

QML security determination for two-year peak liability - Eagle Gold Mine, Yukon

Description of Cost	SGC July 1, 2019 cost estimate	GRIT Nov 5, 2019 cost estimate (third party engineer contracted by YG)	SGC Dec 4, 2019 cost estimate update	YG determination
Closure Implementation				
T3 General & Administration	\$948,276	\$1,701,891	\$1,642,369	\$1,642,369
T4 Exploration Disturbances	n/a	n/a	n/a	n/a
T5 Closure Planning	\$282,500	\$282,500	\$282,500	\$282,500
T6 Pit	\$35,626	\$139,189	\$129,752	\$129,752
T7 Heap Leach Pad	\$1,143,932	\$2,936,377	\$2,737,300	\$2,737,300
T8 Waste Dumps	\$590,939	\$1,115,002	\$1,039,409	\$1,039,409
T9 Surface Facilities	\$5,395,711	\$5,771,921	\$5,630,453	\$5,630,453
T10 Infrastructure	\$308,496	\$423,655	\$394,932	\$394,932
T11 Waste Disposal and Remediation	\$93,803	\$164,106	\$158,391	\$158,391
T12 Landfills	\$101,706	\$147,687	\$137,674	\$137,674
T13 Roads & Trails	\$354,432	\$463,166	\$431,765	\$431,765
T14 Water Management	\$170,502	\$200,010	\$186,450	\$186,450
T16 Interim Care & Maintenance	\$1,462,887	\$2,087,854	\$1,835,854	\$1,835,854
Sub-total	\$10,888,809	\$15,433,358	\$14,606,850	\$14,606,850
Indirect Costs	\$1,633,321	\$2,315,004	\$2,191,027	\$2,191,027
Contingency Costs	\$1,895,976	\$3,045,317	\$2,581,755	\$2,581,755
Cost Inflation	\$766,455	\$1,463,036	\$1,384,685	\$1,384,685
Total Closure Implementation Costs**	\$13,288,584	\$19,211,397	\$18,182,563	\$18,182,563
T15 Care, Maintenance, and Monitoring Costs (Phase 6, 7/8)				
Onsite Management	\$489,880	\$489,880	\$489,880	\$489,880
Transport Costs	\$36,206	\$34,143	\$36,206	\$36,206
Water Treatment Costs (Phase 6)	-	-	-	-
Active Treatment (Phase 6)	-	-	-	-
Capital Costs (included in T9, above)	\$0	\$0	\$0	\$0
Capital Replacement Costs	\$121,502	\$123,423	\$121,502	\$121,502
Operating Costs	\$1,501,474	\$1,436,951	\$1,501,474	\$1,501,474
Draindown Pumping (Phase 6)	\$188,584	\$201,193	\$188,584	\$188,584
Draindown Pumping (Phase 6) - Pump Rental	-	\$289,800	-	-
Passive Treatment (Phase 7-8)	-	-	-	-
Capital Costs	\$122,505	\$289,895	\$265,121	\$265,121
Operating Costs	\$43,739	\$43,739	\$43,739	\$43,739
Reclamation & Closure Research Phase 6	\$41,775	\$45,000	\$41,775	\$41,775
Monitoring & Reporting	\$1,711,152	\$1,698,616	\$1,711,152	\$1,711,152
Post Closure Maintenance (Phase 7/8)	\$651,317	\$724,559	\$709,968	\$709,968
Sub-Total	\$4,908,134	\$5,377,199	\$5,109,401	\$5,109,401
Indirect Costs	\$736,220	\$806,580	\$766,410	\$766,410
Contingency Costs	\$736,220	\$806,580	\$766,410	\$766,410
Total Care, Maintenance and Monitoring Costs**	\$5,644,354	\$6,183,779	\$5,875,811	\$5,875,811
Total Closure Costs	\$18,932,938	\$25,395,176	\$24,058,374	\$24,058,374
Contingency Amount	\$2,632,196	\$3,851,897	\$3,348,165	\$3,348,165
Total Closure Costs (Plus Contingency)	\$21,565,135	\$29,247,073	\$27,406,539	\$27,406,539

Cost Factors	
Indirect Cost Factor	Contingency Factor
15%	30%
n/a	n/a
15%	30%
15%	15%
15%	15%
15%	15%
15%	23%
15%	30%
15%	30%
15%	15%
15%	30%
15%	15%

Cost Factors	
Indirect Cost Factor	Contingency Factor
15%	15%

**Note these line items Totals do not include contingency. Contingency is added to final Total Closures Costs at bottom of table.

Line Item	Reason for Decision
T3-T14	Cost estimate difference from Project Management and Engineering (PME) rates of 10% SGC vs 18% GRIT. YG determines 10% PME is a reasonable estimate considering the smaller footprint and lower complexity of the reclamation and closure at the peak two-year liability. Also, additional costs are included in the SGC cost estimate for reclamation and closure research activities.
T7, T16	Cost estimate difference from pump rental and replacement costs for the heap leach. SGC provided additional information to YG on the number of installed heap leach pumps operating during Phase 1 vs non-operating and spare inventory pumps on site at the two-year peak liability. YG determines that it is reasonable to assume the installed pumps will be functional at the two-year peak liability due to low operating hours during Phase 1 and there is contingency with the spare pumps on site in inventory. Therefore, YG removes pump rental and replacement costs at the two-year peak liability.
T7, T16	Cost estimate difference from heap leach pad rinsing activity scheduled after the two-year interim care and maintenance (ICM). SGC provided additional information to YG to demonstrate that the heap leach pad rinsing will be accomplished by the heap leach pumps running during ICM. YG determines it is reasonable to schedule the heap leach pad rinsing and interim care and maintenance concurrently as the pumps will be run during ICM and all infrastructure is in place.
T9	Cost estimate difference is driven by demolition and hazardous materials disposal costs. YG determines that it is reasonable to assume hazardous materials inventory (e.g. waste oil, fuel, reagents, etc.) should be accurate at the two-year peak liability. YG can conduct inspections during Phase 1 to confirm the hazardous materials are correctly stored and inventoried on site at the two-year peak liability.
Contingency Costs	YG determines the contingency factor of 15% SGC vs 23% GRIT is reasonable for the covers on the heap leach pad and waste dumps in T7 and T8, respectively. YG considers reasonable estimate considering the smaller footprint and lower complexity of the reclamation and closure at the peak two-year liability for the pad and dumps. Also, additional costs are included in the SGC cost estimate for reclamation and closure research activities.
Drain Down Pumping (Phase 6) - pump rental	See above notes for T7,16 regarding heap leach pumps.