Volume 1 Annex V1-7 Type A Water Licence Applications

Package P4-22

Hope Bay Project Doris-Madrid Interim Closure and Reclamation Plan, Detailed Cost Estimate

MAC RESOURCES

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Memo

To:	John Roberts, PEng, Vice President Environment Oliver Curran, MSc, Director Environmental Affairs	**Client:**	TMAC Resources Inc.
From:	Iozsef Miskolczi, MASc, PEng	**Project No:**	1CT022.013
Reviewed By:	Maritz Rykaart, PhD, PEng	**Date:**	November 30, 2017
Subject:	Hope Bay Project Doris-Madrid Interim Closure and Reclamation Plan, Detailed Cost Estimate		

Change Log

The following table provides an overview of material changes to this report from the previous version issued as Volume 8 – Annex 28 as part of the DEIS for Phase 2 of the Hope Bay Project dated December 2016.

Changes by Section

Information Request, Technical Comment, or Other Change	Section	Comments
General	All	Cost estimate reorganised to reflect the facility-type layout typical of RECLAIM
General	All	The belt-wide closure and reclamation cost estimate was divided into the Doris-Madrid and the Boston areas respectively.
Pumping down the Reclaim Pond	2.4.2	Partially completed as part of ICM
Camp costs	2.4.4	Updated costs from vendor estimate
Personnel transport to/from camp	2.4.4	Bi-weekly crew charters were included as separate cost

1 Introduction

The Hope Bay Project (the Project) is a gold mining and milling undertaking of TMAC Resources Inc. The Project is located 705 km northeast of Yellowknife and 153 km southwest of Cambridge Bay in Nunavut Territory, and is situated east of Bathurst Inlet. The Project comprises of three distinct areas of known mineralization plus extensive exploration potential and targets. The three areas that host mineral resources are Doris, Madrid, and Boston.

The Project consists of two phases: Phase 1 (Doris project), which is currently being carried out under an existing Water Licence, and Phase 2 (Madrid-Boston project) which is in the environmental assessment and regulatory stage. Phase 1 includes mining and infrastructure at Doris, while Phase 2 includes mining and infrastructure at Madrid and Boston located approximately 10 and 60 km due south from Doris, respectively.

This memo provides a detailed description of the costing assumptions and associated closure and reclamation cost for Doris-Madrid. The memo should be read in conjunction with the Doris-Madrid Project Interim Closure and Reclamation Plan Hope Bay Project (ICRP) (SRK 2017a).

The cost estimate was developed using an internal SRK spreadsheet model that is consistent with the principles of RECLAIM version 7.0 (Brodie 2014). A summary of the estimated costs (rounded to the nearest thousand) is provided in Table 1, while the detailed backup information is included in Attachment 1.

Table 1: Summary of Closure and Reclamation Costs

Facility Type	Cost (rounded to nearest thousand)
Direct Cost Items	
Stockpiles and Waste Rock Dumps	$88,000
Fuel Storage Facilities	$3,078,000
Buildings and Facilities	$8,705,000
Water Management	$324,000
Rock Fill Pads	$1,052,000
Roads and Transportation	$1,289,000
Underground Workings	$342,000
Quarry	$12,000
Tailings	$19,267,000
Waste and Landfills	$1,013,000
Pipelines	$609,000
Marine Environment Reclamation	$137,000
Closure - Drain Reclaim Pond	$345,000
Interim Care and Maintenance (18 months)	$2,754,000
TOTAL DIRECT COSTS	**$39,015,000**
Indirect Cost Items	
Contingency	$7,803,000
Mobilization & Demobilization	$2,178,000
General and Administration costs	$6,874,000
Field support	$2,026,000
Hydrocarbon decontamination	$100,000
Post-closure Monitoring	$970,000
TOTAL INDIRECT COSTS	**$19,951,000**
CLOSURE COST - TOTAL	**$58,964,000**

2 Cost Estimate Basis

2.1 Third Party Contractor

The cost estimate assumes that all work is carried out by an independent qualified third-party contractor.

2.2 Quantities

Quantity estimates needed as input into the cost estimates were derived using standard engineering calculations, or direct material take-offs from topographic maps, design and as-built drawings and aerial photographs. Itemized quantity estimates are provided in Attachment 1.

2.3 Unit Costs

2.3.1 Equipment Rates

Equipment rates were provided in 2012 by the independent on-site construction contractor (Nuna Logistics). These rates were updated to represent 2017 CAD dollars by applying an annual escalation of 3%. The rates include ownership, overhead and profit, but excludes maintenance labor and fuel, which is added separately.

2.3.2 Labour Rates

Labor rates were provided in 2015 by Nuna Logistics and include overhead and profit. The 2015 unit rates were updated to 2017 CAD by applying a 3% annual escalation. The labour rates do not include the costs of camp accommodation or travel to and from site, which is added separately.

2.3.3 Material Costs

Estimates of material costs were obtained from the following sources:

- Vendor quotes;
- Costs from third party consultants;
- Cost Mine 2015 (InfoMine 2014), updated to 2017 by applying 3% annual escalation; and
- SRK experience on other projects.

Older material quotes were adjusted to 2017 dollars based on a 3% annual escalation. Material costs were factored up by 15% to include freight and shipping to site.

2.3.4 Task Unit Costs

The Task Unit Rate worksheet, listed in Attachment 1, calculates the cost per unit quantity based on the labour, equipment and materials required to complete the task. The productivity for each task was obtained from the following sources:

- Equipment specifications obtained from manufacturer's data, in this case the Caterpillar Handbook (CAT 2012);
- "Environmental Remediation Cost Data – Unit Price" 11th Annual Edition, (Martin *et al*. 2004);
- Site specific contractor estimates; and
- SRK experience on other projects.

2.3.5 Relocation Unit Costs

The relocation unit costs consist of the transport of materials from the various reclamation areas to the Quarry #3 Landfill, or to Roberts Bay over all-weather roads. Regular haul trucks or 20-foot cargo containers (Seacans) on a trailer were assumed to be used for hauling waste or equipment to these locations.

Detailed relocation costs are provided in Attachment 1 as line items for each facility. Costs for loading and unloading the Seacans were calculated as separate line items.

2.4 Indirect Costs

Indirect costs were defined as any costs that cannot be directly associated with individual tasks.

Many of the indirect costs depend on the Project duration. The Project duration was estimated as the summation of the durations for the individual tasks based on the calculated crew productivities. Start weeks for individual tasks were determined based on equipment availability and the requirement of capping the camp at a relatively small size (33 person for Doris-Madrid). End week for individual tasks is dependent on the duration of that task. The detailed schedule is provided in Attachment 1.

2.4.1 Contingency

A contingency of 20% of direct costs was added to the estimate.

2.4.2 Interim Care and Maintenance

While the closure activities are assumed to commence immediately after milling is completed, an interim care and maintenance period of 18 months was included for costing purposes. This cost covers maintenance of the water management systems and compliance monitoring. Presence on site is assumed for the open water season only (182 days).

During the ICM period the TIA Reclaim Pond will need to be pumped out and discharged to Roberts Bay. It is assumed that during the 18-month period, there will be two open water season when this pumping is required. This will consist of pumping water through existing facilities (pumps, pipelines, etc.) and therefore no additional personnel was assumed to be needed.

2.4.3 Mobilization and Demobilization

The mob-demob costs were included as a lump sum in the cost estimate and are based on the equipment needs and schedule to complete the works as detailed in Attachment 1.

Mobilized equipment was assumed to originate from Edmonton, AB. Equipment is hauled by truck to Hay River, NT, and shipped by barge to Roberts Bay. Marine barging costs were calculated based on the revenue ton for each piece of equipment from 2017 rates published by the Nunavut Government (NT 2017). Revenue tons for barging are calculated as the cubic meter volume or the net weight of the equipment, whichever is larger. Trucking cost of the equipment to Hay River was assumed to be equal to the barging cost.

2.4.4 Camp Costs

Camp costs were included in the cost estimate under the General and Administration Cost headings. Labour benefits were included in the labour unit costs. The maximum number of beds required in camp was determined to be 33 based on the crew sizes to complete the closure and the scheduling of the individual closure tasks (Attachment 1). This includes camp support personnel.

Camp costs for the 33-person camp was scaled up from an estimate for a 16-person mobile winter camp (SRK 2017b) and are included as follows:

- Camp mobilization/demobilization and one-time setup cost of $208,000;
- Camp operations cost of $816,000 per year, which includes the camp manager as well as cooking/first aid staff; and
- Camp rental of $495,000 per year.

The cost of groceries was calculated based on the total number of person-days for the closure at an assumed cost of $100 per person per day. Personnel transportation to and from camp was included as bi-weekly charter flights to Yellowknife at a cost of $10,600 each.

Camp mobilization and demobilization will be done by airplane from the Doris all-weather airstrip.

2.4.5 Field Support

It was assumed that a supervisor would be on site throughout the Project duration. An allowance for equipment maintenance support was included, with a mechanic assumed to be on-site for 10% of the project duration.

All reclamation areas are assumed to be accessible on all-weather roads, thus no helicopter support was assumed to be required for closure.

2.4.6 Hydrocarbon Decontamination

An allowance was made for hydrocarbon decontamination including planning and engineering as well as sampling and testing costs. Contaminated soils are disposed of locally in the underground workings.

2.4.7 Post-closure Monitoring

Lump sums were included for each of the various post-closure monitoring items, according to the schedule showing the required frequency and duration. The costs are in undiscounted 2017 CAD.

3 Variance from Previous Estimate

The previous closure cost estimate was prepared as part of the updated mine development plan under the Amendment 1 application to Type A water licence 2AM-DOH1323 (TMAC 2015) and the subsequent technical meetings and public hearings. The final closure cost estimate amounted to $31.3 millions. The new cost estimate for the Doris-Madrid Amendment is $58.9 millions. Key reasons for the difference are listed in Table 2.

Table 2: Key Differences from Previous Estimates

Area / Facility	Changes from previous version
General	• Unit rates updated to reflect 2017 Canadian Dollars
Stockpiles and Waste Rock Dumps	• Included new facilities at Madrid North and Madrid South
Fuel Storage Facilities	• Included new facilities at Roberts Bay, Doris North, Doris South, Windy Camp, and Patch 14
Buildings and Facilities	• Included 6 wind generation towers • Expanded laydown surface area at Roberts Bay • Included new facilities at Madrid North, Madrid South, Windy Camp
Water Management	• Included new facilities at Madrid North and Madrid South
Rock Fill Pads	• Included new facilities at Roberts Bay, Doris North, Doris South, Windy Camp, and Patch 14 • Increased surface area of pads at Roberts Bay
Roads and Transportation	• Included new roads at Madrid South, Madrid North, Windy Camp, and Patch 14 • Included the Madrid-Boston All Weather Road and associated water crossings
Underground Workings	• Included new facilities at Madrid North and Madrid South
Quarry	• Included new facilities associated with Madrid North, Madrid South, and the Madrid-Boston All Weather Road
Tailings	• Removed Interim Dyke (superseded in Phase 2) • Increased exposed tailings area to be covered • Included closure water conveyance channel
Waste and Landfills	• Removal of Explosives Storage Facility • Removal of catch basins
Pipelines	• Included new facilities at Roberts Bay, Madrid North and Madrid South
Marine Environment Reclamation	• No change
Closure – Drain Reclaim Pond	• Updated pumping period to include ICM
Interim Care and Maintenance	• 18 months ICM, with partially draining the TIA Reclaim Pond included here
Contingency	• Remained at 20%, updated costs based on increased Direct Costs
Mob/Demob	• Fleet size updated to reflect assumed closure work and schedule
General and Administration Costs	• Camp costs updated based on vendor estimate
Field Support	• Quantity updated to reflect assumed closure work and schedule
Hydrocarbon decontamination	• No change
Post-closure Monitoring	• No change
Other	• No change

4 Compatibility with RECLAIM 7.0

The Canadian Government liability estimate is required by Indigenous and Northern Affairs Canada (INAC). INAC requires that a spreadsheet model (RECLAIM 7.0) be used to estimate closure costs.

The RECLAIM model is a spreadsheet model originally developed by SRK in 1992, and subsequently modified and updated by Brodie Consulting (Brodie 2014). The model has pre-set sheets that can be expanded to describe a specific project. The model template includes a default list of unit costs for most tasks and materials used in closure work. Typical low and high equipment and labor unit rates are suggested, but the user is encouraged to apply known unit rates instead of the default rates wherever possible. Some indirect costs are estimated as user-specified percentage of direct costs (Engineering and Project Management). Mobilization/ Demobilization costs are calculated based on unit rates.

The cost estimate was structured in a similar fashion to the RECLAIM structure, with the facilities being grouped into functional categories, as follows:

- Stockpile Stockpiles and Waste Rock Dumps,
- Fuel Storage Facilities,
- Buildings and Facilities,
- Water Management,
- Rock Fill Pads,
- Roads and Transportation,
- Underground Workings,
- Quarry,
- Tailings,
- Waste and Landfills,
- Pipelines,
- Marine Environment Reclamation,
- Closure – Drain Reclaim Pond, and
- Interim Care and Maintenance.

The methods used by SRK and RECLAIM to estimate costs are similar. Both models are based on the same facilities, use the same quantities, unit rates and indirect costs. The methods differ by how this information is organized within the spreadsheets. The cost information is summarized similarly. Because of this, the SRK cost estimate is directly comparable to RECLAIM.

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The opinions expressed in this report have been based on the information available to SRK at the time of preparation. SRK has exercised all due care in reviewing information supplied by others for use on this project. Whilst SRK has compared key supplied data with expected values, the accuracy of the results and conclusions from the review are entirely reliant on the accuracy and completeness of the supplied data. SRK does not accept responsibility for any errors or omissions in the supplied information, except to the extent that SRK was hired to verify the data.

5 References

Brodie Consulting Ltd. (2014). RECLAIM Version 7.0 User Manual. MS Excel Workbook and User Manual prepared for Aboriginal Affairs and Northern Development Canada – Water Resources Division. March 2014.

Caterpillar Inc. (2012). Caterpillar Performance Handbook. Edition 42. January 2012.

InfoMine 2014. Cost Mine Mining Cost Services Section SU Supplies and Miscellaneous Items. Accessed August 1, 2014.

Martin, S., Rast, J., Rast, R., Eds. 2004. Environmental Remediation Unit Cost Book; 11th Annual Edition; R.S. Means Company Inc.

SRK Consulting (Canada) Inc., 2017a. Hope Bay Project Doris-Madrid Interim Closure and Reclamation Plan, November 2017 Hope Bay Project. Report Prepared for TMAC Resources Inc. 1CT022.013. November 2017.

SRK Consulting (Canada) Inc. 2017b. Personal communications with Malcolm McLean of Discovery Mining Services. April 3, 2017

TMAC 2015. TMAC Resources Inc. Doris North Mine Interim Closure and Reclamation Plan June 2015 Hope Bay, Nunavut. June 2015.

Attachment 1 – Cost Estimate Sheets

Work Area Code		Item	Task	Sub-task	Facility Name	Task	Quantity	Quantity	Unit	Cost Code	Unit Cost	Activity Total	Subtotals	Source / Comments
DIRECT COSTS														
Stockpiles and Waste Rock Dumps													$ 88,463.31	
RB_007	Y	1	7	1	Roberts Bay Overburden Pile	collect all debris	14205.0	14205.0	m2	C.3.10	$ 0.37	$ 5,326.00		
		1	7	2		load waste into containers	8.5	8.5	m3	C.4.01	$ 10.23	$ 87.17		
		1	7	3		haul containers to Quarry 3 landfill	8.5	8.5	m3	C.4.15	$ 5.99	$ 51.08		
		1	7	4		grade for positive drainage	14205.0	14205.0	m2	C.5.05	$ 1.23	$ 17,434.51		
Q2_002	Y	14	2	1	Quarry 2 Overburden Pile	reslope to 3H:1V	8781.3	8781.3	m2	C.5.06	$ 3.27	$ 28,740.72		Assumed 1/3 of footprint
		14	2	2		grade top for positive drainage	18440.8	18440.8	m2	C.5.05	$ 1.23	$ 22,633.32		Assumed 70% of footprint
		14	2	3		install erosion protection measures (coconut matting)	2634.4	2634.4	m2	C.5.08	$ 4.84	$ 12,741.99		Assumed 10% of footprint
		14	2	4		Remove Culvert	15.0	15.0	m	C.5.15	$ 96.57	$ 1,448.53		
DM_010	Y	2	10	1	Doris Ore Pile	activities are required for final closure, regrading addressed under DM_032								
		2	10	2		interim closure cover: regrade top surface for positive drainage	0.0	0.0	m2	C.5.05	$ 1.23	$ -		
		2	10	3		interim closure cover: cover entire dump with hdpe liner	0.0	0.0	m2	C.5.01	$ 33.85	$ -		
		2	10	4		interim closure cover: produce ROQ (quarry drill & blast)	0.0	0.0	m3	C.5.09	$ 24.76	$ -		
		2	10	5		interim closure cover: place 0.3 m thick liner protection layer of crushed rock	0.0	0.0	m3	C.5.02	$ 16.35	$ -		
DM_025	Y	2	25	1	Doris Waste Rock Pile	activities are required for final closure, regrading addressed under DM_032								
		2	25	2		interim closure cover: regrade top surface for positive drainage	0.0	0.0	m2	C.5.05	$ 1.23	$ -		
		2	25	3		interim closure cover: cover entire dump with hdpe liner	0.0	0.0	m2	C.5.01	$ 33.85	$ -		
		2	25	4		interim closure cover: produce ROQ (quarry drill & blast)	0.0	0.0	m3	C.5.09	$ 24.76	$ -		
		2	25	5		interim closure cover: place 0.3 m thick liner protection layer of crushed rock	0.0	0.0	m3	C.5.02	$ 16.35	$ -		
DW_009	Y	3	9	1	Doris-Windy All Weather Road Quarry D Overburden P	grade for positive drainage	0.0	0.0	m2	C.5.05	$ 1.23	$ -		
MN_001	Y	5	1	1	Madrid North Waste Rock Pile	activities are required for final closure, regrading addressed under MN_016								
		5	1	2		interim closure cover: regrade top surface for positive drainage	0.0	0.0	m2	C.5.05	$ 1.23	$ -		
		5	1	3		interim closure cover: cover entire dump with hdpe liner	0.0	0.0	m2	C.5.01	$ 33.85	$ -		
		5	1	4		interim closure cover: produce ROQ (quarry drill & blast)	0.0	0.0	m3	C.5.09	$ 24.76	$ -		
		5	1	5		interim closure cover: place 0.3 m thick liner protection layer of crushed rock	0.0	0.0	m3	C.5.02	$ 16.35	$ -		
MN_002	Y	5	2	1	Madrid North Ore Stockpile	no closure activities are required, regrading addressed under MN_016		0.0	m3	C.5.02	$ 16.35	$ -		No ore scheduled to be on surface at the end of each year, or at the end of production.
MS_001	Y	7	1	1	Madrid South Waste Rock Pile	activities are required for final closure, regrading addressed under MS_021								
		7	1	2		interim closure cover: regrade top surface for positive drainage	0.0	0.0	m3	C.5.05	$ 1.23	$ -		
		7	1	3		interim closure cover: cover entire dump with hdpe liner	0.0	0.0	m3	C.5.01	$ 33.85	$ -		
		7	1	4		interim closure cover: produce ROQ (quarry drill & blast)	0.0	0.0	m3	C.5.09	$ 24.76	$ -		
		7	1	5		interim closure cover: place 0.3 m thick liner protection layer of crushed rock	0.0	0.0	m3	C.5.02	$ 16.35	$ -		
MS_002	Y	7	2	1	Madrid South Ore Stockpile	no closure activities are required, regrading addressed under MS_021								
DC_001	Y	22	1	1	Doris Phase 1 Waste Rock Pile	no closure activities are required								
		22	1	2		interim closure cover: regrade top surface for positive drainage	0.0	0.0	m2	C.5.05	$ 1.23	$ -		
		22	1	3		interim closure cover: cover entire dump with hdpe liner	0.0	0.0	m2	C.5.01	$ 33.85	$ -		
		22	1	4		interim closure cover: produce ROQ (quarry drill & blast)	0.0	0.0	m3	C.5.09	$ 24.76	$ -		
		22	1	5		interim closure cover: place 0.3 m thick liner protection layer of crushed rock	0.0	0.0	m3	C.5.02	$ 16.35	$ -		
DC_002	Y	22	2	1	Doris Phase 1 Expanded Waste Rock Storage (Pad T)	no closure activities are required								
		22	2	2		interim closure cover: regrade top surface for positive drainage	0.0	0.0	m2	C.5.05	$ 1.23	$ -		
		22	2	3		interim closure cover: cover entire dump with hdpe liner	0.0	0.0	m2	C.5.01	$ 33.85	$ -		
		22	2	4		interim closure cover: produce ROQ (quarry drill & blast)	0.0	0.0	m3	C.5.09	$ 24.76	$ -		
		22	2	5		interim closure cover: place 0.3 m thick liner protection layer of crushed rock	0.0	0.0	m3	C.5.02	$ 16.35	$ -		
Fuel Storage Facilities													$ 3,078,418.23	
WC_001	Y	19	1	1	Windy Tank Farm	haul reusable materials to Doris camp	10.8	10.8	m3	C.4.60	$ 2.77	$ 29.81		
		19	1	2		unload container	10.8	10.8	m3	C.4.65	$ 34.08	$ 367.34		
		19	1	3		place rockfill buttress on slope near tank farm	600.0	600.0	m3	C.5.25	$ 12.27	$ 7,364.10		
		19	1	4		load debris into seacans for transport	12.0	12.0	m3	C.4.01	$ 10.23	$ 122.74		
		19	1	5		haul containers to Quarry 3 landfill	12.0	12.0	m3	C.4.25	$ 3.26	$ 39.12		
		19	1	6		revegetate area	1400.0	1400.0	m2	C.5.13	$ 0.92	$ 1,288.49		
PLA_001	Y	18	1	1	Patch Lake Tank Farm	stake out low-lying areas in summer to place fill	1.0	1.0	day	C.5.14	$ 7,186.44	$ 7,186.44		
		18	1	2		regrade spoil piles to ensure positive drainage	200.0	200.0	m2	C.5.05	$ 1.23	$ 245.47		
		18	1	3		regrade spoil piles to ensure positive drainage (with excavator)	3630.0	3630.0	m2	C.5.26	$ 5.50	$ 19,955.53		
		18	1	4		install erosion protection measures (coconut matting)	381.5	381.5	m2	C.5.08	$ 4.84	$ 1,845.23		
		18	1	5		cover area with 1 m thermal rock cover	3000.0	3000.0	m^3	C.5.03	$ 24.53	$ 73,587.95		
RB_013	Y	1	13	1	Roberts Bay 10ML Fuel Storage Facility	drain residual fuel	160000.0	160000.0	L	C.2.03	$ 0.02	$ 3,634.78		
		1	13	2		consolidate fuel in barge at Roberts Bay	160000.0	160000.0	L	C.4.69	$ 0.01	$ 986.66		
		1	13	3		decommission fuel transfer facilities	1.0	1.0	each	C.1.02	$ 476.06	$ 476.06		
		1	13	4		wash tanks	4.0	4.0	each	C.2.04	$ 1,186.71	$ 4,746.84		
		1	13	5		operate oil/water separator	4.5	4.5	m3	C.2.08	$ 32.80	$ 147.38		
		1	13	6		disconnect piping and controls	4.0	4.0	each	C.1.02	$ 476.06	$ 1,904.25		
		1	13	7		dismantle tanks and cut into manageable pieces	4.0	4.0	each	X.08	$ 100,000.00	$ 400,000.00		
		1	13	8		prepare pieces for transportation	51.7	51.7	m3	C.4.01	$ 10.23	$ 529.04		
		1	13	9		haul cut metal to quarry 3 landfill	51.7	51.7	m3	C.4.15	$ 5.99	$ 310.01		
		1	13	10		excavate and stockpile liner protection cover	10315.2	10315.2	m3	C.5.04	$ 2.75	$ 28,353.34		
		1	13	11		load contained contaminated soils into megabags for hauling	5157.6	5157.6	m3	C.4.12	$ 72.73	$ 375,117.27		assume 50% of liner protection cover is contaminated
		1	13	12		haul megabags to Doris	5157.6	5157.6	m3	C.4.04	$ 2.30	$ 11,848.95		
		1	13	13		haul megabags to Doris underground	5157.6	5157.6	m3	C.5.22	$ 15.37	$ 79,256.84		
		1	13	14		clean liner	8596.0	8596.0	m2	C.2.10	$ 0.41	$ 3,542.00		
		1	13	15		remove and cut liner into manageable pieces	8596.0	8596.0	m2	C.3.02	$ 0.17	$ 1,464.59		
		1	13	16		load waste into containers	128.9	128.9	m3	C.4.01	$ 10.23	$ 1,318.79		
		1	13	17		haul containers to Quarry 3 landfill	128.9	128.9	m3	C.4.15	$ 5.99	$ 772.78		
		1	13	18		breach containment berm	45.0	45.0	m3	C.5.04	$ 2.75	$ 123.69		
RB_002	Y	1	2	1	Roberts Bay 20 ML Tank Farm	drain residual fuel	160000.0	160000.0	L	C.2.03	$ 0.02	$ 3,634.78		
		1	2	2		consolidate fuel in barge at Roberts Bay	160000.0	160000.0	L	C.4.69	$ 0.01	$ 986.66		
		1	2	3		decommission fuel transfer facilities	1.0	1.0	each	C.1.02	$ 476.06	$ 476.06		
		1	2	4		wash tanks	4.0	4.0	each	C.2.04	$ 1,186.71	$ 4,746.84		
		1	2	5		operate oil/water separator	4.5	4.5	m3	C.2.08	$ 32.80	$ 147.38		
		1	2	6		disconnect piping and controls	4.0	4.0	each	C.1.02	$ 476.06	$ 1,904.25		
		1	2	7		dismantle tanks and cut into manageable pieces	4.0	4.0	each	X.08	$ 100,000.00	$ 400,000.00		
		1	2	8		prepare pieces for transportation	51.7	51.7	m3	C.4.01	$ 10.23	$ 529.04		
		1	2	9		haul cut metal to quarry 3 landfill	57.6	57.6	m3	C.4.15	$ 5.99	$ 344.96		
		1	2	10		excavate and stockpile liner protection cover	7923.6	7923.6	m3	C.5.04	$ 2.75	$ 21,779.56		
		1	2	11		load contained contaminated soils into megabags for hauling	3961.8	3961.8	m3	C.4.12	$ 72.73	$ 288,145.57		assume 50% of liner protection cover is contaminated
		1	2	12		haul megabags to Doris	3961.8	3961.8	m3	C.4.04	$ 2.30	$ 9,101.75		
		1	2	13		haul megabags to Doris underground	3961.8	3961.8	m3	C.5.22	$ 15.37	$ 60,880.98		
		1	2	14		clean liner	13206.0	13206.0	m2	C.2.10	$ 0.41	$ 5,441.56		
		1	2	15		remove and cut liner into manageable pieces	13206.0	13206.0	m2	C.3.02	$ 0.17	$ 2,250.04		
		1	2	16		load waste into containers	118.9	118.9	m3	C.4.01	$ 10.23	$ 1,215.63		
		1	2	17		haul containers to Quarry 3 landfill	118.9	118.9	m3	C.4.15	$ 5.99	$ 712.33		
		1	2	18		breach containment berm	154.0	154.0	m3	C.5.04	$ 2.75	$ 423.27		
RB_003	Y	1	3	1	Roberts Bay Quarry 1 - 5 ML Tank Farm	drain residual fuel	40000.0	40000.0	L	C.2.03	$ 0.02	$ 908.69		
		1	3	2		consolidate fuel in barge at Roberts Bay	40000.0	40000.0	L	C.4.69	$ 0.01	$ 246.66		
		1	3	3		decommission fuel transfer facilities	1.0	1.0	each	C.1.02	$ 476.06	$ 476.06		
		1	3	4		wash tanks	1.0	1.0	each	C.2.04	$ 1,186.71	$ 1,186.71		
		1	3	5		operate oil/water separator	1.1	1.1	m3	C.2.08	$ 32.80	$ 36.85		
		1	3	6		disconnect piping and controls	1.0	1.0	each	C.1.02	$ 476.06	$ 476.06		
		1	3	7		dismantle tanks and cut into manageable pieces	1.0	1.0	each	X.08	$ 100,000.00	$ 100,000.00		
		1	3	8		prepare pieces for transportation	16.9	16.9	m3	C.4.01	$ 10.23	$ 172.93		
		1	3	9		haul cut metal to quarry 3 landfill	16.9	16.9	m3	C.4.15	$ 5.99	$ 101.33		
		1	3	10		drain and wash empty fuel drums	150.0	150.0	each	C.2.05	$ 18.40	$ 2,760.11		
		1	3	11		crush empty fuel drums	150.0	150.0	each	C.3.01	$ 21.04	$ 3,155.42		
		1	3	12		excavate and stockpile liner protection cover	2979.9	2979.9	m3	C.5.04	$ 2.75	$ 8,190.84		
		1	3	13		load contained contaminated soils into megabags for hauling	1490.0	1490.0	m3	C.4.12	$ 72.73	$ 108,365.51		assume 50% of liner protection cover is contaminated
		1	3	14		haul megabags to Doris	745.0	745.0	m3	C.4.04	$ 2.30	$ 1,711.49		
		1	3	15		haul megabags to Doris underground	1490.0	1490.0	m3	C.5.22	$ 15.37	$ 22,896.06		
		1	3	16		clean liner	9933.0	9933.0	m2	C.2.10	$ 0.41	$ 4,092.91		
		1	3	17		remove and cut liner into manageable pieces	9933.0	9933.0	m2	C.3.02	$ 0.17	$ 1,692.39		
		1	3	18		load waste into containers	149.9	149.9	m3	C.4.01	$ 10.23	$ 1,533.66		Includes geotextile, liner, & fuel drums
		1	3	19		haul containers to Quarry 3 landfill	149.9	149.9	m3	C.4.15	$ 5.99	$ 898.69		
		1	3	20		breach containment berm	77.8	77.8	m3	C.5.04	$ 2.75	$ 213.74		
DM_020	Y	2	20	1	Doris Tank Farm	drain residual fuel	75000.0	75000.0	each	C.2.03	$ 0.02	$ 1,703.80		
		2	20	2		consolidate fuel in barge at Roberts Bay	75000.0	75000.0	L	C.4.70	$ 0.01	$ 546.55		
		2	20	3		decommission fuel transfer facilities	5.0	5.0	each	C.1.02	$ 476.06	$ 2,380.31		
		2	20	4		wash tanks	5.0	5.0	each	C.2.04	$ 1,186.71	$ 5,933.55		
		2	20	5		operate oil/water separator	3.9	3.9	m3	C.2.08	$ 32.80	$ 129.39		
		2	20	6		disconnect piping and controls	5.0	5.0	each	C.1.02	$ 476.06	$ 2,380.31		
		2	20	7		dismantle tanks and cut into manageable pieces	5.0	5.0	each	X.22	$ 74,211.74	$ 371,058.71		
		2	20	8		prepare pieces for transportation	25.3	25.3	m3	C.4.01	$ 10.23	$ 258.58		
		2	20	9		haul cut metal to quarry 3 landfill	25.3	25.3	m3	C.4.47	$ 4.92	$ 124.28		
		2	20	10		excavate and stockpile liner protection cover	3360.0	3360.0	m3	C.5.04	$ 2.75	$ 9,235.62		
		2	20	11		load contained contaminated soils into megabags for hauling	1680.0	1680.0	m3	C.4.12	$ 72.73	$ 122,188.03		assume 50% of liner protection cover is contaminated
		2	20	12		haul megabags to Doris underground	1680.0	1680.0	m3	C.5.22	$ 15.37	$ 25,816.56		
		2	20	13		clean liner	5500.0	5500.0	m2	C.2.10	$ 0.41	$ 2,266.29		
		2	20	14		remove and cut liner into manageable pieces	5500.0	5500.0	m2	C.3.02	$ 0.17	$ 937.09		
		2	20	15		load waste into containers	82.5	82.5	m3	C.4.01	$ 10.23	$ 843.80		
		2	20	16		haul containers to Quarry 3 landfill	82.5	82.5	m3	C.4.14	$ 4.70	$ 387.73		
		2	20	17		level containment berms	90.0	90.0	m3	C.5.04	$ 2.75	$ 247.38		
MN_011	Y	5	11	1	Madrid North Fuel Storage Facility	drain residual fuel	45000.0	45000.0	each	C.2.03	$ 0.02	$ 1,022.28		
		5	11	2		consolidate fuel in barge at Roberts Bay	45000.0	45000.0	L	C.4.71	$ 0.01	$ 426.42		
		5	11	3		decommission fuel transfer facilities	3.0	3.0	each	C.1.02	$ 476.06	$ 1,428.19		
		5	11	4		wash tanks	3.0	3.0	each	C.2.04	$ 1,186.71	$ 3,560.13		
		5	11	5		operate oil/water separator	2.6	2.6	m3	C.2.08	$ 32.80	$ 83.93		
		5	11	6		disconnect piping and controls	3.0	3.0	each	C.1.02	$ 476.06	$ 1,428.19		
		5	11	7		dismantle tanks and cut into manageable pieces	3.0	3.0	each	X.22	$ 74,211.74	$ 222,635.23		
		5	11	8		prepare pieces for transportation	16.3	16.3	m3	C.4.01	$ 10.23	$ 166.56		
		5	11	9		haul cut metal to quarry 3 landfill	16.3	16.3	m3	C.4.59	$ 4.92	$ 80.05		
		5	11	10		excavate and stockpile liner protection cover	2436.0	2436.0	m3	C.5.04	$ 2.75	$ 6,695.82		
		5	11	11		load contained contaminated soils into megabags for hauling	1218.0	1218.0	m3	C.4.12	$ 72.73	$ 88,586.33		assume 50% of liner protection cover is contaminated
		5	11	12		haul megabags to Madrid north underground	1218.0	1218.0	m3	C.5.22	$ 15.37	$ 18,717.01		
		5	11	13		clean liner	18.3	18.3	m2	C.2.10	$ 0.41	$ 7.53		
		5	11	14		remove and cut liner into manageable pieces	18.3	18.3	m2	C.3.02	$ 0.17	$ 3.11		
		5	11	15		load waste into containers	32.3	32.3	m3	C.4.01	$ 10.23	$ 330.55		
		5	11	16		haul containers to Quarry 3 landfill	32.3	32.3	m3	C.4.59	$ 4.92	$ 158.87		
		5	11	17		breach containment berm	90.0	90.0	m3	C.5.04	$ 2.75	$ 247.38		
MS_017	Y	7	17	1	Madrid South Fuel Storage Facility	drain residual fuel	2000.0	2000.0	L	C.2.03	$ 0.02	$ 45.43		
		7	17	2		consolidate fuel in barge at Roberts Bay	2000.0	2000.0	L	C.4.71	$ 0.01	$ 18.95		
		7	17	3		decommission fuel transfer facilities	1.0	1.0	each	C.1.02	$ 476.06	$ 476.06		
		7	17	4		wash tanks	1.0	1.0	each	C.2.04	$ 1,186.71	$ 1,186.71		
		7	17	5		operate oil/water separator	0.2	0.2	m3	C.2.08	$ 32.80	$ 5.04		
		7	17	6		disconnect piping and controls	1.0	1.0	each	C.1.02	$ 476.06	$ 476.06		
		7	17	7		dismantle tanks and cut into manageable pieces	1.0	1.0	each	X.22	$ 74,211.74	$ 74,211.74		
		7	17	8		prepare pieces for transportation	0.8	0.8	m3	C.4.01	$ 10.23	$ 7.71		
		7	17	9		haul cut metal to quarry 3 landfill	0.8	0.8	m3	C.4.25	$ 3.26	$ 2.46		
		7	17	10		excavate and stockpile liner protection cover	450.0	450.0	m3	C.5.04	$ 2.75	$ 1,236.91		
		7	17	11		load contained contaminated soils into megabags hauling	225.0	225.0	m3	C.4.12	$ 72.73	$ 16,364.47		assume 50% of liner protection cover is contaminated
		7	17	12		haul megabags to Madrid south underground	225.0	225.0	m3	C.5.22	$ 15.37	$ 3,457.58		
		7	17	13		clean liner	375.0	375.0	m2	C.2.10	$ 0.41	$ 154.52		
		7	17	14		remove and cut liner into manageable pieces	375.0	375.0	m2	C.3.02	$ 0.17	$ 63.89		
		7	17	15		load waste into containers	3.4	3.4	m3	C.4.01	$ 10.23	$ 34.52		
		7	17	16		haul containers to Quarry 3 landfill	3.4	3.4	m3	C.4.25	$ 3.26	$ 11.00		
		7	17	17		breach containment berm	90.0	90.0	m3	C.5.04	$ 2.75	$ 247.38		
Buildings and Facilities													$ 8,704,961.22	
MBR_041	Y	8	41	1	Madrid-Boston All Weather Road Turbine Pad #6	Dismantle wind turbine and prepare for shipping off-site	1.0	1.0	each	X.23	$ 500,000.00	$ 500,000.00		
		8	41	2		Demolish equipment housing shack	288.8	288.8	m3	C.3.05	$ 13.12	$ 3,788.60		
		8	41	3		Remove electrical and fiber optics cables	11949.0	11949.0	m	C.3.20	$ 14.04	$ 167,731.41		
		8	41	4		collect debris	5080.0	5080.0	m2	C.3.10	$ 0.37	$ 1,904.69		
		8	41	5		load waste into trucks for transport to landfill	580.5	580.5	m3	C.4.01	$ 10.23	$ 5,937.80		
		8	41	6		transport waste to landfill	580.5	580.5	m3	C.4.49	$ 3.21	$ 1,862.49		
		8	41	7		transport wind turbine parts to Roberts Bay	1.0	1.0	each	X.19	$ 20,000.00	$ 20,000.00		
MBR_040	Y	8	40	1	Madrid-Boston All Weather Road Turbine Pad #5	Dismantle wind turbine and prepare for shipping off-site	1.0	1.0	each	X.23	$ 500,000.00	$ 500,000.00		
		8	40	2		Demolish equipment housing shack	288.8	288.8	m3	C.3.05	$ 13.12	$ 3,788.60		
		8	40	3		Remove electrical and fiber optics cables	11949.0	11949.0	m	C.3.20	$ 14.04	$ 167,731.41		
		8	40	4		collect debris	5080.0	5080.0	m2	C.3.10	$ 0.37	$ 1,904.69		
		8	40	5		load waste into trucks for transport to landfill	580.5	580.5	m3	C.4.01	$ 10.23	$ 5,937.80		
		8	40	6		transport waste to landfill	580.5	580.5	m3	C.4.49	$ 3.21	$ 1,862.49		
		8	40	7		transport wind turbine parts to Roberts Bay	1.0	1.0	m3	X.19	$ 20,000.00	$ 20,000.00		
MBR_039	Y	8	39	1	Madrid-Boston All Weather Road Turbine Pad #4	Dismantle wind turbine and prepare for shipping off-site	1.0	1.0	each	X.23	$ 500,000.00	$ 500,000.00		
		8	39	2		Demolish equipment housing shack	288.8	288.8	m3	C.3.05	$ 13.12	$ 3,788.60		
		8	39	3		Remove electrical and fiber optics cables	3385.0	3385.0	m	C.3.20	$ 14.04	$ 47,516.18		
		8	39	4		collect debris	5080.0	5080.0	m2	C.3.10	$ 0.37	$ 1,904.69		
		8	39	5		load waste into trucks for transport to landfill	580.5	580.5	m3	C.4.01	$ 10.23	$ 5,937.80		
		8	39	6		transport waste to landfill	580.5	580.5	m3	C.4.49	$ 3.21	$ 1,862.49		
		8	39	7		transport wind turbine parts to Roberts Bay	1.0	1.0	m3	X.20	$ 15,000.00	$ 15,000.00		
MBR_038	Y	8	38	1	Madrid-Boston All Weather Road Turbine Pad #3	Dismantle wind turbine and prepare for shipping off-site	1.0	1.0	each	X.23	$ 500,000.00	$ 500,000.00		
		8	38	2		Demolish equipment housing shack	288.8	288.8	m3	C.3.05	$ 13.12	$ 3,788.60		
		8	38	3		Remove electrical and fiber optics cables	1692.0	1692.0	m	C.3.20	$ 14.04	$ 23,751.07		
		8	38	4		collect debris	5080.0	5080.0	m2	C.3.10	$ 0.37	$ 1,904.69		
		8	38	5		load waste into trucks for transport to landfill	580.5	580.5	m3	C.4.01	$ 10.23	$ 5,937.80		
		8	38	6		transport waste to landfill	580.5	580.5	m3	C.4.49	$ 3.21	$ 1,862.49		
		8	38	7		transport wind turbine parts to Roberts Bay	1.0	1.0	m3	X.20	$ 15,000.00	$ 15,000.00		
DW_012	Y	3	12	1	Doris-Windy All Weather Road Turbine Pad #2	Dismantle wind turbine and prepare for shipping off-site	1.0	1.0	each	X.23	$ 500,000.00	$ 500,000.00		
		3	12	2		Demolish equipment housing shack	288.8	288.8	m3	C.3.05	$ 13.12	$ 3,788.60		
		3	12	3		Remove electrical and fiber optics cables	405.0	405.0	m	C.3.20	$ 14.04	$ 5,685.10		
		3	12	4		collect debris	5080.0	5080.0	m2	C.3.10	$ 0.37	$ 1,904.69		
		3	12	5		load waste into trucks for transport to landfill	580.5	580.5	m3	C.4.01	$ 10.23	$ 5,937.80		
		3	12	6		transport waste to landfill	580.5	580.5	m3	C.4.49	$ 3.21	$ 1,862.49		
		3	12	7		transport wind turbine parts to Roberts Bay	1.0	1.0	m3	X.21	$ 10,000.00	$ 10,000.00		
DW_011	Y	3	11	1	Doris-Windy All Weather Road Turbine Pad #1	Dismantle wind turbine and prepare for shipping off-site	1.0	1.0	each	X.23	$ 500,000.00	$ 500,000.00		
		3	11	2		Demolish equipment housing shack	288.8	288.8	m3	C.3.05	$ 13.12	$ 3,788.60		
		3	11	3		Remove electrical and fiber optics cables	4261.0	4261.0	m	C.3.20	$ 14.04	$ 59,812.83		
		3	11	4		collect debris	5080.0	5080.0	m2	C.3.10	$ 0.37	$ 1,904.69		
		3	11	5		load waste into trucks for transport to landfill	580.5	580.5	m3	C.4.01	$ 10.23	$ 5,937.80		
		3	11	6		transport waste to landfill	580.5	580.5	m3	C.4.49	$ 3.21	$ 1,862.49		
		3	11	7		transport wind turbine parts to Roberts Bay	1.0	1.0	m3	X.21	$ 10,000.00	$ 10,000.00		
DW_010	Y	3	10	1	Doris-Windy All Weather Road Explosives Storage Faci	remove all explosives	2176.0	2176.0	m3	C.4.08	$ 2.91	$ 6,333.51		
		3	10	2		demolish entry gates	0.5	0.5	m3	C.3.05	$ 13.12	$ 5.90		
		3	10	3		collect all debris	2805.8	2805.8	m2	C.3.10	$ 0.37	$ 1,052.01		
		3	10	4		load waste into containers for transport to landfill	5.4	5.4	m3	C.4.01	$ 10.23	$ 55.23		
		3	10	5		haul waste to landfill	5.4	5.4	m3	C.4.18	$ 3.41	$ 18.39		
		3	10	6		regrade area for positive drainage	2805.8	2805.8	m2	C.5.18	$ 0.01	$ 27.72		Includes AWR
WC_007	Y	19	7	1	Windy Waste Incinerator	decommission waste incinerator (mechanical)	1.0	1.0	each	C.1.04	$ 1,322.22	$ 1,322.22		
		19	7	2		collect ashes and place in containers	1.0	1.0	m3	C.2.07	$ 763.55	$ 763.55		
		19	7	3		dismantle (welding crew)	1.0	1.0	each	C.3.08	$ 534.78	$ 534.78		
		19	7	4		load waste into containers	6.8	6.8	m3	C.4.64	$ 804.49	$ 5,430.29		
		19	7	5		haul reusable materials to Doris Camp	6.8	6.8	m3	C.4.60	$ 2.77	$ 18.67		
WC_006	Y	19	6	1	Windy Potable Water Supply System	decommission potable water supply system	1.0	1.0	LS	C.1.03	$ 1,327.71	$ 1,327.71		
		19	6	2		dismantle potable water supply system	1.0	1.0	LS	C.3.08	$ 534.78	$ 534.78		
		19	6	3		load treatment units and tanks on skids for transport	4.0	4.0	m3	C.4.64	$ 804.49	$ 3,217.95		
		19	6	4		haul reusable materials to Doris Camp	35.6	35.6	m3	C.4.60	$ 2.77	$ 98.59		
WC_002	Y	19	2	1	Windy Accomodation Camp Buildings	decommission (electrical, mechanical, plumbing)	1.0	1.0	LS	C.1.05	$ 679.52	$ 679.52		
		19	2	2		load reusable components into containers for transport to Doris Camp	29.0	29.0	m3	C.4.66	$ 136.30	$ 3,952.82		
		19	2	3		dismantle and package communication equipment	1.0	1.0	LS	C.1.07	$ 374.34	$ 374.34		
		19	2	4		haul all reusable materials to Doris Camp	31.6	31.6	m3	C.4.60	$ 2.77	$ 87.28		
		19	2	5		regrade area for positive drainage	1248.0	1248.0	m2	C.5.05	$ 1.23	$ 1,531.73		
		19	2	6		install erosion protection measures (coconut matting)	500.0	500.0	m2	C.5.08	$ 4.84	$ 2,418.38		
		19	2	7		revegetate area	1248.0	1248.0	m2	C.5.13	$ 0.92	$ 1,148.60		
		19	2	8		fill low-lying areas with soil to prevent ponding	150.0	150.0	m3	C.5.25	$ 12.27	$ 1,841.03		
		19	2	9		manual demolition beyond rock pads	886.2	886.2	m2	C.3.18	$ 154.86	$ 137,234.66		
		19	2	10		mechanical demolition on rock pads	3479.1	3479.1	m3	C.3.19	$ 11.23	$ 39,084.16		
		19	2	11		load waste into containers	1891.3	1891.3	m3	C.4.01	$ 10.23	$ 19,344.55		
		19	2	12		haul containers to Quarry 3 landfill	1891.3	1891.3	m3	C.4.59	$ 4.92	$ 9,297.33		
RB_004	Y	1	4	1	Roberts Bay Mechanical Shop Complex	chanical, heating (including connections to generator house & transformer)	7.0	7.0	each	C.1.05	$ 679.52	$ 4,756.61		
		1	4	2		demolish (steel modular structure)	2402.4	2402.4	m3	C.3.05	$ 13.12	$ 31,521.60		
		1	4	3		demolish wood structures (warehouse roof, crew lounge)	283.2	283.2	m3	C.3.05	$ 13.12	$ 3,715.78		
		1	4	4		demolish tent structure (light vehicle shop)	460.3	460.3	m3	C.3.05	$ 13.12	$ 6,039.52		
		1	4	5		collect debris	480.5	480.5	m2	C.3.10	$ 0.37	$ 180.15		
		1	4	6		load waste into containers	776.9	776.9	m3	C.4.01	$ 10.23	$ 7,946.30		
		1	4	7		haul containers to Quarry 3 landfill	776.9	776.9	m3	C.4.15	$ 5.99	$ 4,656.34		
RB_005	Y	1	5	1	Roberts Bay Waste Management Facility	collect ashes and place in containers	0.5	0.5	m3	C.2.07	$ 763.55	$ 381.77		
		1	5	2		dismantle (welding crew)	2.0	2.0	each	C.3.08	$ 534.78	$ 1,069.57		
		1	5	3		demolish wood structures (roof, entryway, etc.)	321.6	321.6	m3	C.3.05	$ 13.12	$ 4,220.25		
		1	5	4		disconnect containers and prep for shipping	11.0	11.0	each	C.1.08	$ 1,368.94	$ 15,058.31		
		1	5	5		collect all debris	128.7	128.7	m2	C.3.10	$ 0.37	$ 48.24		
		1	5	6		load waste into containers	189.8	189.8	m3	C.4.01	$ 10.23	$ 1,940.91		
		1	5	7		haul containers to Quarry 3 landfill	189.8	189.8	m3	C.4.15	$ 5.99	$ 1,137.33		
RB_009	Y	1	9	1	Roberts Bay Communications Tower	decommission tower	1.0	1.0	Each	C.1.05	$ 679.52	$ 679.52		
		1	9	2		remove communication equipment	4.0	4.0	each	C.1.07	$ 374.34	$ 1,497.34		
		1	9	3		dismantle towers	1.0	1.0	each	C.3.11	$ 15,749.71	$ 15,749.71		
		1	9	4		collect all debris	2.9	2.9	m2	C.3.10	$ 0.37	$ 1.08		
		1	9	5		load waste into containers	4.1	4.1	m3	C.4.01	$ 10.23	$ 41.50		
		1	9	6		haul containers to Quarry 3 landfill	4.1	4.1	m3	C.4.15	$ 5.99	$ 24.32		

Work Area Code		Item	Task	Sub-task	Facility Name	Task	Quantity	Quantity	Unit	Cost Code	Unit Cost	Activity Total	Subtotals	Source / Comments
RP_004	Y	12	4	1	Reagent Pads Exploration Drilling Support Shop	Decommission electrical, mechanical, heating	2.0	2.0	each	C.1.05	$ 679.52	$ 1,359.03		
		12	4	2		demolish building (tent structure)	708.7	708.7	m3	C.3.05	$ 13.12	$ 9,298.10		
		12	4	3		prep sea-cans for moving	13.0	13.0	each	C.1.08	$ 1,368.94	$ 17,796.19		
		12	4	4		haul sea-cans Quarry 3 landfill	483.7	483.7	m3	C.4.17	$ 5.23	$ 2,529.95		
		12	4	5		collect all debris	1449.0	1449.0	m2	C.3.10	$ 0.37	$ 543.29		
		12	4	6		load waste into containers	12.4	12.4	m3	C.4.01	$ 10.23	$ 126.85		
		12	4	7		haul containers to Quarry 3 landfill	12.4	12.4	m3	C.4.17	$ 5.23	$ 64.87		
DM_001	Y	2	1	1	Doris Accommodation Complex	decommission (electrical, mechanical, plumbing)	103.0	103.0	each	C.1.05	$ 679.52	$ 69,990.15		
		2	1	2		demolish trailers	11184.8	11184.8	m3	C.3.05a	$ 13.32	$ 148,980.27		
		2	1	3		demolish cabins	319.1	319.1	m3	C.3.05	$ 13.12	$ 4,186.49		
		2	1	4		demolish cribbing, stairs, entryways, etc.	221.4	221.4	m3	C.3.05	$ 13.12	$ 2,904.92		
		2	1	5		demolish arctic corridor	132.5	132.5	m3	C.3.05	$ 13.12	$ 1,738.49		
		2	1	6		collect all debris	21050.0	21050.0	m2	C.3.10	$ 0.37	$ 7,892.45		
		2	1	7		load waste into containers	7426.1	7426.1	m3	C.4.01	$ 10.23	$ 75,953.37		
		2	1	8		haul containers to Quarry 3 landfill	7426.1	7426.1	m3	C.4.14	$ 4.70	$ 34,900.35		
DM_002	Y	2	2	1	Doris Backup Power generator	decommission (electrical)	4.0	4.0	each	C.1.05	$ 679.52	$ 2,718.06		
		2	2	2		disconnect generator units and prep for shipping off-site	2.0	2.0	each	C.1.06	$ 784.27	$ 1,568.55		
		2	2	3		haul units to quarry 3 landfill	67.6	67.6	m3	C.4.14	$ 4.70	$ 317.70		
		2	2	4		demolish tent housing structure	1296.6	1296.6	m3	C.3.05	$ 13.12	$ 17,012.28		
		2	2	5		collect all debris	259.3	259.3	m2	C.3.10	$ 0.37	$ 97.23		
		2	2	6		load waste into containers	21.4	21.4	m3	C.4.01	$ 10.23	$ 218.68		
		2	2	7		haul containers to Quarry 3 landfill	21.4	21.4	m3	C.4.14	$ 4.70	$ 100.48		
DM_004	Y	2	4	1	Doris Communications Tower	Remove communications equipment	12.0	12.0	each	C.1.07	$ 374.34	$ 4,492.02		
		2	4	2		Dismantle the communications towers and prepare for shipping off-site	2.0	2.0	each	C.3.11	$ 15,749.71	$ 31,499.41		
		2	4	3		Demolish equipment housing shack	24.0	24.0	m3	C.3.05	$ 13.12	$ 315.06		
		2	4	4		Remove electrical and fiber optics cables	12.0	12.0	each	C.1.05	$ 679.52	$ 8,154.19		
		2	4	5		Remove all equipment, material, and waste from Doris Mountain,	9.0	9.0	m3	C.3.17	$ 2,509.33	$ 22,514.46		
		2	4	6		load waste into containers	9.0	9.0	m3	C.4.01	$ 10.23	$ 91.77		
		2	4	7		haul containers to Quarry 3 landfill	9.0	9.0	m3	C.4.14	$ 4.70	$ 42.17		
		2	4	8		Transport Communications tower equipment to Roberts Bay	37.2	37.2	m3	C.4.04	$ 2.30	$ 85.49		
DM_005	Y	2	5	1	Doris Fire Water Storage Tank	decommission and disconnect electrical and plumbing	3.0	3.0	each	C.1.03	$ 1,327.71	$ 3,983.12		
		2	5	2		disconnect and remove container housing the pumps and controls, and prep for shipping	1.0	1.0	each	C.1.08	$ 1,368.94	$ 1,368.94		
		2	5	3		haul container to Quarry 3 landfill	74.4	74.4	m3	C.4.14	$ 4.70	$ 349.75		
		2	5	4		remove tank insulation	1.0	1.0	each	C.3.15	$ 746.46	$ 746.46		
		2	5	5		dismantle tanks and cut into manageable pieces	1.0	1.0	LS	X.08	$ 100,000.00	$ 100,000.00		
		2	5	6		prepare pieces for transportation	1.5	1.5	m3	C.4.01	$ 10.23	$ 15.78		
		2	5	7		haul containers to Quarry 3 landfill	1.5	1.5	m3	C.4.14	$ 4.70	$ 7.25		
		2	5	8		collect debris	73.1	73.1	m2	C.3.10	$ 0.37	$ 27.42		
		2	5	9		load waste into containers	0.0	0.0	m3	C.4.01	$ 10.23	$ 0.45		
		2	5	10		haul containers to Quarry 3 landfill	0.0	0.0	m3	C.4.14	$ 4.70	$ 0.21		
DM_008	Y	2	8	1	Doris Muster Station	demolish tent structure	227.3	227.3	m3	C.3.05	$ 13.12	$ 2,982.38		
		2	8	2		dismantle wood flooring	27.3	27.3	m3	C.3.05	$ 13.12	$ 357.89		
		2	8	3		collect debris	90.9	90.9	m2	C.3.10	$ 0.37	$ 34.09		
		2	8	4		load debris into containers for transport	48.2	48.2	m3	C.4.01	$ 10.23	$ 493.38		
		2	8	5		haul debris to quarry 3 landfill	48.2	48.2	m3	C.4.14	$ 4.70	$ 226.71		
DM_009	Y	2	9	1	Doris Offices & Mine Dry Complex	decommission (electrical, mechanical, plumbing)	3.0	3.0	each	C.1.05	$ 679.52	$ 2,038.55		
		2	9	2		disconnect trailers and prep for moving (remove boards, cladding, etc.; wrap in plastic)	17.0	17.0	each	C.1.08	$ 1,368.94	$ 23,271.94		
		2	9	3		haul trailers to Quarry 3 landfill	145670.5	145670.5	m3	C.4.14	$ 4.70	$ 684,607.24		
		2	9	4		demolish arctic corridor	219.5	219.5	m3	C.3.05	$ 13.12	$ 2,879.68		
		2	9	5		demolish cribbing, stairs, entryways, etc.	45.9	45.9	m3	C.3.05	$ 13.12	$ 602.24		
		2	9	6		collect all debris	2034.9	2034.9	m2	C.3.10	$ 0.37	$ 762.97		
		2	9	7		load waste into containers	1.2	1.2	m3	C.4.01	$ 10.23	$ 12.49		
		2	9	8		haul containers to Quarry 3 landfill	1.2	1.2	m3	C.4.14	$ 4.70	$ 5.74		
DM_011	Y	2	11	1	Doris Permanent Power Generator	decommission (electrical)	8.0	8.0	each	C.1.06	$ 784.27	$ 6,274.19		
		2	11	2		disconnect containers and prep for shipping off-site	8.0	8.0	each	C.1.08	$ 1,368.94	$ 10,951.50		
		2	11	3		haul containers to Roberts bay laydown	264.8	264.8	m3	C.4.04	$ 2.30	$ 608.35		
		2	11	4		dismantle stacks	40.0	40.0	m	C.3.13	$ 136.30	$ 5,452.16		
		2	11	5		prep stacks for shipping	40.0	40.0	m	C.3.12	$ 627.24	$ 25,089.76		
		2	11	6		haul stack sections to Quarry 3 landfill	166.0	166.0	m3	C.4.14	$ 4.70	$ 780.15		
		2	11	7		collect all debris	2103.6	2103.6	m2	C.3.10	$ 0.37	$ 788.73		
		2	11	8		load waste into containers	1.3	1.3	m3	C.4.01	$ 10.23	$ 12.91		
		2	11	9		haul containers to Quarry 3 landfill	1.3	1.3	m3	C.4.14	$ 4.70	$ 5.93		
DM_017	Y	2	17	1	Doris Sewage Treatment Plant	ve sewage plumbing, collect sewage sludge/waste water in 55 gallon drums	9.0	9.0	each	C.2.06	$ 677.68	$ 6,099.16		
		2	17	2		decommission (electrical)	9.0	9.0	each	C.1.05	$ 679.52	$ 6,115.64		
		2	17	3		disconnect containers and prep for shipping	9.0	9.0	each	C.1.08	$ 1,368.94	$ 12,320.44		
		2	17	4		haul containers to Quarry 3 landfill	671.4	671.4	m3	C.4.14	$ 4.70	$ 3,155.50		
		2	17	5		collect debris	268.6	268.6	m2	C.3.10	$ 0.37	$ 100.70		
		2	17	6		load waste into containers	24.0	24.0	m3	C.4.01	$ 10.23	$ 245.05		
		2	17	7		haul containers to Quarry 3 landfill	24.0	24.0	m3	C.4.14	$ 4.70	$ 112.60		
DM_019	Y	2	19	1	Doris Swick Shop	demolish tent structure	859.2	859.2	m3	C.3.05	$ 13.12	$ 11,272.81		
		2	19	2		collect debris	229.1	229.1	m2	C.3.10	$ 0.37	$ 85.90		
		2	19	3		load waste into containers	18.3	18.3	m3	C.4.01	$ 10.23	$ 187.50		
		2	19	4		haul containers to Quarry 3 landfill	18.3	18.3	m3	C.4.14	$ 4.70	$ 86.15		
DM_021	Y	2	21	1	Doris Process Plant	decommission crusher, milling, and process plants	1.0	1.0	each	X.09	$ 100,000.00	$ 100,000.00		
		2	21	2		Drain chemicals and reagents into containers for shipping off site	8.3	8.3	m3	C.2.01	$ 2,699.56	$ 22,460.31		
		2	21	3		disassemble equipment	1.0	1.0	each	X.10	$ 200,000.00	$ 200,000.00		
		2	21	4		prepare equipment for shipping	1.0	1.0	each	X.11	$ 50,000.00	$ 50,000.00		
		2	21	5		demolish / dismantle mill building	123540.0	123540.0	m3	C.3.05a	$ 13.32	$ 1,645,538.85		
		2	21	6		Collect Debris	8700.0	8700.0	m2	C.3.10	$ 0.37	$ 3,261.96		
		2	21	7		load waste into containers	8522.2	8522.2	m3	C.4.01	$ 10.23	$ 87,163.94		
		2	21	8		haul containers to Quarry 3 landfill	8522.2	8522.2	m3	C.4.14	$ 4.70	$ 40,051.57		
		2	21	9		transport drums to Roberts Bay	8.3	8.3	m3	C.4.04	$ 2.30	$ 19.11		
DM_022	Y	2	22	1	Doris Underground Support Mechanical Shop	trical, mechanical (including connections to generator house & transformer)	3.0	3.0	each	C.1.05	$ 679.52	$ 2,038.55		
		2	22	2		demolish building	2281.6	2281.6	m3	C.3.05	$ 13.12	$ 29,935.55		
		2	22	3		collect debris	456.3	456.3	m2	C.3.10	$ 0.37	$ 171.09		
		2	22	4		load waste into containers	549.7	549.7	m3	C.4.01	$ 10.23	$ 5,622.39		
		2	22	5		haul containers to Quarry 3 landfill	549.7	549.7	m3	C.4.14	$ 4.70	$ 2,583.47		
DM_023	Y	2	23	1	Doris Underground Wash Bay	demolish tent structure	776.9	776.9	m3	C.3.05	$ 13.12	$ 10,193.20		
		2	23	2		collect debris	155.4	155.4	m2	C.3.10	$ 0.37	$ 58.26		
		2	23	3		load waste into containers	13.5	13.5	m3	C.4.01	$ 10.23	$ 138.24		
		2	23	4		haul containers to Quarry 3 landfill	13.5	13.5	m3	C.4.14	$ 4.70	$ 63.52		
DM_024	Y	2	24	1	Doris Warehouse / Core Shack	demolish tent structure	3422.2	3422.2	m3	C.3.05	$ 13.12	$ 44,901.62		
		2	24	2		dismantle wood flooring, shelving, and lofts	186.2	186.2	m3	C.3.05	$ 13.12	$ 2,443.18		
		2	24	3		collect debris	720.1	720.1	m2	C.3.10	$ 0.37	$ 269.98		
		2	24	4		load waste into containers	350.7	350.7	m3	C.4.01	$ 10.23	$ 3,587.41		
		2	24	5		haul containers to Quarry 3 landfill	350.7	350.7	m3	C.4.14	$ 4.70	$ 1,648.40		
		2	24	6		haul all warehouse containers to Quarry 3 landfill	796.8	796.8	m3	C.4.14	$ 4.70	$ 3,744.72		
MN_004	Y	5	4	1	Madrid North Emergency Shelter	decommission (electrical, mechanical, plumbing)	2.0	2.0	each	C.1.05	$ 679.52	$ 1,359.03		
		5	4	2		demolish trailers	75.0	75.0	each	C.3.05	$ 13.12	$ 984.05		
		5	4	3		demolish cribbing, stairs, entryways, etc.	4.1	4.1	m3	C.3.05	$ 13.12	$ 53.14		
		5	4	4		collect all debris	30.0	30.0	m2	C.3.10	$ 0.37	$ 11.25		
		5	4	5		load waste into containers	4.1	4.1	m3	C.4.01	$ 10.23	$ 41.61		
		5	4	6		haul containers to Quarry 3 landfill	51.2	51.2	m3	C.4.59	$ 4.92	$ 251.53		
MN_005	Y	5	5	1	Madrid North Office Trailer	decommission (electrical, mechanical, plumbing)	3.0	3.0	each	C.1.05	$ 679.52	$ 2,038.55		
		5	5	2		demolish trailer	75.0	75.0	m3	C.3.05	$ 13.12	$ 984.05		
		5	5	3		demolish cribbing, stairs, entryways, etc.	4.1	4.1	m3	C.3.05	$ 13.12	$ 53.14		
		5	5	4		collect all debris	30.0	30.0	m2	C.3.10	$ 0.37	$ 11.25		
		5	5	5		load waste into containers	4.1	4.1	m3	C.4.01	$ 10.23	$ 41.61		
		5	5	6		haul containers to Quarry 3 landfill	51.2	51.2	m3	C.4.59	$ 4.92	$ 251.53		
MN_007	Y	5	7	1	Madrid North Mine Equipment Shop	decommission electrical, mechanical, heating	2.0	2.0	each	C.1.05	$ 679.52	$ 1,359.03		
		5	7	2		demolish equipment shop	1125.0	1125.0	m3	C.3.05	$ 13.12	$ 14,760.77		
		5	7	3		collect all debris	450.0	450.0	m2	C.3.10	$ 0.37	$ 168.72		
		5	7	4		load waste into containers off-site	0.3	0.3	m3	C.4.01	$ 10.23	$ 2.76		
		5	7	5		haul containers to Quarry 3 landfill	481.8	481.8	m3	C.4.59	$ 4.92	$ 2,368.24		
MN_008	Y	5	8	1	Madrid North Compressor Building	decommission (electrical)	2.0	2.0	each	C.1.05	$ 679.52	$ 1,359.03		
		5	8	2		disconnect compressor units and prep for shipping off-site	2.0	2.0	each	C.1.06	$ 784.27	$ 1,568.55		
		5	8	3		haul units to Roberts bay laydown	37.2	37.2	m3	C.4.22	$ 5.02	$ 186.76		
		5	8	4		demolish tent housing structure	62.5	62.5	m3	C.3.05	$ 13.12	$ 820.04		
		5	8	5		collect all debris	25.0	25.0	m2	C.3.10	$ 0.37	$ 9.37		
		5	8	6		load waste into containers off-site	5.9	5.9	m3	C.4.01	$ 10.23	$ 59.99		
		5	8	7		haul containers to Quarry 3 landfill	5.9	5.9	m3	C.4.59	$ 4.92	$ 28.83		
MN_009	Y	5	9	1	Madrid North Diesel Generator	decommission (electrical)	1.0	1.0	each	C.1.06	$ 784.27	$ 784.27		
		5	9	2		disconnect containers and prep for shipping off-site	1.0	1.0	each	C.1.08	$ 1,368.94	$ 1,368.94		
		5	9	3		haul containers to Roberts bay laydown	46.9	46.9	m3	C.4.22	$ 5.02	$ 235.28		
		5	9	4		demolish tent housing structure	46.9	46.9	m3	C.3.05	$ 13.12	$ 615.03		
		5	9	5		collect all debris	18.8	18.8	m2	C.3.10	$ 0.37	$ 7.03		
		5	9	6		load waste into containers	1.9	1.9	m3	C.4.01	$ 10.23	$ 19.23		
		5	9	7		haul containers to Quarry 3 landfill	1.9	1.9	m3	C.4.59	$ 4.92	$ 9.24		
MN_013	Y	5	13	1	Madrid North Water Storage Tank with Containment	drain tanks into portable storage (envirotanks)	1.0	1.0	each	C.2.03	$ 0.02	$ 0.02		
		5	13	2		wash tanks	1.0	1.0	each	C.2.04	$ 1,186.71	$ 1,186.71		
		5	13	3		disconnect piping and controls	1.0	1.0	each	C.1.02	$ 476.06	$ 476.06		
		5	13	4		dismantle tanks and cut into manageable pieces	1.0	1.0	each	X.08	$ 100,000.00	$ 100,000.00		
		5	13	5		prepare pieces for transportation	2.4	2.4	m3	C.4.01	$ 10.23	$ 24.55		
		5	13	6		haul cut metal to quarry 3 landfill	2.4	2.4	m3	C.4.59	$ 4.92	$ 11.80		
		5	13	7		excavate and stockpile liner protection cover	259.2	259.2	m3	C.5.04	$ 2.75	$ 712.46		
		5	13	8		clean liner	144.0	144.0	m2	C.2.10	$ 0.41	$ 59.34		
		5	13	9		remove and cut liner into manageable pieces	144.0	144.0	m2	C.3.02	$ 0.17	$ 24.53		
		5	13	10		load waste into containers	1.3	1.3	m3	C.4.01	$ 10.23	$ 13.26		
		5	13	11		haul containers to Quarry 3 landfill	1.3	1.3	m3	C.4.59	$ 4.92	$ 6.37		
MN_015	Y	5	15	1	Madrid North Brine Mixing Facility	load contained contaminated soils into megabags for hauling	5.6	5.6	m3	C.4.12	$ 72.73	$ 409.11		assume 50% of liner protection cover is contaminated
		5	15	2		haul megabags to Madrid north underground	5.6	5.6	m3	C.5.22	$ 15.37	$ 86.44		
		5	15	3		collect all debris	18.8	18.8	m2	C.3.10	$ 0.37	$ 7.03		
		5	15	4		clean liner	18.8	18.8	m2	C.2.10	$ 0.41	$ 7.73		
		5	15	5		remove and cut liner into manageable pieces	18.8	18.8	m2	C.3.02	$ 0.17	$ 3.19		
		5	15	6		load waste into containers	0.2	0.2	m3	C.4.01	$ 10.23	$ 1.82		
		5	15	7		haul containers to Quarry 3 landfill	0.2	0.2	m3	C.4.25	$ 3.26	$ 0.58		
MN_019	Y	5	19	1	Madrid North Power Plant	decommission (electrical)	4.0	4.0	each	C.1.06	$ 784.27	$ 3,137.10		
		5	19	2		demolish building	2375.0	2375.0	m3	C.3.05a	$ 13.32	$ 31,634.73		
		5	19	3		dismantle stacks	40.0	40.0	m	C.3.13	$ 136.30	$ 5,452.16		
		5	19	4		prep stacks for shipping	40.0	40.0	m	C.3.12	$ 627.24	$ 25,089.76		
		5	19	5		haul stack sections to Quarry 3 landfill	166.0	166.0	m3	C.4.59	$ 4.92	$ 816.01		
		5	19	6		collect all debris	950.0	950.0	m2	C.3.10	$ 0.37	$ 356.19		
		5	19	7		load waste into containers	738.0	738.0	m3	C.4.01	$ 10.23	$ 7,548.51		
		5	19	8		haul containers to Quarry 3 landfill	738.0	738.0	m3	C.4.59	$ 4.92	$ 3,627.95		
MN_021	Y	5	21	1	Madrid North Concentrator	decommission crusher, milling, and process plants	1.0	1.0	each	X.09	$ 100,000.00	$ 100,000.00		
		5	21	2		Drain chemicals and reagents into containers for shipping off site	4.2	4.2	m3	C.2.01	$ 2,699.56	$ 11,230.16		
		5	21	3		disassemble equipment	1.0	1.0	each	X.10	$ 200,000.00	$ 200,000.00		
		5	21	4		prepare equipment for shipping	1.0	1.0	each	X.11	$ 50,000.00	$ 50,000.00		
		5	21	5		demolish / dismantle mill building	23075.0	23075.0	m3	C.3.05a	$ 13.32	$ 307,356.39		
		5	21	6		Collect Debris	1625.0	1625.0	m2	C.3.10	$ 0.37	$ 609.28		
		5	21	7		load waste into containers	3691.8	3691.8	m3	C.4.01	$ 10.23	$ 37,759.42		
		5	21	8		haul containers to Quarry 3 landfill	3691.8	3691.8	m3	C.4.59	$ 4.92	$ 18,147.84		
		5	21	9		transport drums to Roberts Bay	4.2	4.2	m3	C.4.22	$ 5.02	$ 20.88		
MS_004	Y	7	4	1	Madrid South Mine Equipment Shop	decommission electrical, mechanical, heating	4.0	4.0	each	C.1.05	$ 679.52	$ 2,718.06		
		7	4	2		demolish tent housing structure	2250.0	2250.0	m3	C.3.05	$ 13.12	$ 29,521.54		
		7	4	3		collect all debris	450.0	450.0	m2	C.3.10	$ 0.37	$ 168.72		
		7	4	4		load waste into containers	35.4	35.4	m3	C.4.01	$ 10.23	$ 361.76		
		7	4	5		haul containers to Quarry 3 landfill	35.4	35.4	m3	C.4.25	$ 3.26	$ 115.30		
MS_005	Y	7	5	1	Madrid South Emergency Shelter	decommission (electrical, mechanical, plumbing)	3.0	3.0	each	C.1.05	$ 679.52	$ 2,038.55		
		7	5	2		demolish structure	75.0	75.0	each	C.3.05	$ 13.12	$ 984.05		
		7	5	3		demolish cribbing, stairs, entryways, etc.	4.1	4.1	m3	C.3.05	$ 13.12	$ 53.14		
		7	5	4		collect all debris	30.0	30.0	m2	C.3.10	$ 0.37	$ 11.25		
		7	5	5		load waste into containers	51.2	51.2	m3	C.4.01	$ 10.23	$ 523.34		
		7	5	6		haul containers to Quarry 3 landfill	51.2	51.2	m3	C.4.25	$ 3.26	$ 166.80		
MS_006	Y	7	6	1	Madrid South Office Trailer	decommission (electrical, mechanical, plumbing)	3.0	3.0	each	C.1.05	$ 679.52	$ 2,038.55		
		7	6	2		demolish structure	75.0	75.0	each	C.3.05	$ 13.12	$ 984.05		
		7	6	3		demolish cribbing, stairs, entryways, etc.	4.1	4.1	m3	C.3.05	$ 13.12	$ 53.14		
		7	6	4		collect all debris	30.0	30.0	m2	C.3.10	$ 0.37	$ 11.25		
		7	6	5		load waste into containers	51.2	51.2	m3	C.4.01	$ 10.23	$ 523.34		
		7	6	6		haul containers to Quarry 3 landfill	51.2	51.2	m3	C.4.25	$ 3.26	$ 166.80		
MS_007	Y	7	7	1	Madrid South Diesel Generator	decommission (electrical)	1.0	1.0	each	C.1.06	$ 784.27	$ 784.27		
		7	7	2		demolish tent housing structure	46.9	46.9	m3	C.3.05	$ 13.12	$ 615.03		
		7	7	3		collect all debris	18.8	18.8	m2	C.3.10	$ 0.37	$ 7.03		
		7	7	4		load waste into containers	1.9	1.9	m3	C.4.01	$ 10.23	$ 19.23		
		7	7	5		haul containers to Quarry 3 landfill	1.9	1.9	m3	C.4.24	$ 1.86	$ 3.50		
MS_008	Y	7	8	1	Madrid South Compressor Building	decommission (electrical)	2.0	2.0	each	C.1.05	$ 679.52	$ 1,359.03		
		7	8	2		disconnect compressor units and prep for shipping off-site	2.0	2.0	each	C.1.06	$ 784.27	$ 1,568.55		
		7	8	3		haul units to Quarry 3 landfill	37.2	37.2	m3	C.4.59	$ 4.92	$ 182.91		
		7	8	4		demolish tent housing structure	62.5	62.5	m3	C.3.05	$ 13.12	$ 820.04		
		7	8	5		collect all debris	25.0	25.0	m2	C.3.10	$ 0.37	$ 9.37		
		7	8	6		load waste into containers	2.3	2.3	m3	C.4.01	$ 10.23	$ 23.42		
		7	8	7		haul containers to Quarry 3 landfill	2.3	2.3	m3	C.4.25	$ 3.26	$ 7.47		
MS_019	Y	7	19	1	Madrid South Brine Mixing Facility	load contained contaminated soils into megabags for hauling	7.5	7.5	m3	C.4.12	$ 72.73	$ 545.48		assume 50% of liner protection cover is contaminated
		7	19	2		haul megabags to Madrid south underground	7.5	7.5	m3	C.5.22	$ 15.37	$ 115.25		
		7	19	3		collect all debris	25.0	25.0	m2	C.3.10	$ 0.37	$ 9.37		
		7	19	4		clean liner	25.0	25.0	m2	C.2.10	$ 0.41	$ 10.30		
		7	19	5		remove and cut liner into manageable pieces	25.0	25.0	m2	C.3.02	$ 0.17	$ 4.26		
		7	19	6		load waste into containers	0.2	0.2	m3	C.4.01	$ 10.23	$ 2.43		
		7	19	7		haul containers to Quarry 3 landfill	0.2	0.2	m3	C.4.25	$ 3.26	$ 0.77		
MS_020	Y	7	20	1	Madrid South Water Storage Tank with Containment	disconnect piping and controls	1.0	1.0	each	C.1.02	$ 476.06	$ 476.06		
		7	20	2		dismantle tanks and cut into manageable pieces	1.0	1.0	each	X.08	$ 100,000.00	$ 100,000.00		
		7	20	3		prepare pieces for transportation	2.4	2.4	m3	C.4.01	$ 10.23	$ 24.55		
		7	20	4		haul cut metal to quarry 3 landfill	2.4	2.4	m3	C.4.25	$ 3.26	$ 7.83		
		7	20	5		excavate and stockpile liner protection cover	259.2	259.2	m3	C.5.04	$ 2.75	$ 712.46		
		7	20	6		clean liner	144.0	144.0	m2	C.2.10	$ 0.41	$ 59.34		
		7	20	7		remove and cut liner into manageable pieces	144.0	144.0	m2	C.3.02	$ 0.17	$ 24.53		
		7	20	8		load waste into containers	0.1	0.1	m3	C.4.01	$ 10.23	$ 0.88		
		7	20	9		haul containers to Quarry 3 landfill	0.1	0.1	m3	C.4.25	$ 3.26	$ 0.28		
Water Management													**$ 324,456.73**	
MN_022	Y	5	22	1	Madrid North Diversion Berm	breach berm to original ground (one location) to restore natural flow paths	75.6	75.6	m3	C.5.04	$ 2.75	$ 207.80		
		5	22	2		remove cut liners and place in containers for disposal	0.6	0.6	m3	C.3.02	$ 0.17	$ 0.10		
		5	22	3		haul containers to Quarry 3 landfill	0.6	0.6	m3	C.4.59	$ 4.92	$ 2.79		
MN_023	Y	5	23	1	Madrid North Sump	decommission sump	1.0	1.0	each	C.1.05	$ 679.52	$ 679.52		
		5	23	2		remove pumps, pipes, cables, and culverts	1.0	1.0	each	X.05	$ 2,500.00	$ 2,500.00		
		5	23	3		backfill sump excavation	17.0	17.0	m3	C.5.02	$ 16.35	$ 277.42		
Q2_003	Y	14	3	1	Quarry 2 Treated Sewage Discharge Areas	Fill in low-lying areas (assumed sourced within 0.5km)	552.0	552.0	m3	C.5.02	$ 16.35	$ 9,026.79		
		14	3	2		erosion protection: Supply and place coconut matting	460.0	460.0	m2	C.5.08	$ 4.84	$ 2,224.91		
DM_013	Y	2	13	1	Doris Run-off Diversion Berm	original ground in several locations (4 locations) to restore natural flow path	453.6	453.6	m3	C.5.04	$ 2.75	$ 1,246.81		
		2	13	2		remove cut liners and place in containers for shipping off-site and disposal	0.3	0.3	m3	C.3.02	$ 0.17	$ 0.05		
		2	13	3		haul containers to Quarry 3 landfill	0.3	0.3	m3	C.4.14	$ 4.70	$ 1.42		
DM_014	Y	2	14	1	Doris Sedimentation Berm	breach the berm to restore a free drainage path	28.8	28.8	m3	C.5.04	$ 2.75	$ 79.16		
DM_015	Y	2	15	1	Doris Sedimentation/Pollution Control Pond	disconnect piping and electrical wiring, remove sump pumps	2.0	2.0	each	C.1.05	$ 679.52	$ 1,359.03		
		2	15	2		remove and cut liner into manageable pieces	14110.0	14110.0	m2	C.3.02	$ 0.17	$ 2,404.06		
		2	15	3		load waste into containers for hauling to landfill	70.2	70.2	m3	C.4.01	$ 10.23	$ 717.69		
		2	15	4		haul containers to Quarry 3 landfill	70.2	70.2	m3	C.4.14	$ 4.70	$ 329.78		
		2	15	5		breach contact water containment berm	3129.8	3129.8	m3	C.5.05	$ 1.23	$ 3,841.41		
DM_018	Y	2	18	1	Doris Sumps	decommission sumps	2.0	2.0	each	C.1.05	$ 679.52	$ 1,359.03		
		2	18	2		remove pumps, pipes, cables, culverts	2.0	2.0	LS	X.05	$ 2,500.00	$ 5,000.00		
		2	18	3		backfill sump excavation	33.9	33.9	m3	C.5.02	$ 16.35	$ 554.84		
DM_026	Y	2	26	1	Doris Water Intake Structure and Pumping Facility	remove water intake line from Doris lake	25.0	25.0	lm	C.3.03	$ 11.08	$ 277.11		
		2	26	2		decommission pumping facility (remove electrical)	2.0	2.0	each	C.1.03	$ 1,327.71	$ 2,655.41		
		2	26	3		prep containers for shipping off-site	2.0	2.0	each	C.1.08	$ 1,368.94	$ 2,737.88		
		2	26	4		disconnect and remove generator fuel tank (place in Doris tank farm for cleaning)	1.0	1.0	each	C.1.01	$ 95.44	$ 95.44		
		2	26	5		clean tidytank and prep for shipping	1.0	1.0	each	C.2.02	$ 24.72	$ 24.72		
		2	26	6		run oil-water separator	1.0	1.0	m3	C.2.08	$ 32.80	$ 32.80		
		2	26	7		prep generator container for shipping	1.0	1.0	each	C.1.08	$ 1,368.94	$ 1,368.94		
		2	26	8		haul containers to Roberts bay laydown	66.4	66.4	m3	C.4.04	$ 2.30	$ 152.55		
		2	26	9		collect debris	2226.2	2226.2	m2	C.3.10	$ 0.37	$ 834.68		
		2	26	10		load debris into containers for transport	21.3	21.3	m3	C.4.01	$ 10.23	$ 218.22		
		2	26	11		haul debris to quarry 3 landfill	21.3	21.3	m3	C.4.14	$ 4.70	$ 100.27		
DM_035	Y	2	35	1	Doris Pad U Sedimentation/Pollution Control Pond	disconnect piping and electrical wiring, remove sump pumps	1.0	1.0	each	C.1.05	$ 679.52	$ 679.52		
		2	35	2		load waste into containers	1.9	1.9	m3	C.4.01	$ 10.23	$ 19.33		
		2	35	3		haul containers to Quarry 3 landfill	1.9	1.9	m3	C.4.14	$ 4.70	$ 8.88		
		2	35	4		breach contact water containment berm	1008.0	1008.0	m3	C.5.05	$ 1.23	$ 1,237.17		
		2	35	5		remove and cut liner at breach into manageable pieces	210.0	210.0	m2	C.3.02	$ 0.17	$ 35.78		
MN_003	Y	5	3	1	Madrid North Contact Water Pond Berm	disconnect piping and electrical wiring, remove sump pumps	1.0	1.0	each	C.1.05	$ 679.52	$ 679.52		
		5	3	2		load waste into containers	1.9	1.9	m3	C.4.01	$ 10.23	$ 19.33		
		5	3	3		haul containers to Quarry 3 landfill	1.9	1.9	m3	C.4.59	$ 4.92	$ 9.29		
		5	3	4		breach contact water containment berm	1008.0	1008.0	m3	C.5.05	$ 1.23	$ 1,237.17		
		5	3	5		remove and cut liner at breach into manageable pieces	210.0	210.0	m2	C.3.02	$ 0.17	$ 35.78		
MS_003	Y	7	3	1	Madrid South Primary Contact Water Pond Berm	disconnect piping and electrical wiring, remove sump pumps	4.0	4.0	each	C.1.05	$ 679.52	$ 2,718.06		
		7	3	2		load waste into containers	1.9	1.9	m3	C.4.01	$ 10.23	$ 19.33		
		7	3	3		haul containers to Quarry 3 landfill	1.9	1.9	m3	C.4.25	$ 3.26	$ 6.16		
		7	3	4		breach contact water containment berm	1008.0	1008.0	m3	C.5.05	$ 1.23	$ 1,237.17		
		7	3	5		remove and cut liner from breach into manageable pieces	210.0	210.0	m2	C.3.02	$ 0.17	$ 35.78		

Work Area Code		Item	Task	Sub-task	Facility Name	Task	Quantity	Quantity	Unit	Cost Code	Unit Cost	Activity Total	Subtotals	Source / Comments
MS_012	Y	7	12	1	Madrid South Haul Road / Secondary Contact Water Po	disconnect piping and electrical wiring, remove sump pumps	4.0	4.0	each	C.1.05	$ 679.52	$ 2,718.06		
		7	12	2		load waste into containers for hauling	1.9	1.9	m3	C.4.01	$ 10.23	$ 19.33		
		7	12	3		haul containers to Quarry 3 landfill	1.9	1.9	m3	C.4.25	$ 3.26	$ 6.16		
		7	12	4		breach contact water containment berm	1008.0	1008.0	m3	C.5.05	$ 1.23	$ 1,237.17		
		7	12	5		remove and cut liner from breach into manageable pieces	210.0	210.0	m2	C.3.02	$ 0.17	$ 35.78		
CM_001	Y	17	1	1	Closure Drain Reclaim Pond	Pump technician	170.0	170.0	day	day rate	$ 1,189.13	$ 202,151.32		first 2 seasons of pumping occur while under C&M, only last season accounted here
		17	1	2		Support person (camp, etc.)	0.0	0.0	day	day rate	$ 2,000.00	$ -		camp costs are covered under general closure activities
		17	1	3		Site Services Support &Maintenance	1.0	1.0	-	LS	$ 50,000.00	$ 50,000.00		first 2 seasons of pumping occur while under C&M
		17	1	4		Spare Parts & Consumables	1.0	1.0	-	LS	$ 20,000.00	$ 20,000.00		first 2 seasons of pumping occur while under C&M
Rock Fill Pads													**$ 1,052,105.17**	
WC_010	Y	19	10	1	Windy Summer Debris Collection	collect misc. debris scattered around site and stockpile	40000.0	40000.0	m2	C.3.10	$ 0.37	$ 14,997.54		
		19	10	2		load stockpiled debris into container for transport (to landfill)	30.0	30.0	m3	C.4.01	$ 10.23	$ 306.84		
		19	10	3		haul materials to landfill	30.0	30.0	m3	C.4.63	$ 4.04	$ 121.34		
WC_012	Y	19	12	1	Windy Reclaim Drill Holes	cut top of drill pipes and cap	889.0	889.0	each	C.3.09	$ 13.11	$ 11,653.69		
		19	12	2		load debris into containers for disposal	10.0	10.0	m3	C.4.01	$ 10.23	$ 101.82		
		19	12	3		Fill in low-lying areas (assumed sourced within 0.5km)	100.0	100.0	m3	C.5.02	$ 16.35	$ 1,635.29		
		19	12	4		supply and place coconut matting	100.0	100.0	m2	C.5.08	$ 4.84	$ 483.68		
		19	12	5		revegetate area	100.0	100.0	m2	C.5.13	$ 0.92	$ 92.03		
WC_011	Y	19	11	1	Windy Developed Areas (for regrading)	stake-out low lying areas in summer to place fill	1.0	1.0	day	C.5.14	$ 7,186.44	$ 7,186.44		
		19	11	2		apply nutrients for soil bioremediation	113.5	113.5	m3	H.07	$ 260.00	$ 29,510.00		
		19	11	3		excavate hydrocarbon contaminated soil and place in megabags	717.2	717.2	m3	C.4.12	$ 72.73	$ 52,162.65		
		19	11	4		place megabags into containers	717.2	717.2	m3	C.4.61	$ 20.91	$ 14,995.32		
		19	11	5		haul containers to Madrid North Underground	717.2	717.2	m3	C.4.14	$ 4.70	$ 3,370.62		
		19	11	6		excavate and place soil in megabags (for transport to Doris OVB dump)	60.0	60.0	m3	C.4.12	$ 72.73	$ 4,363.86		
		19	11	7		place megabags into containers	60.0	60.0	m3	C.5.02	$ 16.35	$ 981.17		
		19	11	8		empty megabags	60.0	60.0	m3	C.4.62	$ 34.30	$ 2,058.13		
		19	11	9		haul containers to Doris OVB Dump	60.0	60.0	m3	C.4.60	$ 2.77	$ 165.94		
		19	11	10		Load, Haul, Dump, Place from Quarry D (less than 1 km)	662.0	662.0	m3	C.5.12	$ 12.69	$ 8,398.25		
PLA_003	Y	18	3	1	Patch Lake Developed Areas (for regrading)	excavate impacted soil and place in megabags	243.6	243.6	m3	C.4.12	$ 72.73	$ 17,717.27		
		18	3	2		haul containers to Madrid North Underground	243.6	243.6	m3	C.4.14	$ 4.70	$ 1,144.85		
		18	3	3		backfill area with ROQ	243.6	243.6	m3	C.5.12	$ 12.69	$ 3,090.21		
		18	3	4		regrade for positive drainage	291.0	291.0	m2	C.5.05	$ 1.23	$ 357.16		
		18	3	5		in-situ bioremediation	39.0	39.0	m3	H.07	$ 260.00	$ 10,140.00		
		18	3	6		install silt fencing	1.0	1.0	LS	X.18	$ 2,500.00	$ 2,500.00		
RB_006	Y	1	6	1	Roberts Bay Laydown Area	decommission vehicle plug system	1.0	1.0	each	C.1.05	$ 679.52	$ 679.52		
		1	6	2		remove cables and posts	8.0	8.0	each	C.3.14	$ 411.17	$ 3,289.39		
		1	6	3		collect all debris	63291.6	63291.6	m2	C.3.10	$ 0.37	$ 23,730.46		
		1	6	4		load waste into containers	20.0	20.0	m3	C.4.01	$ 10.23	$ 204.56		
		1	6	5		haul debris to quarry 3 landfill	20.0	20.0	m3	C.4.15	$ 5.99	$ 119.87		
		1	6	6		regrade area for positive drainage	63291.6	63291.6	m2	C.5.18	$ 0.01	$ 625.29		
RB_011	Y	1	11	1	Roberts Bay Developed Areas (for regrading)	regrade for positive drainage	137500.0	137500.0	m2	C.5.18	$ 0.01	$ 1,358.43		
RP_001	Y	12	1	1	Reagent Pads Equipment Laydown Area	collect all debris	35244.0	35244.0	m2	C.3.10	$ 0.37	$ 13,214.33		
		12	1	2		load waste for transport to landfill	20.0	20.0	m3	C.4.01	$ 10.23	$ 204.56		
		12	1	3		regrade area for positive drainage	35244.0	35244.0	m2	C.5.18	$ 0.01	$ 348.19		
		12	1	4		haul waste to Quarry 3 Landfill	20.0	20.0	m3	C.4.17	$ 5.23	$ 104.60		
RP_002	Y	12	2	1	Reagent Pads Materials Laydown Area	collect all debris	25421.0	25421.0	m2	C.3.10	$ 0.37	$ 9,531.31		
		12	2	2		load waste to ship to Landfill	20.0	20.0	m3	C.4.01	$ 10.23	$ 204.56		
		12	2	3		regrade area for positive drainage	25421.0	25421.0	m2	C.5.18	$ 0.01	$ 251.15		
		12	2	4		haul waste to Quarry 3 Landfill	20.0	20.0	m3	C.4.17	$ 5.23	$ 104.60		
RP_003	Y	12	3	1	Reagent Pads Ammonium Nitrate Storage Area	remove and stockpile liner protection cover	893.2	893.2	m3	C.5.04	$ 2.75	$ 2,455.02		
		12	3	2		clean liner	2481.0	2481.0	m2	C.2.10	$ 0.41	$ 1,022.30		
		12	3	3		remove and cut liner into manageable pieces	2481.0	2481.0	m2	C.3.02	$ 0.17	$ 422.71		
		12	3	4		load waste for transport to landfill	22.3	22.3	m3	C.4.01	$ 10.23	$ 228.38		
		12	3	5		Haul waste to Quarry 3 Landfill	22.3	22.3	m3	C.4.17	$ 5.23	$ 116.78		
		12	3	6		level containment berms	31.7	31.7	m2	C.5.05	$ 1.23	$ 38.91		
		12	3	7		regrade area for positive drainage	2481.0	2481.0	m2	C.5.18	$ 0.01	$ 24.51		
WM_001	Y	13	1	1	Waste Management Area Land Farm	load contained contaminated soils into megabags for hauling	100.0	100.0	m3	C.4.12	$ 72.73	$ 7,273.10		
		13	1	2		haul megabags to Doris underground	100.0	100.0	m3	C.5.22	$ 15.37	$ 1,536.70		
		13	1	3		treat contained water and discharge	1.0	1.0	LS	X.03	$ 5,000.00	$ 5,000.00		
		13	1	4		remove and stockpile liner protection cover	2591.0	2591.0	m3	C.5.04	$ 2.75	$ 7,121.87		
		13	1	5		clean liner	4384.0	4384.0	m2	C.2.10	$ 0.41	$ 1,806.44		
		13	1	6		remove and cut liner into manageable pieces	4384.0	4384.0	m2	C.3.02	$ 0.17	$ 746.95		
		13	1	7		load waste for transport to landfill	118.4	118.4	m3	C.4.01	$ 10.23	$ 1,210.66		
		13	1	8		Haul Material to Quarry 3 Landfill	118.4	118.4	m3	C.4.14	$ 4.70	$ 556.29		
		13	1	9		breach contact water containment berm	90.0	90.0	m3	C.5.04	$ 2.75	$ 247.38		
		13	1	10		regrade area for positive drainage	4384.0	4384.0	m2	C.5.18	$ 0.01	$ 43.31		
WM_002	Y	13	2	1	Waste Management Area Batch Plant Pad	demolish tent structure	3701.7	3701.7	m3	C.3.05	$ 13.12	$ 48,568.17		
		13	2	2		collect all debris	740.3	740.3	m2	C.3.10	$ 0.37	$ 277.58		
		13	2	3		load waste for transport to landfill	55.9	55.9	m3	C.4.01	$ 10.23	$ 571.56		
		13	2	4		haul waste to Quarry 3 Landfill	55.9	55.9	m3	C.4.17	$ 5.23	$ 292.27		
		13	2	5		regrade area for positive drainage	740.3	740.3	m2	C.5.18	$ 0.01	$ 7.31		
WM_003	Y	13	3	1	Waste Management Area Burn Pan	Collect ashes and place in containers	0.1	0.1	m3	C.2.07	$ 763.55	$ 76.35		
		13	3	2		Dismantle (welding crew)	1.0	1.0	each	C.3.08	$ 534.78	$ 534.78		
		13	3	3		load waste into containers	0.2	0.2	m3	C.4.01	$ 10.23	$ 2.52		
		13	3	4		haul containers to Boston landfill	0.2	0.2	m3	C.4.44	$ 3.26	$ 0.80		
		13	3	5		regrade area for positive drainage	400.0	400.0	m2	C.5.18	$ 0.01	$ 3.95		
WM_004	Y	13	4	1	Waste Management Area Core Storage Area	load core boxes into containers for shipping	500.0	500.0	each	C.6.02	$ 11.36	$ 5,679.34		
		13	4	2		collect all debris	10000.0	10000.0	m2	C.3.10	$ 0.37	$ 3,749.38		
		13	4	3		load waste into containers	6.0	6.0	m3	C.4.01	$ 10.23	$ 61.37		
		13	4	4		haul debris to Boston landfill	6.0	6.0	m3	C.4.44	$ 3.26	$ 19.56		
DM_032	Y	2	32	1	Doris Developed Areas (for regrading)	regrade for positive drainage	460000.0	460000.0	m2	C.5.18	$ 0.01	$ 4,544.58		
DW_008	Y	3	8	1	Doris-Windy All Weather Road Core Storage Area	load core boxes into containers for shipping	1665.0	1665.0	m3	C.4.01	$ 10.23	$ 17,029.48		
		3	8	2		haul containers to Quarry 3 landfill	1665.0	1665.0	m3	C.4.44	$ 3.26	$ 5,427.73		
		3	8	3		collect all debris	10000.0	10000.0	m2	C.3.10	$ 0.37	$ 3,749.38		
		3	8	4		load waste into containers	6.0	6.0	m3	C.4.01	$ 10.23	$ 61.37		
		3	8	5		haul debris to Quarry 3 landfill	6.0	6.0	m3	C.4.44	$ 3.26	$ 19.56		
MN_006	Y	5	6	1	Madrid North Portal Pad	load contained contaminated soils into megabags for hauling	7635.0	7635.0	m3	C.4.12	$ 72.73	$ 555,300.98		assume 50% of liner protection cover is contaminated
		5	6	2		haul megabags to Roberts bay laydown	7635.0	7635.0	m3	C.5.22	$ 15.37	$ 117,327.05		
MN_010	Y	5	10	1	Madrid North Laydown Area	decommission vehicle plug system	5.0	5.0	each	C.1.05	$ 679.52	$ 3,397.58		
		5	10	2		remove cables and posts	5.0	5.0	each	C.3.14	$ 411.17	$ 2,055.87		
		5	10	3		collect all debris	1473.0	1473.0	m2	C.3.10	$ 0.37	$ 552.28		
		5	10	4		load waste into containers	0.9	0.9	m3	C.4.01	$ 10.23	$ 9.04		
		5	10	5		haul debris to quarry 3 landfill	0.9	0.9	m3	C.4.59	$ 4.92	$ 4.34		
MN_014	Y	5	14	1	Madrid North Calcium Chloride Laydown	load contained contaminated soils into megabags for hauling	6.3	6.3	m3	C.4.12	$ 72.73	$ 454.57		assume 50% of liner protection cover is contaminated
		5	14	2		haul megabags to Madrid north underground	6.3	6.3	m3	C.4.23	$ 6.29	$ 39.29		
		5	14	3		collect all debris	25.0	25.0	m2	C.3.10	$ 0.37	$ 9.37		
		5	14	4		clean liner	25.0	25.0	m2	C.2.10	$ 0.41	$ 10.30		
		5	14	5		remove and cut liner into manageable pieces	25.0	25.0	m2	C.3.02	$ 0.17	$ 4.26		
		5	14	6		load waste into containers	0.2	0.2	m3	C.4.01	$ 10.23	$ 2.30		
		5	14	7		haul containers to Quarry 3 landfill	0.2	0.2	m3	C.4.25	$ 3.26	$ 0.73		
MN_016	Y	5	16	1	Madrid North Developed Areas (for regrading)	regrade for positive drainage	95000.0	95000.0	m2	C.5.18	$ 0.01	$ 938.55		
MS_009	Y	7	9	1	Madrid South Laydown Pad	decommission vehicle plug system	5.0	5.0	each	C.1.05	$ 679.52	$ 3,397.58		
		7	9	2		remove cables and posts	5.0	5.0	each	C.3.14	$ 411.17	$ 2,055.87		
		7	9	3		collect all debris	5967.0	5967.0	m2	C.3.10	$ 0.37	$ 2,237.26		
		7	9	4		load waste into containers off-site	3.6	3.6	m3	C.4.01	$ 10.23	$ 36.62		
		7	9	5		haul debris to quarry 3 landfill	3.6	3.6	m3	C.4.25	$ 3.26	$ 11.67		
MS_018	Y	7	18	1	Madrid South Calcium Chloride Laydown	load contained contaminated soils into megabags for hauling	5.6	5.6	m3	C.4.12	$ 72.73	$ 409.11		assume 50% of liner protection cover is contaminated
		7	18	2		haul megabags to Madrid south underground	5.6	5.6	m3	C.5.22	$ 15.37	$ 86.44		
		7	18	3		collect all debris	18.8	18.8	m2	C.3.10	$ 0.37	$ 7.03		
		7	18	4		clean liner	18.8	18.8	m2	C.2.10	$ 0.41	$ 7.73		
		7	18	5		remove and cut liner into manageable pieces	18.8	18.8	m2	C.3.02	$ 0.17	$ 3.19		
		7	18	6		demolish tent structure	46.9	46.9	m3	C.3.05	$ 13.12	$ 615.03		
		7	18	7		load waste into containers	2.0	2.0	m3	C.4.01	$ 10.23	$ 20.84		
		7	18	8		haul containers to Quarry 3 landfill	2.0	2.0	m3	C.4.25	$ 3.26	$ 6.64		
MS_021	Y	7	21	1	Madrid South Developed Areas (for regrading)	regrade for positive drainage	108340.0	108340.0	m2	C.5.18	$ 0.01	$ 1,070.35		
Roads and Transportation													**$ 1,288,880.53**	
MN_024	Y	5	24	1	Madrid North Fuel Storage Facility Access Road	crown road for positive drainage	0.6	0.6	km	C.5.17	$ 866.22	$ 501.54		
MN_025	Y	5	25	1	Madrid North Fuel Storage Facility Bypass Road	crown road for positive drainage	0.1	0.1	km	C.5.17	$ 866.22	$ 100.48		
WC_004	Y	19	4	1	Windy Winter Road to Patch	Fill in low-lying areas with rock fill (to prevent ponding)	225.0	225.0	m	C.5.25	$ 12.27	$ 2,761.54		
PLA_002	Y	18	2	1	Patch Lake Roads and Trails	Fill in low-lying areas	119.4	119.4	m3	C.5.25	$ 12.27	$ 1,465.46		
RB_015	Y	1	15	1	Roberts Bay 10ML Fuel Storage Facility Access Road C	remove culvert and create swale	40.0	40.0	lm	C.5.15	$ 96.57	$ 3,862.74		
RB_014	Y	1	14	1	Roberts Bay 10ML Fuel Storage Facility Access Road	crown road for positive drainage	0.2	0.2	km	C.5.17	$ 866.22	$ 159.38		
RB_012	Y	1	12	1	Roberts Bay Cargo Dock	remove rock fill to 0.3 m below llwl	24867.6	24867.6	m3	C.5.04	$ 2.75	$ 68,353.45		
		1	12	2		remove on-shore mooring points	2.0	2.0	LS	X.01	$ 1,200.00	$ 2,400.00		
		1	12	2		cut sheet piles to 0.3 m below llwl	1.0	1.0	each	X.15	$ 50,000.00	$ 50,000.00		
		1	12	2		haul cut metal to quarry 3 landfill	15.9	15.9	m3	C.4.15	$ 5.99	$ 95.11		
RB_001	Y	1	1	1	Roberts Bay Jetty	remove rock fill to 0.3 m below llwl	1216.6	1216.6	m3	C.5.04	$ 2.75	$ 3,344.10		
		1	1	3		remove on-shore mooring points	1.0	1.0	LS	X.01	$ 1,200.00	$ 1,200.00		
		1	1	3		remove mooring buoy	1.0	1.0	LS	X.02	$ 2,500.00	$ 2,500.00		
		1	1	2		crown jetty for positive drainage	1045.2	1045.2	m2	C.5.05	$ 1.23	$ 1,282.83		
MNT_003	Y	4	3	1	Madrid North - TIA Road Bridge crossing	remove bridge (timber deck and steel girders)	1.0	1.0	each	X.06	$ 50,000.00	$ 50,000.00		
		4	3	4		cut piles to ground surface	8.0	8.0	each	C.3.08	$ 534.78	$ 4,278.27		
		4	3	3		load waste materials into containers for shipping	92.0	92.0	m3	C.4.01	$ 10.23	$ 941.08		
		4	3	2		haul container to Boston landfill	92.0	92.0	m3	C.4.45	$ 9.18	$ 845.08		
		4	3	5		remove traffic barriers (boulders)	24.0	24.0	m3	C.5.04	$ 2.75	$ 65.97		
		4	3	4		reslope abutments	225.0	225.0	m2	C.5.06	$ 3.27	$ 736.41		
MNT_002	Y	4	2	1	Madrid North - TIA Road Culvert crossings	remove culvert and create swale	60.0	60.0	lm	C.5.15	$ 96.57	$ 5,794.11		
MNT_001	Y	4	1	1	Madrid North - TIA Road All-Weather Road	crown road for positive drainage	5.4	5.4	km	C.5.17	$ 866.22	$ 4,681.92		
CDR_003	Y	21	3	1	Cargo Dock Access Road Bridge Crossing	remove bridge (timber deck and steel girders)	1.0	1.0	each	X.06	$ 50,000.00	$ 50,000.00		
		21	3	2		cut piles to ground surface	8.0	8.0	each	C.3.08	$ 534.78	$ 4,278.27		
		21	3	2		load waste materials into containers for shipping	110.0	110.0	m3	C.4.01	$ 10.23	$ 1,125.18		
		21	3	2		haul container to quarry 3 landfill	110.0	110.0	m3	C.4.45	$ 9.18	$ 1,010.41		
		21	3	3		remove traffic barriers (boulders)	24.0	24.0	m3	C.5.04	$ 2.75	$ 65.97		
		21	3	3		reslope abutments	225.0	225.0	m2	C.5.06	$ 3.27	$ 736.41		
CDR_002	Y	21	2	1	Cargo Dock Access Road Culverts	remove culvert and create swale	30.0	30.0	lm	C.5.15	$ 96.57	$ 2,897.05		
CDR_001	Y	21	1	1	Cargo Dock Access Road All-Weather Road	crown road for positive drainage	2.8	2.8	km	C.5.17	$ 866.22	$ 2,425.42		
RB_008	Y	1	8	1	Roberts Bay Fuel Transfer Access Road	crown road for positive drainage	0.3	0.3	km	C.5.17	$ 866.22	$ 291.05		
SR_001	Y	15	1	1	Secondary Road Secondary Road	Remove Doris Creek bridge	1.0	1.0	LS	X.06	$ 50,000.00	$ 50,000.00		
		15	1	2		Cut tailings line running alongside the road into manageable pieces	5750.0	5750.0	m	C.3.03	$ 11.08	$ 63,735.57		
		15	1	3		Strap together or load pipe sections in containers for transport to landfill	2167.7	2167.7	m3	C.4.01	$ 10.23	$ 22,171.04		
		15	1	4		crown road for positive drainage	3.5	3.5	km	C.5.17	$ 866.22	$ 3,014.45		
		15	1	5		Haul waste to the landfill	2167.7	2167.7	m3	C.4.19	$ 4.17	$ 9,048.34		
		15	1	6		Remove pipe culvert east of the bridge	18.8	18.8	lm	C.5.15	$ 96.57	$ 1,815.49		
SR_003	Y	15	3	1	Secondary Road Tail Lake Access Road	Crown road for positive drainage	0.3	0.3	km	C.5.17	$ 866.22	$ 259.87		
Q3_002	Y	16	2	1	Quarry 3 Access Road	Crown road for positive drainage	0.2	0.2	km	C.5.17	$ 866.22	$ 199.23		
DM_007	Y	2	7	1	Doris Helicopter Support Facilities	dismantle helicopter pads and walkway	15.0	15.0	m3	C.3.06	$ 4.18	$ 62.78		
		2	7	2		demolish helishack	19.3	19.3	m3	C.3.05	$ 13.12	$ 253.75		
		2	7	3		decommission washcar and other facilities	70.8	70.8	m3	C.3.05	$ 13.12	$ 928.38		
		2	7	4		collect debris	180.2	180.2	m2	C.3.10	$ 0.37	$ 67.55		
		2	7	5		load debris into containers for transport	213.3	213.3	m3	C.4.01	$ 10.23	$ 2,181.62		
		2	7	6		haul debris to quarry 3 landfill	213.3	213.3	m3	C.4.14	$ 4.70	$ 1,002.45		
DM_027	Y	2	27	1	Doris Airstrip	decommission airstrip	2.0	2.0	Each	C.1.09	$ 322.61	$ 645.22		
		2	27	2		collect all debris	67722.0	67722.0	m2	C.3.10	$ 0.37	$ 25,391.58		
		2	27	3		load waste into containers	40.6	40.6	m3	C.4.01	$ 10.23	$ 415.59		
		2	27	4		haul containers to Quarry 3 landfill	40.6	40.6	m3	C.4.16	$ 3.48	$ 141.61		
		2	27	5		crown airstrip and airstrip expansion for positive drainage	67722.0	67722.0	m2	C.5.05	$ 1.23	$ 83,118.60		
DM_028	Y	2	28	1	Doris Airstrip Aprons	crown for positive drainage	15500.0	15500.0	m2	C.5.05	$ 1.23	$ 19,023.93		
		2	28	2		decommission electrical, and heating from traffic control tower	1.0	1.0	each	C.1.07	$ 374.34	$ 374.34		
		2	28	3		demolish control tower structure (wood shack)	30.5	30.5	m3	C.3.05	$ 13.12	$ 400.18		
		2	28	4		disconnect containers and prep for shipping	5.0	5.0	each	C.1.08	$ 1,368.94	$ 6,844.69		
		2	28	5		haul trailers to Quarry 3 landfill	235.6	235.6	m3	C.4.14	$ 4.70	$ 1,107.39		
		2	28	6		collect all debris	15500.0	15500.0	m2	C.3.10	$ 0.37	$ 5,811.55		
		2	28	7		load waste into containers	29.6	29.6	m3	C.4.01	$ 10.23	$ 302.51		
		2	28	8		haul containers to Quarry 3 landfill	29.6	29.6	m3	C.4.14	$ 4.70	$ 139.00		
DM_029	Y	2	29	1	Doris Airstrip Lighting	remove lighting fixtures (airstrip lighting, approach lights)	70.0	70.0	each	C.1.10	$ 42.47	$ 2,972.88		
DM_031	Y	2	31	1	Doris Primary Road	Crown road for positive drainage	2.4	2.4	km	C.5.17	$ 866.22	$ 2,096.25		
DW_001	Y	3	1	1	Doris-Windy All Weather Road All weather road	crown road for positive drainage	7.3	7.3	km	C.5.17	$ 866.22	$ 6,338.82		
DW_004	Y	3	4	1	Doris-Windy All Weather Road Clear-span crossings	remove bridge (timber deck and steel girders)	3.0	3.0	each	X.06	$ 50,000.00	$ 150,000.00		
		3	4	2		load waste materials into containers	138.0	138.0	m3	C.4.01	$ 10.23	$ 1,410.96		
		3	4	3		haul container to quarry 3 landfill	138.0	138.0	m3	C.4.59	$ 4.92	$ 678.13		
DW_005	Y	3	5	1	Doris-Windy All Weather Road Arched Culvert Crossing	remove arched culvert	1.0	1.0	each	X.12	$ 100,000.00	$ 100,000.00		
		3	5	2		load waste into containers	180.0	180.0	m3	C.4.01	$ 10.23	$ 1,841.03		
		3	5	3		haul container to quarry 3 landfill	180.0	180.0	m3	C.4.25	$ 3.26	$ 586.78		
MN_017	Y	5	17	1	Madrid North Vent Raise Access Road	crown road for positive drainage	1.1	1.1	km	C.5.17	$ 866.22	$ 977.10		
		5	17	2		remove culvert and create swale	10.0	10.0	lm	C.5.15	$ 96.57	$ 965.68		
MN_020	Y	5	20	1	Madrid North Culverts	remove culvert and create swale	48.0	48.0	lm	C.5.15	$ 96.57	$ 4,635.29		
MSR_001	Y	6	1	1	Madrid South All Weather Road All-Weather Road	crown road for positive drainage	4.9	4.9	km	C.5.17	$ 866.22	$ 4,281.73		
MSR_002	Y	6	2	1	Madrid South All Weather Road Culvert crossings	remove culvert and create swale	2.0	2.0	lm	C.5.15	$ 96.57	$ 193.14		
MS_010	Y	7	10	1	Madrid South Infrastructure Access Road	sure activities are required, addressed under Madrid South developed areas								
MS_011	Y	7	11	1	Madrid South Portal Haul Road	sure activities are required, addressed under Madrid South developed areas								
MS_013	Y	7	13	1	Madrid South Vent Raise Pad Access Road	crown road for positive drainage	0.5	0.5	km	C.5.17	$ 866.22	$ 420.98		
MBR_001	Y	8	1	1	Madrid-Boston All Weather Road All-Weather Road	crown road for positive drainage	52.9	52.9	km	C.5.17	$ 866.22	$ 45,864.62		
MBR_022	Y	8	22	1	Madrid-Boston All Weather Road Crossing C-MBR-7	remove bridge (timber deck and steel girders)	1.0	1.0	each	X.06	$ 50,000.00	$ 50,000.00		
		8	22	2		cut piles to ground surface	8.0	8.0	each	C.3.08	$ 534.78	$ 4,278.27		
		8	22	3		load waste materials into containers for shipping	135.0	135.0	m3	C.4.01	$ 10.23	$ 1,380.77		
		8	22	4		haul container to Quarry 3 landfill	135.0	135.0	m3	C.4.45	$ 9.18	$ 1,239.92		
		8	22	5		remove traffic barriers (boulders)	24.0	24.0	m3	C.5.04	$ 2.75	$ 65.97		
		8	22	6		reslope abutments	225.0	225.0	m2	C.5.06	$ 3.27	$ 736.41		
MBR_023	Y	8	23	1	Madrid-Boston All Weather Road Crossing C-MBR-8	remove bridge (timber deck and steel girders)	1.0	1.0	each	X.06	$ 50,000.00	$ 50,000.00		
		8	23	2		cut piles to ground surface	8.0	8.0	each	C.3.09	$ 13.11	$ 104.87		
		8	23	3		load waste materials into containers for shipping	126.0	126.0	m3	C.4.01	$ 10.23	$ 1,288.72		
		8	23	4		haul container to Boston landfill	126.0	126.0	m3	C.4.46	$ 7.09	$ 893.21		
		8	23	5		remove traffic barriers (boulders)	24.0	24.0	m3	C.5.04	$ 2.75	$ 65.97		
		8	23	6		reslope abutments	225.0	225.0	m2	C.5.06	$ 3.27	$ 736.41		
MBR_024	Y	8	24	1	Madrid-Boston All Weather Road Crossing C-MBR-9	remove bridge (timber deck and steel girders)	1.0	1.0	each	X.06	$ 50,000.00	$ 50,000.00		
		8	24	2		cut piles to ground surface	8.0	8.0	each	C.3.09	$ 13.11	$ 104.87		
		8	24	3		load waste materials into containers for shipping	180.0	180.0	m3	C.4.01	$ 10.23	$ 1,841.03		
		8	24	4		haul container to Boston landfill	180.0	180.0	m3	C.4.47	$ 4.92	$ 884.83		
		8	24	5		remove traffic barriers (boulders)	24.0	24.0	m3	C.5.04	$ 2.75	$ 65.97		
		8	24	6		reslope abutments	225.0	225.0	m2	C.5.05	$ 1.23	$ 276.15		
MBR_025	Y	8	25	1	Madrid-Boston All Weather Road Crossing C-MBR-10	remove culvert and create swale	34.0	34.0	lm	C.5.15	$ 96.57	$ 3,283.33		
MBR_026	Y	8	26	1	Madrid-Boston All Weather Road Crossing C-MBR-11	remove culvert and create swale	34.0	34.0	lm	C.5.15	$ 96.57	$ 3,283.33		
MBR_027	Y	8	27	1	Madrid-Boston All Weather Road Crossing C-MBR-12	remove bridge (timber deck and steel girders)	1.0	1.0	each	X.06	$ 50,000.00	$ 50,000.00		
		8	27	2		cut piles to ground surface	8.0	8.0	each	C.3.09	$ 13.11	$ 104.87		
		8	27	3		load waste materials into containers for shipping	180.0	180.0	m3	C.4.01	$ 10.23	$ 1,841.03		
		8	27	4		haul container to Boston landfill	180.0	180.0	m3	C.4.50	$ 2.28	$ 409.82		
		8	27	5		remove traffic barriers (boulders)	24.0	24.0	m3	C.5.04	$ 2.75	$ 65.97		
		8	27	6		reslope abutments	225.0	225.0	m2	C.5.06	$ 3.27	$ 736.41		
MBR_028	Y	8	28	1	Madrid-Boston All Weather Road Crossing C-MBR-13	remove culvert and create swale	36.0	36.0	lm	C.5.15	$ 96.57	$ 3,476.46		
MBR_029	Y	8	29	1	Madrid-Boston All Weather Road Crossing C-MBR-14	remove culvert and create swale	34.0	34.0	lm	C.5.15	$ 96.57	$ 3,283.33		
MBR_030	Y	8	30	1	Madrid-Boston All Weather Road Crossing C-MBR-15	remove bridge (timber deck and steel girders)	1.0	1.0	each	X.06	$ 50,000.00	$ 50,000.00		
		8	30	2		cut piles to ground surface	8.0	8.0	each	C.3.09	$ 13.11	$ 104.87		
		8	30	3		load waste materials into containers for shipping	108.0	108.0	m3	C.4.01	$ 10.23	$ 1,104.62		
		8	30	4		haul container to Boston landfill	108.0	108.0	m3	C.4.53	$ 1.79	$ 192.80		
		8	30	5		remove traffic barriers (boulders)	24.0	24.0	m3	C.5.04	$ 2.75	$ 65.97		
		8	30	6		reslope abutments	225.0	225.0	m2	C.5.06	$ 3.27	$ 736.41		
MBR_031	Y	8	31	1	Madrid-Boston All Weather Road Crossing C-MBR-16	remove bridge (timber deck and steel girders)	1.0	1.0	each	X.06	$ 50,000.00	$ 50,000.00		
		8	31	2		cut piles to ground surface	8.0	8.0	each	C.3.09	$ 13.11	$ 104.87		
		8	31	3		load waste materials into containers for shipping	90.0	90.0	m3	C.4.01	$ 10.23	$ 920.51		
		8	31	4		haul container to Boston landfill	90.0	90.0	m3	C.4.54	$ 2.17	$ 195.59		
		8	31	5		remove traffic barriers (boulders)	24.0	24.0	m3	C.5.04	$ 2.75	$ 65.97		
		8	31	6		reslope abutments	225.0	225.0	m2	C.5.06	$ 3.27	$ 736.41		
MBR_032	Y	8	32	1	Madrid-Boston All Weather Road Crossing C-MBR-17	remove culvert and create swale	50.0	50.0	lm	C.5.15	$ 96.57	$ 4,828.42		
MBR_033	Y	8	33	1	Madrid-Boston All Weather Road Crossing C-MBR-18	remove culvert and create swale	34.0	34.0	lm	C.5.15	$ 96.57	$ 3,283.33		
MBR_034	Y	8	34	1	Madrid-Boston All Weather Road Crossing C-MBR-19	remove bridge (timber deck and steel girders)	1.0	1.0	each	X.06	$ 50,000.00	$ 50,000.00		
		8	34	2		cut piles to ground surface	8.0	8.0	each	C.3.09	$ 13.11	$ 104.87		
		8	34	3		load waste materials into containers for shipping	108.0	108.0	m3	C.4.01	$ 10.23	$ 1,104.62		
		8	34	4		haul container to Boston landfill	108.0	108.0	m3	C.4.57	$ 2.77	$ 298.98		
		8	34	5		remove traffic barriers (boulders)	24.0	24.0	m3	C.5.04	$ 2.75	$ 65.97		
		8	34	6		reslope abutments	225.0	225.0	m2	C.5.06	$ 3.27	$ 736.41		
MBR_035	Y	8	35	1	Madrid-Boston All Weather Road Crossing C-MBR-20	remove culvert and create swale	40.0	40.0	lm	C.5.15	$ 96.57	$ 3,862.74		
Underground Workings													**$ 341,870.12**	
DM_012	Y	2	12	1	Doris Portal and Underground Works	remove ducts, pipes, electrical cables	100.0	100.0	lm	C.3.16	$ 119.02	$ 11,901.55		
		2	12	2		construct portal plug	706.8	706.8	m3	C.5.03	$ 24.53	$ 17,337.32		
DM_030	Y	2	30	1	Doris Primary Vent Raise	Remove ducts, pipes, and cables	100.0	100.0	lm	C.3.16	$ 119.02	$ 11,901.55		
		2	30	2		Construct a concrete cap (0.5 m thick reinforced concrete) to seal the top	1.0	1.0	each	C.6.03	$ 14,292.68	$ 14,292.68		
		2	30	3		Decommission and dismantle all ventilation and heating facilities	4.0	4.0	each	C.1.05	$ 679.52	$ 2,718.06		
		2	30	4		Prepare units for shipping	1.0	1.0	each	C.1.08	$ 1,368.94	$ 1,368.94		
		2	30	5		haul units to quarry 3 landfill	33.2	33.2	m3	C.4.14	$ 4.70	$ 156.03		
		2	30	6		Regrade pads for positive drainage	4150.0	4150.0	m2	C.5.18	$ 0.01	$ 41.00		
		2	30	7		Drain and decommission Enviro Tank	1.0	1.0	each	C.2.03	$ 0.02	$ 0.02		
		2	30	8		Haul Enviro Tank to Roberts Bay	33.2	33.2	m3	C.4.04	$ 2.30	$ 76.27		
		2	30	9		Remove liner and cut into manageable pieces	1230.0	1230.0	m2	C.3.02	$ 0.17	$ 209.57		
		2	30	10		Load waste for transport to landfill	11.1	11.1	m3	C.4.01	$ 10.23	$ 113.22		
		2	30	11		Haul waste to landfill	11.1	11.1	m3	C.4.14	$ 4.70	$ 52.03		
		2	30	12		Backfill area to prevent permanent ponding	4150.0	4150.0	m2	C.5.05	$ 1.23	$ 5,093.50		

Work Area Code		Item	Task	Sub-task	Facility Name	Task	Quantity	Quantity	Unit	Cost Code	Unit Cost	Activity Total	Subtotals	Source / Comments
DM_033	Y	2	33	1	Doris Connector Vent Raise	Remove ducts, pipes, and cables	100.0	100.0	lm	C.3.16	$ 119.02	$ 11,901.55		
		2	33	2		Decommission and dismantle all ventilation facilities	2.0	2.0	each	C.1.05	$ 679.52	$ 1,359.03		
		2	33	3		Prepare units for shipping	1.0	1.0	each	C.1.08	$ 1,368.94	$ 1,368.94		
		2	33	4		haul units to quarry 3 landfill	33.2	33.2	each	C.4.14	$ 4.70	$ 156.03		
		2	33	5		Construct a concrete cap (0.5 m thick reinforced concrete) to seal the top	1.0	1.0	each	C.6.03	$ 14,292.68	$ 14,292.68		
		2	33	6		Remove culvert	1.0	1.0	each	C.5.15	$ 96.57	$ 96.57		
		2	33	7		Crown road for positive drainage	0.2	0.2	km	C.5.17	$ 866.22	$ 181.04		
DM_034	Y	2	34	1	Doris Central Vent Raise	Remove ducts, pipes, and cables	100.0	100.0	lm	C.3.16	$ 119.02	$ 11,901.55		
		2	34	2		Decommission and dismantle all ventilation facilities	2.0	2.0	each	C.1.05	$ 679.52	$ 1,359.03		
		2	34	3		Prepare units for shipping off-site	1.0	1.0	each	C.1.08	$ 1,368.94	$ 1,368.94		
		2	34	4		haul units to quarry 3 landfill	33.2	33.2	each	C.4.14	$ 4.70	$ 156.03		
		2	34	5		Construct a concrete cap (0.5 m thick reinforced concrete) to seal the top	1.0	1.0	each	C.6.03	$ 14,292.68	$ 14,292.68		
		2	34	6		Remove culvert	1.0	1.0	each	C.5.15	$ 96.57	$ 96.57		
		2	34	7		Crown road for positive drainage	0.7	0.7	km	C.5.17	$ 866.22	$ 613.28		
MN_012	Y	5	12	1	Madrid North Portal and Underground Works	remove ducts, pipes, electrical cables	100.0	100.0	lm	C.3.16	$ 119.02	$ 11,901.55		
		5	12	2		construct portal plug	706.8	706.8	m3	C.5.03	$ 24.53	$ 17,337.32		
MN_018	Y	5	18	1	Madrid North Vent Raises	remove ducts, pipes, and cables	300.0	300.0	lm	C.3.16	$ 119.02	$ 35,704.66		
		5	18	2		construct a concrete cap (0.5 m thick reinforced concrete) to seal the top	3.0	3.0	each	C.6.03	$ 14,292.68	$ 42,878.04		
		5	18	3		decommission and dismantle all ventilation and heating facilities	4.0	4.0	each	C.1.05	$ 679.52	$ 2,718.06		
		5	18	4		prepare units for shipping	1.0	1.0	each	C.1.08	$ 1,368.94	$ 1,368.94		
		5	18	5		haul units to quarry 3 landfill	37.2	37.2	m3	C.4.25	$ 3.26	$ 121.30		
		5	18	6		regrade pads for positive drainage	11435.0	11435.0	m2	C.5.05	$ 1.23	$ 14,034.75		
MS_014	Y	7	14	1	Madrid South Air Heating Facility	Decommission and dismantle all ventilation and heating facilities	4.0	4.0	each	C.1.05	$ 679.52	$ 2,718.06		
		7	14	2		Prepare units for shipping	1.0	1.0	each	C.1.08	$ 1,368.94	$ 1,368.94		
		7	14	3		haul units to quarry 3 landfill	33.2	33.2	m3	C.4.25	$ 3.26	$ 108.23		
MS_015	Y	7	15	1	Madrid South Vent Raises	remove ducts, pipes, and cables	200.0	200.0	lm	C.3.16	$ 119.02	$ 23,803.11		
		7	15	2		construct a concrete cap (0.5 m thick reinforced concrete) to seal the top	2.0	2.0	each	C.6.03	$ 14,292.68	$ 28,585.36		
		7	15	3		decommission and dismantle all ventilation and heating facilities	4.0	4.0	each	C.1.05	$ 679.52	$ 2,718.06		
		7	15	4		prepare units for shipping	2.0	2.0	each	C.1.08	$ 1,368.94	$ 2,737.88		
		7	15	5		haul units to quarry 3 landfill	37.2	37.2	m3	C.4.25	$ 3.26	$ 121.30		
MS_016	Y	7	16	1	Madrid South Madrid South Portal and Underground W	remove ducts, pipes, electrical cables	100.0	100.0	lm	C.3.16	$ 119.02	$ 11,901.55		
		7	16	2		construct portal plug	706.8	706.8	m3	C.5.03	$ 24.53	$ 17,337.32		
Quarry													**$ 11,965.67**	
MBR_037	Y	8	37	1	Madrid-Boston All Weather Road Quarry AJ	no closure activities are required								
Q2_001	Y	14	1	1	Quarry 2 Quarry	no closure activities are required								
Q3_001	Y	16	1	1	Quarry 3 Quarry # 3	no closure activities are required								
DW_002	Y	3	2	1	Doris-Windy All Weather Road Quarry A	no closure activities are required								
DW_003	Y	3	3	1	Doris-Windy All Weather Road Quarry B	no closure activities are required								
MNT_004	Y	4	4	1	Madrid North - TIA Road Quarry AG	no closure activities are required								
DW_007	Y	3	7	1	Doris-Windy All Weather Road Quarry D	no closure activities are required								
MBR_002	Y	8	2	1	Madrid-Boston All Weather Road Quarry G	no closure activities are required								
MBR_003	Y	8	3	1	Madrid-Boston All Weather Road Quarry H	no closure activities are required								
MBR_004	Y	8	4	1	Madrid-Boston All Weather Road Quarry J	no closure activities are required								
MBR_005	Y	8	5	1	Madrid-Boston All Weather Road Quarry L	crown access road for positive drainage	0.3	0.3	Km	C.5.17	$ 866.22	$ 233.88		
MBR_006	Y	8	6	1	Madrid-Boston All Weather Road Quarry M	crown access road for positive drainage	0.7	0.7	Km	C.5.17	$ 866.22	$ 647.93		
MBR_007	Y	8	7	1	Madrid-Boston All Weather Road Quarry N	crown access road for positive drainage	0.3	0.3	Km	C.5.17	$ 866.22	$ 224.35		
MBR_008	Y	8	8	1	Madrid-Boston All Weather Road Quarry O	crown access road for positive drainage	0.1	0.1	Km	C.5.17	$ 866.22	$ 76.23		
MBR_009	Y	8	9	1	Madrid-Boston All Weather Road Quarry P	no closure activities are required								
MBR_010	Y	8	10	1	Madrid-Boston All Weather Road Quarry Q	no closure activities are required								
MBR_011	Y	8	11	1	Madrid-Boston All Weather Road Quarry R	no closure activities are required								
MBR_012	Y	8	12	1	Madrid-Boston All Weather Road Quarry S	crown access road for positive drainage	1.2	1.2	Km	C.5.17	$ 866.22	$ 1,010.88		
MBR_013	Y	8	13	1	Madrid-Boston All Weather Road Quarry T	no closure activities are required								
MBR_014	Y	8	14	1	Madrid-Boston All Weather Road Quarry U	crown access road for positive drainage	0.5	0.5	Km	C.5.17	$ 866.22	$ 392.40		
MBR_015	Y	8	15	1	Madrid-Boston All Weather Road Quarry V	no closure activities are required								
MBR_016	Y	8	16	1	Madrid-Boston All Weather Road Quarry W	crown access road for positive drainage	1.2	1.2	Km	C.5.17	$ 866.22	$ 1,024.74		
MBR_017	Y	8	17	1	Madrid-Boston All Weather Road Quarry X	crown access road for positive drainage	0.0	0.0	Km	C.5.17	$ 866.22	$ 34.65		
MBR_018	Y	8	18	1	Madrid-Boston All Weather Road Quarry Z	crown access road for positive drainage	0.5	0.5	Km	C.5.17	$ 866.22	$ 424.45		
MBR_019	Y	8	19	1	Madrid-Boston All Weather Road Quarry AA	no closure activities are required								
MBR_020	Y	8	20	1	Madrid-Boston All Weather Road Quarry AB	crown access road for positive drainage	1.2	1.2	Km	C.5.17	$ 866.22	$ 1,024.74		
MBR_021	Y	8	21	1	Madrid-Boston All Weather Road Quarry AD	no closure activities are required								
MNT_004	Y	4	4	1	Madrid North - TIA Road Quarry AG	no closure activities are required								
MBR_036	Y	8	36	1	Madrid-Boston All Weather Road Crusher	dismantle hopper/crusher parts for transport	2.0	2.0	each	C.1.11	$ 3,397.58	$ 6,795.16		
		8	36	2		load equipment into containers for transport (to Roberts bay)	33.2	33.2	m3	C.4.04	$ 2.30	$ 76.27		
Tailings													**$ 19,266,674.76**	
TIA_001	Y	10	1	1	TIA Subaerial Tailings Area	Produce ROQ (quarry drill&blast)	510000.0	510000.0	m3	C.5.24	$ 23.16	$ 11,811,727.84		
		10	1	2		LHDP ROQ to construct 0.3 m cover	510000.0	510000.0	m3	C.5.23	$ 8.94	$ 4,558,821.31		
		10	1	3		Produce additional ROQ for drainage channel armoring	18150.0	18150.0	m3	C.5.24	$ 23.16	$ 420,358.55		
		10	1	3		LHDP ROQ to construct 0.3 m drainage channel armoring	18150.0	18150.0	m3	C.5.23	$ 8.94	$ 162,240.41		
TIA_002	Y	10	2	1	TIA South Dam	no closure activities are required								
TIA_003	Y	10	3	1	TIA North Dam	each the dam by cutting a 20 m slot down to original ground (drill and blast)	7028.0	7028.0	m3	C.5.09	$ 24.76	$ 174,033.99		
		10	3	2		Load and haul material	31021.1	31021.1	m3	C.5.16	$ 8.82	$ 273,741.45		
		10	3	3		Remove thermosyphon radiators and superstructure	12.0	12.0	each	C.3.08	$ 534.78	$ 6,417.40		
		10	3	4		Clad the cut core faces for thermal protection	614.2	614.2	m3	C.5.02	$ 16.35	$ 10,044.59		
TIA_004	Y	10	4	1	TIA West Dam	no closure activities are required								
TIA_005	Y	10	5	1	TIA Shoreline Protection	Install separation geotextile	54340.0	54340.0	m2	M.02	$ 30.02	$ 1,631,327.29		
		10	5	2		Haul and place riprap to prevent erosion	24700.0	24700.0	m3	C.5.16	$ 8.82	$ 217,961.91		
TIA_006		10	6	1	TIA Interim Dyke	recontour dike crest	0.0	0.0	m3	C.5.04	$ 2.75	$ -		
		10	6	2		crown access road for positive drainage	0.0	0.0	km	C.5.17	$ 866.22	$ -		
Waste and Landfills													**$ 1,013,273.56**	
WC_009	Y	19	9	1	Windy Hazardous Waste Disposal Cost	hazardous waste one time flat fee	0.0	0.0	LS	M.09	$ 11,273.28	$ -		accounted for under W.002
		19	9	2		Haul hazardous waste to Roberts Bay	2.8	2.8	m3	C.4.23	$ 6.29	$ 17.60		
		19	9	3		disposal fees at Hay River	0.0	0.0	m3	H.05	$ 116.16	$ -		accounted for under W.002
WC_008	Y	19	8	1	Windy Disposal of demolition waste	Load debris for transport to landfill	2579.4	2579.4	m3	C.4.01	$ 10.23	$ 26,382.14		
		19	8	2		haul debris to landfill	2579.4	2579.4	m3	C.4.22	$ 5.02	$ 12,946.66		
		19	8	3		hydrocarbon contaminated soils to Madrid underground	4263.0	4263.0	m3	C.4.60	$ 2.77	$ 11,790.16		
PLA_004	Y	18	4	1	Patch Lake Disposal of demolition waste	hydrocarbon contaminated soil to Madrid underground	243.6	243.6	m3	C.4.60	$ 2.77	$ 673.72		
Q3_003	Y	16	3	1	Quarry 3 Landfill	empty seacan of debris, place and track pack	5278.4	5278.4	each	C.4.02	$ 86.72	$ 457,763.97		
		16	3	2		regrade top surface for positive drainage	27081.0	27081.0	m2	C.5.05	$ 1.23	$ 33,237.87		
		16	3	3		Produce ROQ (quarry drill&blast)	8124.3	8124.3	m3	C.5.09	$ 24.76	$ 201,180.70		
		16	3	4		place 0.3 m thick liner protection layer of crushed rock	8124.3	8124.3	m3	C.5.02	$ 16.35	$ 132,855.69		
W_001	Y	16	1	1	Waste Ship Off-Site	Hazardous waste	118.3	118.3	m3	S.02	$ 232.32	$ 27,492.96		
		16	1	2		Hazardous solid waste	38.4	38.4	m3	S.02	$ 232.32	$ 8,932.11		
W_002	Y	16	2	1	Waste Disposal Off-Site	Hazardous waste	1.0	1.0	LS	X.07	$ 50,000.00	$ 50,000.00		
		16	2	2		disposal fees at Hay River	0.0	0.0	t	H.05	$ 116.16	$ -		
W_003	Y	16	3	1	Waste Contaminated Material	hydrocarbon contamination survey	1.0	1.0	ls	X.13	$ 25,000.00	$ 25,000.00		
		16	3	2		metal contamination survey	1.0	1.0	ls	X.13	$ 25,000.00	$ 25,000.00		
Pipelines													**$ 609,308.02**	
PL_003	Y	11	3	1	Pipeline Madrid South Groundwater Pipeline	Cut pipelines into manageable pieces	14309.0	14309.0	lm	C.3.03	$ 11.08	$ 158,607.36		
		11	3	2		decommission electrical (heat tracing)	25.0	25.0	each	C.1.05	$ 679.52	$ 16,987.90		
		11	3	3		collect electrical cables and controllers and prep for shipping off-site	2861.8	2861.8	m2	C.3.10	$ 0.37	$ 1,073.00		
		11	3	4		Load debris for transport to landfill	3349.1	3349.1	m3	C.4.01	$ 10.23	$ 34,254.61		
		11	3	5		haul debris to landfill	3349.1	3349.1	m3	C.4.22	$ 5.02	$ 16,809.96		
PL_002	Y	11	2	1	Pipeline Madrid North Reclaim Pipeline	Cut pipelines into manageable pieces	13392.0	13392.0	lm	C.3.03	$ 11.08	$ 148,442.92		
		11	2	2		decommission electrical (heat tracing)	25.0	25.0	each	C.1.05	$ 679.52	$ 16,987.90		
		11	2	3		collect electrical cables and controllers and prep for shipping off-site	2678.4	2678.4	m2	C.3.10	$ 0.37	$ 1,004.24		
		11	2	4		Load debris for transport to landfill	3134.5	3134.5	m3	C.4.01	$ 10.23	$ 32,059.39		
		11	2	5		haul debris to landfill	3134.5	3134.5	m3	C.4.22	$ 5.02	$ 15,732.69		
CDR_004	Y	21	4	1	Cargo Dock Access Road Fuel Transfer Pipeline	flush pipeline prior to decommissioning	1.0	1.0	Each	C.2.06	$ 677.68	$ 677.68		
		21	4	2		cut pipelines into manageable pieces and place in containers for hauling to landfill	3250.0	3250.0	m	C.3.03	$ 11.08	$ 36,024.45		
		21	4	3		remove electrical cables and controllers	2.0	2.0	each	C.1.05	$ 679.52	$ 1,359.03		
		21	4	4		load debris into containers for hauling to landfill	159.5	159.5	m3	C.4.01	$ 10.23	$ 1,631.70		
		21	4	5		haul containers to Quarry 3 landfill	159.5	159.5	m3	C.4.17	$ 5.23	$ 834.38		
DM_006	Y	2	6	1	Doris Fresh Water Pipelines	cut pipelines into manageable pieces	830.0	830.0	lm	C.3.03	$ 11.08	$ 9,200.09		
		2	6	2		decommission electrical (heat tracing)	4.0	4.0	each	C.1.05	$ 679.52	$ 2,718.06		
		2	6	3		collect electrical cables and controllers and prep for shipping off-site	1600.0	1600.0	m2	C.3.10	$ 0.37	$ 599.90		
		2	6	4		load debris into containers for transport	28.2	28.2	m3	C.4.01	$ 10.23	$ 288.03		
		2	6	5		haul debris to quarry 3 landfill	28.2	28.2	m3	C.4.14	$ 4.70	$ 132.35		
DM_016	Y	2	16	1	Doris Sewage Discharge Line	flush pipeline prior to decommissioning	1.0	1.0	Each	C.2.06	$ 677.68	$ 677.68		
		2	16	2		cut pipelines into manageable pieces and place in containers for hauling to landfill	1190.0	1190.0	m	C.3.03	$ 11.08	$ 13,190.49		
		2	16	3		remove electrical cables and controllers	1.0	1.0	each	C.1.05	$ 679.52	$ 679.52		
		2	16	4		load debris into containers for hauling to landfill	90.8	90.8	m3	C.4.01	$ 10.23	$ 929.16		
		2	16	5		haul containers to Quarry 3 landfill	90.8	90.8	m3	C.4.14	$ 4.70	$ 426.95		
SR_002	Y	15	2	1	Secondary Road Tailings and Reclaim Water Pipelines	Cut pipelines into manageable pieces	8125.0	8125.0	lm	C.3.03	$ 11.08	$ 90,061.14		
		15	2	2		decommission electrical (heat tracing)	4.0	4.0	each	C.1.05	$ 679.52	$ 2,718.06		
		15	2	3		collect electrical cables and controllers and prep for shipping off-site	4062.5	4062.5	m2	C.3.10	$ 0.37	$ 1,523.19		
		15	2	4		Load debris for transport to landfill	255.3	255.3	m3	C.4.01	$ 10.23	$ 2,610.72		
		15	2	5		Haul waste to the landfill	255.3	255.3	m3	C.4.19	$ 4.17	$ 1,065.47		
Marine Environment Reclamation													**$ 136,659.13**	
PL_001	Y	11	1	1	Pipeline Roberts Bay Discharge System	Cut pipelines into manageable pieces	5470.0	5470.0	lm	C.3.03	$ 11.08	$ 60,631.93		
		11	1	2		decommission electrical (heat tracing)	11.0	11.0	each	C.1.05	$ 679.52	$ 7,474.68		
		11	1	3		collect electrical cables and controllers and prep for shipping off-site	5470.0	5470.0	m2	C.3.10	$ 0.37	$ 2,050.91		
		11	1	4		Load debris for transport to landfill	1160.0	1160.0	m3	C.4.01	$ 10.23	$ 11,863.92		
		11	1	5		haul debris to landfill	1160.0	1160.0	m3	C.4.16	$ 3.48	$ 4,042.43		
		11	1	6		Remove rock fill to 0.3 m below LLWL	485.0	485.0	m3	C.5.05	$ 1.23	$ 595.26		
		11	1	7		conduct survey of submerged section of pipeline	1.0	1.0	ls	X.14	$ 50,000.00	$ 50,000.00		
Closure Monitoring													**$ 345,000.00**	
CM_002	Y	24	1	1	Closure Compliance	Annual Geotechical Inspection	3	3	each	LS	$ 35,000.00	$ 105,000.00		yearly during closure activities
		24	1	2		Water Sampling and Testing	3	3	each	LS	$ 60,000.00	$ 180,000.00		yearly during closure activities
		24	1	3		Regulatory Costs	3	3	each	LS	$ 20,000.00	$ 60,000.00		yearly during closure activities
Interim Care and Maintenance													**$ 2,753,608.67**	
ICM_001	Y	23	1	1	Interim Care and Maintenance - Annual ICM	water management and camp care and maintenance	1.5	1.5	year	LS	$ 1,569,603.11	$ 2,354,404.67		2 years of ICM
		23	1	2		compliance monitoring	1.5	1.5	year	LS	$ 95,000.00	$ 142,500.00		compliance monitoring extended into closure duration
		23	1	3		mob/demob ICM fleet	1	1	-	LS	$ 256,704.00	$ 256,704.00		equipment required at 2 camp(s) based on number of work areas
Total Direct Costs													**$ 39,015,645.11**	
Contingency													$ 7,803,129.02	
-					Contingency	20% of direct costs	0.2	0.2	%	x	$ 39,015,645.11	$ 7,803,129.02		
Mobilization & Demobilization													$ 2,178,405.71	
-					Mobilization - all work areas	Mob/Demob	1	1	ls		$ 1,089,202.85	$ 1,089,202.85		equipment on site for 2 years while all closure completed
					Demobilization - all work areas	Mob/Demob	1	1	ls		$ 1,089,202.85	$ 1,089,202.85		
General and Administration costs													$ 6,873,522.09	
-					Travel allowance		0	0				$ -		
-					Camp Management & Operations		3	3.00	yr	OC.11	$ 816,750.00	$ 2,450,250.00		
-					Camp Mobilization/Demobilization		1	1	LS	OC.12	$ 208,000.00	$ 208,000.00		
					Crew charters (by-weekly)		78	78	each	OC.05	$ 10,617.57	$ 828,170.49		
					Groceries		19,021	19,021	person-day	OC.13	$ 100.00	$ 1,902,101.60		
-					Camp Rental		3	3	yr	OC.10	$ 495,000.00	$ 1,485,000.00		
Field support													$ 2,025,598.64	
-					Supervision		1,085.00	1,085.00	days	x	$ 1,750.63	$ 1,899,428.14		
-					Equipment maintenance support - Mechanic		109.00	109.00	days	x	$ 1,157.53	$ 126,170.50		
-					Helicopter Support		0	0	hours	E.08	$ 2,367.39	$ -		
Hydrocarbon decontamination													$ 100,000.00	
-					Confirmatory Sampling and Analysis		1	1	LS		$ 100,000.00	$ 100,000.00		Minimum cost $25,000 maximum cost $100,000, each work area = $20,000
Post-closure Monitoring													$ 970,000.00	
					Annual geotechnical inspection	Annual for first 3 years, the years 6 and 10	5	5	LS		$ 35,000.00	$ 175,000.00		
					Cover monitoring	Every 2 years for a 10 year period	5	5	LS		$ 35,000.00	$ 175,000.00		
					Regulatory costs	Yearly for 10 years	10	10	LS		$ 20,000.00	$ 200,000.00		
					Water sampling and testing	Annual for 5 consecutive years, they year 7 and 10	7	7	LS		$ 60,000.00	$ 420,000.00		
Other														
-					Contractor profit	% of direct and other indirect costs (excluding contingency)	0	0	%	of	$ -	$ -	$ -	this is included in the hourly rates for the equipment
-					Contractor Bonding	% of direct cost	0	0	%	of	$ -	$ -		
Total Indirect Costs													**$ 19,950,655.46**	
Total Closure and Reclamation Cost													**$ 58,966,300.57**	

Mobilization

No. of units (from schedule)	Manual Override	Equipment already on site from ICM	Final No. Units	Description	Units	Quantity	Unit cost	Task cost	Notes
All Project Areas				Construction equipment					
1			1	Helicopter	ea	1.0	$ 10,000.00	$ 10,000.00	Flight from Yellowknife
3			3	Dozer - CAT D8	m^2	38.9	$ 470.00	$ 54,905.40	From Hay River to Roberts Bay; NT Marine Rates 2017
3		2	1	Excavator - Cat 330	m^2	36.7	$ 470.00	$ 17,237.04	From Hay River to Roberts Bay; NT Marine Rates 2017
5		2	3	Loader - CAT 980	m^2	46.4	$ 470.00	$ 65,441.58	From Hay River to Roberts Bay; NT Marine Rates 2017
1	2		2	Motor grader CAT 14H	m^2	28.5	$ 470.00	$ 26,798.00	From Hay River to Roberts Bay; NT Marine Rates 2017
2	2		2	Skidder CAT 242	m^2	5.8	$ 470.00	$ 5,470.44	From Hay River to Roberts Bay; NT Marine Rates 2017
5	5	2	3	Truck - CAT 740	m^3	69.3	$ 470.00	$ 97,713.00	From Hay River to Roberts Bay; NT Marine Rates 2017
4	4		4	Tractor Trailer	m^2	1.0	$ 14,216.00	$ 56,864.00	From Hay River to Roberts Bay; NT Marine Rates 2017
4	4		4	Flatbed truck (5 tonne)	ea	1.0	$ 5,358.00	$ 21,432.00	From Hay River to Roberts Bay; NT Marine Rates 2017
6			6	Drill	m^2	25.9	$ 470.00	$ 73,094.40	From Hay River to Roberts Bay; NT Marine Rates 2017
1			1	Drum crusher	kg	0.2	$ 470.00	$ 70.50	From Hay River to Roberts Bay; NT Marine Rates 2017
1			1	Power washer	kg	0.1	$ 470.00	$ 47.00	From Hay River to Roberts Bay; NT Marine Rates 2017
2			2	Welding Equipment	kg	0.3	$ 470.00	$ 235.00	From Hay River to Roberts Bay; NT Marine Rates 2017
2	2		2	Crane	m^2	28.4	$ 470.00	$ 26,720.06	From Hay River to Roberts Bay; NT Marine Rates 2017
6		4	2	Pickup trucks - F150	ea	1.0	$ 3,925.00	$ 7,850.00	From Hay River to Roberts Bay; NT Marine Rates 2017
30		4	26	20 ft containers	ea	1.0	$ 6,896.00	$ 179,296.00	tires, spare parts, and lubricants; from Hay River to Roberts Bay; NT Marine Ra
41			41	Highway Trailers Hauling	LS	1.0	$ 456,028.43	$ 456,028.43	double up the barging cost, as per INAC& TMAC agreed upon cost
							Subtotal Mobilisation	**$ 1,089,203**	
							Subtotal Demobilisation	**$ 1,089,203**	Assumes same cost as mobilisation
							Total	***$ 2,178,406***	

Task	Unit	Quantity	Tonnage	Unit Cost	Activity Total	Subtotals	Notes
INTERIM CARE & MAINTENANCE						**$ 1,332,182**	
on-site caretaker	person months	6		$35,674	$214,043		on-site caretaker in the summer months only
extra personnel	person months						extra personnel
-electrician	person months	3		$36,622	$109,865		half the time, for opening and closing the camp + maintenance
-mechanic	person months	3		$34,726	$104,177		half the time, for opening and closing the camp + maintenance
annual fuel	litre	22500		$1.05	$23,625		annual fuel
misc. supplies	allow	6		$1,500	$9,000		misc. supplies
pick-up truck	month	12	2	$3,999	$95,986.72		one pickup for each crew - Doris and Madrid
small dozer	month	12		$36,215	$217,287.39		yearly stand-by rate at 50% of active rate
small excavator	month	12		$10,000	$120,000		small excavator
snow machine	month	0		$7,103	$0		summer caretaker only
articulated dump truck	month	12		$10,000	$120,000		articulated dump truck
communications	month	6		$2,500	$15,000		communications
mobile camp rental	allow	0		$80,000	$0		existing Doris camp will be used as it transitions to C&M
camp operations (up to 10 persons)	month	6		$20,625	$123,750		includes manager and cook/first aid
groceries	person/month	182	6	$130	$141,960.00		based on 6 person average occupancy
flights (Yellowknife - cambridge bay - Doris)	each	26		$1,442	$37,488		two person-crews shift change monthly commercial flight to Cambridge Bay + 1 hr helicopter charter
COMPLIANCE MONITORING AND REPORTING						**$ 95,000**	
SNP/AEMP water sampling & reporting	each	1		$60,000	$60,000		SNP/AEMP water sampling & reporting
geotechnical assessment	each	1		$35,000	$35,000		geotechnical assessment
WATER MANAGEMENT						**$ 237,421**	
Operate / maintain pumping system							
technician (camp support incl under Mob)	days	182		$1,189	$216,421		120 days pumping down Doris TIA Reclaim Pond (June to September)
site support, consumables	month	6		$3,500	$21,000		site support, consumables
Annual Interim C&M Cost						**$ 1,664,603.11**	
EQUIPMENT MOBILIZATION						**$ 256,704.00**	
Number of ICM crews required:		2					Based on number of areas requiring reclamation, linked to schedule
Excavators							
mobilize		2	20	$ 470.00	$ 18,800.00		Edmonton to Hay River (1 x 36.1 tonnes)
demobilize		2	20	$ 470.00	$ 18,800.00		Hay River to Roberts Bay (1 x 36.1 tonnes)
Dump trucks							
mobilize		2	34.4	$ 470.00	$ 32,336.00		Edmonton to Hay River (1 x 34.4 tonnes)
demobilize		2	34.4	$ 470.00	$ 32,336.00		Hay River to Roberts Bay (1 x 34.4 tonnes)
Loaders							
mobilize		2	30	$ 470.00	$ 28,200.00		Edmonton to Hay River (1 x 30 tonnes)
demobilize		2	30	$ 470.00	$ 28,200.00		Hay River to Roberts Bay (1 x 30 tonnes)
Light duty vehicles							
mobilize		4	-	$ 5,358.00	$ 21,432.00		Edmonton to Hay River
demobilize		4	-	$ 5,358.00	$ 21,432.00		Hay River to Roberts Bay
Standard 20' containers							
mobilize		4	-	$ 6,896.00	$ 27,584.00		Edmonton to Hay River
demobilize		4	-	$ 6,896.00	$ 27,584.00		Hay River to Roberts Bay
Mob/Demob cost for ICM						**$ 256,704.00**	

Item_Task	Duration (weeks)	Crew Size	Start Week	End Week
Doris TIA Produce ROQ	64	10	0	63
Doris TIA Construct Cover	58	5	4	61
Doris camp and mill facilities Decommission	13	4	0	12
Doris camp and mill facilities Decontamination	2	4	13	14
Doris camp and mill facilities Demolition	22	10	62	83
Doris camp and mill facilities Earthworks	7	4	84	90
Doris camp and mill facilities Misc.	9	6	84	92
Doris camp and mill facilities Vent Raise Seal	2	5	84	85
Doris Fuel Storage Decommission	1	3	62	62
Doris Fuel Storage Decontamination	1	3	63	63
Doris Fuel Storage Demolition	1	3	64	64
Doris Fuel Storage Earthworks	2	2	65	66
Doris Fuel Storage Misc.	10	3	67	76
Doris Pads Collect Debris	1	4	77	77
Doris Pads Earthworks	5	6	78	82
Doris Water Management Structures Demolition	1	3	65	65
Doris Water Management Structures Earthworks	1	6	66	66
Construct Quarry 3 Landfill Cover Produce ROQ	4	4	67	70
Construct Quarry 3 Landfill Cover Construct Cover	3	3	71	73
Roberts Bay facilities Decommission	2	4	93	94
Roberts Bay facilities Decontamination	1	2	95	95
Roberts Bay facilities Demolition	2	5	96	97
Roberts Bay facilities Earthworks	5	4	93	97
Roberts Bay facilities Misc.	2	6	98	99
Roberts Bay Fuel Storage Decommission	1	3	93	93
Roberts Bay Fuel Storage Decontamination	4	3	94	97
Roberts Bay Fuel Storage Demolition	1	3	98	98
Roberts Bay Fuel Storage Earthworks	9	2	99	107
Roberts Bay Fuel Storage Misc.	18	5	108	125
Roberts Bay Pads Collect Debris	1	4	93	93
Roberts Bay Pads Earthworks	2	1	94	95
Roberts Bay Water Management Structures Demolition	0	0	96	95
Roberts Bay Water Management Structures Earthworks	0	0	96	95
All Roads Collect Debris	1	4	93	93
All Roads Earthworks	6	4	94	99
Patch Lake Earthworks	1	1	126	126
Patch Lake Fuel Storage Earthworks	3	6	127	129
Patch lake Developed Areas Earthworks	1	4	130	130
Windy Decommission	1	3	126	126
Windy Decontamination	1	2	127	127
Windy Demolition	6	4	128	133
Windy Earthworks	1	6	126	126
Windy Misc.	0	0	127	126
Windy Earthworks	1	6	127	127
Windy Fuel Storage Earthworks	1	3	126	126
Windy Pads Decontamination	0	0	127	126
Windy Pads Demolition	2	1	127	128
Windy Pads Earthworks	1	6	129	129
Madrid Camp and Mill Facilities Decommission	3	4	130	132
Madrid Camp and Mill Facilities Decontamination	1	4	133	133
Madrid Camp and Mill Facilities Demolition	11	10	134	144
Madrid Camp and Mill Facilities Earthworks	3	4	145	147
Madrid Camp and Mill Facilities Misc.	11	6	145	155
Madrid Camp and Mill Facilities Earthworks	3	4	130	132
Madrid Fuel Storage Decommission	1	3	130	130
Madrid Fuel Storage Decontamination	1	3	131	131
Madrid Fuel Storage Demolition	1	3	132	132
Madrid Fuel Storage Earthworks	2	2	133	134
Madrid Fuel Storage Misc.	8	3	135	142
Madrid Pads Collect Debris	1	4	130	130
Madrid Pads Earthworks	4	5	131	134
Madrid Water Management Structures Demolition	1	3	135	135
Madrid Water Management Structures Earthworks	1	1	136	136