	416275	6262627	Gingras Creek	S5	17.2	5.5	1.2	-	-	N	N	N	N	N	N	N	N	-	-	-	N	Y		
	48	5001	McTagg phase 1 flood outlet	416275	6262627	Gingras Creek	S5	17.2	5.5	1.2	-	-	N	N	N	N	N	N	N	N	-	-	-	N	Y			
	53	MCT2 (2017)*	McTagg Twinned Diversion Tunnels	417236	6267821	McTagg Creek	S5	10.0	-	10.0	-	n/a	N	N	N	N	N	-	N	-	Y	-	-	N	Y			
	54	MCT2 (2017)*	Phase 3 West McTagg inlet	417236	6267821	McTagg Creek	S5	10.0	-	10.0	-	n/a	N	N	N	N	N	-	N	-	Y	-	-	N	Y			
	55	MCT2 (2017)*	Phase 3 West McTagg dam	417236	6267821	McTagg Creek	S5	10.0	-	10.0	-	n/a	N	N	N	N	N	-	N	-	Y	-	-	N	Y			
	57	MCT2 (2017)*	Phase 3 East McTagg inlet	417236	6267821	McTagg Creek	S5	10.0	-	10.0	-	n/a	N	N	N	N	N	-	N	-	Y	-	-	N	Y			
	58	MCT2 (2017)*	Phase 3 East McTagg dam	417236	6267821	McTagg Creek	S5	10.0	-	10.0	-	n/a	N	N	N	N	N	-	N	-	Y	-	-	N	Y			
	59	MCT2 (2017)*	Phase 3 East McTagg dam spillway	417236	6267821	McTagg Creek	S5	10.0	-	10.0	-	n/a	N	N	N	N	N	-	N	-	Y	-	-	N	Y			
	60	MCT2 (2017)*	Phase 2 McTagg inlet	417236	6267821	McTagg Creek	S5	10.0	-	10.0	-	n/a	N	N	N	N	N	-	N	-	Y	-	-	N	Y			
	61	MCT2 (2017)*	Phase 2 McTagg dam	417236	6267821	McTagg Creek	S5	10.0	-	10.0	-	n/a	N	N	N	N	N	-	N	-	Y	-	-	N	Y			
	62	MCT2 (2017)*	Phase 2 McTagg dam spillway	417236	6267821	McTagg Creek	S5	10.0	-	10.0	-	n/a	N	N	N	N	N	-	N	-	Y	-	-	N	Y			
	63	MCT2 (2017)*	Phase 1 McTagg dam	417236	6267821	McTagg Creek	S5	10.0	-	10.0	-	n/a	N	N	N	N	N	-	N	-	Y	-	-	N	Y			
	64	MCT2 (2017)*	Phase 1 McTagg inlet	417236	6267821	McTagg Creek	S5	10.0	-	10.0	-	n/a	N	N	N	N	N	-	N	-	Y	-	-	N	Y			
68	MCT2 (2017)*	McTagg Power Plant	417236	6267821	McTagg Creek	S5	10.0	-	10.0	-	n/a	N	N	N	N	N	-	N	-	Y	-	-	N	Y				
McTagg Power Plant	Mitchell Rock Storage Facility (RSF)	69	5538*	North Slope pipeline	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	n/a	N	N	N	N	-	N	-	-	-	-	N	Y			
		70	5538*	North Slope pipeline access road	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	n/a	N	N	N	N	-	N	-	-	-	-	N	Y			
		72	5538*	North Slope collection ditch	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	n/a	N	N	N	N	-	N	-	-	-	-	N	Y			
		73	5538*	North Slope diversion buried pipeline	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	n/a	N	N	N	N	-	N	-	-	-	-	-	N	Y		
		74	5538*	North Slope diversion ditch access road	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	n/a	N	N	N	N	-	N	-	-	-	-	-	N	Y		
		75	5538*	Mitchell North closure channel	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	n/a	N	N	N	N	-	N	-	-	-	-	-	N	Y		
		76	5538*	Upper Mitchell Creek bridge	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	n/a	N	N	N	N	-	N	-	-	-	-	-	N	Y		
		77	MCT2 (2017)*	Mitchell RSF landbridge	417236	6267821	McTagg Creek	S5	10.0	-	10.0	-	n/a	N	N	N	N	-	N	-	Y	-	-	-	N	Y		
		83	5538	TWT 6 - diversion ditch	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	n/a	N	N	N	N	-	N	-	-	-	-	-	N	Y		
		85	5538	TWT 6 - buried pipeline	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	n/a	N	N	N	N	-	N	-	-	-	-	-	N	Y		
		92	5538*	Sulphurets waste conveyor 3	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	n/a	N	N	N	N	-	N	-	-	-	-	-	N	Y		
		94	5538*	Sulphurets waste conveyor 1	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	n/a	N	N	N	N	-	N	-	-	-	-	-	N	Y		
		96	5538*	Mitchell RSF	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	n/a	N	N	N	N	-	N	-	-	-	-	-	N	Y		
		98	5538*	Mitchell Valley Drainage Tunnel	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	n/a	N	N	N	N	-	N	-	-	-	-	-	N	Y		
		459	5538*	Mitchell North Closure Channel Access Road	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	n/a	N	N	N	N	-	N	-	-	-	-	-	N	Y		
		460	5538*	Mitchell Ore Stockpile Feed Conveyor	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	n/a	N	N	N	N	-	N	-	-	-	-	-	N	Y		
		Mitchell Ore Preparation Complex	104	5538*	Mitchell OPC	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	n/a	N	N	N	N	-	N	-	-	-	-	N	Y		
108	5538*		Closure substation	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	n/a	N	N	N	N	-	N	-	-	-	-	N	Y				
109	5538*		25 kV transmission lines	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	n/a	N	N	N	N	-	N	-	-	-	-	N	Y				
113	5538*		Mitchell OPC snow storage	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	n/a	N	N	N	N	-	N	-	-	-	-	-	N	Y			
126	5538*		Mitchell Pit north wall dewatering adits	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	n/a	N	N	N	N	-	N	-	-	-	-	-	N	Y			
127	5538*		Mitchell Pit haul road	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	n/a	N	N	N	N	-	N	-	-	-	-	-	N	Y			
Mitchell Pit	128	5538*	Mitchell Pit closure dam	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	n/a	N	N	N	N	-	N	-	-	-	-	-	N	Y			
	129	5538*	Mitchell Pit closure dam spillway	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	n/a	N	N	N	N	-	N	-	-	-	-	-	N	Y			
	130	5538*	Mitchell Pit Lake discharge pipe	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	n/a	N	N	N	N	-	N	-	-	-	-	-	N	Y			
	131	5538*	Mitchell Pit pre-production ore stockpile	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	n/a	N	N	N	N	-	N	-	-	-	-	-	N	Y			
	132	5538*	Mitchell Pit	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	n/a	N	N	N	N	-	N	-	-	-	-	-	N	Y			
	134	5538*	Mitchell Pit North diversion ditch	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	n/a	N	N	N	N	-	N	-	-	-	-	-	N	Y			
	135	5538*	Mitchell Pit East diversion ditch	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	n/a	N	N	N	N	-	N	-	-	-	-	-	N	Y			
	138	5538*	Mitchell surface disturbance	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	n/a	N	N	N	N	-	N	-	-	-	-	-	N	Y			
Mitchell Block Cave Mine	146	5538*	Mitchell diversion contact water ditch	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	n/a	N	N	N	N	-	N	-	-	-	-	-	N	Y			
	154	5538*	Mitchell flood overflow drainage tunnel	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	n/a	N	N	N	N	-	N	-	-	-	-	-	N	Y			
	155	5538*	Mitchell Diversion access road	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-	n/a	N	N	N	N	-	N	-	-	-	-	-	N	Y			
	174	5538*	Mitchell Diversion outlet access road	416725	6262799	Mitchell Creek	S5	8.7	-	3.5	-																	

Appendix 31-A - Table 2. Baseline Data Study Results- Assessment of Stream Characteristics Against the Minor Works and Waters Order

Project Region	Project Area	Table 1 (Project Component) ID #	Sampling Site No.	Project Work	Location		Waterway Name	Channel Measurements					Minor Water and Works Order Criteria										Minor Water? (Y/N)	Scope Into Effects Assessment (Y/N)	Count of Navigable Streams ¹	Total No. of Sampled Streams ²		
					Eastings	Northings		Stream Class	BF Channel Width (m)	BF Channel Depth (m)	Mean Gradient (%)	Sinuosity Ratio	Diversion / Ditch Width (m)	Minor Work?	Private Lake? (Y/N)	Drainage Ditch? (Y/N)	Initial Review Criteria		Second Review Criteria									
																	BF Width < 1.2 m? (Y/N)	BF Depth < 0.3 m? (Y/N)	BF Width (1.2 ≤ w ≤ 3 m) (Y/N)	BF Depth ≤ 0.6 m? (Y/N)	Slope > 4%? (Y/N)	Sinuosity Ratio > 2? (Y/N)					> 3 obstacles? (Y/N)	
Mine Site (cont'd)	Sulphurets Laydown Area	221	SC1 (1011)*	Sulphurets Access Road	419491	6261371	Sulphurets Creek	S5	17.0	1.2	17.0	-	n/a	N	N	N	N	N	N	N	-	-	N	Y				
		225	SC1 (1011)*	Sulphurets Collection Ditch	419491	6261371	Sulphurets Creek	S5	17.0	1.2	17.0	-	n/a	N	N	N	N	N	N	N	Y	-	-	N	Y			
		237	SC1 (1011)*	Sulphurets Pit drainage pipeline to Selenium Treatment	419491	6261371	Sulphurets Creek	S5	17.0	1.2	17.0	-	n/a	N	N	N	N	N	N	N	Y	-	-	N	Y			
	Kerr Rope Conveyor	Kerr Pit	238	SC1 (1011)*	Sulphurets Pit drainage pipeline to WSF	419491	6261371	Sulphurets Creek	S5	17.0	1.2	17.0	-	n/a	N	N	N	N	N	N	Y	-	-	N	Y			
			240	SC1 (1011)*	Kerr Rope Conveyor	419491	6261371	Sulphurets Creek	S5	17.0	1.2	17.0	-	n/a	N	N	N	N	N	N	Y	-	-	N	Y			
			242	SC1 (1011)*	Kerr Pit access road	419491	6261371	Sulphurets Creek	S5	17.0	1.2	17.0	-	n/a	N	N	N	N	N	N	Y	-	-	N	Y			
			243	SC1 (1011)*	Kerr Pit snow storage	419491	6261371	Sulphurets Creek	S5	17.0	1.2	17.0	-	n/a	N	N	N	N	N	N	Y	-	-	N	Y			
			245	SC1 (1011)*	Kerr Pit	419491	6261371	Sulphurets Creek	S5	17.0	1.2	17.0	-	n/a	N	N	N	N	N	N	Y	-	-	N	Y			
	Explosives Manufacturing Facility		248	SC1 (1011)*	Kerr Pit dewatering pipeline	419491	6261371	Sulphurets Creek	S5	17.0	1.2	17.0	-	n/a	N	N	N	N	N	N	Y	-	-	N	Y			
			254	SCT (3007)*	Sulphurets Valley Access Road (Ted Morris Bridge)	417405	6261506	Ted Morris Creek	S5	21.8	2.0	21.8	-	n/a	N	N	N	N	N	N	Y	-	-	N	Y	1	1	
			255	SC1 (1011)*	Sulphurets bridge	419491	6261371	Sulphurets Creek	S5	17.0	1.2	17.0	-	n/a	N	N	N	N	N	N	Y	-	-	N	Y			
			258	SCT (3007)*	closure cover borrow and till storage areas	417405	6261506	Ted Morris Creek	S5	21.8	2.0	21.8	-	n/a	N	N	N	N	N	N	Y	-	-	N	Y			
			260	SCT (3007)*	explosives access road	417405	6261506	Ted Morris Creek	S5	21.8	2.0	21.8	-	n/a	N	N	N	N	N	N	Y	-	-	N	Y			
	Temporary Frank Mackie Glacier Access Route		461	SCT (3007)*	Till Storage Access Road	417405	6261506	Ted Morris Creek	S5	21.8	2.0	21.8	-	n/a	N	N	N	N	N	N	Y	-	-	N	Y			
			265	2017	Temporary Frank Mackie Glacier Access Route	433429	6241135	Unnamed	S1	35.5	-	7.5	-	n/a	Y	N	N	N	N	N	-	-	-	-	N	N		1
			265	2012	Temporary Frank Mackie Glacier Access Route	434251	6237110	Bowser River	S1	800.0	-	1.3	-	n/a	Y	N	N	N	N	N	-	-	-	-	N	N		1
			265	2018	Temporary Frank Mackie Glacier Access Route	433129	6242575	Unnamed	S5	7.5	25.0	36.0	-	n/a	Y	N	N	N	N	N	-	-	-	-	N	N		1
			265	2016	Temporary Frank Mackie Glacier Access Route	433537	6240947	Unnamed	S2	7.3	10.0	10.0	-	n/a	Y	N	N	N	N	N	-	-	-	-	N	N		1
			265	2015	Temporary Frank Mackie Glacier Access Route	433795	6239928	Unnamed	S1	140.0	-	6.7	-	n/a	Y	N	N	N	N	N	-	-	-	-	N	N		1
			265	2014	Temporary Frank Mackie Glacier Access Route	433946	6239202	Unnamed	S2	17.0	9.0	4.0	-	n/a	Y	N	N	N	N	N	-	-	-	-	N	N		1
265			2013	Temporary Frank Mackie Glacier Access Route	433977	6237580	Unnamed	S5	8.0	-	11.3	-	n/a	Y	N	N	N	N	N	-	-	-	-	N	N		1	
Sub-Total																									3	10		
Processing and Tailing Management Area	North Cell Tailing Management Facility	348	T4*	North cell soil storage area	440415	6280904	Teigen Creek	S2	6.7	1.0	2.8	-	-	N	N	N	N	N	N	N	-	-	N	Y		1	1	
		351	T4*	TWT 9 - sediment control pond	440415	6280904	Teigen Creek	S2	6.7	1.0	2.8	-	-	N	N	N	N	N	N	N	N	-	-	N	Y			
		352	T4*	TWT-9 pipeline	440415	6280904	Teigen Creek	S2	6.7	1.0	2.8	-	-	N	N	N	N	N	N	N	N	-	-	N	Y			
		353	T4*	North Cell seepage collection dam	440415	6280904	Teigen Creek	S2	6.7	1.0	2.8	-	-	N	N	N	N	N	N	N	N	-	-	N	Y			
		353	1110*	North Cell seepage collection dam	440727	6279725	Unnamed	S2	5.3	-	2.0	-	-	N	N	N	N	N	N	N	N	-	-	N	Y	1	1	
		354	T4*	North cell seepage collection dam spillway	440415	6280904	Teigen Creek reach 4	S2	6.7	1.0	2.8	-	-	N	N	N	N	N	N	N	N	-	-	N	Y			
		354	1110*	North cell seepage collection dam spillway	440727	6279725	Unnamed	S2	5.3	-	2.0	-	-	N	N	N	N	N	N	N	N	-	-	N	Y			
		355	T4*	North Cell seepage collection pond	440415	6280904	Teigen Creek reach 4	S2	6.7	1.0	2.8	-	-	N	N	N	N	N	N	N	N	-	-	N	Y			
		355	1110*	North Cell seepage collection pond	440727	6279725	Unnamed	S2	5.3	-	2.0	-	-	N	N	N	N	N	N	N	N	-	-	N	Y			
		358	T4*	North Cell starter dam	440415	6280904	Teigen Creek reach 4	S2	6.7	1.0	2.8	-	-	N	N	N	N	N	N	N	N	-	-	N	Y			
		358	1002*	North Cell starter dam	440909	6279355	Unnamed	S4	1.1	0.3	1.0	-	-	N	N	N	Y	N	-	-	-	-	-	Y	N		1	
		358	1003*	North Cell starter dam	441029	6279213	Unnamed	S4	0.9	0.3	2.0	-	-	N	N	N	Y	N	-	-	-	-	-	Y	N		1	
		359	T4*	North Dam construction pipeline and cofferdam	440415	6280904	Teigen Creek reach 4	S2	6.7	1.0	2.8	-	-	N	N	N	N	N	N	N	N	-	-	N	Y			
		360	T4*	North Cell dam	440415	6280904	Teigen Creek reach 4	S2	6.7	1.0	2.8	-	-	N	N	N	N	N	N	N	N	-	-	N	Y			
		360	1110*	North Cell dam	440727	6279725	Unnamed	S2	5.3	-	2.0	-	-	N	N	N	N	N	N	N	N	-	-	N	Y			
		360	1002*	North Cell dam	440909	6279355	Unnamed	S4	1.1	0.3	1.0	-	-	N	N	N	Y	N	-	-	-	-	-	Y	N			
		360	1003*	North Cell dam	441029	6279213	Unnamed	S4	0.9	0.3	2.0	-	-	N	N	N	Y	N	-	-	-	-	-	Y	N			
		360	1090*	North Cell dam	440791	6279657	Unnamed	S4	0.5	0.2	10.0	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1	
		360	1091*	North Cell dam	440795	6279692	Unnamed	S4	0.8	-	25.0	-	-	N	N	N	Y	N	-	-	-	-	-	Y	N		1	
		361	T4*	North Cell borrow area	440415	6280904	Teigen Creek reach 4	S2	6.7	1.0	2.8	-	-	N	N	N	N	N	N	N	N	-	-	N	Y			
		361	1090*	North Cell borrow area	440791	6279657	Unnamed	S4	0.5	0.2	10.0	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N			
		361	1091*	North Cell borrow area	440795	6279692	Unnamed	S4	0.8	-	25.0	-	-	N	N	N	Y	N	-	-	-	-	-	Y	N			
		361	1005*	North Cell borrow area	441272	6278863	Unnamed	S4	1.7	0.2	1.0	-	-	N	N	N	N	Y	-	-	-	-	-	Y	N		1	
		361	1006*	North Cell borrow area	441368	6278743	Unnamed	S4	1.2	0.2	14.0	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1	
		362	1010*	North cell quarry	441404	6278345	Unnamed	S2	6.2	0.5	10.0	-	-	N	N	N	N	N	N	Y	Y	-	-	N	Y	1	1	
		362	1012*	North cell quarry	441490	6277921	Unnamed	S3	3.6	0.4	11.8	-	-	N	N	N	N	N	N	Y	Y	-	-	N	Y	1	1	
		363	1007*	North Cell Waste Pile	441524	6278421	Unnamed	S3	2.3	0.2	17.0	-	-	N	N	N	N	Y	-	-	-	-	-	Y	N		1	
		363	1008*	North Cell Waste Pile	441695	6278396	Unnamed	S4	1.3	0.3	18.0	-	-	N	N	N	N	Y	-	-	-	-	-	Y	N		1	
		363	1009*	North Cell Waste Pile	441621	6278211	Unnamed	S4	0.5	0.2	1.0	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1	
		363	1010*	North Cell Waste Pile	441404	6278345	Unnamed	S2	6.2	0.5	10.0	-	-	N	N	N	N	N	N	Y	Y	-	-	N	Y			
		363	1011*	North Cell Waste Pile	441560	6278110	Unnamed	S3	1.9	0.5	12.0	-	-	N	N	N	N	N	Y	Y	Y	-	-	Y	N		1	
		363	1012*	North Cell Waste Pile	441490	6277921	Unnamed	S3	3.6	0.4	11.8	-	-	N	N	N	N	N	N	Y	Y	-	-	N	Y			
		363	1013*	North Cell Waste Pile	441752	6277984	Unnamed	S3	2.0	0.3	1.0	-	-	N	N	N	N	Y	-	-	-	-	-	Y	N		1	
		363	1014*	North Cell Waste Pile	441792	62779012	Unnamed	S4	0.7	0.2	1.0	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1	
		363	1015*	North Cell Waste Pile	441808	6277683	Unnamed	S4	0.9	0.7	3.0	-	-	N	N	N	Y	N	Y	N	N	-	Y	Y	N		1	
		363	1016*	North Cell Waste Pile	441773	6277585	Unnamed	S3	3.5	0.4	15.5	-	-	N	N	N	N	N	N	Y	Y	-	-	N				

Appendix 31-A - Table 2. Baseline Data Study Results- Assessment of Stream Characteristics Against the Minor Works and Waters Order

Project Region	Project Area	Table 1 (Project Component) ID #	Sampling Site No.	Project Work	Location		Waterway Name	Channel Measurements					Minor Water and Works Order Criteria										Minor Water? (Y/N)	Scope Into Effects Assessment (Y/N)	Count of Navigable Streams ¹	Total No. of Sampled Streams ²		
					Easting	Northing		Stream Class	BF Channel Width (m)	BF Channel Depth (m)	Mean Gradient (%)	Sinuosity Ratio	Diversion / Ditch Width (m)	Minor Work?	Private Lake? (Y/N)	Drainage Ditch? (Y/N)	Initial Review Criteria		Second Review Criteria									
																	BF Width < 1.2 m? (Y/N)	BF Depth < 0.3 m? (Y/N)	BF Width (1.2 ≤ w ≤ 3 m) (Y/N)	BF Depth ≤ 0.6 m? (Y/N)	Slope > 4%? (Y/N)	Sinuosity Ratio > 2? (Y/N)					> 3 obstacles? (Y/N)	
Processing and Tailing Management Area (cont'd)	North Cell Tailing Management Facility (cont'd)	364	1009*	North Cell construction access road and transmission line	441621	6278211	Unnamed	S4	0.5	0.2	1.0	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N			
		365	T4*	North Cell	440415	6280904	Teigen Creek reach 4	S2	6.7	1.0	2.8	-	-	N	N	N	N	N	N	N	N	-	-	N	Y			
		365	1005*	North Cell	441272	6278863	Unnamed	S3	1.7	0.2	1.0	-	-	N	N	N	N	Y	-	-	-	-	-	Y	N			
		365	1006*	North Cell	441368	6278743	Unnamed	S4	1.2	0.2	14.0	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N			
		365	1007*	North Cell	441524	6278421	Unnamed	S3	2.3	0.2	17.0	-	-	N	N	N	N	Y	-	-	-	-	-	Y	N			
		365	1008*	North Cell	441695	6278396	Unnamed	S4	1.3	0.3	18.0	-	-	N	N	N	N	Y	-	-	-	-	-	Y	N			
		365	1009*	North Cell	441621	6278211	Unnamed	S4	0.5	0.2	1.0	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N			
		365	1010*	North Cell	441404	6278345	Unnamed	S2	6.2	0.5	10.0	-	-	N	N	N	N	N	N	Y	Y	-	-	-	N	Y		
		365	1011*	North Cell	441560	6278110	Unnamed	S3	1.9	0.5	12.0	-	-	N	N	N	N	N	Y	Y	Y	-	-	Y	N			
		365	1012*	North Cell	441490	6277921	Unnamed	S3	3.6	0.4	11.8	-	-	N	N	N	N	N	Y	N	Y	-	-	N	Y			
		365	1013*	North Cell	441752	6277984	Unnamed	S3	2.0	0.3	1.0	-	-	N	N	N	N	Y	-	-	-	-	-	Y	N			
		365	1014*	North Cell	441792	62779012	Unnamed	S4	0.7	0.2	1.0	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N			
		365	1015*	North Cell	441808	6277683	Unnamed	S4	0.9	0.7	3.0	-	-	N	N	N	Y	N	Y	N	N	-	-	Y	N			
		365	1016*	North Cell	441773	6277585	Unnamed	S3	3.5	0.4	15.5	-	-	N	N	N	N	N	N	Y	Y	-	-	N	Y			
		365	1017*	North Cell	441928	6277672	Unnamed	S3	3.5	-	2.0	-	-	N	N	N	N	-	N	-	N	-	-	N	Y			
		365	1018*	North Cell	441949	6277567	Unnamed	S4	1.5	-	0.0	-	-	N	N	N	N	-	Y	-	N	-	-	N	Y			
		365	1206*	North Cell	442093	6277460	Unnamed	S4	1.5	0.3	2.0	-	-	N	N	N	N	N	Y	Y	N	-	-	Y	N			
		365	1207*	North Cell	442038	6277605	Unnamed	S4	1.3	0.1	30.0	-	-	N	N	N	N	Y	-	-	-	-	-	Y	N			
		365	T5*	North Cell	441628	6278058	Teigen Creek reach 5	S2	6.4	0.8	1.0	-	-	N	N	N	N	N	N	N	N	-	-	N	Y		1	1
		365	1019*	North Cell	442480	6276750	Unnamed	S3	2.8	0.5	10.8	-	-	N	N	N	N	N	Y	Y	Y	-	-	Y	N			1
		366	T4*	North Cell closure pond	440415	6280904	Teigen Creek reach 4	S2	6.7	1.0	2.8	-	-	N	N	N	N	N	N	N	N	-	-	N	Y			
		366	T5*	North Cell closure pond	441628	6278058	Teigen Creek reach 5	S2	6.4	0.8	1.0	-	-	N	N	N	N	N	N	N	N	-	-	N	Y			
		366	1011*	North Cell closure pond	441560	6278110	Unnamed	S3	1.9	0.5	12.0	-	-	N	N	N	N	N	Y	Y	Y	-	-	Y	N			
		366	1012*	North Cell closure pond	441490	6277921	Unnamed	S3	3.6	0.4	11.8	-	-	N	N	N	N	N	N	Y	Y	-	-	N	Y			
		366	1013*	North Cell closure pond	441752	6277984	Unnamed	S3	2.0	0.3	1.0	-	-	N	N	N	N	Y	-	-	-	-	-	Y	N			
		366	1009*	North Cell closure pond	441621	6278211	Unnamed	S4	0.5	0.2	1.0	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N			
		368	T4*	gravel beach cover	440415	6280904	Teigen Creek reach 4	S2	6.7	1.0	2.8	-	-	N	N	N	N	N	N	N	N	-	-	N	Y			
		368	T5*	gravel beach cover	441628	6278058	Teigen Creek reach 5	S2	6.4	0.8	1.0	-	-	N	N	N	N	N	N	N	N	-	-	N	Y			
		East Catchment Diversion	372	T4*	East Catchment diversion tunnel portal access road	440415	6280904	Teigen Creek reach 4	S2	6.7	1.0	2.8	-	-	N	N	N	N	N	N	N	-	-	N	Y			
			379	1030*	East Catchment diversion dam	442587	6276670	Unnamed	S3	2.6	0.5	3.8	-	-	N	N	N	N	N	Y	Y	N	-	-	Y	N		1
			381	1030*	East Catchment diversion pond	442587	6276670	Unnamed	S3	2.6	0.5	3.8	-	-	N	N	N	N	N	Y	Y	N	-	-	Y	N		
			383	1030*	Upper East Catchment diversion dam	442587	6276670	Unnamed	S3	2.6	0.5	3.8	-	-	N	N	N	N	N	Y	Y	N	-	-	Y	N		
			384	1030*	Upper East Catchment diversion pond	442587	6276670	Unnamed	S3	2.6	0.5	3.8	-	-	N	N	N	N	N	Y	Y	N	-	-	Y	N		
			386	1030*	TWT 12 - sediment control pond	442587	6276670	Unnamed	S3	2.6	0.5	3.8	-	-	N	N	N	N	N	Y	Y	N	-	-	Y	N		
			387	1022*	Centre Cell borrow area	442633	6276443	Unnamed	S4	1.5	0.1	18.0	-	-	N	N	N	N	Y	-	-	-	-	-	Y	N		1
			387	1023*	Centre Cell borrow area	442730	6276241	Unnamed	S3	1.8	0.2	13.0	-	-	N	N	N	N	Y	-	-	-	-	-	Y	N		1
			387	1025*	Centre Cell borrow area	442877	6276251	Unnamed	S3	1.6	0.5	9.8	-	-	N	N	N	N	N	Y	Y	Y	-	-	Y	N		1
			387	1026*	Centre Cell borrow area	443028	6276174	Unnamed	S3	1.8	0.2	4.0	-	-	N	N	N	N	Y	-	-	-	-	-	Y	N		1
		Centre Cell Tailing Management Facility	388	T5*	Splitter starter dam	441628	6278058	Teigen Creek reach 5	S2	6.4	0.8	1.0	-	-	N	N	N	N	N	N	N	-	-	N	Y			
			388	1021*	Splitter starter dam	442592	6276524	Unnamed	S4	1.2	0.1	6.8	-	-	N	N	N	N	Y	-	-	-	-	-	Y	N		1
			389	1019*	Splitter starter dam	442480	6276750	Unnamed	S3	2.8	0.5	10.8	-	-	N	N	N	N	N	Y	Y	Y	-	-	Y	N		1
			389	T5*	Splitter dam construction pipeline and cofferdam	441628	6278058	Teigen Creek reach 5	S2	6.4	0.8	1.0	-	-	N	N	N	N	N	N	N	N	-	-	N	Y		
			390	1021*	Splitter dam	442592	6276524	Unnamed	S4	1.2	0.1	6.8	-	-	N	N	N	N	Y	-	-	-	-	-	Y	N		
			391	1019*	Splitter dam	442480	6276750	Unnamed	S3	2.8	0.5	10.8	-	-	N	N	N	N	N	Y	Y	Y	-	-	Y	N		
			391	1022*	CIL Lined Pond	442633	6276443	Unnamed	S4	1.5	0.1	18.0	-	-	N	N	N	N	Y	-	-	-	-	-	Y	N		
			391	1023*	CIL Lined Pond	442730	6276241	Unnamed	S3	1.8	0.2	13.0	-	-	N	N	N	N	Y	-	-	-	-	-	Y	N		
			391	1025*	CIL Lined Pond	442877	6276251	Unnamed	S3	1.6	0.5	9.8	-	-	N	N	N	N	N	Y	Y	Y	-	-	Y	N		
			391	1026*	CIL Lined Pond	443028	6276174	Unnamed	S3	1.8	0.2	4.0	-	-	N	N	N	N	Y	-	-	-	-	-	Y	N		
392	T6*		reclaim barges (x 2)	442625	6276430	Teigen Creek reach 6	S2	5.1	0.5	5.0	-	-	N	N	N	N	N	N	Y	Y	-	-	N	Y		1	1	
393	1004*		Saddle starter dam	-	-	Unnamed	S3	2.2	0.3	3.5	-	-	N	N	N	N	N	Y	Y	N	-	-	Y	N		1		
393	1027*		Saddle starter dam	443274	6276058	Unnamed	S4	0.9	0.2	17.0	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1		
393	1150*		Saddle starter dam	443194	6276323	Unnamed	S4	1.3	0.3	2.7	-	-	N	N	N	N	Y	-	-	-	-	-	Y	N		1		
393	1151*		Saddle starter dam	446636	6274468	Unnamed	S4	0.5	0.2	2.0	-	-	N	N	N	Y	Y	-	-	-	-	-	Y	N		1		
393	1152*		Saddle starter dam	443450	6276233	Unnamed	S4	1.2	0.2	2.0	-	-	N	N	N	N	Y	-	-	-	-	-	Y	N		1		
393	1205*		Saddle starter dam	443450	6276264	Unnamed	S4	1.4	0.1	0.5	-	-	N	N	N	N	Y	-	-	-	-	-	Y	N		1		
393	T6*		Saddle starter dam	442625	6276430	Teigen Creek reach 6	S2	5.1	0.5	5.0	-	-	N	N	N	N	N	N	Y	Y	-	-	N	Y				
393	T7*		Saddle starter dam	443585	6276059	Teigen Creek reach 7	S2	6.0	0.3	-	-	-	N	N	N	N	N	N	Y	-	-	-	-	N	Y		1	1
393	1029*		Saddle starter dam	443597	6276031	Unnamed	S3	3.0	0.4	1.0	-	-	N	N	N	N	N	Y	Y	N	-	-	Y	N		1		
393	1030*	Saddle starter dam	442587	6276670	Unnamed	S3	2.6	0.5	3.8	-	-	N	N															

Appendix 31-A - Table 2. Baseline Data Study Results- Assessment of Stream Characteristics Against the Minor Works and Waters Order

Project Region	Project Area	Table 1 (Project Component) ID #	Sampling Site No.	Project Work	Location		Waterway Name	Channel Measurements					Minor Water and Works Order Criteria										Minor Water? (Y/N)	Scope Into Effects Assessment (Y/N)	Count of Navigable Streams ¹	Total No. of Sampled Streams ²																													
					Eastings	Northings		Stream Class	BF Channel Width (m)	BF Channel Depth (m)	Mean Gradient (%)	Sinuosity Ratio	Diversion / Ditch Width (m)	Minor Work?	Private Lake? (Y/N)	Drainage Ditch? (Y/N)	Initial Review Criteria		Second Review Criteria																																				
																	BF Width < 1.2 m? (Y/N)	BF Depth < 0.3 m? (Y/N)	BF Width (1.2 ≤ w ≤ 3 m) (Y/N)	BF Depth ≤ 0.6 m? (Y/N)	Slope > 4%? (Y/N)	Sinuosity Ratio > 2? (Y/N)					> 3 obstacles? (Y/N)																												
Processing and Tailing Management Area	South Cell Tailing Management Facility (cont'd)	416	1059*	South Cell pond	444740	6276112	Unnamed	S3	1.9	0.3	9.2	-	-	N	N	N	N	Y	N	-	-	-	-	-	-	-	-	Y	N																										
		416	1061*	South Cell pond	445088	6275419	Unnamed	S4	0.7	0.1	2.0	-	-	N	N	N	N	Y	Y	-	-	-	-	-	-	-	-	Y	N																										
		416	1062*	South Cell pond	445084	6275551	Unnamed	S4	1.2	0.7	2.0	-	-	N	N	N	N	Y	N	-	-	-	-	-	-	-	-	Y	N																										
		416	1063*	South Cell pond	445078	6275634	Unnamed	S4	0.7	-	2.0	-	-	N	N	N	N	Y	N	-	-	-	-	-	-	-	-	Y	N																										
		416	1064*	South Cell pond	445077	6275613	Unnamed	S4	0.7	-	2.0	-	-	N	N	N	N	Y	N	-	-	-	-	-	-	-	-	Y	N																										
		416	1065*	South Cell pond	445061	6275598	Unnamed	S4	1.2	-	2.0	-	-	N	N	N	N	Y	N	-	-	-	-	-	-	-	-	Y	N																										
		416	1066*	South Cell pond	445052	6275588	Unnamed	S4	1.0	-	2.0	-	-	N	N	N	N	Y	N	-	-	-	-	-	-	-	-	Y	N																										
		416	1067*	South Cell pond	445045	6275573	Unnamed	S3	1.8	0.2	2.0	-	-	N	N	N	N	N	Y	-	-	-	-	-	-	-	-	Y	N																										
		416	1068*	South Cell pond	445054	6275553	Unnamed	S4	1.0	-	2.0	-	-	N	N	N	N	Y	N	-	-	-	-	-	-	-	-	Y	N																										
		416	1069*	South Cell pond	445117	6275483	Unnamed	S4	0.4	-	2.0	-	-	N	N	N	N	Y	N	-	-	-	-	-	-	-	-	Y	N																										
		416	1070*	South Cell pond	444745	6275946	Unnamed	S4	0.8	-	2.0	-	-	N	N	N	N	Y	-	-	-	-	-	-	-	-	-	Y	N																										
		416	1071*	South Cell pond	444761	6275913	Unnamed	S4	0.8	-	2.0	-	-	N	N	N	N	Y	-	-	-	-	-	-	-	-	-	Y	N																										
		416	1082*	South Cell pond	444120	6275928	Unnamed	S3	1.7	0.4	3.0	-	-	N	N	N	N	N	Y	Y	N	-	-	-	-	-	-	Y	N																										
		416	1084*	South Cell pond	444892	6275782	Unnamed	S4	1.3	-	2.0	-	-	N	N	N	N	N	Y	-	N	-	Y	-	-	-	-	Y	N																										
		416	1085*	South Cell pond	444926	6275810	Unnamed	S4	0.7	-	2.0	-	-	N	N	N	N	Y	-	-	-	-	-	-	-	-	-	Y	N																										
		416	1086*	South Cell pond	444933	6275747	Unnamed	S3	1.8	0.5	10.0	-	-	N	N	N	N	N	Y	Y	Y	-	-	-	-	-	-	Y	N																										
		416	1087*	South Cell pond	445079	6275746	Unnamed	S4	1.1	-	1.0	-	-	N	N	N	N	Y	-	-	-	-	-	-	-	-	-	Y	N																										
		416	1088*	South Cell pond	441955	6277660	Unnamed	S4	1.0	-	0.0	-	-	N	N	N	N	Y	-	-	-	-	-	-	-	-	-	Y	N																										
		416	1089*	South Cell pond	445043	6275661	Unnamed	S4	0.5	-	2.0	-	-	N	N	N	N	Y	-	-	-	-	-	-	-	-	-	Y	N																										
		417	1056	South cell closure pond	445210	6275266	Unnamed	S4	1.5	0.1	2.0	-	-	N	N	N	N	N	Y	-	-	-	-	-	-	-	-	Y	N																										
		417	1057	South cell closure pond	445159	6275325	Unnamed	S4	1.4	0.2	2.0	-	-	N	N	N	N	N	Y	-	-	-	-	-	-	-	-	Y	N																										
		417	1072	South cell closure pond	444657	6275900	Unnamed	S4	0.9	-	2.0	-	-	N	N	N	N	Y	N	-	-	-	-	-	-	-	-	Y	N																										
		417	1081	South cell closure pond	-	-	Unnamed	S3	1.7	-	2.6	-	-	N	N	N	N	N	Y	-	-	-	-	-	-	-	-	Y	N																										
		417	1059*	South cell closure pond	444740	6276112	Unnamed	S3	1.9	0.3	9.2	-	-	N	N	N	N	N	Y	Y	Y	-	-	-	-	-	-	Y	N																										
		417	1061*	South cell closure pond	445088	6275419	Unnamed	S4	0.7	0.1	2.0	-	-	N	N	N	N	Y	Y	-	-	-	-	-	-	-	-	Y	N																										
		417	1062*	South cell closure pond	445084	6275551	Unnamed	S4	1.2	0.7	2.0	-	-	N	N	N	N	Y	N	-	-	-	-	-	-	-	-	Y	N																										
		417	1063*	South cell closure pond	445078	6275634	Unnamed	S4	0.7	-	2.0	-	-	N	N	N	N	Y	N	-	-	-	-	-	-	-	-	Y	N																										
		417	1064*	South cell closure pond	445077	6275613	Unnamed	S4	0.7	-	2.0	-	-	N	N	N	N	Y	N	-	-	-	-	-	-	-	-	Y	N																										
		417	1065*	South cell closure pond	445061	6275598	Unnamed	S4	1.2	-	2.0	-	-	N	N	N	N	Y	N	-	-	-	-	-	-	-	-	Y	N																										
		417	1066*	South cell closure pond	445052	6275588	Unnamed	S4	1.0	-	2.0	-	-	N	N	N	N	Y	N	-	-	-	-	-	-	-	-	Y	N																										
		417	1067*	South cell closure pond	445045	6275573	Unnamed	S3	1.8	0.2	2.0	-	-	N	N	N	N	N	Y	-	-	-	-	-	-	-	-	Y	N																										
		417	1068*	South cell closure pond	445054	6275553	Unnamed	S4	1.0	-	2.0	-	-	N	N	N	N	Y	N	-	-	-	-	-	-	-	-	Y	N																										
		417	1069*	South cell closure pond	445117	6275483	Unnamed	S4	0.4	-	2.0	-	-	N	N	N	N	Y	N	-	-	-	-	-	-	-	-	Y	N																										
		417	1070*	South cell closure pond	444745	6275946	Unnamed	S4	0.8	-	2.0	-	-	N	N	N	N	Y	-	-	-	-	-	-	-	-	-	Y	N																										
		417	1071*	South cell closure pond	444761	6275913	Unnamed	S4	0.8	-	2.0	-	-	N	N	N	N	Y	-	-	-	-	-	-	-	-	-	Y	N																										
		417	1082*	South cell closure pond	444120	6275928	Unnamed	S3	1.7	0.4	3.0	-	-	N	N	N	N	N	Y	Y	N	-	-	-	-	-	-	Y	N																										
		417	1084*	South cell closure pond	444892	6275782	Unnamed	S4	1.3	-	2.0	-	-	N	N	N	N	N	Y	-	N	-	Y	-	-	-	-	Y	N																										
		417	1085*	South cell closure pond	444926	6275810	Unnamed	S4	0.7	-	2.0	-	-	N	N	N	N	Y	-	-	-	-	-	-	-	-	-	Y	N																										
		417	1086*	South cell closure pond	444933	6275747	Unnamed	S3	1.8	0.5	10.0	-	-	N	N	N	N	N	Y	Y	Y	-	-	-	-	-	-	Y	N																										
		417	1087*	South cell closure pond	445079	6275746	Unnamed	S4	1.1	-	1.0	-	-	N	N	N	N	Y	-	-	-	-	-	-	-	-	-	Y	N																										
		417	1088*	South cell closure pond	441955	6277660	Unnamed	S4	1.0	-	0.0	-	-	N	N	N	N	Y	-	-	-	-	-	-	-	-	-	Y	N																										
		417	1089*	South cell closure pond	445043	6275661	Unnamed	S4	0.5	-	2.0	-	-	N	N	N	N	Y	-	-	-	-	-	-	-	-	-	Y	N																										
		418	TR2*	gravel beach cover	446613	6274403	N. Treaty Creek reach 2	S2	6.1	0.6	2.0	-	-	N	N	N	N	N	N	Y	Y	-	-	-	-	-	-	N	Y																										
		420	1051	southeast dam	446651	6274363	Unnamed	S3	1.8	0.3	4.0	-	-	N	N	N	N	N	Y	-	-	-	-	-	-	-	-	Y	N		1																								
		420	1052	southeast dam	446550	6274466	Unnamed	S4	1.4	0.2	2.0	-	-	N	N	N	N	N	Y	-	-	-	-	-	-	-	-	Y	N		1																								
		420	1101	southeast dam	447006	6273976	Unnamed	S4	0.5	0.1	5.0	-	-	N	N	N	N	Y	Y	-	-	-	-	-	-	-	-	Y	N		1																								
		420	TR2*	southeast dam	446613	6274403	N. Treaty Creek reach 2	S2	6.1	0.6	2.0	-	-	N	N	N	N	N	N	Y	Y	-	-	-	-	-	-	N	Y																										
		420	TR1*	southeast dam	447414	6272871	N. Treaty Creek reach 1	S2	5.5	0.4	5.8	-	-	N	N	N	N	N	N	Y	Y	-	-	-	-	-	-	N	Y																										
		421	1051	southeast starter dam	446651	6274363	Unnamed	S3	1.8	0.3	4.0	-	-	N	N	N	N	N	Y	-	-	-	-	-	-	-	-	Y	N																										
421	1052	southeast starter dam	446550	6274466	Unnamed	S4	1.4	0.2	2.0	-	-	N	N	N	N	N	Y	-	-	-	-	-	-	-	-	Y	N																												
421	1101	southeast starter dam	447006	6273976	Unnamed	S4	0.5	0.1	5.0	-	-	N	N	N	N	Y	Y	-	-	-	-	-	-	-	-	Y	N																												
421	TR2*	southeast starter dam	446613	6274403	N. Treaty Creek reach 2	S2	6.1	0.6	2.0	-	-	N	N	N	N	N	N	Y	Y	-	-	-	-	-	-	N	Y																												
421	TR1*	southeast starter dam	447414	6272871	N. Treaty Creek reach 1	S2	5.5	0.4	5.8	-	-	N	N	N	N	N	N	Y	Y	-	-	-	-	-	-	N	Y																												
422	TR1*	southeast dam diversion ditch	447414	6272871	N. Treaty Creek reach 1	S2	5.5	0.4	5.8	-	-	N	N	N	N	N	N	Y	Y	-	-	-	-	-	-	N	Y																												
423	TR1*	South Cell seepage reclaim pipeline	447414	6272871	N. Treaty Creek reach 1	S2	5.5	0.4	5.8	-	-	N	N	N	N	N	N	Y	Y	-	-	-	-	-	-	N	Y																												
424	TR1*	South Cell borrow area	447414	6272871	N. Treaty Creek reach 1	S2	5.5	0.4	5.8	-	-	N	N	N	N	N	N	Y	Y	-	-	-	-	-	-	N	Y																												
425	TR1*	TWT 15 - sediment control structure	447414	6272871	N. Treaty Creek reach 1	S2	5.5	0.4	5.8	-	-	N	N	N	N	N	N	Y	Y	-	-	-	-	-	-	N	Y																												
427	TR1*	Treaty Creek closure spillway	447414	6272871	N. Treaty Creek reach 1	S2	5.5	0.4	5.8	-	-	N	N	N	N	N	N	Y	Y	-	-	-	-	-	-	N	Y																												
428	TR1*	southeast seepage collection dam	447414	6272871	N. Treaty Creek reach 1	S2	5.5	0.4	5.8	-	-	N	N	N	N	N	N	Y	Y	-	-	-	-	-	-	N	Y																												
429	TR1*	southeast seepage collection pond	447414	6272871	N. Treaty Creek reach 1	S2	5.5	0.4	5.8	-	-	N	N	N	N	N	N	Y	Y	-	-	-	-	-	-	N	Y																												
Sub-Totals																																																						14	75

Appendix 31-A - Table 2. Baseline Data Study Results- Assessment of Stream Characteristics Against the Minor Works and Waters Order

Project Region	Project Area	Table 1 (Project Component) ID #	Sampling Site No.	Project Work	Location		Waterway Name	Channel Measurements					Minor Water and Works Order Criteria										Minor Water? (Y/N)	Scope Into Effects Assessment (Y/N)	Count of Navigable Streams ¹	Total No. of Sampled Streams ²		
					Easting	Northing		Stream Class	BF Channel Width (m)	BF Channel Depth (m)	Mean Gradient (%)	Sinuosity Ratio	Diversion / Ditch Width (m)	Minor Work?	Private Lake? (Y/N)	Drainage Ditch? (Y/N)	Initial Review Criteria		Second Review Criteria									
																	BF Width < 1.2 m? (Y/N)	BF Depth < 0.3 m? (Y/N)	BF Width (1.2 ≤ w ≤ 3 m) (Y/N)	BF Depth ≤ 0.6 m? (Y/N)	Slope > 4%? (Y/N)	Sinuosity Ratio > 2? (Y/N)					> 3 obstacles? (Y/N)	
Treaty Creek Access Road		438	106	Treaty Creek access road (TCAR) (culvert)	433770	6275601	Unnamed	S6	0.3	-	32.0	-	n/a	N	N	N	Y	-	-	-	-	-	-	-	Y	N		1
		438	106-2	Treaty Creek access road (TCAR) (culvert)	433781	6275004	Unnamed	S6	0.3	0.1	33.0	-	n/a	N	N	N	Y	Y	-	-	-	-	-	-	Y	N		1
		438	104	Treaty Creek access road (TCAR) (culvert)	-	-	Unnamed	S6	<3	-	-	-	n/a	N	N	N	Y	-	-	-	-	-	-	-	Y	N		1
		438	224	Treaty Creek access road (TCAR) (culvert)	435517	6275096	Unnamed	S6	<3	-	45.0	-	n/a	N	N	N	N	-	Y	-	Y	-	-	-	Y	N		1
		438	223	Treaty Creek access road (TCAR) (culvert)	435836	6275089	Unnamed	S6	<3	-	25.0	-	n/a	N	N	N	N	-	Y	-	Y	-	-	-	Y	N		1
		438	222	Treaty Creek access road (TCAR) (culvert)	436070	6275115	Unnamed	S6	<3	-	15-30	-	n/a	N	N	N	N	-	Y	-	Y	-	-	-	Y	N		1
		438	221	Treaty Creek access road (TCAR) (culvert)	436488	6274982	Unnamed	S6	<3	-	22.0	-	n/a	N	N	N	N	-	Y	-	Y	-	-	-	Y	N		1
		438	220	Treaty Creek access road (TCAR) (culvert)	437196	6274672	Unnamed	S6	<3	-	21.0	-	n/a	N	N	N	N	-	Y	-	Y	-	-	-	Y	N		1
		438	219	Treaty Creek access road (TCAR) (culvert)	437238	6274726	Unnamed	S6	<3	-	23.0	-	n/a	N	N	N	N	-	Y	-	Y	-	-	-	Y	N		1
		438	218	Treaty Creek access road (TCAR) (culvert)	437252	6274681	Unnamed	S6	<3	-	23.0	-	n/a	N	N	N	N	-	Y	-	Y	-	-	-	Y	N		1
		438	216	Treaty Creek access road (TCAR) (culvert)	437502	6274539	Unnamed	S6	<3	-	22.0	-	n/a	N	N	N	N	-	Y	-	Y	-	-	-	Y	N		1
		438	215	Treaty Creek access road (TCAR) (culvert)	437680	6274440	Unnamed	S6	<3	-	21.0	-	n/a	N	N	N	N	-	Y	-	Y	-	-	-	Y	N		1
		438	214	Treaty Creek access road (TCAR) (culvert)	437683	6274428	Unnamed	S6	<3	-	19.0	-	n/a	N	N	N	N	-	Y	-	Y	-	-	-	Y	N		1
		438	213	Treaty Creek access road (TCAR) (culvert)	437931	6274251	Unnamed	S6	<3	-	25.0	-	n/a	N	N	N	N	-	Y	-	Y	-	-	-	Y	N		1
		438	149	Treaty Creek access road (TCAR) (culvert)	438074	6274106	Unnamed	S6	1.0	0.2	29.0	-	n/a	N	N	N	Y	Y	-	-	-	-	-	-	Y	N		1
		438	212	Treaty Creek access road (TCAR) (culvert)	438084	6274148	Unnamed	S6	<3	-	25.0	-	n/a	N	N	N	N	-	Y	-	Y	-	-	-	Y	N		1
		438	211	Treaty Creek access road (TCAR) (culvert)	438171	6274102	Unnamed	S6	<3	-	85.0	-	n/a	N	N	N	N	-	Y	-	Y	-	-	-	Y	N		1
		438	147	Treaty Creek access road (TCAR) (culvert)	438234	6274109	Unnamed	S6	1.5	1.0	28.0	-	n/a	N	N	N	N	Y	N	Y	-	-	-	-	Y	N		1
		438	148	Treaty Creek access road (TCAR) (culvert)	438234	6274124	Unnamed	S6	1.0	0.2	82.0	-	n/a	N	N	N	Y	Y	-	-	-	-	-	-	Y	N		1
		438	146	Treaty Creek access road (TCAR) (culvert)	438370	6273978	Unnamed	S6	2.1	0.1	78.0	-	n/a	N	N	N	N	Y	-	-	-	-	-	-	Y	N		1
		438	145	Treaty Creek access road (TCAR) (culvert)	439104	6273673	Unnamed	S5	3.5	0.3	55.0	-	n/a	N	N	N	N	Y	-	-	-	-	-	-	Y	N		1
		438	144	Treaty Creek access road (TCAR) (culvert)	439220	6273673	Unnamed	S6	0.8	0.2	39.0	-	n/a	N	N	N	Y	Y	-	-	-	-	-	-	Y	N		1
		438	143	Treaty Creek access road (TCAR) (culvert)	439255	6273662	Unnamed	S5	5.0	0.4	35.0	-	n/a	N	N	N	N	N	Y	Y	-	-	-	-	N	Y	1	1
		438	142	Treaty Creek access road (TCAR) (culvert)	439293	6273665	Unnamed	S6	1.0	0.3	30.0	-	n/a	N	N	N	N	Y	-	-	-	-	-	-	Y	N		1
		438	141-2	Treaty Creek access road (TCAR) (culvert)	439755	6273556	Unnamed	S5	8.0	6.0	31.0	-	n/a	N	N	N	N	N	N	Y	-	-	-	-	N	Y	1	1
		438	235	Treaty Creek access road (TCAR) (culvert)	442563	6272878	Unnamed	S6	0.4	-	22.0	-	n/a	N	N	N	Y	N	-	-	-	-	-	-	Y	N		1
		438	236	Treaty Creek access road (TCAR) (culvert)	442771	6272836	Unnamed	S6	0.3	-	45.0	-	n/a	N	N	N	Y	N	-	-	-	-	-	-	Y	N		1
		438	237	Treaty Creek access road (TCAR) (culvert)	442906	6272825	Unnamed	S6	0.5	-	26.0	-	n/a	N	N	N	Y	N	-	-	-	-	-	-	Y	N		1
		438	238	Treaty Creek access road (TCAR) (culvert)	442958	6272835	Unnamed	S6	0.4	-	32.0	-	n/a	N	N	N	Y	N	-	-	-	-	-	-	Y	N		1
		438	239	Treaty Creek access road (TCAR) (culvert)	443047	6272835	Unnamed	S6	0.3	-	45.0	-	n/a	N	N	N	Y	N	-	-	-	-	-	-	Y	N		1
		438	240	Treaty Creek access road (TCAR) (culvert)	443134	6272832	Unnamed	S6	0.6	-	55.0	-	n/a	N	N	N	Y	N	-	-	-	-	-	-	Y	N		1
		438	241	Treaty Creek access road (TCAR) (culvert)	443270	6272762	Unnamed	S6	0.5	-	85.0	-	n/a	N	N	N	Y	N	-	-	-	-	-	-	Y	N		1
		438	242	Treaty Creek access road (TCAR) (culvert)	443298	6272760	Unnamed	S6	0.4	-	37.0	-	n/a	N	N	N	Y	N	-	-	-	-	-	-	Y	N		1
		438	243	Treaty Creek access road (TCAR) (culvert)	443508	6272703	Unnamed	S3	4.2	0.5	18.0	-	n/a	N	N	N	N	N	N	Y	Y	-	-	-	N	Y	1	1
		438	140	Treaty Creek access road (TCAR) (culvert)	443677	6272751	Unnamed	S6	1.0	0.1	25.0	-	n/a	N	N	N	Y	Y	-	-	-	-	-	-	Y	N		1
		438	139	Treaty Creek access road (TCAR) (culvert)	443781	6272747	Unnamed	S5	3.2	0.7	36.0	-	n/a	N	N	N	N	N	N	Y	-	-	-	-	N	Y	1	1
		438	136	Treaty Creek access road (TCAR) (culvert)	444305	6272665	Unnamed	S6	0.9	0.2	29.0	-	n/a	N	N	N	Y	Y	-	-	-	-	-	-	Y	N		1
		438	137	Treaty Creek access road (TCAR) (culvert)	444305	6272665	Unnamed	S6	2.5	0.2	30.0	-	n/a	N	N	N	N	Y	-	-	-	-	-	-	Y	N		1
		438	129	Treaty Creek access road (TCAR) (culvert)	444554	6272533	Unnamed	S6	1.1	0.3	45.0	-	n/a	N	N	N	Y	N	-	-	-	-	-	-	Y	N		1
		438	133	Treaty Creek access road (TCAR) (culvert)	444585	6272587	Unnamed	S6	3.0	0.2	40.0	-	n/a	N	N	N	N	Y	-	-	-	-	-	-	Y	N		1
		438	134	Treaty Creek access road (TCAR) (culvert)	444585	6272587	Unnamed	S6	3.0	1.0	34.0	-	n/a	N	N	N	N	Y	N	Y	-	-	-	-	Y	N		1
		438	135	Treaty Creek access road (TCAR) (culvert)	444585	6272587	Unnamed	S6	1.5	0.4	30.0	-	n/a	N	N	N	N	N	Y	Y	Y	-	-	-	Y	N		1
		438	130	Treaty Creek access road (TCAR) (culvert)	444626	6272566	Unnamed	S6	1.4	0.2	42.0	-	n/a	N	N	N	N	Y	-	-	-	-	-	-	Y	N		1
		438	127	Treaty Creek access road (TCAR) (culvert)	444894	6272525	Unnamed	S6	1.8	-	32.0	-	n/a	N	N	N	N	Y	N	Y	-	-	-	-	Y	N		1
		438	128	Treaty Creek access road (TCAR) (culvert)	444894	6272519	Unnamed	S6	0.8	0.1	37.0	-	n/a	N	N	N	Y	Y	-	-	-	-	-	-	Y	N		1
		438	125	Treaty Creek access road (TCAR) (culvert)	445038	6272469	Unnamed	S6	1.5	0.1	58.0	-	n/a	N	N	N	N	Y	-	-	-	-	-	-	Y	N		1
		438	126	Treaty Creek access road (TCAR) (culvert)	445038	6272469	Unnamed	S6	1.2	0.2	34.0	-	n/a	N	N	N	N	Y	-	-	-	-	-	-	Y	N		1
		438	124	Treaty Creek access road (TCAR) (culvert)	445076	6272471	Unnamed	S6	2.0	0.4	63.0	-	n/a	N	N	N	N	Y	Y	Y	-	-	-	-	Y	N		1
		438	123	Treaty Creek access road (TCAR) (culvert)	445215	6272467	Unnamed	S6	0.9	0.1	49.0	-	n/a	N	N	N	Y	Y	-	-	-	-	-	-	Y	N		1
		438	122	Treaty Creek access road (TCAR) (culvert)	445221	6272476	Unnamed	S6	0.4	0.1	41.0	-	n/a	N	N	N	Y	Y	-	-	-	-	-	-	Y	N		1
		438	121	Treaty Creek access road (TCAR) (culvert)	445383	6272364	Unnamed	S6	0.8	0.1	36.0	-	n/a	N	N	N	Y	Y	-	-	-	-	-	-	Y	N		1
		438	233	Treaty Creek access road (TCAR) (culvert)	445416	6272432	Unnamed	S6	<3	-	45.0	-	n/a	N	N	N	N	N	Y	N	Y	-	-	-	Y	N		1
		438	230	Treaty Creek access road (TCAR) (culvert)	445753	6272283	Unnamed	S6	<3	-	50.0	-	n/a	N	N	N	N	Y	N	Y	-	-	-	-	Y	N		1
		438	229	Treaty Creek access road (TCAR) (culvert)	445806	6272245	Unnamed	S6	<3	-	55.0	-	n/a	N	N	N	N	Y	N	Y	-	-	-	-	Y	N		1
		438	228	Treaty Creek access road (TCAR) (culvert)	446543	6272042	Unnamed	S6	<3	-	100.0	-	n/a	N	N	N	N	N	Y	N	Y	-	-	-	Y	N		1
		438	227	Treaty Creek access road (TCAR) (culvert)	446737	6272018	Unnamed	S6	<3	-	105.0	-	n/a	N	N	N	N	N	Y	N	Y	-	-	-	Y	N		1
		438	226	Treaty Creek access road (TCAR) (culvert)	446891	6271989	Unnamed	S6	<3	-	16-50	-	n/a	N	N	N	N	N	Y	N	Y	-	-	-	Y	N		1
		438	225	Treaty Creek access road (TCAR) (culvert)	446932	6271969	Unnamed	S6	<3	-	90.0	-	n/a	N	N	N	N	N	Y	N	Y	-	-	-	Y	N		1
		438, 434	120	Treaty Creek access road (TCAR) (culvert), Treaty Creek Transmission Line	447931	6271189	Unnamed	S6	0.9	-	65.0	-	n/a	N	N	N	Y	N	-	-	-	-	-	-	Y	N		1
		438, 434	119	Treaty Creek access road (TCAR) (culvert), Treaty Creek Transmission Line	447990	6271149	Unnamed	S6	1.8	0.1	34.0	-	n/a	N	N	N	N	Y	-	-	-	-	-	-	Y	N		1
		438, 434	117	Treaty Creek access road (TCAR) (culvert), Treaty Creek Transmission Line	448574	6270741	Unnamed	S6	1.2	0.1	35.0	-	n/a	N	N	N	N	Y	-	-								

Appendix 31-A - Table 2. Baseline Data Study Results- Assessment of Stream Characteristics Against the Minor Works and Waters Order

Project Region	Project Area	Table 1 (Project Component) ID #	Sampling Site No.	Project Work	Location		Waterway Name	Channel Measurements					Minor Water and Works Order Criteria										Minor Water? (Y/N)	Scope Into Effects Assessment (Y/N)	Count of Navigable Streams ¹	Total No. of Sampled Streams ²																											
					Easting	Northing		Stream Class	BF Channel Width (m)	BF Channel Depth (m)	Mean Gradient (%)	Sinuosity Ratio	Diversion / Ditch Width (m)	Minor Work?	Private Lake? (Y/N)	Drainage Ditch? (Y/N)	Initial Review Criteria		Second Review Criteria																																		
																	BF Width < 1.2 m? (Y/N)	BF Depth < 0.3 m? (Y/N)	BF Width (1.2 ≤ w ≤ 3 m) (Y/N)	BF Depth ≤ 0.6 m? (Y/N)	Slope > 4%? (Y/N)	Sinuosity Ratio > 2? (Y/N)					> 3 obstacles? (Y/N)																										
Treaty Creek Access Road (cont'd)		438, 434	109	Treaty Creek access road (TCAR) (culvert), Treaty Creek Transmission Line	449755	6270112	Unnamed	S6	0.7	0.1	21.0	-	n/a	N	N	N	Y	Y	-	-	-	-	-	Y	N		1																										
		438, 434	234	Treaty Creek access road (TCAR) (culvert), Treaty Creek Transmission Line	450872	6269799	Unnamed	S6	0.4	-	4.0	-	n/a	N	N	N	Y	N	-	-	-	-	-	Y	N		1																										
		438, 434	101	Treaty Creek access road (TCAR) (culvert), Treaty Creek Transmission Line	454518	6268819	Unnamed	S6	<3	<0.3	-	-	n/a	N	N	N	N	N	Y	Y	N	-	-	Y	N		1																										
		438, 434	210	Treaty Creek access road (TCAR) (culvert), Treaty Creek Transmission Line	455190	6269430	Unnamed	S3	4.0	-	16.0	-	n/a	N	N	N	N	N	N	-	Y	-	-	N	Y	1	1																										
		438, 434	209	Treaty Creek access road (TCAR) (culvert), Treaty Creek Transmission Line	455448	6269847	Unnamed	S4	0.9	8.7	9.0	-	n/a	N	N	N	Y	N	-	-	-	-	-	Y	N		1																										
		438, 434	208	Treaty Creek access road (TCAR) (culvert), Treaty Creek Transmission Line	455482	6269910	Unnamed	S6	<3	-	-	-	n/a	N	N	N	Y	Y	-	-	-	-	-	Y	N		1																										
		438, 434	205	Treaty Creek access road (TCAR) (culvert), Treaty Creek Transmission Line	455723	6270012	Unnamed	S4	0.4	0.1	15.0	-	n/a	N	N	N	Y	Y	-	-	-	-	-	Y	N		1																										
		438, 434	204	Treaty Creek access road (TCAR) (culvert), Treaty Creek Transmission Line	455882	6270066	Unnamed	S4	0.3	0.1	18.0	-	n/a	N	N	N	Y	Y	-	-	-	-	-	Y	N		1																										
		438, 434	203	Treaty Creek access road (TCAR) (culvert), Treaty Creek Transmission Line	455990	6270132	Unnamed	S6	<3	-	30.0	-	n/a	N	N	N	N	N	Y	N	Y	-	-	Y	N		1																										
		438, 434	202	Treaty Creek access road (TCAR) (culvert), Treaty Creek Transmission Line	456003	6270155	Unnamed	S6	<3	-	35.0	-	n/a	N	N	N	N	N	Y	N	Y	-	-	Y	N		1																										
		438, 434	103	Treaty Creek access road (TCAR) (culvert), Treaty Creek Transmission Line	-	-	Unnamed	S6	<3	<0.3	-	-	n/a	N	N	N	N	N	Y	Y	-	-	-	Y	N		1																										
		438, 434	105	Treaty Creek access road (TCAR) (culvert), Treaty Creek Transmission Line	-	-	Unnamed	S6	<3	<0.3	-	-	n/a	N	N	N	N	N	Y	Y	-	-	-	Y	N		1																										
		438, 434	118	Treaty Creek access road (TCAR) (culvert), Treaty Creek Transmission Line	-	-	Unnamed	S6	1.5	0.1	29.0	-	n/a	N	N	N	N	Y	-	-	-	-	-	Y	N		1																										
		438, 434	138	Treaty Creek access road (TCAR) (culvert), Treaty Creek Transmission Line	-	-	Unnamed	S6	0.9	0.3	38.0	-	n/a	N	N	N	Y	Y	-	-	-	-	-	Y	N		1																										
		442	4026	creek crossing R053 (TCAR) (bridge)	435155	6275052	Unnamed	S3	2.5	0.6	11.0	-	n/a	N	N	N	N	N	Y	Y	Y	-	-	Y	N		1																										
		443	217	creek crossing R049 (TCAR) (bridge)	437311	6274657	Unnamed	S6	<3	-	27.0	-	n/a	N	N	N	N	N	Y	N	Y	-	-	Y	N		1																										
		444	141	creek crossing R047 (TCAR) (bridge)	443652	6272739	Unnamed	S6	1.7	0.6	26.0	-	n/a	N	N	N	N	N	Y	N	Y	-	-	Y	N		1																										
		445	4011	North Treaty Creek bridge (R045) (TCAR), Treaty Creek Transmission Line	447556	6271912	N. Treaty Creek	S2	8.9	1.1	2.7	-	n/a	N	N	N	N	N	N	N	-	-	-	N	Y	1	1																										
		446	114	creek crossing R037 (TCAR) bridge, Treaty Creek Transmission Line	448987	6270402	Unnamed	S2	15.5	0.6	20.0	-	n/a	N	N	N	N	N	N	Y	Y	-	-	N	Y	1	1																										
		447	108	creek crossing R038 (TCAR) bridge, Treaty Creek Transmission Line	449782	6270082	Unnamed	S3	2.0	0.4	24.0	-	n/a	N	N	N	N	N	Y	Y	Y	-	-	Y	N		1																										
		448	244	creek crossing R036 (TCAR) bridge, Treaty Creek Transmission Line	452180	6269610	Unnamed	S2	5.5	1.2	18.0	-	n/a	N	N	N	N	N	N	Y	-	-	-	N	Y	1	1																										
		449	107	creek crossing R035 (TCAR) bridge, Treaty Creek Transmission Line	433793	6275602	Unnamed	S5	5.7	0.4	34.0	-	n/a	N	N	N	N	N	Y	Y	-	-	-	N	Y	1	1																										
		466	100	creek crossing R034a (TCAR) bridge, Treaty Creek Transmission Line	457091	6270729	Unnamed	S1	63.3	3.0	19.0	-	n/a	N	N	N	N	N	N	Y	-	-	-	N	Y	1	1																										
		467	100	creek crossing R034b (TCAR) bridge, Treaty Creek Transmission Line	457091	6270729	Unnamed	S1	63.3	3.0	19.0	-	n/a	N	N	N	N	N	N	Y	-	-	-	N	Y																												
		451	4004	Bell-Irving River bridge (R033) (TCAR), Treaty Creek Transmission Line	460039	6272653	Bell-Irving River	S1	70.0	-	0.5	-	n/a	N	N	N	N	N	N	-	N	-	-	N	Y	1	1																										
Sub-Totals																																																				11	90
	Fish Habitat Compensation	n/a	TC1	Teigen Creek - intake pipe	439735	6283407	Teigen Creek	S1	35.0	1.3	0.2		n/a	N	N	N	N	N	N	N	-	-	-	N	Y	1	1																										
		n/a	GC1	Glacier Creek - intake pipe	460250	6272800	Glacier Creek	S2	10.0	0.5	1.5		n/a	N	N	N	N	N	Y	N	-	-	-	N	Y	1	1																										
		n/a	-	Treaty Creek - intake pipe	448500	6271000	Treaty Creek	S2	8.9	-	-		n/a	N	N	N	N	N	-	-	-	-	-	N	Y	1	1																										
		n/a	-	Taft Creek - intake pipe	473400	6261300	Taft Creek	S1	60+	-	-		n/a	N	N	N	N	N	-	-	-	-	-	N	Y	1	1																										
Sub-Totals																																																				4	4
Totals																																																				41	237

Notes:

*Site interacts with additional components

Red = Sampling Site No. 5538 is used in both the CCAR and Mine Site assessment

¹The first time a sampling site no. is recorded and receives a 'Y' in the 'Scope Into Effects Assessment', it is given a value of 1 and a value of '0' for every subsequent entry.

²Represents total number of individual streams sampled

Y = yes, N = no