

APPENDIX 4

UPDATE OF DECOMMISSIONING AND RECLAMATION SCHEDULE

POLARIS MINE - DECOMMISSIONING & RECLAMATION SCHEDULE

UPDATED AS OF September 24, 2003

ACTIVITY	Prior Periods	3rd Qtr. 2003			4th Qtr. 2003			1st Qtr. 2004			2nd Qtr. 2004			3rd Qtr. 2004		
		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
CONTRACTOR MOBILIZATION																
Pre-mobilization Planning / Order Materials/Equip																
Ship to Site with Contractor Equipment																
Offload Ship																
Setup Warehousing/Laydown Area																
SETUP TEMPORARY FACILITIES																
DECOMMISSIONING UNDERGROUND																
Remove / Salvage Mine Equipment & Crusher	Cancelled															
Remove Refrigeration Plant																
Remove Surface Ventilation Fans																
Seal Mine Openings																
MILL / BARGE DEMOLITION																
Initial Cleanup of Barge by Teck Cominco																
Removal of Barge Services																
Transfer fuel to Tank Farm & Clean Hull																
Remove hazardous Materials / Wastes																
Remove / Salvage Process Equipment																
Demolish Internal Equipment																
Demolish Structure																
Remove Hydrocarbon/Metals Contaminated Soils																
Regrade Area Surrounding Barge																
PRODUCT STORAGE BUILDING DEMOLITION																
Cleanup of Building / Remove Liquids from Equip.																
Demolish Exterior Conveyors																
Demolish Reclaim Conveyors																
Remove Cladding from Building																
Demolish Structure																
Demolish Foundations																
Remove Contaminated Soils																
Regrading Area																
SHIP LOADER / RECLAIM CONVEYOR DEMOL.																
Cleanup of Conveyor Areas/Remove Oils																
Demolish Conveyors																

POLARIS MINE - DECOMMISSIONING & RECLAMATION SCHEDULE

UPDATED AS OF September 24, 2003

ACTIVITY	Prior Periods	3rd Qtr. 2003			4th Qtr. 2003			1st Qtr. 2004			2nd Qtr. 2004			3rd Qtr. 2004		
		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
DOCK DECOMMISSIONING																
Inspect / Remove Glycols from Freeze Pipes																
Remove Metals Contaminated Soils																
Remove Cells 1 & 2																
Remove Cells 3 & 4																
Removal of Temporary Dock																
Shoreline Recontouring																
Berm Removal																
Grade New Beach to Final Profiles																
TAILINGS SYSTEM DEMOLITION																
Final Cleanup of Thickener																
Flush Tails Lines																
Salvage Equipment																
Remove hazardous Materials / Wastes																
Remove Tails Line / Return Line																
Demolish Equipment																
Demolish Structure																
Remove Foundations																
Remove Contaminated Soils																
Regrading																
GARROW LAKE / DAM DECOMMISSIONING																
Drawdown Lake																
Removal of Centre Section of Dam																
Creek Channel Construction																
Final Grading / Armouring of Dam Remnants																
CRF PLANT DEMOLITION																
Final Cleanup of Plant																
Remove hazardous Materials / Wastes																
Demolish Plant Equipment																
Demolish Buildings																
Site Grading (Plant & Surrounding Area)																

POLARIS MINE - DECOMMISSIONING & RECLAMATION SCHEDULE

UPDATED AS OF September 24, 2003

ACTIVITY	Prior Periods	3rd Qtr. 2003			4th Qtr. 2003			1st Qtr. 2004			2nd Qtr. 2004			3rd Qtr. 2004		
		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
ACCOMMODATIONS COMPLEX DEMOLITION																
Establish Temporary Offices / Building Services																
Use Accommodations Complex																
Establish Temporary Camp Accommodations																
Use Temporary Camp																
Remove hazardous Materials / Wastes																
Demolish Buildings																
Regrade Area																
Remove Temporary Camp																
FUEL STORAGE (TANK FARM) DEMOLITION																
Use with Temporary Modifications																
Transfer Fuel to Temporary Storage																
Cleaning of Tanks / Piping																
Demolish Tanks / Piping																
Cleanup of Berm & Liner																
Site Grading																
BLADDER AREA CONTAMINATED SOILS																
Cleanup of Hydrocarbon Soils																
Area Grading																
MISC. BUILDING DEMOLITION																
Exploration Quonset Huts																
Core Shack (Atco Trailer)																
Emergency Shelter at North Portal																
Steam Wash Bay & Tire Shop (relocated in 3rd Qtr)																
Generator Building																
Bent Horn Building																
Dock Office Trailer (relocated in 3rd Qtr)																
Airstrip Storage Hut																
Fresh Water Pump House																
Fresh Water Tank & Shed																
Carpenter Shop (used as temp. warehouse)																
Shipping Containers (Sea Cans - more to move on-going)																
Foldaways by Temporary Dock (3)																
Firehall																

POLARIS MINE - DECOMMISSIONING & RECLAMATION SCHEDULE

UPDATED AS OF September 24, 2003

ACTIVITY	Prior Periods	3rd Qtr. 2003			4th Qtr. 2003			1st Qtr. 2004			2nd Qtr. 2004			3rd Qtr. 2004		
		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
OPERATIONAL LANDFILL CLOSURE																
Relocate Construction Landfill																
Hauling Landfill Cover Cap Material																
LRD QUARRY Landfill																
Cut Notch into Quarry / Construct Haul Road																
Installation of Thermistor Pipe Stands																
Placing debris in Quarry																
Grading of Notch to Match Cap																
Placement of Cap and Final Grading																
Installation of Thermistors into Pipes																
MISC. SITE RECLAMATION & EARTHWORKS																
Reduction in spare parts/supplies by TCML																
Ship Mill Process Chemicals South for Sale/Recycle																
Site Cleanup of scrap material during operations																
Regrading North 40 Area																
Grading of Reclamation Landfill Area																
Road Closure / Culvert Removals/Runway																
DEMOBILIZE FROM SITE																
Prepare Equipment / Supplies for shipping from site																
Prepare Residual Chemicals / Wastes for shipping																
Last Ship from Polaris																

APPENDIX 5

UPDATE OF ESTIMATED MINE DECOMMISSIONING, RECLAMATION AND MONITORING COSTS

POLARIS MINE DECOMMISSIONING, RECLAMATION AND MONITORING COST ESTIMATE

3rd QUARTER 2003 UPDATE

	BUDGET		SEPT 30, 2003 CLAIMED TO DATE		FORECAST FINAL PROJECT COST		NOTES
	By Code	Subtotals	By Code	Subtotals	By Code	Subtotals	
DEMOLITION & RECLAMATION (BARE COSTS)							
MINE EQUIPMENT REMOVAL							
Hazardous Materials Removal	35,845		853		30,845		
Mine Refrigeration Plant	145,525		14,281		92,044		
Mobile & Mine Equipment	2,919		2,524		22,919		
Remove Salvaged Mine Equipment	20,754		3,983		5,754		
Misc Sub Contract Costs	45,957		23,297		45,385		
		\$ 251,000		\$ 44,938		\$ 196,947	
MINE ACCESS SEALING							
Seal Mine Portals	60,000		464		73,509		
		\$ 60,000		\$ 464		\$ 73,509	
CONCENTRATOR BUILDING							
Miscellaneous Materials	22,092				-		
Mill Equipment Clean-Up - Fuels	16,398				-		
Mill Equipment Clean-Up	99,900		40,613		40,625		
Hazardous Materials Removal	151,117		94,476		147,099		
Barge Demolition	608,592		441,028		513,459		
Misc Process Equipment Demolition & Removal	197,432		183,317		183,346		
Misc Sub Contract Costs	88,469		83,898		87,013		
		\$ 1,184,000		\$ 843,332		\$ 971,542	
CONCENTRATE STORAGE STRUCTURE & EQUIPMENT							
Concentrate Storage Equipment Clean-Up	26,117		1,905		1,900		
Conveyors	67,600		8,421		8,431		
Concentrate Storage Structure & Equipment	555,283		78,302		116,564		
		\$ 649,000		\$ 88,628		\$ 126,895	
SHIP LOADER & CONVEYOR							
Conveyors	50,000		24,592		24,593		
		\$ 50,000		\$ 24,592		\$ 24,593	
DOCK & SHORELINE							
Dock & Shoreline Reclamation	869,000		240,476		939,131		
		\$ 869,000		\$ 240,476		\$ 939,131	
THICKENER & TAILINGS LINES							
Hazardous Materials Removal	22,577		16,452		16,456		
Tailings Thickener	377,423		91,269		113,259		
		\$ 400,000		\$ 107,721		\$ 129,715	
GARROW LAKE							
Garrow Lake Siphons & Lake Drawdown	120,391		202,648		204,366		
Dam/Spillway Modifications	95,467		66,583		172,865		
Escalation Allowance	3,142				-		
		\$ 219,000		\$ 269,231		\$ 377,231	
CRF PLANT STRUCTURE & EQUIPMENT							
CRF Plant Equipment Clean-Up	7,002		1,040		1,041		
CRF Plant Equipment Removal	17,533		9,406		9,404		
CRF Plant Buildings Demolition	130,455		23,497		23,517		
Misc Sub Contract Costs	11,010		46,766		46,764		
		\$ 166,000		\$ 80,709		\$ 80,726	
ACCOMMODATION COMPLEX STRUCTURE & EQUIPMENT							
Accommodation Complex Building Demolition	249,000		10,211		171,125		
		\$ 249,000		\$ 10,211		\$ 171,125	
FUEL STORAGE & HANDLING EQUIPMENT							
Miscellaneous Materials	3,681		2,531		(1,319)		
Purge & Decommission Fuel Tanks	53,404		296,235		319,000		
Hazardous Materials Removal	50,645		125,575		164,272		
Fuel Pumping & Distribution Systems	87,270				90,133		
		\$ 195,000		\$ 424,341		\$ 572,086	
BUILDINGS & CONTAINERS							
Miscellaneous Materials	1,323				-		
Misc Warehouse / Shipping Equipment	1,221		3,292		3,292		
Misc Buildings Demolition	250,456		35,397		169,268		
		\$ 253,000		\$ 38,689		\$ 172,560	
MISC CONTRACTOR LABOUR							
Unallocated Labour	133,000		79,131		129,027		
		\$ 133,000		\$ 79,131		\$ 129,027	
GENERAL SITE GRADING							
Hazardous Materials Removal	44,719		20,938		46,870		
General Site Grading & Reclamation	7,129		207,612		201,505		
Escalation Allowance	4,152				-		
		\$ 56,000		\$ 228,550		\$ 248,375	

POLARIS MINE DECOMMISSIONING, RECLAMATION AND MONITORING COST ESTIMATE
3rd QUARTER 2003 UPDATE

	BUDGET		SEPT 30, 2003 CLAIMED TO DATE		FORECAST FINAL PROJECT COST		NOTES
	By Code	Subtotals	By Code	Subtotals	By Code	Subtotals	
LANDFILL RECLAMATION							
Landfill Reclamation	432,000		645,694		800,374		
		\$ 432,000		\$ 645,694		\$ 800,374	
CONTAMINATED SOILS - CLEANUP							
Metals & Hydrocarbon Contaminated Soils Cleanup & Disposal	366,623		900,231		1,445,291		
Hydrocarbon Contaminated Soils (By Polaris)	6,097		13,131		13,131		
Metals Contaminated Soils (By Polaris)	173,605		52,382		52,382		
U/G Handling & Disposal Of Contaminated Soils	48,675		244,463		440,925		
		\$ 595,000		\$ 1,210,207		\$ 1,951,729	
QUARRIES & MINE SURFACE RECLAMATION (EARTHWORK)							
Backfill & Re-Contouring	263,000		177,581		319,452		
		\$ 263,000		\$ 177,581		\$ 319,452	
MISC. DEMOLITION & CLEAN-UP							
Misc Unallocated Clean-Up / Demo	380,000		41,405		44,157		
		\$ 380,000		\$ 41,405		\$ 44,157	
EQUIPMENT PURCHASE/RENTAL							
Contractor Equipment Rental	5,274,900		2,761,061		5,144,900		
Contractor Misc Equipment Purchase	719,407		432,906		448,309		
Escalation Allowance	59,693				-		
		\$ 6,054,000		\$ 3,193,967		\$ 5,593,209	
MISC. SERVICES & SUPPLIES							
Misc Purchased Materials / Supplies	235,333		159,773		233,181		
Escalation Allowance	19,667				-		
		\$ 255,000		\$ 159,773		\$ 233,181	
FUEL							
Fuel Supply	3,294,536		4,216,186		4,216,186		
Fuel Taxes (Heating & Power Generation)	68,677				99,727		
Fuel Taxes (Equipment)	467,343		325,719		677,493		
Escalation Allowance	157,444				-		
		\$ 3,988,000		\$ 4,541,905		\$ 4,993,406	
MAINTENANCE OF EQUIPMENT & FACILITIES							
Mobile Equip Maintenance	1,296,759		3,705,847		5,106,671		
Building Maintenance	506,923		1,159,481		1,388,571		
Escalation Allowance	101,318				-		
		\$ 1,905,000		\$ 4,865,328		\$ 6,495,242	
PRE - PURCHASED EQUIPMENT (BY COMINCO)							
Construction Equipment - Purchase (By Owner)	541,000		541,271		541,271		
		\$ 541,000		\$ 541,271		\$ 541,271	
CONTRACTOR'S FIELD SUPPORT & SUPPLIES							
TRANSPORTATION (SHIPPING)							
Packing & Preparation	85,326		60,035		92,804		
Shipping Costs	948,661		1,258,272		1,870,797		
Escalation Allowance	78,013				-		
		\$ 1,112,000		\$ 1,318,307		\$ 1,963,601	
CONTRACTOR MOB, DEMOB & SUPERVISION							
Contractor Mob/Demob	61,883		87,810		251,831		
Contractor Supervisory/Admin Personnel	2,127,339		1,839,016		2,959,195		
Safety Services & Supplies	36,000		221,846		295,231		
Misc Temporary Services / Modifications	223,824		872,350		1,008,541		
Escalation Allowance	13,954				-		
		\$ 2,463,000		\$ 3,021,022		\$ 4,514,798	
MISC. SERVICES & SUPPLIES							
Communications & TV	374,000		91,235		217,679		
Escalation Allowance	31,000				-		
		\$ 405,000		\$ 91,235		\$ 217,679	
ACCOMODATIONS							
Catering	1,487,166		1,156,195		1,831,193		
Escalation Allowance	122,834				-		
		\$ 1,610,000		\$ 1,156,195		\$ 1,831,193	
TRAVEL & PERSONNEL							
Travel (Airlines & Expenses)	1,552,881		2,052,383		3,435,600		
Travel Premium - Revised Rotation Schedule	1,072,773				-		
Misc Personnel Transport	72,274		121,525		172,274		
Escalation Allowance	575,072				-		
		\$ 3,273,000		\$ 2,173,908		\$ 3,607,874	

POLARIS MINE DECOMMISSIONING, RECLAMATION AND MONITORING COST ESTIMATE

3rd QUARTER 2003 UPDATE

	BUDGET		SEPT 30, 2003 CLAIMED TO DATE		FORECAST FINAL PROJECT COST		NOTES
	By Code	Subtotals	By Code	Subtotals	By Code	Subtotals	
CONTRACTOR INDIRECTS							
HO MOB & DEMOB SUPPORT							
Mob & Demob	1,912,000		1,526,300		1,912,376		
		\$ 1,912,000		\$ 1,526,300		\$ 1,912,376	
CONTRACTOR MANAGEMENT SUPPORT							
Personnel	3,928,932		2,391,496		3,928,932		
Safety & First Aid Personnel to Provide Overlap	184,068		111,792		183,644		
		\$ 4,113,000		\$ 2,503,288		\$ 4,112,576	
OTHER CONTRACTOR INDIRECTS							
Contractor's General Indirects	4,952,000		3,469,507		5,482,420		
		\$ 4,952,000		\$ 3,469,507		\$ 5,482,420	
ENGINEERING / PROJECT MANAGEMENT							
ENVIRONMENTAL SITE ASSESSMENT							
Environmental Consultants - Site Assessment	275,787		272,949		314,609		
Site Assessment - Unallocated	207,874		105,263		191,524		
Escalation Allowance	2,339				-		
		\$ 486,000		\$ 378,212		\$ 506,133	
CLOSURE PLAN							
Environmental Consultants - Closure Plan	415,772		372,272		372,272		
Escalation Allowance	2,228				-		
		\$ 418,000		\$ 372,272		\$ 372,272	
ENGINEERING / SPECIAL CONSULTANTS							
Design Consultants - Dock / Loadout	1,316		1,413		1,413		
Design Consultants - Tailings / Garrow Lake	3,520		3,515		3,515		
Design Consultants - Dock / Loadout	79,684		65,354		79,994		
Design Consultants - Tailings / Garrow Lake	54,780		45,328		45,328		
Sitework & Demolition Procedures - Design Services	18,300		14,465		55,400		
Escalation Allowance	2,400				-		
		\$ 160,000		\$ 130,075		\$ 185,650	
PROJECT MANAGEMENT CONSULTANT (HO STAFF)							
Project Management - Salaries	411,069		757,118		982,069		
Project Management - Reimb Expenses	100,000		57,487		100,000		
Escalation Allowance	31,931				-		
		\$ 543,000		\$ 814,605		\$ 1,082,069	
CONSTRUCTION MANAGEMENT (FIELD STAFF)							
Construction Management - Salaries	2,142,878		921,834		1,755,878		
Escalation Allowance	179,122				-		
		\$ 2,322,000		\$ 921,834		\$ 1,755,878	
ENVIRONMENTAL TESTING AND SAMPLING							
Environmental Reclamation Supervision - Staff	337,123		265,245		668,060		
Escalation Allowance	29,550				-		
Environmental Reclamation Supervision - Testing	330,000		94,680		239,060		
Additional Sampling and Consultant Services (MMER)	0		140,996		396,192		
Escalation Allowance	26,327				-		
		\$ 723,000		\$ 500,921		\$ 1,303,312	
OWNER'S COSTS							
SALARIES & EXPENSES							
Teck Cominco HO Proj Mgmt (Staff Lab)	374,631		314,923		563,132		
Teck Cominco HO Proj Mgmt (Misc Material & Exp)	199,149		131,845		178,333		
Escalation Allowance	34,220				-		
		\$ 608,000		\$ 446,768		\$ 741,465	
OVERHEAD / HO SUPPORT							
Land Leases, Licences	175,000		96,398		237,525		
Miscellaneous Permits	45,000		9,118		10,222		
Insurance	445,900		106,692		174,310		
Property Taxes	495,000		37,181		495,000		
Home Office General Admin (Labour & Exp)	722,384		14,313		30,000		
Public Relations	74,292		58,718		74,292		
Legal	57,540		48,021		68,431		
Escalation Allowance	168,560				-		
Misc Owner's Overhead	6,324		13,882		13,882		
		\$ 2,190,000		\$ 384,323		\$ 1,103,662	
GENERAL ADMIN							
Closure Management - Polaris Personnel	54,000				-		
Escalation Allowance	2,880				-		
Closure Wrap Up	5,120		27,132		45,667		
		\$ 62,000		\$ 27,132		\$ 45,667	

POLARIS MINE DECOMMISSIONING, RECLAMATION AND MONITORING COST ESTIMATE
3rd QUARTER 2003 UPDATE

	BUDGET		SEPT 30, 2003 CLAIMED TO DATE		FORECAST FINAL PROJECT COST		NOTES
	By Code	Subtotals	By Code	Subtotals	By Code	Subtotals	
POST RECLAMATION COSTS (2005 - 2011)							
SITE MONITORING AND HOLDING COSTS							
Annual Post Closure Environmental Monitoring (2005 to 2011)		510,000				510,000	
Final Sampling Program, Data Evaluation and Reporting in 2011		160,000				160,000	
Land Lease/Licence costs from 2005 to 2011		126,000				126,000	
Property Taxes - 2005 to 2011		70,000				70,000	
Escalation Allowance		135,000				135,000	
		\$ 1,001,000		\$ -		\$ 1,001,000	Corrected typos from 2nd Qtr Report For Forecast Costs
UNALLOCATED							
Uncoded Forecast Cost Adjustments (Net)		-		-		-	
		\$ -		\$ -		\$ -	
TOTAL DECOMMISSIONING / RECLAMATION & MONITORING COSTS		\$ 47,500,000		\$ 37,094,048		\$ 56,925,108	

APPENDIX 6

COST ESTIMATE

TO

RE-CONSTRUCT GARROW LAKE DAM

Polaris Mine Closure
CASCADE PROJECT 2071

Garrow Lake Level Control Structure

Order Of Magnitude
Cost Estimate

October 30, 2003

GARROW LAKE LEVEL CONTROL STRUCTURE COST ESTIMATE

TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY

2.0 BASIS OF ESTIMATE

2.1 SCOPE OF ESTIMATE

1. Estimate Format
2. Purpose of Estimate
3. Work Included
4. Work Excluded

2.2 INFORMATION BASIS & ASSUMPTIONS

1. Project Schedule
2. Design
3. Procurement
4. Construction Philosophy
5. Construction Facilities

2.3 PRICES

1. Labour Rates
2. Material Prices
3. Equipment Prices
4. Currency & Escalation
5. Taxes & Duty

2.4 ACCURACY OF ESTIMATE

2.5 CONTINGENCIES

- 1 Project Contingency

2.6 ESTIMATE SUMMARY

3.0 APPENDICES

- 3.1 Estimate Detail

1.0 EXECUTIVE SUMMARY

In April 2002 Teck Cominco received approval to re-establish original water levels in Garrow Lake and to remove the central portion of the existing Garrow Lake Dam and re-establish natural flow out of the lake via the existing creek bed. Teck Cominco has proposed a long term sampling program which will monitor concentration of metals in the discharge into Garrow Bay. Concern has been expressed by regulators with regard to the potential for higher than anticipated levels of heavy metals (lead and zinc) in the discharge from Garrow Lake once original lake levels have been established. While Teck Cominco considers this to be a highly unlikely occurrence, contingency plans have been established to re-instate a portion of the Garrow Lake dam to raise the lake level back to 2002 levels, where it has been demonstrated that metals concentrations in the discharge remain well within allowable limits.

In order to determine financial liability should such action be required, Teck Cominco requested Cascade Management Inc to prepare an order of magnitude cost estimate of the construction of such a level control structure.

This cost estimate has been prepared as requested and Cascade Management Inc are of the opinion that, subject to the assumptions outlined in this report, this structure could be completed for a total cost of \$1,270,000, plus or minus 25%. The following report is intended to outline the basis of this estimate and the assumptions made in arriving at the estimated cost.

2.0 BASIS OF ESTIMATE

2.1 SCOPE OF ESTIMATE

Estimate Format

Project cost codes have been established for the Polaris Mine Closure and Reclamation work currently underway. For simplicity, the same coding structure was used for this estimate.

The cost estimate is to be considered “Order of Magnitude” only and is based on certain assumptions with regard to Scope of Work, using historical (i.e. recent actual cost experience) pricing data for the Polaris Reclamation.

Purpose of Estimate

To provide a reasonable estimate of cost exposure (liability) to Teck Cominco should it become necessary to reinstate Garrow Lake water levels.

Work Included

- Carry out site investigation and prepare detail drawings and specifications for construction of level control structure.
- Procurement of necessary materials and construction services.
- Construct level control structure, including field supervision and quality control inspections.
- Cleanup and demobilize from site.

Work Excluded

- Environmental sampling and testing.
- Regulatory approvals and permits.
- Escalation

2.2 INFORMATION BASIS & ASSUMPTIONS

Project Schedule

It has been assumed that the work would be carried out in one construction season, most likely during the period of mid-July to mid-August. It is estimated that 30 working days would be required for work on site.

Design

For purposes of estimating it has been assumed that the level control structure would be of sufficient height to raise the water level of Garrow Lake back to 2002 levels (approximately 1.5M) and would be located across the creek bed in the

location of the existing dam. Allowance has been made for provision of a synthetic liner to provide an impermeable core. A rock lined spillway would be provided to effect natural discharge from Garrow Lake.

It should be noted that the impact of the design of the actual structure on the cost of construction is somewhat less significant than normal, due to the high cost of mobilizing and demobilizing personnel and equipment to and from the site. Once personnel and equipment have been mobilized to the site, actual construction costs should be adequately covered by the current estimate and contingency allowances.

Procurement

Materials would be purchased in advance by Teck Cominco and delivered to the island for use by the Contractor. Construction would be competitively bid.

Construction Philosophy

Local contractors, competitively bid on a Lump Sum basis.

Construction Facilities

Temporary camp will be required (tents) with regular air support from Resolute Bay. Supervisors of the work will be required to be fully trained in emergency first aid. Basic emergency supplies will be provided by the Contractor.

2.3 PRICES

Labour Rates

Crew size has been established based on the assumed Scope of Work. Labour rates are based on current labour rates for the Polaris project, with applicable additives for Contractor's overhead and overtime premiums. Labour costs have been estimated using the following crew requirements;

- 1 Foreman
- 3 Equipment Operators
- 1 Mechanic
- 1 Surveyor
- 1 Cook
- 1 Bull Cook

Material Prices

- Cost allowance.

Equipment Prices

- Based on historical data.

Equipment costs are based on the following requirements;

- 1 Excavator
- 1 Dozer
- 1 Loader
- 1 Truck
- 1 Temp Camp

Currency & Escalation

- All costs are estimated in 2003 Canadian Dollars. No allowance has been made for escalation since it is unknown when, or if, the work would be required.

▪

Taxes & Duty

Included where applicable.

2.4 ACCURACY OF ESTIMATE

Given the level of detail available and the assumptions made, it would be reasonable to expect an accuracy of $\pm 25\%$ of estimated cost, including contingency.

2.5 CONTINGENCIES

Project Contingency

Given the expected accuracy of the estimate, for financial planning purposes Cascade Management would recommend, and have included, a contingency of 25 percent.

2.6 ESTIMATE SUMMARY

Based on the above, the Order of Magnitude cost estimate for construction of a level control structure at Garrow Lake has been determined as per the following summary;

▪ Base Construction Cost	369,000
▪ Transportation (Shipping)	150,000
▪ Mobilization & Demobilization	78,500
▪ Accommodations/Camp	49,500
▪ Contractor Overhead	162,000
▪ Engineering	121,350
▪ Construction Supervision	57,650
▪ Owner's Project Management	<u>31,000</u>
Sub Total	1,019,000
▪ Contingency	<u>251,000</u>
TOTAL	\$1,270,000

A copy of the detailed cost estimate is included for reference in the Appendix of this report.

3.0 APPENDICIES

3.1 Detailed Cost Estimate

APPENDIX 1

DETAILED COST ESTIMATE

Client: Teck Cominco
Project: 2071: Polaris Estimate - Sept 30

Garrow Lake - Reinstall Level Control Structure: Extended Costs, Item Details

COST CENTER && PROJECT CODE		QTY	Units	Hrs	LABOUR AND EQUIPMENT			MATERIAL / LUMP SUM		Misc Allowance	TOTAL
					Lab Cost	Const Equip	Sub Con	Material	Lump Sum		
:41 LEVEL CONTROL STRUCTURE											
<u>1410-02.280-01 - Dam/Spillway Modifications</u>											
0002	Mobilize to site and set up plant	8.0	Day	768	40,059	35,264	0	0	0	0	75,323
0003	Supply Equipment Consumables (Ground Engaging Tools)	1.0	Allow	0	0	0	0	25,000	0	0	25,000
0004	Spare parts and maintenance supplies for equipment	30.0	Day	0	0	0	0	26,460	0	0	26,460
0005	Fuel & Lube Allowance	30.0	Day	0	0	0	0	9,930	0	0	9,930
0006	Supply impermeable liner for dam core (if	1.0	Allow	0	0	0	0	25,000	0	0	25,000
0007	Re-establish dam core 40m long X 25m wide X 3m high (3000 cm @ 200 cm/day = 15 days)	15.0	Day	1,440	75,110	66,120	0	0	0	0	141,230
0008	Tear down and demobilize	7.0	Day	672	35,052	30,856	0	0	0	0	65,908
0099	Rounding Off Adjustment	1.0	Lot	0	0	0	0	0	0	149	149
				2,880	150,221	132,240	0	86,390	0	149	369,000
				Sub Total:							

211 TRANSPORTATION (SHIPPING)

<u>2110-01.100-02 - Shipping Costs</u>											
0002	Shipping - Resolute to LCI	3.0	Day	0	0	0	0	0	0	75,000	75,000
0003	Demobilization - Shipping from LCI to Resolute	3.0	Day	0	0	0	0	0	0	75,000	75,000
				0	0	0	0	0	0	150,000	150,000
				Sub Total:							

212 CONTRACTOR MOB, DEMOB & SUPERVISION

<u>2120-01.005-01 - Contractor Mob/Demob</u>											
0002	Mobilization - Preparation and loading/unloading of equipment	72.0	MT	0	0	0	0	0	0	25,200	25,200
0003	Mobilization - Load and unload fuel in 45 gallon drums: 8 per pallet = 5000 gal or 14 Tonnes	14.0	MT	0	0	0	0	0	0	4,900	4,900
0004	Mobilization - Load & Unload Two Containers (Tools and Mechanics Shop)	2.0	Ea	0	0	0	0	0	0	6,000	6,000
0005	Mobilization - Load & Unload One container of misc gear (tube oil, filters, etc.)	1.0	Ea	0	0	0	0	0	0	3,000	3,000

COST CENTER && PROJECT CODE	QTY	Units	Hrs	LABOUR AND EQUIPMENT			MATERIAL / LUMP SUM		Misc Allowance	TOTAL
				Lab Cost	Const Equip	Sub Con	Material	Lump Sum		
0008 Demobilization - Load & Unload Fuel drums and pallets	1.0	Lot	0	0	0	0	0	0	4,900	4,900
0009 Demobilization - Load & Unload Containers	3.0	Ea	0	0	0	0	0	0	9,000	9,000
0010 Demobilization - Load and unload equipment	72.0	MT	0	0	0	0	0	0	25,200	25,200
0099 Rounding Off Adjustment	1.0	Lot	0	0	0	0	0	0	300	300
<i>Sub Total:</i>			0	0	0	0	0	0	78,500	78,500
215 ACCOMMODATIONS										
<u>2150-01.810-01 - Site Accommodations / Camp Costs</u>										
0001 Camp Costs - Assume \$50.00 / Manday X 8 men = \$400 per day)	30.0	Day	0	0	0	12,000	0	0	0	12,000
0002 Airfares based on 8 men on site for 30 days (\$3,000 per man)	8.0	Ea	0	0	0	24,000	0	0	0	24,000
0003 Sustaining air freight assuming two flights per week @ \$1500/Trip (9 Trips)	9.0	Trips	0	0	0	13,500	0	0	0	13,500
<i>Sub Total:</i>			0	0	0	49,500	0	0	0	49,500
319 GENERAL CONTRACTOR OH										
<u>3190-01.000-00 - Contractor's Overhead - Summary Account (Lump Sum)</u>										
0000 General Contractor Overhead	15.0	%	0	0	0	0	0	0	97,050	97,050
0001 Contractor's Fee	10.0	%	0	0	0	0	0	0	64,700	64,700
0099 Rounding Off Adjustment	1.0	Lot	0	0	0	0	0	0	250	250
<i>Sub Total:</i>			0	0	0	0	0	0	162,000	162,000
721 ENGINEERING / SPECIAL CONSULTANTS										
<u>721B-17.110-05 - Design Consultants - Tailings / Garrow Lake</u>										
0000 Design Of Replacement Level Control Structure	15.0	%	0	0	0	0	0	0	121,350	121,350
<i>Sub Total:</i>			0	0	0	0	0	0	121,350	121,350
732 CONSTRUCTION MANAGEMENT (FIELD STAFF)										
<u>7320-01.010-01 - Construction Management - Salaries</u>										
0000 Teck Cominco Field Supervision and Construction Management	1.0	Lot	400	48,000	0	0	0	0	0	48,000

COST CENTER & PROJECT CODE				LABOUR AND EQUIPMENT			MATERIAL / LUMP SUM		Misc Allowance	TOTAL
	QTY	Units	Hrs	Lab Cost	Const Equip	Sub Con	Material	Lump Sum		
Sub Total:										
7320-01.010-02 - Construction Management - Reimb Expenses										
0000	Teck Cominco Field Supervision and Construction Management - Expenses	1.0	Allow	0	0	0	0	0	9,650	9,650
Sub Total:										
			0	0	0	0	0	0	9,650	9,650
811 OWNER'S PROJECT MANAGEMENT										
8110-17.020-01 - Cominco HO Proj Mgmt (Staff Lab)										
0001	Teck Cominco HO Administration and Project Management - Salaries	1.0	Mhrs	19,200	0	0	0	0	0	19,200
Sub Total:										
			160	19,200	0	0	0	0	0	19,200
8110-17.030-01 - Cominco HO Proj Mgmt (Misc Material & Exp)										
0002	Teck Cominco HO Administration and Project Management - Expenses (based on two round trips to site plus misc office expenses)	1.0	Allow	0	0	0	0	0	11,800	11,800
Sub Total:										
			0	0	0	0	0	0	11,800	11,800
981 CONTINGENCY										
9810-19.900-01 - Project Contingency - General										
0001	Project Contingency	25.0	%	0	0	0	0	0	254,500	254,500
0002	Rounding Off Adjustment	-1.0	Lot	0	0	0	0	0	-3,500	-3,500
Sub Total:										
			0	0	0	0	0	0	251,000	251,000
Project Total:										
			3,440	217,421	132,240	49,500	86,390	0	784,449	1,270,000