May 29/01
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PROPOSAL AND
COST ESTIMATE FOR
ECHO BAY MINES LTD.
LUPIN MINE SITE RECLAMATION

dust

Public Registry

Prepared For:

BILL BURTON, Director, Mining
ECHO BAY MINES LTD.
1210 Manulife Place
10180 - 101 Street
Edmonton, Alberta

Respectfully Submitted By:

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January 19, 2001

NUNA LOGISTICS

This Proposal and Cost Estimate Has Been Distributed To:

ECHO BAY MINES LTD.

- Jerry McCrank, Vice President Operations (Edmonton)
- Bill Danyluk, Mine Manager - Lupin, Echo Bay Mines Ltd. (Lupin Site)
- Hugh Ducasse, Manager, Loss Control & Environmental Affairs (Lupin)
- Dave Hohnstein, Environmental Coordinator (Lupin)

NUNA LOGISTICS LIMITED

- John Zigarlick, Chairman & Chief Executive Officer (Vancouver)
- Mervyn Hempenstall, President & Chief Operating Officer (Vancouver)

CLARK BUILDERS

- Andrew Clark, President (Edmonton)
- Roger Geisinger, Construction Manager, Metal Buildings Division (Edmonton)

EBA ENGINEERING CONSULTANTS LTD.

- Derek Cathro, Vice President, Frontier (Edmonton)
- Brent Murphy, Manager, NWT Mining Services (Yellowknife)

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January 19, 2001

Bill Burton, Director, Mining
Echo Bay Mines Ltd.
1210 Manulife Place
10180 - 101 Street
Edmonton, AB

Dear Sir:

RE: COST ESTIMATE – ECHO BAY MINES LTD. – LUPIN MINE RECLAMATION

Nuna Logistics Limited in conjunction with Clark Builders and EBA Engineering Consultants Ltd., is pleased to submit a proposal and cost estimate for the reclamation of Echo Bay Mines' Lupin mine site.

The proposal and cost estimate is based on information gathered during three visits to the mine site:

SEPTEMBER 1999 - John Zigarlick and Court Smith (Nuna Logistics) for the purpose of reviewing the tailings management and restoration plan.

AUGUST 2000 - Court Smith (Nuna Logistics), Andrew Clark and Roger Geisinger (Clark Builders) for the purpose of determining a demolition plan for the site facilities, equipment and structures.

SEPTEMBER 2000 - Court Smith (Nuna Logistics) and Brent Murphy (EBA Engineering) for the purpose of reviewing environmental and geotechnical issues relating to the abandonment and restoration of the Lupin mine site.

The Executive Summary section describes the partnership of Nuna Logistics, Clark Builders, and EBA Engineering and presents a pro-active plan to minimize overall reclamation costs.

Thank you for the opportunity to present our proposal and cost estimate. Please contact me at 604-682-4667 if you have any questions.

Respectfully submitted,

NUNA LOGISTICS LIMITED

Courtland Smith, P.Eng.
Vice President
CS/jm

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PROPOSAL AND
COST ESTIMATE FOR
ECHO BAY MINES LTD.
LUPIN MINE SITE RECLAMATION

INDEX

NUNA LOGISTICS

EXECUTIVE SUMMARY

OUR TEAM

Nuna Logistics, Clark Builders and EBA Engineering intend to jointly pursue reclamation work related to mine site development and restoration throughout Nunavut and the Northwest Territories. Our concept is to provide a total solution to mine site reclamation by providing a cradle-to-grave monitoring, planning, and restoration service. Our companies have specific expertise that, when combined, cover the full range of requirements for the reclamation of mine developments.

Nuna Logistics is a northern company with extensive earthworks experience in the region. We have a demonstrated commitment to hiring northerners, and providing subcontract and supply opportunities to northern firms. Nuna Logistics has direct operating experience at the Lupin mine site in tailings dam construction and site services.

Clark Builders originated in the north and have extensive experience in building and facilities construction in Canada and aboard. Clark Builders was involved in the original construction of the Lupin plant and facilities.

EBA Engineering Consultants is one of Western Canada's premier geotechnical and environmental consulting firms. EBA Engineering is a recognized leader in northern engineering.

CONCEPT

The proposal and cost estimate is based on the following:

- Completion of some of the earthwork prior to mine closure. This approach will result in substantial completion of the restoration within one year of mine closure, thereby significantly reducing overhead costs after mine closure.

- Using Caterpillar 776 tractor-trailer arrangements for esker and rock haulage. These units are capable of hauling 120 tonnes per load of esker (136 tonnes per load of rock).

- No demolition or removal of floor level concrete. We have assumed that, upon building demolition, equipment pedestals can be leveled and made safe and no further concrete removal will be required.

COST ESTIMATE

The total cost estimate excluding contingency is as follows:

DIRECT COSTS

Main Complex	$ 3,818,900
Residence Complex	200,600
Site Buildings and Infrastructure	1,660,200
Site Earthworks Reclamation	827,800
Tailings	10,050,800
Underground	272,100
Subtotal	**$16,830,400**

INDIRECT COSTS

General Indirects	$ 1,475,000
Project Administration	1,362,900
Supplies and Services	60,000
Support Equipment	1,436,000
Support Labour	1,233,200
Utilities and Support	299,700
Transportation and Camp	1,901,600
Subtotal	**$ 7,768,400**

TOTAL PROJECT	**$24,598,800**

PROPOSAL

Nuna Logistics', Clark Builder's, and EBA Engineering's proposal is based on a time and materials basis. Labour and equipment rates include all consumables (except for those specified as Owner supplied items) and include overheads and profit.

Nuna Logistics' proposed work relates to the site earthworks, materials handling, and site services. Clark Builders' proposed work relates to the demolition of the site facilities, equipment and structures. EBA Engineering's proposed work relates to technical assistance planning, site management, quality assurance, surveying, and environmental monitoring.

LABOUR RATES

Labour rates are based on a two-week on-site and two-week off-site schedule for Nuna Logistics' employees and a three week on-site and one week off-site for Clark Builders using non-union labour. The rates consist of our current labour pay rates, scheduled overtime, employee benefits (CPP, EI, WCB), statutory holiday pay, vacation pay, overheads and profit. Air transport to site and camp catering are not included in the labour rates, but will be charged separately under materials supplies and services. The rates are based on our Year 2000 base rate schedule and do not include escalation. The rates are as follows:

NUNA LOGISTICS LIMITED

Project Manager	$ 67.00
Project Foreman	$ 53.00
Administrator	$ 39.00
Equipment Operator	$ 47.00
Truck Driver	$ 44.00
Serviceman	$ 45.00
Labourer	$ 39.00

CLARK BUILDERS

Superintendent - Level 1	$ 70.37
Superintendent - Level 2	$ 65.22
Foreman - Level 1	$ 61.79
Foreman - Level 2	$ 60.08
Equipment Operator - Journeyman	$ 61.79
Millwright - Journeyman	$ 61.79
Iron Worker - Journeyman	$ 60.08
Iron Worker - Level 2	$ 56.65
Welder - Journeyman	$ 61.79
Machinest - Journeyman	$ 61.79
Carpenter - Journeyman	$ 60.08
Carpenter - 4th Year	$ 55.96

CLARK BUILDERS CONTINUED...

Carpenter - 3rd Year	$ 51.84
Carpenter - 2nd Year	$ 47.73
Labourer - Level 1	$ 49.79
Labourer - Level 2	$ 46.36
Labourer - Level 3	$ 42.92
Labourer - Level 3	$ 39.49

EBA ENGINEERING CONSULTANTS

Engineer/Scientist – Level 5	$134.00
Engineer/Scientist – Level 4	$113.00
Engineer/Scientist – Level 3	$ 93.00
Engineer/Scientist – Level 2	$ 78.00
Technical Services – Level 3	$ 68.00
Technical Services – Level 2	$ 58.00
Technical Services – Level 1	$ 48.00

EQUIPMENT RATES

Equipment rates are based, for each piece of equipment, on a monthly ownership rate plus an hourly operating rate. The ownership rate includes carrying costs, depreciation, and equipment specific insurance. The operating rate includes fuel at $0.55 per liter, lubricants, tires, repair parts, wear parts, maintenance labour (with the same inclusions and exclusions as operating labour), overheads and profit. The monthly ownership rate applies for all months in which the equipment is on site. The hourly operating rate additional to the monthly rate, applies for hours operated doing the work. The rates do not include variances in fuel pricing. The rates are as follows:

NUNA LOGISTICS LIMITED	MONTHLY RATE	PLUS HOURLY RATE
Cat 776 Tractors/Trailers	$2,700	$209.00
Cat 992 Loaders	$3,200	$264.00
Cat D8 Dozers	$2,800	$142.00
Cat 773 trucks	$6,600	$202.00
John Deere 992E Excavator	$4,500	$190.00
Cat 16G Graders	$5,000	$122.00
Cat 966 Loaders	$1,900	$123.00
Cat IT28 Tool carriers	$1,000	$ 41.00
Conventional tractor/Trailers	$1,800	$ 88.00
Buses	$ 500	$ 33.00
Pickups	$ 500	$ 7.00

CLARK BUILDERS	HOURLY RATE (MINIMUM 200 HOURS PER MONTH)
120 Ton Conventional Crane	$ 90.00
50 Ton RT Crane	$ 75.00
25 Ton RT Crane	$ 50.00
120' Manlift	$ 55.00
80' Manlift	$ 45.00
60' Manlift	$ 17.50
10,000 Lb Zoom Boom Forklift	$ 17.50
235 Excavator	$125.00
Metal Shears	$ 42.50
Loader	$ 50.00

MOBILIZATION AND DEMOBILIZATION

Off-site mobilization and demobilization will be invoiced at cost. Off-site costs are expected to consist of transport charges and road-use fees. On-site mobilization and demobilization will be charged according to the above labour and equipment rates. On-site costs are expected to consist of minor equipment erection.

MATERIALS, SUPPLIES, AND SERVICES

Materials, supplies, and services, which are not included in the labour or equipment rates, will be invoiced at cost.

BASIS OF THE ESTIMATE

The cost estimate was prepared using the rates and parameters presented in the proposal. All rates are based on year 2000 numbers and do not include escalation.

The cost estimate includes items which may be either Owner-supplied or independently supplied as follows:

1) on-site accommodations ($40.00 per day per person);
2) air transport of personnel and supplies between Edmonton/Yellowknife or northern communities and Lupin ($750.00 per average round trip per person);
3) road use fees ($0.10 per ton-km).

The estimate does not include Owner-supplied items prior to the closure of Lupin operations as follows:

1) first-aid and safety orientation;
2) emergency facilities and staff; and
3) Owner's project management.

The estimate includes the items and quantities specifically listed in the estimate.

We have had the benefit of viewing a report entitled "Closure Cost Estimate and Scoping of Mine Closure Issues, Lupin Mine, NWT" prepared by Golder Associates in December, 1997. Although our approach to the reclamation is different, comparison of the costs generally confirm our estimates.

ASSUMPTIONS

In developing the cost estimate, we have made the following assumptions.

1) The cost estimate is based on constant Year 2000 Canadian dollars.

2) The estimate includes the provision of office, camp, catering services and shop facilities during the final stages of main facilities demolition. Nuna Logistics assumes that the existing on-site facilities will be available for use by Nuna Logistics, Clark Builders, and EBA Engineering prior to the final stages of demolition. Camp catering is included in the estimate at a price of $40.00 per manday.

3) The quantities (tonnes, cubic meters) and resulting haulage hours are assumed to be approximate only and the numbers may change based on equipment, quantity, variances, and scheduling.

4) The haul cycle profiles used are assumed to be representative of the average haul for each type of material based on current road locations and conditions.

5) Specific gravities, swell factors and density of the materials are assumed to be:

Esker	Specific Gravity	1.85
	Swell	30%
	LCM Density	1.42
	ECM Density	1.61
Quarry or Waste Rock	Specific Gravity	2.65
	Swell	40%
	LCM Density	1.89
	ECM Density	2.21

6) Whiteout days have not been included in the costs or the schedule. This should not be an issue because most of the work is scheduled to occur during the summer season.

7) An operating schedule of two weeks on-site followed by two weeks off-site is used in the cost estimate for Nuna Logistics' and EBA Engineering's employees (two 11-hour shifts per day). An operating schedule of three weeks on-site followed by one week off-site is used in the cost estimate for Clark Builders' employees (one 12-hour shift per day).

8) We have assumed that none of the esker material will require blasting and that sufficient quarry or waste rock will be available for the restoration without the need for further blasting.

9) Fuel required for mining and earthworks construction has been included in the estimate at a price of $0.55 per liter all inclusive at the site.

10) Mobilization and demobilization costs have been included in the estimate and assume that the proposed equipment will be mobilized from its present locations. On completion of the work, the estimate assumes that the equipment would be demobilized to these same locations.

11) We have assumed level road speeds of 37 kph Loaded and 40 KPH empty; and rough road speeds of 20 kph, for conventional mine trucks (15 kph for tractor/wagons). In view of our recent experience hauling esker material at Lupin, these speeds are conservative.

12) The carrying cost of the capital value of equipment is assumed to be 9%.

13) The equipment rates are based on our current experience with our current fleet. The capital cost valuation, operating costs, and performance of individual pieces of equipment at the time the work is to begin, will more accurately determine the equipment rates.

14) Air transportation has been included in the estimate at a price of $750.00 per round trip. No allowance has been made for short rotations. The price is expected to reflect an average price from various hire points to site.

15) No credits are included in this estimate for salvage value of facilities or equipment.

16) Tailings cover quantities are based on an internal Echo Bay memo from Mike Tansey to Bill Danyluk dated August 6, 2000. The timing of the placement has been modified to match equipment and esker thaw capabilities.

17) Re-vegetation has not been included in the estimate or schedule.

18) The estimate does not include post-reclamation monitoring. The estimate also does not include advance environmental work such as the preparation of the final abandonment and restroration plan or supporting studies if required. The estimate does, however, include minor on-site planning and monitoring by EBA Engineering from 2003 through 2008.

19) The estimate does not include any treatment of tailings pond supernatant liquids or special disposal of hazardous materials or soils, except for disposal to the tailings area of a minor amount of potentially acid generating rock as encountered during reclamation. Also, the tank farm soils will be relocated to the tailings area.

WORK PLAN AND SCHEDULE

The work plan and schedule are based on mine closure in early 2008 at the latest.

Nuna Logistics proposes to complete most of the tailings cover requirement while Lupin is in operation. This will ensure that the post-closure requirement will be completed in one season concurrent with the facilities reclamation. With this in mind, we also propose to delay the pre-closure tailings cover requirement as long as practical to conserve cash flow. Based on reclamation in 2008, the tailings cover work would begin in 2006.

YEARS 2006

Tailings

Tailing cover on Cells 1, 2 and part of cell 3 would be done during this summer season. The cover would require the following equipment which would be mobilized to site on the 2006 winter road.

- 4 – Caterpillar 776 Tractors
- 4 – 150-Ton Trailers
- 2 – Caterpillar 992 Loaders
- 3 – Caterpillar D8 Dozers currently (on-site)

The work would occur over a period of about 90 days (June to August).

YEAR 2007

Tailings

Tailings cover on most of the remainder of cell 3 would be done during this summer season. The work would occur over a period of about 99 days (June to early September)

Tailings cover on Cell 5, the remainder of Cell 3, and the final grading of the dikes would be completed in 2008.

The work would occur over a period of 94 days (June to early September).

Demolition

The basis of the demolition plan is to maximize the use of mechanical demolition equipment. This will result in minimal but efficient use of manpower and ensure overall worker safety.

Prior to commencing with demolition, items that have potential salvage value would be removed by a crew that would go ahead of the main dismantling crew. Items for salvage

would need to be identified ahead of time and any special handling requirements noted. Our estimate does not include credit for salvage equipment.

The following demolition equipment will be mobilized on the 2008 winter road:

2 – Backhoes
2 – Shears
3 – Cranes
1 – Caterpillar 992 Loader
2 – Caterpillar 773 Trucks
1 – Caterpillar D10 Dozer
Miscellaneous Manlifts and JLG's

The main dismantling crew will begin dismantling the main complex in mid-April, 2008.

Beginning with the roof, workers will remove exterior roof panels by cutting metal roofing into sections then hoisting these sections to the ground with a crane. Workers using manlifts and JLG's will remove exterior cladding to free the structure for demolition.

Once cladding has been removed, interior demolition will commence using large backhoes equipped with metal cutting shears. Workers using manlifts and specialized cutting equipment will work in areas where shears may not be effective.

Building structural steel will be removed with cranes and/or backhoes equipped with shears. All material will be cut into manageable sized pieces for disposal.

Elevated concrete will be removed using pneumatic hammers mounted on mobile equipment where possible. Some areas may require hand demolition and some may be cut into manageable size sections using concrete saws and then hoisted away using cranes. All grade level concrete will remain as is.

While the main complex is being demolished, personnel requirements will vary depending on the degree to which mechanized methods can be employed. During these mechanized periods, personnel can be used to seal the underground and demolish other site buildings and infrastructure. The last buildings to be demolished will be the main camp kitchen and two wings, water pumphouse, emergency powerhouse, and surface shop. At this point, the crews will be reduced to a minimum and housed in the Manager's house for the final demolition.

As the demolition is occurring, the materials will be loaded into Caterpillar 773 trucks. The truck will haul first to the crown pillar location until it reaches capacity and then to the present landfill location. We believe that using the underground via ramp or shaft to dispose of demolition materials is not practical. We also believe that the present landfill location is of sufficient size and should be acceptable to authorities, given its current use.

Demolition of facilities and the disposal of the materials is expected to take five months (mid-April to mid-August).

Site Reclamation

As the demolition advances on dayshift, the night shift crews will complete the site earthworks reclamation. We propose to dress the roads and airstrip side slopes and to cover the main complex area with a thin layer of esker material.

Support

During the reclamation project, site service will be required similar to the site service requirement during operations. We have assumed a similar crew using the same equipment. We have increased the pickup allocation to six to reflect the number of work places and crew requirements.

The reclamation program should be completed by October, 2008.

YEAR 2009

Demolition

The equipment used to complete the reclamation work will be demobilized on the 2009 winter road.

Echo Bay Mines Ltd.
Lupin Reclamation Plan
Overall Summary

Schedule 1: Overall Summary

Combined Estimates (Nuna, Clark, EBA)

Prepared by Nuna Logistics Ltd.
19-Jan-01
C.D.S.

Cost Estimate ($ thousands)	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Direct Costs														
Main Complex (Clark,Nuna)	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,818.9	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,818.9
Residence Complex (Clark,Nuna)	$ -	$ -	$ -	$ -	$ -	$ -	$ 200.6	$ -	$ -	$ -	$ -	$ -	$ -	$ 200.6
Site Buildings & Infrastructure (Clark,Nuna	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,660.2	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,660.2
Site Earthworks Reclamation (Nuna)	$ -	$ -	$ -	$ -	$ -	$ -	$ 827.8	$ -	$ -	$ -	$ -	$ -	$ -	$ 827.8
Tailings (Nuna)	$ -	$ -	$ -	$ -	$ 3,163.4	$ 3,427.1	$ 3,460.3	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,050.8
Underground (Clark,Nuna)	$ -	$ -	$ -	$ -	$ -	$ -	$ 272.1	$ -	$ -	$ -	$ -	$ -	$ -	$ 272.1
Total Directs	$ -	$ -	$ -	$ -	$ 3,163.4	$ 3,427.1	$ 10,239.8	$ -	$ -	$ -	$ -	$ -	$ -	$ 16,830.4
Indirect Costs														
General Indirects (Nuna)	$ -	$ 10.0	$ 10.0	$ 10.0	$ 425.0	$ 40.0	$ 480.0	$ 500.0	$ -	$ -	$ -	$ -	$ -	$ 1,475.0
Project Administration (Nuna,Clark,EBA)	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,362.9	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,362.9
Supplies & Services (Nuna)	$ -	$ -	$ -	$ -	$ -	$ -	$ 60.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 60.0
Support Equipment (Nuna)	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,436.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,436.0
Support Labour (Nuna)	$ -	$ -	$ -	$ -	$ 251.3	$ 276.4	$ 705.4	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,233.2
Utilities & Support (Nuna)	$ -	$ -	$ -	$ -	$ -	$ -	$ 299.7	$ -	$ -	$ -	$ -	$ -	$ -	$ 299.7
Transportation & Camp (Nuna)	$ -	$ -	$ -	$ -	$ 213.0	$ 234.1	$ 1,434.5	$ 20.0	$ -	$ -	$ -	$ -	$ -	$ 1,901.6
Total Indirects	$ -	$ 10.0	$ 10.0	$ 10.0	$ 889.3	$ 550.5	$ 5,778.6	$ 520.0	$ -	$ -	$ -	$ -	$ -	$ 7,768.4
Total Project	$ -	$ 10.0	$ 10.0	$ 10.0	$ 4,052.7	$ 3,977.6	$ 16,018.5	$ 520.0	$ -	$ -	$ -	$ -	$ -	$ 24,598.7

NUNA LOGISTICS

Echo Bay Mines Ltd.
Lupin Reclamation Plan
Summary of Direct Costs

Schedule 2: Direct Costs Summary

Combined Estimates (Nuna, Clark, EBA)

Prepared by Nuna Logistics Ltd.
19-Jan-01
C.D.S.

Direct Costs Estimate ($ thousands)	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Main Complex														
Shaft House (Clark)	$ -	$ -	$ -	$ -	$ -	$ -	$ 198.6	$ -	$ -	$ -	$ -	$ -	$ -	$ 198.6
Hoist Room (Clark)	$ -	$ -	$ -	$ -	$ -	$ -	$ 149.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 149.0
Crushing & Grinding (Clark)	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,042.7	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,042.7
Recovery Plant (Clark)	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,117.1	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,117.1
Backfill Plant (Clark)	$ -	$ -	$ -	$ -	$ -	$ -	$ 443.5	$ -	$ -	$ -	$ -	$ -	$ -	$ 443.5
Powerhouse (Clark)	$ -	$ -	$ -	$ -	$ -	$ -	$ 397.2	$ -	$ -	$ -	$ -	$ -	$ -	$ 397.2
Warehouse & Offices (Clark)	$ -	$ -	$ -	$ -	$ -	$ -	$ 470.8	$ -	$ -	$ -	$ -	$ -	$ -	$ 470.8
Subtotal	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,818.9	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,818.9
Residence Complex														
Rooms & Corridors (Clark)	$ -	$ -	$ -	$ -	$ -	$ -	$ 56.5	$ -	$ -	$ -	$ -	$ -	$ -	$ 56.5
Kitchen & Dining Area (Clark)	$ -	$ -	$ -	$ -	$ -	$ -	$ 59.5	$ -	$ -	$ -	$ -	$ -	$ -	$ 59.5
Recreation Centre (Clark)	$ -	$ -	$ -	$ -	$ -	$ -	$ 54.8	$ -	$ -	$ -	$ -	$ -	$ -	$ 54.8
Office Area (Clark)	$ -	$ -	$ -	$ -	$ -	$ -	$ 29.8	$ -	$ -	$ -	$ -	$ -	$ -	$ 29.8
Subtotal	$ -	$ -	$ -	$ -	$ -	$ -	$ 200.6	$ -	$ -	$ -	$ -	$ -	$ -	$ 200.6
Site Buildings & Infrastructure														
Storage & Shop Buildings (Clark)	$ -	$ -	$ -	$ -	$ -	$ -	$ 288.1	$ -	$ -	$ -	$ -	$ -	$ -	$ 288.1
Fuel Tank Farms (Clark)	$ -	$ -	$ -	$ -	$ -	$ -	$ 337.3	$ -	$ -	$ -	$ -	$ -	$ -	$ 337.3
Emergency Powerhouse (Clark)	$ -	$ -	$ -	$ -	$ -	$ -	$ 118.2	$ -	$ -	$ -	$ -	$ -	$ -	$ 118.2
Tailings Line (Clark)	$ -	$ -	$ -	$ -	$ -	$ -	$ 374.7	$ -	$ -	$ -	$ -	$ -	$ -	$ 374.7
Explosives Storage (Clark)	$ -	$ -	$ -	$ -	$ -	$ -	$ 82.4	$ -	$ -	$ -	$ -	$ -	$ -	$ 82.4
Water Supply (Clark)	$ -	$ -	$ -	$ -	$ -	$ -	$ 159.6	$ -	$ -	$ -	$ -	$ -	$ -	$ 159.6
Weather Station (Clark)	$ -	$ -	$ -	$ -	$ -	$ -	$ 299.8	$ -	$ -	$ -	$ -	$ -	$ -	$ 299.8
Subtotal	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,660.2	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,660.2
Site Earthworks Reclamation														
Airstrip (Nuna)	$ -	$ -	$ -	$ -	$ -	$ -	$ 80.5	$ -	$ -	$ -	$ -	$ -	$ -	$ 80.5
Lights & Instruments (Clark)	$ -	$ -	$ -	$ -	$ -	$ -	$ 79.3	$ -	$ -	$ -	$ -	$ -	$ -	$ 79.3
Site Roads (Nuna)	$ -	$ -	$ -	$ -	$ -	$ -	$ 201.2	$ -	$ -	$ -	$ -	$ -	$ -	$ 201.2
Sewage Ponds (Nuna)	$ -	$ -	$ -	$ -	$ -	$ -	$ 161.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 161.0
Final Grading (Nuna)	$ -	$ -	$ -	$ -	$ -	$ -	$ 305.8	$ -	$ -	$ -	$ -	$ -	$ -	$ 305.8
Subtotal	$ -	$ -	$ -	$ -	$ -	$ -	$ 827.8	$ -	$ -	$ -	$ -	$ -	$ -	$ 827.8
Tailings														
Cover Tailings (Nuna)	$ -	$ -	$ -	$ -	$ 3,163.4	$ 3,427.1	$ 3,290.3	$ -	$ -	$ -	$ -	$ -	$ -	$ 9,880.8
Dyke Contouring (Alloc.)	$ -	$ -	$ -	$ -	$ -	$ -	$ 150.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 150.0
Occurance 8 Berm (Alloc.)	$ -	$ -	$ -	$ -	$ -	$ -	$ 20.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 20.0
Subtotal	$ -	$ -	$ -	$ -	$ 3,163.4	$ 3,427.1	$ 3,460.3	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,050.8
Underground														
Equipment Disposal (Clark)	$ -	$ -	$ -	$ -	$ -	$ -	$ 17.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 17.0
Access Closures (Clark)	$ -	$ -	$ -	$ -	$ -	$ -	$ 255.1	$ -	$ -	$ -	$ -	$ -	$ -	$ 255.1
Subtotal	$ -	$ -	$ -	$ -	$ -	$ -	$ 272.1	$ -	$ -	$ -	$ -	$ -	$ -	$ 272.1
Total Direct Costs	$ -	$ -	$ -	$ -	$ 3,163.4	$ 3,427.1	$ 10,239.8	$ -	$ -	$ -	$ -	$ -	$ -	$ 16,830.4

Notes: Fingers Lake Esker Contouring included in Tailings Containment Estimate (Farming Esker)

NUNA LOGISTICS

Echo Bay Mines Ltd.
Lupin Reclamation Plan
Summary of Indirect Costs

Schedule 3: Indirect Costs Summary

Combined Estimates (Nuna, Clark, EBA)

Prepared by Nuna Logistics Ltd.
19-Jan-01
C.D.S.

Indirect Costs Estimate ($ thousands)	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
General Indirects														
Advance Work & Planning (Nuna)	$ -	$ 10.0	$ 10.0	$ 10.0	$ 105.0	$ 40.0	$ 215.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 390.0
Mobilization (Nuna)	$ -	$ -	$ -	$ -	$ 320.0	$ -	$ 265.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 585.0
Demobilization (Nuna)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 500.0	$ -	$ -	$ -	$ -	$ -	$ 500.0
Insurance	*Included in Labour Rates as Off-Site Overhead*													$ -
Subtotal	$ -	$ 10.0	$ 10.0	$ 10.0	$ 425.0	$ 40.0	$ 480.0	$ 500.0	$ -	$ -	$ -	$ -	$ -	$ 1,475.0
Project Administration														
Management (Nuna)	$ -	$ -	$ -	$ -	$ -	$ -	$ 221.6	$ -	$ -	$ -	$ -	$ -	$ -	$ 221.6
Administration (Nuna)	$ -	$ -	$ -	$ -	$ -	$ -	$ 139.6	$ -	$ -	$ -	$ -	$ -	$ -	$ 139.6
Survey (EBA)	$ -	$ -	$ -	$ -	$ -	$ -	$ 154.1	$ -	$ -	$ -	$ -	$ -	$ -	$ 154.1
Quality Control (EBA)	$ -	$ -	$ -	$ -	$ -	$ -	$ 154.1	$ -	$ -	$ -	$ -	$ -	$ -	$ 154.1
Supervision (Nuna,Clark)	$ -	$ -	$ -	$ -	$ -	$ -	$ 693.5	$ -	$ -	$ -	$ -	$ -	$ -	$ 693.5
Subtotal	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,362.9	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,362.9
Supplies & Services														
Special & One-time Supplies (Alloc.)	$ -	$ -	$ -	$ -	$ -	$ -	$ 60.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 60.0
General Supplies & Services (Nuna)	*Included in Labour Rates as On-Site Overhead*													$ -
Subtotal	$ -	$ -	$ -	$ -	$ -	$ -	$ 60.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 60.0
Support Equipment														
General Support (Nuna)	$ -	$ -	$ -	$ -	$ -	$ -	$ 518.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 518.0
Manlifts, Forklifts, Loaders (Clark)	$ -	$ -	$ -	$ -	$ -	$ -	$ 918.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 918.0
Subtotal	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,436.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,436.0
Support Labour														
Servicing - Tailings (Nuna)	$ -	$ -	$ -	$ -	$ 251.3	$ 276.4	$ 262.5	$ -	$ -	$ -	$ -	$ -	$ -	$ 790.2
Support - Demolition (Nuna)	$ -	$ -	$ -	$ -	$ -	$ -	$ 443.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 443.0
Subtotal	$ -	$ -	$ -	$ -	$ 251.3	$ 276.4	$ 705.4	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,233.2
Utilities & Support														
Communications (Alloc.)	*Included in Labour Rates as On-Site Overhead*			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Generated Power (Alloc.)	$ -	$ -	$ -	$ -	$ -	$ -	$ 269.7	$ -	$ -	$ -	$ -	$ -	$ -	$ 269.7
Water Supply (Alloc.)	$ -	$ -	$ -	$ -	$ -	$ -	$ 20.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 20.0
Compressed Air (Alloc.)	$ -	$ -	$ -	$ -	$ -	$ -	$ 10.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 10.0
Subtotal	$ -	$ -	$ -	$ -	$ -	$ -	$ 299.7	$ -	$ -	$ -	$ -	$ -	$ -	$ 299.7
Transportation & Camp														
Scheduled Flights (All)	$ -	$ -	$ -	$ -	$ 122.3	$ 134.3	$ 720.8	$ -	$ -	$ -	$ -	$ -	$ -	$ 977.3
Unscheduled Flights (Alloc.)	*Based on 10% of Post-Closure Scheduled Flight Costs*			$ -	$ -	$ -	$ 72.1	$ -	$ -	$ -	$ -	$ -	$ -	$ 72.1
Camp Catering (All)	$ -	$ -	$ -	$ -	$ 90.7	$ 99.8	$ 641.7	$ -	$ -	$ -	$ -	$ -	$ -	$ 832.2
Temporary Camp (Alloc.)	*Based on Temporary Well-Site for two weeks*			$ -	$ -	$ -	$ -	$ 20.0	$ -	$ -	$ -	$ -	$ -	$ 20.0
Subtotal	$ -	$ -	$ -	$ -	$ 213.0	$ 234.1	$ 1,434.5	$ 20.0	$ -	$ -	$ -	$ -	$ -	$ 1,901.6
Total Indirect Costs	$ -	$ 10.0	$ 10.0	$ 10.0	$ 889.3	$ 550.5	$ 5,778.6	$ 520.0	$ -	$ -	$ -	$ -	$ -	$ 7,768.4

NUNA LOGISTICS

Echo Bay Mines Ltd.
Lupin Reclamation Plan
Direct Cost Detail

Schedule 4: Main Complex
Combined Estimates (Nuna, Clark)

Prepared by Nuna Logistics Ltd.
19-Jan-01
C.D.S.

Main Complex	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Clark Builders ($ thousands)														
Equipment														
Cranes, Backhoes & Shears	$ -	$ -	$ -	$ -	$ -	$ -	$ 840.9	$ -	$ -	$ -	$ -	$ -	$ -	$ 840.9
Labour														
Shaft House	$ -	$ -	$ -	$ -	$ -	$ -	$ 108.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 108.0
Hoist Room	$ -	$ -	$ -	$ -	$ -	$ -	$ 81.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 81.0
Crushing & Grinding	$ -	$ -	$ -	$ -	$ -	$ -	$ 567.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 567.0
Recovery Plant	$ -	$ -	$ -	$ -	$ -	$ -	$ 607.5	$ -	$ -	$ -	$ -	$ -	$ -	$ 607.5
Backfill Plant	$ -	$ -	$ -	$ -	$ -	$ -	$ 241.2	$ -	$ -	$ -	$ -	$ -	$ -	$ 241.2
Powerhouse	$ -	$ -	$ -	$ -	$ -	$ -	$ 216.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 216.0
Warehouse & Offices	$ -	$ -	$ -	$ -	$ -	$ -	$ 256.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 256.0
Subtotal Clark Builders	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,917.6	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,917.6
Nuna Logistics														
Equipment														
Units Required														
Cat 992 Loaders	-	-	-	-	-	-	1	-	-	-	-	-	-	
Cat 773 Trucks	-	-	-	-	-	-	2	-	-	-	-	-	-	
JD 992E Excavator	-	-	-	-	-	-	1	-	-	-	-	-	-	
Cat D10 Dozers	-	-	-	-	-	-	1	-	-	-	-	-	-	
Utilization														
Cat 992 Loaders	0%	0%	0%	0%	0%	0%	70%	0%	0%	0%	0%	0%	0%	
Cat 773 Trucks	0%	0%	0%	0%	0%	0%	40%	0%	0%	0%	0%	0%	0%	
JD 992E Excavator	0%	0%	0%	0%	0%	0%	60%	0%	0%	0%	0%	0%	0%	
Cat D10 Dozers	0%	0%	0%	0%	0%	0%	70%	0%	0%	0%	0%	0%	0%	
Productive Hours Required														
Cat 992 Loaders	-	-	-	-	-	-	672	-	-	-	-	-	-	672
Cat 773 Trucks	-	-	-	-	-	-	816	-	-	-	-	-	-	816
JD 992E Excavator	-	-	-	-	-	-	576	-	-	-	-	-	-	576
Cat D10 Dozers	-	-	-	-	-	-	630	-	-	-	-	-	-	630
Equipment Costs ($ thousands)														
Cat 992 Loaders	$ -	$ -	$ -	$ -	$ -	$ -	$ 191.7	$ -	$ -	$ -	$ -	$ -	$ -	$ 191.7
Cat 773 Trucks	$ -	$ -	$ -	$ -	$ -	$ -	$ 201.7	$ -	$ -	$ -	$ -	$ -	$ -	$ 201.7
JD 992E Excavator	$ -	$ -	$ -	$ -	$ -	$ -	$ 127.3	$ -	$ -	$ -	$ -	$ -	$ -	$ 127.3
Cat D10 Dozers	$ -	$ -	$ -	$ -	$ -	$ -	$ 199.5	$ -	$ -	$ -	$ -	$ -	$ -	$ 199.5
Subtotal Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ 720.3	$ -	$ -	$ -	$ -	$ -	$ -	$ 720.3
Operating Days	-	-	-	-	-	-	60	-	-	-	-	-	-	60
Labour														
Operators (per shift)														
Operators	-	-	-	-	-	-	2.0	-	-	-	-	-	-	
Drivers	-	-	-	-	-	-	1.0	-	-	-	-	-	-	
Mechanical (per shift)														
Mechanics	-	-	-	-	-	-	1.0	-	-	-	-	-	-	
Welders	-	-	-	-	-	-	0.5	-	-	-	-	-	-	
Total On-Site (2 shifts)	-	-	-	-	-	-	9.0	-	-	-	-	-	-	
Labour Costs ($ thousands)														
Operators	$ -	$ -	$ -	$ -	$ -	$ -	$ 123.3	$ -	$ -	$ -	$ -	$ -	$ -	$ 123.3
Drivers	$ -	$ -	$ -	$ -	$ -	$ -	$ 57.8	$ -	$ -	$ -	$ -	$ -	$ -	$ 57.8
Subtotal Direct Labour	$ -	$ -	$ -	$ -	$ -	$ -	$ 181.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 181.0
Subtotal Nuna Logistics	$ -	$ -	$ -	$ -	$ -	$ -	$ 901.3	$ -	$ -	$ -	$ -	$ -	$ -	$ 901.3
Total Main Complex	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,818.9	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,818.9

Notes
Maintenance Labour Costs (except Servicemen & Labourers) are included in the Equipment Rates. Servicemen & Labourers are included as Indirect Support Labour Costs
Labour personnel and costs are based on a 2 week in / 2 week out schedule of two 11 hour shifts (Nuna,EBA) and a 3 week in / 1 week out schedule of one 12 hour shift (Clark)
Labour Rates include benefits and fringes except Transporation and Camp Catering (both included in Indirect Transportation & Camp Costs).

NUNA LOGISTICS

Echo Bay Mines Ltd.
Lupin Reclamation Plan
Direct Cost Detail

Schedule 5: Residence Complex

Combined Estimates (Nuna, Clark)

Prepared by Nuna Logistics Ltd.
19-Jan-01
C.D.S.

Residence Complex	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Clark Builders ($ thousands)														
Equipment														
Cranes Backhoes & Shears	$ -	$ -	$ -	$ -	$ -	$ -	$ 30.7	$ -	$ -	$ -	$ -	$ -	$ -	$ 30.7
Labour														
Rooms & Corridors	$ -	$ -	$ -	$ -	$ -	$ -	$ 21.4	$ -	$ -	$ -	$ -	$ -	$ -	$ 21.4
Kitchen & Dining Area	$ -	$ -	$ -	$ -	$ -	$ -	$ 22.5	$ -	$ -	$ -	$ -	$ -	$ -	$ 22.5
Recreation Area	$ -	$ -	$ -	$ -	$ -	$ -	$ 20.7	$ -	$ -	$ -	$ -	$ -	$ -	$ 20.7
Office Area	$ -	$ -	$ -	$ -	$ -	$ -	$ 11.3	$ -	$ -	$ -	$ -	$ -	$ -	$ 11.3
Subtotal Clark Builders	$ -	$ -	$ -	$ -	$ -	$ -	$ 106.5	$ -	$ -	$ -	$ -	$ -	$ -	$ 106.5
Nuna Logistics														
Equipment Requirement														
Units Required														
Cat 992 Loaders	-	-	-	-	-	-	1	-	-	-	-	-	-	
Cat 773 Trucks	-	-	-	-	-	-	2	-	-	-	-	-	-	
JD 992E Excavator	-	-	-	-	-	-	1	-	-	-	-	-	-	
Cat D10 Dozers	-	-	-	-	-	-	1	-	-	-	-	-	-	
Utilization														
Cat 992 Loaders	0%	0%	0%	0%	0%	0%	60%	0%	0%	0%	0%	0%	0%	
Cat 773 Trucks	0%	0%	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%	
JD 992E Excavator	0%	0%	0%	0%	0%	0%	30%	0%	0%	0%	0%	0%	0%	
Cat D10 Dozers	0%	0%	0%	0%	0%	0%	40%	0%	0%	0%	0%	0%	0%	
Productive Hours Required														
Cat 992 Loaders	-	-	-	-	-	-	96	-	-	-	-	-	-	96
Cat 773 Trucks	-	-	-	-	-	-	68	-	-	-	-	-	-	68
JD 992E Excavator	-	-	-	-	-	-	48	-	-	-	-	-	-	48
Cat D10 Dozers	-	-	-	-	-	-	60	-	-	-	-	-	-	60
Equipment Costs ($ thousands)														
Cat 992 Loaders	$ -	$ -	$ -	$ -	$ -	$ -	$ 27.4	$ -	$ -	$ -	$ -	$ -	$ -	$ 27.4
Cat 773 Trucks	$ -	$ -	$ -	$ -	$ -	$ -	$ 16.8	$ -	$ -	$ -	$ -	$ -	$ -	$ 16.8
JD 992E Excavator	$ -	$ -	$ -	$ -	$ -	$ -	$ 10.6	$ -	$ -	$ -	$ -	$ -	$ -	$ 10.6
Cat D10 Dozers	$ -	$ -	$ -	$ -	$ -	$ -	$ 19.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 19.0
Subtotal Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ 73.8	$ -	$ -	$ -	$ -	$ -	$ -	$ 73.8
Operating Days	-	-	-	-	-	-	10	-	-	-	-	-	-	10
Labour Requirement														
Operators (per shift)														
Operators	-	-	-	-	-	-	1.5	-	-	-	-	-	-	
Drivers	-	-	-	-	-	-	0.5	-	-	-	-	-	-	
Mechanical (per shift)														
Mechanics	-	-	-	-	-	-	1.0	-	-	-	-	-	-	
Welders	-	-	-	-	-	-	0.5	-	-	-	-	-	-	
Total On-Site (2 shifts)	-	-	-	-	-	-	7.0	-	-	-	-	-	-	
Labour Costs ($ thousands)														
Operators	$ -	$ -	$ -	$ -	$ -	$ -	$ 15.4	$ -	$ -	$ -	$ -	$ -	$ -	$ 15.4
Drivers	$ -	$ -	$ -	$ -	$ -	$ -	$ 4.8	$ -	$ -	$ -	$ -	$ -	$ -	$ 4.8
Subtotal Direct Labour	$ -	$ -	$ -	$ -	$ -	$ -	$ 20.2	$ -	$ -	$ -	$ -	$ -	$ -	$ 20.2
Subtotal Nuna Logistics	$ -	$ -	$ -	$ -	$ -	$ -	$ 94.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 94.0
Total Residence Complex	$ -	$ -	$ -	$ -	$ -	$ -	$ 200.6	$ -	$ -	$ -	$ -	$ -	$ -	$ 200.6

Notes: Maintenance Labour Costs (except Servicemen & Labourers) are included in the Equipment Rates. Servicemen & Labourers are included as Indirect Support Labour Costs
Labour personnel and costs are based on a 2 week in / 2 week out schedule of two 11 hour shifts (Nuna,EBA) and a 3 week in / 1 week out schedule of one 12 hour shift (Clark)
Labour Rates include benefits and fringes except Transporation and Camp Catering (both included in Indirect Transportation & Camp Costs).

NUNA LOGISTICS

Echo Bay Mines Ltd.
Lupin Reclamation Plan
Direct Cost Detail

Schedule 6: Site Buildings & Infrastructure

Combined Estimates (Nuna, Clark)

Prepared by Nuna Logistics Ltd.
19-Jan-01
C.D.S.

Site Buildings & Infrastructure	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Clark Builders ($ thousands)														
Equipment														
Cranes, Backhoes & Shears	$ -	$ -	$ -	$ -	$ -	$ -	$ 404.1	$ -	$ -	$ -	$ -	$ -	$ -	$ 404.1
Labour														
Storage & Shop Buildings	$ -	$ -	$ -	$ -	$ -	$ -	$ 173.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 173.0
Fuel Tank Farms	$ -	$ -	$ -	$ -	$ -	$ -	$ 202.5	$ -	$ -	$ -	$ -	$ -	$ -	$ 202.5
Emergency Powerhouse	$ -	$ -	$ -	$ -	$ -	$ -	$ 71.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 71.0
Tailings Line	$ -	$ -	$ -	$ -	$ -	$ -	$ 225.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 225.0
Explosives Storage	$ -	$ -	$ -	$ -	$ -	$ -	$ 49.5	$ -	$ -	$ -	$ -	$ -	$ -	$ 49.5
Water Supply	$ -	$ -	$ -	$ -	$ -	$ -	$ 95.9	$ -	$ -	$ -	$ -	$ -	$ -	$ 95.9
Weather Station	$ -	$ -	$ -	$ -	$ -	$ -	$ 180.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 180.0
Subtotal Clark Builders	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,401.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,401.0
Nuna Logistics														
Equipment Requirement														
Units Required														
Cat 992 Loaders	-	-	-	-	-	-	1	-	-	-	-	-	-	
Cat 773 Trucks	-	-	-	-	-	-	2	-	-	-	-	-	-	
JD 992E Excavator	-	-	-	-	-	-	1	-	-	-	-	-	-	
Cat D10 Dozers	-	-	-	-	-	-	1	-	-	-	-	-	-	
Utilization														
Cat 992 Loaders	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	
Cat 773 Trucks	0%	0%	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%	
JD 992E Excavator	0%	0%	0%	0%	0%	0%	30%	0%	0%	0%	0%	0%	0%	
Cat D10 Dozers	0%	0%	0%	0%	0%	0%	70%	0%	0%	0%	0%	0%	0%	
Productive Hours Required														
Cat 992 Loaders	-	-	-	-	-	-	200	-	-	-	-	-	-	200
Cat 773 Trucks	-	-	-	-	-	-	170	-	-	-	-	-	-	170
JD 992E Excavator	-	-	-	-	-	-	120	-	-	-	-	-	-	120
Cat D10 Dozers	-	-	-	-	-	-	263	-	-	-	-	-	-	263
Equipment Costs ($ thousands)														
Cat 992 Loaders	$ -	$ -	$ -	$ -	$ -	$ -	$ 57.1	$ -	$ -	$ -	$ -	$ -	$ -	$ 57.1
Cat 773 Trucks	$ -	$ -	$ -	$ -	$ -	$ -	$ 42.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 42.0
JD 992E Excavator	$ -	$ -	$ -	$ -	$ -	$ -	$ 26.5	$ -	$ -	$ -	$ -	$ -	$ -	$ 26.5
Cat D10 Dozers	$ -	$ -	$ -	$ -	$ -	$ -	$ 83.1	$ -	$ -	$ -	$ -	$ -	$ -	$ 83.1
Subtotal Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ 208.7	$ -	$ -	$ -	$ -	$ -	$ -	$ 208.7
Operating Days	-	-	-	-	-	-	25	-	-	-	-	-	-	25
Labour Requirement														
Operators (per shift)														
Operators	-	-	-	-	-	-	1.5	-	-	-	-	-	-	
Drivers	-	-	-	-	-	-	0.5	-	-	-	-	-	-	
Mechanical (per shift)														
Mechanics	-	-	-	-	-	-	1.0	-	-	-	-	-	-	
Welders	-	-	-	-	-	-	0.5	-	-	-	-	-	-	
Total On-Site (2 shifts)	-	-	-	-	-	-	7.0	-	-	-	-	-	-	
Labour Costs ($ thousands)														
Operators	$ -	$ -	$ -	$ -	$ -	$ -	$ 38.5	$ -	$ -	$ -	$ -	$ -	$ -	$ 38.5
Drivers	$ -	$ -	$ -	$ -	$ -	$ -	$ 12.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 12.0
Subtotal Direct Labour	$ -	$ -	$ -	$ -	$ -	$ -	$ 50.6	$ -	$ -	$ -	$ -	$ -	$ -	$ 50.6
Subtotal Nuna Logistics	$ -	$ -	$ -	$ -	$ -	$ -	$ 259.3	$ -	$ -	$ -	$ -	$ -	$ -	$ 259.3
Total Site Buildings & Infrastructure	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,660.2	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,660.2

Notes: Maintenance Labour Costs (except Servicemen & Labourers) are included in the Equipment Rates. Servicemen & Labourers are included as Indirect Support Labour Costs.
Labour personnel and costs are based on a 2 week in / 2 week out schedule of two 11 hour shifts (Nuna,EBA) and a 3 week in / 1 week out schedule of one 12 hour shift (Clark).
Labour Rates include benefits and fringes except Transporation and Camp Catering (both included in Indirect Transportation & Camp Costs).

NUNA LOGISTICS

Echo Bay Mines Ltd.
Lupin Reclamation Plan
Direct Cost Detail

Schedule 7: Tailings - Load, Haul, & Place Quantities

Nuna Cost Estimate

Prepared by Nuna Logistics Ltd.
19-Jan-01
CDS

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Esker Haul by Category (ECMs)														
Operations														
Divider Dykes														
Cell 3b Divider Dyke	-	-	-	-	-	-	-	-	-		-	-	-	-
Cell 3c Divider Dyke	-	-	-	-	-	-	-	-	-		-	-	-	-
Cell 3d Divider Dyke	-	-	-	-	-	-	-	-	-		-	-	-	-
L Dam	-	-	-	-	-	-	-	-	-		-	-	-	-
Total Operations	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pre-Closure Reclamation														
Granular Cover														
Cover Cell 1 to1 75 m	-	-	-	-	247,500	-	-	-	-		-	-	-	247,500
Cover Cell 1A to 1 75 m	-	-	-	-	41,250	-	-	-	-		-	-	-	41,250
Cover Cell 2NW to 1 75 m	-	-	-	-	90,125	-	-	-	-		-	-	-	90,125
Cover Cell 2 to 1 75 m	-	-	-	-	79,785	-	-	-	-		-	-	-	79,785
Cover Cell 3A to 1 75 m	-	-	-	-	60,821	-	-	-	-		-	-	-	60,821
Cover Cell 3B to 1 75 m	-	-	-	-	50,160	-	-	-	-		-	-	-	50,160
Cover Cell 3C to 1 75 m	-	-	-	-	54,997	-	-	-	-		-	-	-	54,997
Cover Cell 3D to 1 75 m	-	-	-	-	-	73,500	-	-	-		-	-	-	73,500
Cover Cell 3 to 1 75 m	-	-	-	-	83,000	631,240	-	-	-		-	-	-	714,240
Total Pre-Closure Reclamation	-	-	-	-	707,638	704,740	-	-	-		-	-	-	1,412,378
Post-Closure Reclamation														
Granular Cover														
Cover Cell 3 to 1 75 m	-	-	-	-	-	-	58,000	-	-		-	-	-	58,000
Cover Cell 5 to 1 75 m	-	-	-	-	-	-	644,000	-	-		-	-	-	644,000
Total Post-Closure Reclamation	-	-	-	-	-	-	702,000	-	-		-	-	-	702,000
Total Esker Haul	-	-	-	-	707,638	704,740	702,000	-	-		-	-	-	2,114,378
Quantity Equivalents														
Esker (ECMs)	-	-	-	-	707,638	704,740	702,000	-	-		-	-	-	2,114,378
Esker (tonnes)	-	-	-	-	1,138,374	1,133 712	1,129,304	-	-		-	-	-	3,401,391
Esker (BCMs)	-	-	-	-	615,337	612,817	610,435	-	-		-	-	-	1,838,590
Esker (LCMs)	-	-	-	-	799 939	796 663	793,565	-	-		-	-	-	2,390,166
Haul Distances														
Level Road Haul Distance (km)	-	-	-	-	7 2	8 4	7 9	-	-		-	-	-	
Difficult Terrain Haul Distance (km	-	-	-	-	-	-	-	-	-		-	-	-	
Total Distance (km)	-	-	-	-	7 2	8 4	7 9	-	-		-	-	-	
Esker Depth (m)	-	-	-	-	-	-	-	-	-		-	-	-	
Cycle Times														
Average Truck Cycle Times - 992 Loading 776 Tractor-Trailers (min)														
Esker Haul	-	-	-	-	31 7	35 5	33 9	-	-		-	-	-	
Average Truck Cycle Times - 966 Loading 769 (min)														
Esker Haul	-	-	-	-	29 4	33 1	31 6	-	-		-	-	-	
Operating Days	-	-	-	-	**90**	**99**	**94**	-	-	-	-	-	-	283

NUNA LOGISTICS

Echo Bay Mines Ltd.
Lupin Reclamation Plan
Direct Cost Detail

Schedule 8: Tailings - Equipment Requirements

Nuna Cost Estimate

Prepared by Nuna Logistics Ltd.
19-Jan-01
C.D.S.

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Directs - LHP Production Equipment														
Production Equipment Required Productive Hours														
769 Trucks	-	-	-	-	-	-	-	-	-	-	-	-	-	-
776 Tractor-Trailers	-	-	-	-	6,021	6,704	6,385	-	-	-	-	-	-	19,110
966 Loader	-	-	-	-	-	-	-	-	-	-	-	-	-	-
992 Loader	-	-	-	-	1,378	1,372	1,367	-	-	-	-	-	-	4,116
D8 Dozers (Farming Esker)	-	-	-	-	787	784	781	-	-	-	-	-	-	2,352
D8 Dozers (Dump Locations)	-	-	-	-	1,800	1,980	1,880	-	-	-	-	-	-	5,660
D8 Dozers	-	-	-	-	2,587	2,764	2,661	-	-	-	-	-	-	8,012
Production Equipment Required Chargeable Hours														
769 Trucks	-	-	-	-	-	-	-	-	-	-	-	-	-	-
776 Tractor-Trailers	-	-	-	-	6,120	6,732	6,392	-	-	-	-	-	-	19,244
966 Loader	-	-	-	-	-	-	-	-	-	-	-	-	-	-
992 Loader	-	-	-	-	1,440	1,584	1,504	-	-	-	-	-	-	4,528
D8 Dozers	-	-	-	-	4,050	4,455	4,230	-	-	-	-	-	-	12,735
Station Positions														
Loaders Shovels	-	-	-	-	1	1	1	-	-	-	-	-	-	
Dozers @ Dump Locations	-	-	-	-	1	1	1	-	-	-	-	-	-	
Production Equipment Required On-Site														
769 Trucks	-	-	-	-	-	-	-	-	-	-	-	-	-	
776 Tractor-Trailers	-	-	-	-	4	4	4	-	-	-	-	-	-	
966 Loader	-	-	-	-	-	-	-	-	-	-	-	-	-	
992 Loader	-	-	-	-	2	2	2	-	-	-	-	-	-	
D8 Dozers	-	-	-	-	3	3	3	-	-	-	-	-	-	
Production Equipment Costs ($ thousands)														
769 Trucks	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
776 Tractor-Trailers	$ -	$ -	$ -	$ -	$ 1,383.6	$ 1,525.2	$ 1,458.5	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,367.3
966 Loader	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
992 Loader	$ -	$ -	$ -	$ -	$ 480.1	$ 493.0	$ 484.2	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,457.3
D8 Dozers	$ -	$ -	$ -	$ -	$ 719.0	$ 770.2	$ 741.1	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,230.4
	$ -	$ -	$ -	$ -	$ 2,582.7	$ 2,788.4	$ 2,683.8	$ -	$ -	$ -	$ -	$ -	$ -	$ 8,054.9

Notes: Equipment Hours reflects requirement before taking availability and usage into account. Equipment on-site reflects the requirement after taking availability and usage into account.

NUNA LOGISTICS

Echo Bay Mines Ltd.
Lupin Reclamation Plan
Direct Cost Detail

Schedule 9: Tailings - Labour Requirements

Nuna Cost Estimate

Prepared by Nuna Logistics Ltd.
19-Jan-01
C D S.

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Direct Labour Requirement														
Operators (per shift)														
Production Equipment														
Trucks	-	-	-	-	35	35	35	-	-		-	-	-	
Loaders	-	-	-	-	10	10	10	-	-		-	-	-	
Dozers	-	-	-	-	20	20	20	-	-		-	-	-	
Mechanical (per shift)														
Mechanics	-	-	-	-	15	15	15	-	-		-	-	-	
Welders	-	-	-	-	10	10	10	-	-		-	-	-	
Subtotal On-Site (2 shifts)	-	-	-	-	18	18	18	-	-		-	-	-	
Indirect Labour Requirement														
Mechanical (per shift)														
Servicemen/Fuelmen	-	-	-	-	15	15	15		-		-	-	-	
Labourers	-	-	-	-	15	15	15	-	-		-	-	-	
Subtotal On-Site (2 shifts)	-	-	-	-	6	6	6	-	-		-	-	-	
Direct Chargeable Labour Costs ($ thousands)														
Production Equipment														
Trucks	$ -	$ -	$ -	$ -	$ 303.3	$ 333.7	$ 316.8	$ -	$ -	$ -	$ -	$ -	$ -	$ 953.8
Loaders	$ -	$ -	$ -	$ -	$ 92.5	$ 101.7	$ 96.6	$ -	$ -	$ -	$ -	$ -	$ -	$ 290.7
Dozers	$ -	$ -	$ -	$ -	$ 184.9	$ 203.4	$ 193.1	$ -	$ -	$ -	$ -	$ -	$ -	$ 581.4
Total Direct Labour	$ -	$ -	$ -	$ -	$ 580.7	$ 638.7	$ 606.5	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,825.9
Indirect Chargeable Labour Costs ($ thousands)														
Production Equipment														
Servicemen/Fuelmen	$ -	$ -	$ -	$ -	$ 134.3	$ 147.8	$ 140.3	$ -	$ -	$ -	$ -	$ -	$ -	$ 422.4
Labourers	$ -	$ -	$ -	$ -	$ 117.0	$ 128.7	$ 122.2	$ -	$ -	$ -	$ -	$ -	$ -	$ 367.8
Total Indirect Labour	$ -	$ -	$ -	$ -	$ 251.3	$ 276.4	$ 262.5	$ -	$ -	$ -	$ -	$ -	$ -	$ 790.2

Notes: Maintenance Labour Costs (except Servicemen & Labourers) are included in the Equipment Rates. Servicemen & Labourers are included as Indirect Support Labour Costs.
Labour personnel and costs are based on a 2 week in / 2 week out schedule of 11 hour days. Labour Rates include benefits and fringes except Transporation and Camp Catering (both included in Indirect Transportation & Camp Costs).

NUNA LOGISTICS

Echo Bay Mines Ltd.
Lupin Reclamation Plan
Direct Cost Detail

Schedule 10: Site Earthworks Reclamation

Combined Estimates (Nuna, Clark)

Prepared by Nuna Logistics Ltd.
19-Jan-01
C.D.S.

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Site Earthworks Reclamation														
Clark Builders ($ thousands)														
Equipment														
Cranes, Backhoes & Shears	$ -	$ -	$ -	$ -	$ -	$ -	$ 18.2	$ -	$ -	$ -	$ -	$ -	$ -	$ 18.2
Labour														
Lights & Instruments	$ -	$ -	$ -	$ -	$ -	$ -	$ 45.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 45.0
Subtotal Clark Builders	$ -	$ -	$ -	$ -	$ -	$ -	$ 63.2	$ -	$ -	$ -	$ -	$ -	$ -	$ 63.2
Nuna Logistics														
Equipment Requirement														
Units Required														
Cat 992 Loaders	-	-	-	-	-	-	1	-	-	-	-	-	-	
Cat 773 Trucks	-	-	-	-	-	-	2	-	-	-	-	-	-	
JD 992E Excavator	-	-	-	-	-	-	1	-	-	-	-	-	-	
Cat D10 Dozers	-	-	-	-	-	-	1	-	-	-	-	-	-	
Utilization														
Cat 992 Loaders	0%	0%	0%	0%	0%	0%	70%	0%	0%	0%	0%	0%	0%	
Cat 773 Trucks	0%	0%	0%	0%	0%	0%	70%	0%	0%	0%	0%	0%	0%	
JD 992E Excavator	0%	0%	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%	
Cat D10 Dozers	0%	0%	0%	0%	0%	0%	70%	0%	0%	0%	0%	0%	0%	
Productive Hours Required														
Cat 992 Loaders	-	-	-	-	-	-	532	-	-	-	-	-	-	532
Cat 773 Trucks	-	-	-	-	-	-	1,131	-	-	-	-	-	-	1,131
JD 992E Excavator	-	-	-	-	-	-	152	-	-	-	-	-	-	152
Cat D10 Dozers	-	-	-	-	-	-	499	-	-	-	-	-	-	499
Equipment Costs ($ thousands)														
Cat 992 Loaders	$ -	$ -	$ -	$ -	$ -	$ -	$ 151.8	$ -	$ -	$ -	$ -	$ -	$ -	$ 151.8
Cat 773 Trucks	$ -	$ -	$ -	$ -	$ -	$ -	$ 279.5	$ -	$ -	$ -	$ -	$ -	$ -	$ 279.5
JD 992E Excavator	$ -	$ -	$ -	$ -	$ -	$ -	$ 33.6	$ -	$ -	$ -	$ -	$ -	$ -	$ 33.6
Cat D10 Dozers	$ -	$ -	$ -	$ -	$ -	$ -	$ 157.9	$ -	$ -	$ -	$ -	$ -	$ -	$ 157.9
Subtotal Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ 622.8	$ -	$ -	$ -	$ -	$ -	$ -	$ 622.8
Operating Days	-	-	-	-	-	-	48	-	-		-	-	-	48
Labour Requirement														
Operators (per shift)														
Operators	-	-	-	-	-	-	1.5	-	-		-	-	-	
Drivers	-	-	-	-	-	-	1.5	-	-	-	-	-	-	
Mechanical (per shift)														
Mechanics	-	-	-	-	-	-	1.0	-	-		-	-	-	
Welders	-	-	-	-	-	-	0.5	-	-		-	-	-	
Total On-Site (2 shifts)	-	-	-	-	-	-	9.0	-	-		-	-	-	
Labour Costs ($ thousands)														
Operators	$ -	$ -	$ -	$ -	$ -	$ -	$ 73.2	$ -	$ -	$ -	$ -	$ -	$ -	$ 73.2
Drivers	$ -	$ -	$ -	$ -	$ -	$ -	$ 68.6	$ -	$ -	$ -	$ -	$ -	$ -	$ 68.6
Subtotal Direct Labour	$ -	$ -	$ -	$ -	$ -	$ -	$ 141.8	$ -	$ -	$ -	$ -	$ -	$ -	$ 141.8
Subtotal Nuna Logistics	$ -	$ -	$ -	$ -	$ -	$ -	$ 764.6	$ -	$ -	$ -	$ -	$ -	$ -	$ 764.6
Total Site Earthworks Reclamation	$ -	$ -	$ -	$ -	$ -	$ -	$ 827.8	$ -	$ -	$ -	$ -	$ -	$ -	$ 827.8

Notes: Maintenance Labour Costs (except Servicemen & Labourers) are included in the Equipment Rates. Servicemen & Labourers are included as Indirect Support Labour Costs.
Labour personnel and costs are based on a 2 week in / 2 week out schedule of two 11 hour shifts (Nuna,EBA) and a 3 week in / 1 week out schedule of one 12 hour shift (Clark).
Labour Rates include benefits and fringes except Transporation and Camp Catering (both included in Indirect Transportation & Camp Costs).

NUNA LOGISTICS

Echo Bay Mines Ltd.
Lupin Reclamation Plan
Indirect Cost Detail

Schedule 12: General Indirects

Nuna Cost Estimate

Prepared by Nuna Logistics Ltd.
19-Jan-01
C.D.S

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Advance Work & Planning ($ thousands)														
Nuna Logistics														
Engineering/Planning	$ -	$ -	$ -	$ -	$ 15.0	$ -	$ 50.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 65.0
Advance Sitework	$ -	$ -	$ -	$ -	$ 10.0	$ -	$ 10.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 20.0
Activity Ramp-up	$ -	$ -	$ -	$ -	$ 60.0	$ 30.0	$ 60.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 150.0
Subtotal	$ -	$ -	$ -	$ -	$ 85.0	$ 30.0	$ 120.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 235.0
Clark Builders														
Engineering/Planning	$ -	$ -	$ -	$ -	$ -	$ -	$ 25.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 25.0
Advance Sitework	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Activity Ramp-up	$ -	$ -	$ -	$ -	$ -	$ -	$ 30.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 30.0
Subtotal	$ -	$ -	$ -	$ -	$ -	$ -	$ 55.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 55.0
EBA Engineering														
Engineering/Planning	$ -	$ 10.0	$ 10.0	$ 10.0	$ 20.0	$ 10.0	$ 40.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 100.0
Advance Sitework	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Activity Ramp-up	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Subtotal	$ -	$ 10.0	$ 10.0	$ 10.0	$ 20.0	$ 10.0	$ 40.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 100.0
Total Advance Work & Planning	$ -	$ 10.0	$ 10.0	$ 10.0	$ 105.0	$ 40.0	$ 215.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 390.0
Mobilization ($ thousands)														
Nuna Equipment														
Cat 776 Tractor-Trailers	$ -	$ -	$ -	$ -	$ 200.0	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 200.0
Cat 773 Trucks	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Cat 992 Loaders	$ -	$ -	$ -	$ -	$ 95.0	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 95.0
Cat D8 Dozers	$ -	$ -	$ -	$ -	$ 15.0	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 15.0
Cat D10 Dozers	$ -	$ -	$ -	$ -	$ -	$ -	$ 30.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 30.0
Cat 16G Graders	$ -	$ -	$ -	$ -	$ -	$ -	$ 15.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 15.0
992E Excavators	$ -	$ -	$ -	$ -	$ -	$ -	$ 15.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 15.0
Other Equipment & Supplies	$ -	$ -	$ -	$ -	$ 10.0	$ -	$ 30.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 40.0
Subtotal	$ -	$ -	$ -	$ -	$ 320.0	$ -	$ 90.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 410.0
Clark Equipment														
Cranes	$ -	$ -	$ -	$ -	$ -	$ -	$ 45.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 45.0
Backhoes	$ -	$ -	$ -	$ -	$ -	$ -	$ 65.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 65.0
Other Equipment & Supplies	$ -	$ -	$ -	$ -	$ -	$ -	$ 65.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 65.0
Subtotal	$ -	$ -	$ -	$ -	$ -	$ -	$ 175.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 175.0
Total Mobilization	$ -	$ -	$ -	$ -	$ 320.0	$ -	$ 265.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 585.0
Demobilization ($ thousands)														
Nuna Equipment														
Cat 776 Tractor-Trailers	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 200.0	$ -	$ -	$ -	$ -	$ -	$ 200.0
Cat 773 Trucks	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Cat 992 Loaders	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 75.0	$ -	$ -	$ -	$ -	$ -	$ 75.0
Cat D8 Dozers	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10.0	$ -	$ -	$ -	$ -	$ -	$ 10.0
Cat D10 Dozers	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 25.0	$ -	$ -	$ -	$ -	$ -	$ 25.0
Cat 16G Graders	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10.0	$ -	$ -	$ -	$ -	$ -	$ 10.0
992E Excavators	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10.0	$ -	$ -	$ -	$ -	$ -	$ 10.0
Other Equipment & Supplies	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10.0	$ -	$ -	$ -	$ -	$ -	$ 10.0
Subtotal	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 340.0	$ -	$ -	$ -	$ -	$ -	$ 340.0
Clark Equipment														
Cranes	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 40.0	$ -	$ -	$ -	$ -	$ -	$ 40.0
Backhoes	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 55.0	$ -	$ -	$ -	$ -	$ -	$ 55.0
Other Equipment & Supplies	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 65.0	$ -	$ -	$ -	$ -	$ -	$ 65.0
Subtotal	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 160.0	$ -	$ -	$ -	$ -	$ -	$ 160.0
Total Demobilization	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 500.0	$ -	$ -	$ -	$ -	$ -	$ 500.0

NUNA LOGISTICS

Echo Bay Mines Ltd.
Lupin Reclamation Plan
Direct Cost Detail

Schedule 11: Underground Closure

Combined Estimates (Nuna, Clark)

Prepared by Nuna Logistics Ltd.
19-Jan-01
C.D.S.

Underground Closure	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Clark Builders ($ thousands)														
Equipment														
Cranes Backhoes & Shears	$ -	$ -	$ -	$ -	$ -	$ -	$ 64.7	$ -	$ -	$ -	$ -	$ -	$ -	$ 64.7
Labour														
Equipment Disposal	$ -	$ -	$ -	$ -	$ -	$ -	$ 10.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 10.0
Access Closures	$ -	$ -	$ -	$ -	$ -	$ -	$ 150.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 150.0
Subtotal Clark Builders	$ -	$ -	$ -	$ -	$ -	$ -	$ 224.7	$ -	$ -	$ -	$ -	$ -	$ -	$ 224.7
Nuna Logistics														
Equipment Requirement														
Units Required														
Cat 992 Loaders	-	-	-	-	-	-	1	-	-	-	-	-	-	
Cat 773 Trucks	-	-	-	-	-	-	2	-	-	-	-	-	-	
JD 992E Excavator	-	-	-	-	-	-	1	-	-	-	-	-	-	
Cat D10 Dozers	-	-	-	-	-	-	1	-	-	-	-	-	-	
Utilization														
Cat 992 Loaders	0%	0%	0%	0%	0%	0%	70%	0%	0%	0%	0%	0%	0%	
Cat 773 Trucks	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
JD 992E Excavator	0%	0%	0%	0%	0%	0%	40%	0%	0%	0%	0%	0%	0%	
Cat D10 Dozers	0%	0%	0%	0%	0%	0%	70%	0%	0%	0%	0%	0%	0%	
Productive Hours Required														
Cat 992 Loaders	-	-	-	-	-	-	56	-	-	-	-	-	-	56
Cat 773 Trucks	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JD 992E Excavator	-	-	-	-	-	-	32	-	-	-	-	-	-	32
Cat D10 Dozers	-	-	-	-	-	-	53	-	-	-	-	-	-	53
Equipment Costs ($ thousands)														
Cat 992 Loaders	$ -	$ -	$ -	$ -	$ -	$ -	$ 16.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 16.0
Cat 773 Trucks	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
JD 992E Excavator	$ -	$ -	$ -	$ -	$ -	$ -	$ 7.1	$ -	$ -	$ -	$ -	$ -	$ -	$ 7.1
Cat D10 Dozers	$ -	$ -	$ -	$ -	$ -	$ -	$ 16.6	$ -	$ -	$ -	$ -	$ -	$ -	$ 16.6
Subtotal Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ 39.7	$ -	$ -	$ -	$ -	$ -	$ -	$ 39.7
Operating Days	-	-		-	-	-	5	-	-		-	-	-	5
Labour Requirement														
Operators (per shift)														
Operators	-	-		-	-	-	1.5	-	-		-	-	-	
Drivers	-	-		-	-	-	-	-	-		-	-	-	
Mechanical (per shift)														
Mechanics	-	-		-	-	-	1.0	-	-		-	-	-	
Welders	-	-		-	-	-	0.5	-	-		-	-	-	
Total On-Site (2 shifts)	-	-		-	-	-	6.0	-	-		-	-	-	
Labour Costs ($ thousands)														
Operators	$ -	$ -	$ -	$ -	$ -	$ -	$ 7.7	$ -	$ -	$ -	$ -	$ -	$ -	$ 7.7
Drivers	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Subtotal Direct Labour	$ -	$ -	$ -	$ -	$ -	$ -	$ 7.7	$ -	$ -	$ -	$ -	$ -	$ -	$ 7.7
Subtotal Nuna Logistics	$ -	$ -	$ -	$ -	$ -	$ -	$ 47.4	$ -	$ -	$ -	$ -	$ -	$ -	$ 47.4
Total Underground Closure	$ -	$ -	$ -	$ -	$ -	$ -	$ 272.1	$ -	$ -	$ -	$ -	$ -	$ -	$ 272.1

Notes: Maintenance Labour Costs (except Servicemen & Labourers) are included in the Equipment Rates. Servicemen & Labourers are included as Indirect Support Labour Costs.
Labour personnel and costs are based on a 2 week in / 2 week out schedule of two 11 hour shifts (Nuna,EBA) and a 3 week in / 1 week out schedule of one 12 hour shift (Clark).
Labour Rates include benefits and fringes except Transporation and Camp Catering (both included in Indirect Transportation & Camp Costs).

NUNA LOGISTICS

Echo Bay Mines Ltd.
Lupin Reclamation Plan
Indirect Cost Detail

Schedule 13: Project Administration

Nuna Cost Estimate

Prepared by Nuna Logistics Ltd.
19-Jan-01
C.D.S.

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
M&A Requirement														
Administration Operating Days	-	-	-	-	-	-	150	-	-	-	-	-	-	150
Supervision														
Project Manager	-	-	-	-	-	-	1.0	-	-	-	-	-	-	
Nuna Foremen	-	-	-	-	-	-	2.0	-	-	-	-	-	-	
Clark Foremen	-	-	-	-	-	-	2.0	-	-	-	-	-	-	
Administration														
Accounting	-	-	-	-	-	-	0.5	-	-	-	-	-	-	
Clerical	-	-	-	-	-	-	0.5	-	-	-	-	-	-	
Monitoring & Reporting														
Field/Environmental Engineer	-	-	-	-	-	-	1.0	-	-	-	-	-	-	
Surveyor	-	-	-	-	-	-	1.0	-	-	-	-	-	-	
Total On-Site	-	-	-	-	-	-	8.0	-	-	-	-	-	-	

M&A Labour Costs ($ thousands)														
Project Manager	$ -	$ -	$ -	$ -	$ -	$ -	$ 221.6	$ -	$ -	$ -	$ -	$ -	$ -	$ 221.6
Nuna Foremen	$ -	$ -	$ -	$ -	$ -	$ -	$ 346.8	$ -	$ -	$ -	$ -	$ -	$ -	$ 346.8
Clark Foremen	$ -	$ -	$ -	$ -	$ -	$ -	$ 346.8	$ -	$ -	$ -	$ -	$ -	$ -	$ 346.8
Accounting	$ -	$ -	$ -	$ -	$ -	$ -	$ 74.6	$ -	$ -	$ -	$ -	$ -	$ -	$ 74.6
Clerical	$ -	$ -	$ -	$ -	$ -	$ -	$ 65.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 65.0
Field/Environmental Engineer	$ -	$ -	$ -	$ -	$ -	$ -	$ 154.1	$ -	$ -	$ -	$ -	$ -	$ -	$ 154.1
Surveyor	$ -	$ -	$ -	$ -	$ -	$ -	$ 154.1	$ -	$ -	$ -	$ -	$ -	$ -	$ 154.1
Total M&A Labour	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,362.9	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,362.9

Notes: Labour personnel and costs are based on a 2 week in / 2 week out schedule of two 11 hour shifts (Nuna,EBA) and a 3 week in / 1 week out schedule of one 12 hour shift (Clark)
Labour Rates include benefits and fringes except Transporation and Camp Catering (both included in Indirect Transportation & Camp Costs)

NUNA LOGISTICS

Echo Bay Mines Ltd.
Lupin Reclamation Plan
Indirect Cost Detail

Schedule 14: Support Equipment & Labour

Nuna Cost Estimate

Prepared by Nuna Logistics Ltd.
19-Jan-01
C D S.

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Support Equipment Requirement														
Nuna Support Operating Days	-	-	-	-	-	-	150	-	-	-	-	-	-	150
Units Required														
Cat 966 Loaders	-	-	-	-	-	-	1	-	-		-	-	-	
Cat 16G Grader	-	-	-	-	-	-	1	-	-		-	-	-	
Cat IT28 Toolcarriers	-	-	-	-	-	-	2	-	-	-	-	-	-	
Tractor and End Dump Trailers	-	-	-	-	-	-	1	-	-	-	-	-	-	
Buses	-	-	-	-	-	-	1	-	-	-	-	-	-	
Pickups	-	-	-	-	-	-	6	-	-	-	-	-	-	
Utilization														
Cat 966 Loaders	0%	0%	0%	0%	0%	0%	30%	0%	0%	0%	0%	0%	0%	
Cat 16G Grader	0%	0%	0%	0%	0%	0%	40%	0%	0%	0%	0%	0%	0%	
Cat IT28 Toolcarriers	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	
Tractor and End Dump Trailers	0%	0%	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%	
Buses	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%	
Pickups	0%	0%	0%	0%	0%	0%	60%	0%	0%	0%	0%	0%	0%	
Productive Hours Required														
Cat 966 Loaders	-	-	-	-	-	-	720	-	-		-	-	-	720
Cat 16G Grader	-	-	-	-	-	-	1,080	-	-		-	-	-	1,080
Cat IT28 Toolcarriers	-	-	-	-	-	-	2,250	-	-	-	-	-	-	2,250
Tractor and End Dump Trailers	-		-	-	-	-	450	-	-	-	-	-	-	450
Buses	-	-	-	-	-	-	113	-	-	-	-	-	-	113
Pickups	-	-	-	-	-	-	8,100	-	-	-	-	-	-	8,100
Support Equipment Costs ($ thousands)														
Cat 966 Loaders	$ -	$ -	$ -	$ -	$ -	$ -	$ 107.1	$ -	$ -	$ -	$ -	$ -	$ -	$ 107.1
Cat 16G Grader	$ -	$ -	$ -	$ -	$ -	$ -	$ 168.2	$ -	$ -	$ -	$ -	$ -	$ -	$ 168.2
Cat IT28 Toolcarriers	$ -	$ -	$ -	$ -	$ -	$ -	$ 84.5	$ -	$ -	$ -	$ -	$ -	$ -	$ 84.5
Tractor and End Dump Trailers	$ -	$ -	$ -	$ -	$ -	$ -	$ 45.4	$ -	$ -	$ -	$ -	$ -	$ -	$ 45.4
Buses	$ -	$ -	$ -	$ -	$ -	$ -	$ 4.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 4.0
Pickups	$ -	$ -	$ -	$ -	$ -	$ -	$ 108.8	$ -	$ -	$ -	$ -	$ -	$ -	$ 108.8
	$ -	$ -	$ -	$ -	$ -	$ -	$ 518.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 518.0
Support Labour Requirement														
Operators (per shift)														
Operators	-	-	-	-	-	-	1.5	-	-		-	-	-	
Drivers	-	-	-	-	-	-	0.5	-	-			-	-	
Mechanical (per shift)														
Mechanics	-		-	-	-		1.0	-	-	-	-	-	-	
Welders	-	-	-	-	-	-	0.5	-	-	-	-	-	-	
Servicemen/Fuelmen	-	-	-	-	-	-	0.5	-	-		-	-	-	
Labourers	-	-	-	-	-	-	0.5	-	-				-	
Total On-Site (2 shifts)	-	-	-	-	-	-	9.0	-	-	-	-	-	-	
Support Labour Costs ($ thousands)														
Operators	$ -	$ -	$ -	$ -	$ -	$ -	$ 231.1	$ -	$ -	$	$	$ -	$ -	$ 231.1
Drivers	$ -	$ -	$ -	$ -	$ -	$ -	$ 72.2	$ -	$ -	$	$	$ -	$ -	$ 72.2
Servicemen/Fuelmen	$ -	$	$	$ -	$ -	$ -	$ 74.6	$ -	$ -	$	$ -	$ -	$ -	$ 74.6
Labourers	$ -	$ -	$ -	$ -	$ -	$ -	$ 65.0	$ -	$ -	$	$ -	$ -	$ -	$ 65.0
Total Support Labour	$ -	$ -	$ -	$ -	$ -	$ -	$ 443.0	$ -	$ -	$ -	$ -	$ -	$ -	$ 443.0

Notes
Maintenance Labour Costs (except Servicemen & Labourers) are included in the Equipment Rates. Servicemen & Labourers are included as Indirect Support Labour Costs
Labour personnel and costs are based on a 2 week in / 2 week out schedule of two 11 hour shifts (Nuna,EBA) and a 3 week in / 1 week out schedule of one 12 hour shift (Clark)
Labour Rates include benefits and fringes except Transporation and Camp Catering (both included in Indirect Transportation & Camp Costs)

NUNA LOGISTICS

Echo Bay Mines Ltd.
Lupin Reclamation Plan
Indirect Cost Detail

Schedule 15: Transportation & Camp

Nuna Cost Estimate

Prepared by Nuna Logistics Ltd.
19-Jan-01
C.D.S.

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Transportation														
Flights														
Nuna														
Tailings Containment	-	-	-	-	155	170	162	-	-	-	-	-	-	487
Facilities & Site Demolition	-	-	-	-	-	-	89	-	-	-	-	-	-	89
Project Management	-	-	-	-	-	-	86	-	-	-	-	-	-	86
Indirect Support	-	-	-	-	-	-	97	-	-	-	-	-	-	97
Clark	-	-	-	-	-	-	450	-	-	-	-	-	-	450
EBA	-	-	-	-	-	-	31	-	-	-	-	-	-	31
Incidental	-	-	-	-	8	9	46	-	-	-	-	-	-	63
	-	-	-	-	163	179	961	-	-	-	-	-	-	1,303
Transportation Costs ($ thousands)														
At $750 per Round Trip	$ -	$ -	$ -	$ -	$ 122.3	$ 134.3	$ 720.8	$ -	$ -	$ -	$ -	$ -	$ -	$ 977.3
Camp Catering														
Camp Man-Days														
Nuna														
Tailings Containment	-	-	-	-	2,160	2,376	2,256	-	-	-	-	-	-	6,792
Facilities & Site Demolition	-	-	-	-	-	-	1,243	-	-	-	-	-	-	1,243
Project Management	-	-	-	-	-	-	1,200	-	-	-	-	-	-	1,200
Indirect Support	-	-	-	-	-	-	1,350	-	-	-	-	-	-	1,350
Clark	-	-	-	-	-	-	8,800	-	-	-	-	-	-	8,800
EBA	-	-	-	-	-	-	430	-	-	-	-	-	-	430
Incidental	-	-	-	-	108	119	764	-	-	-	-	-	-	991
	-	-	-	-	2,268	2,495	16,043	-	-	-	-	-	-	20,806
Camp Catering Costs ($ thousands)														
At $40 per Man-Day	$ -	$ -	$ -	$ -	$ 90.7	$ 99.8	$ 641.7	$ -	$ -	$ -	$ -	$ -	$ -	$ 832.2

NUNA LOGISTICS

Echo Bay Mines Ltd.
Lupin Reclamation Plan
Indirect Cost Detail

Schedule 16: Fuel Consumption

Nuna Cost Estimate

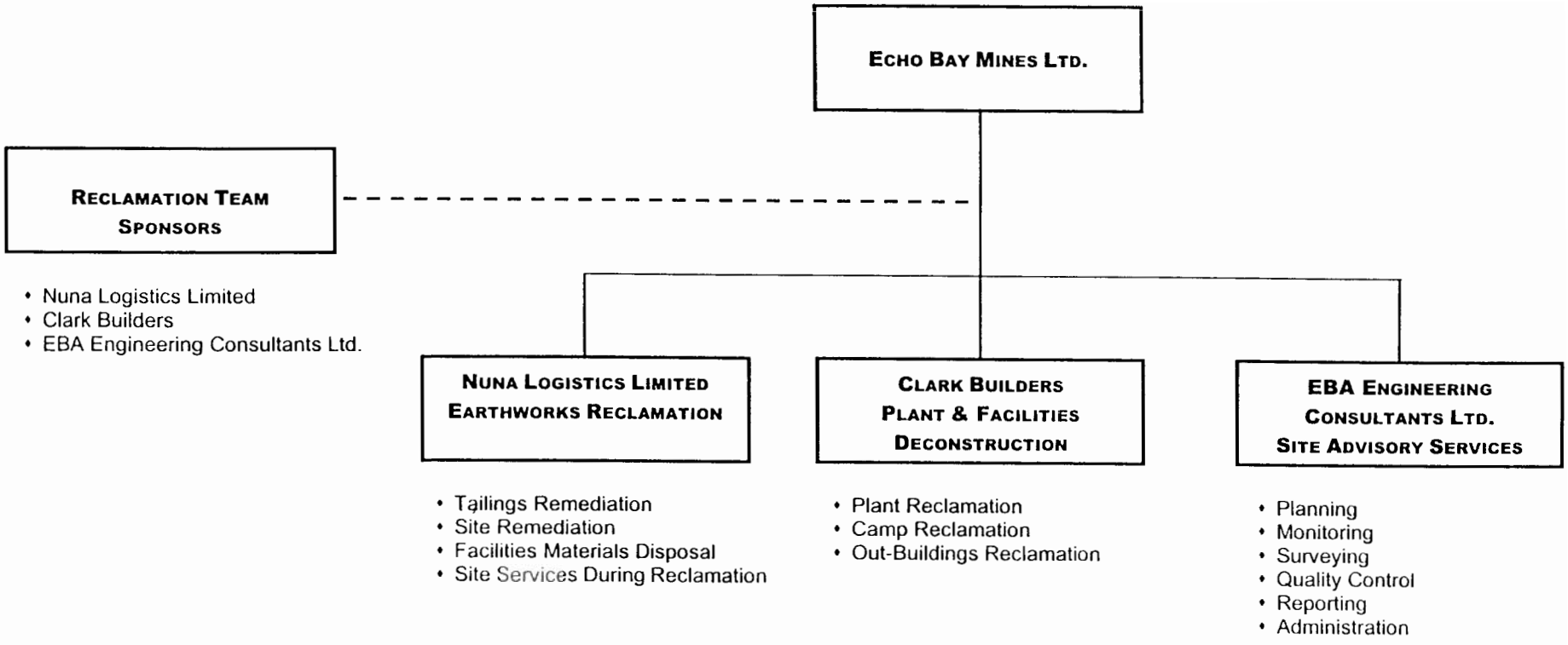
Prepared by Nuna Logistics Ltd.
19-Jan-01
C.D.S.

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Fuel Consumption (Litres)														
Facilities & Site Demolition														
992 Loader	-	-	-	-	-	-	140,040	-	-	-	-	-	-	140,040
773 Trucks	-	-	-	-	-	-	131,070	-	-	-	-	-	-	131,070
D10 Dozers	-	-	-	-	-	-	126,315	-	-	-	-	-	-	126,315
Clark Builders Equipment	-	-	-	-	-	-	500,000	-	-	-	-	-	-	500,000
Subtotal Litres	-	-	-	-	-	-	897,425	-	-	-	-	-	-	897,425
Tailings Containment														
769 Trucks	-	-	-	-	-	-	-	-	-	-	-	-	-	-
776 Tractor-Trailers	-	-	-	-	662,340	737,486	702,304	-	-	-	-	-	-	2,102,131
966 Loader	-	-	-	-	-	-	-	-	-	-	-	-	-	-
992 Loader	-	-	-	-	123,978	123,470	122,990	-	-	-	-	-	-	370,438
D8 Dozers	-	-	-	-	116,422	124,377	119,740	-	-	-	-	-	-	360,539
Subtotal Litres	-	-	-	-	902,740	985,334	945,034	-	-	-	-	-	-	2,833,108
Support Equipment														
Cat 966 Loaders	-	-	-	-	-	-	20,160	-	-	-	-	-	-	20,160
Cat 16G Grader	-	-	-	-	-	-	47,520	-	-	-	-	-	-	47,520
Cat IT28 Toolcarriers	-	-	-	-	-	-	13,500	-	-	-	-	-	-	13,500
Tractor and End Dump Trailers	-	-	-	-	-	-	6,750	-	-	-	-	-	-	6,750
Buses	-	-	-	-	-	-	1,125	-	-	-	-	-	-	1,125
Pickups	-	-	-	-	-	-	32,400	-	-	-	-	-	-	32,400
Subtotal Litres	-	-	-	-	-	-	121,455	-	-	-	-	-	-	121,455
Emergency Powerhouse (Post-Closure	-		-	-	-	-	490,320	-	-	-	-	-	-	490,320
Total Litres	-	-	-	-	902,740	985,334	2,454,234	-	-	-	-	-	-	4,342,308

Notes: Fuel Costs are included in Equipment Charge Rates. Quantities are for Information only
Fuel Consumption includes fuel required to operate the Lupin facilities (Powerhouse) during demolition

NUNA LOGISTICS

Organization Chart



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