

State of California

DEPARTMENT OF CONSERVATION
Financial Assurance Cost Estimate
Form OMR-23 (New 06/96)

APPENDIX A-1
[EXAMPLE]

FINANCIAL ASSURANCE COST ESTIMATE

FOR

CA MINE ID # 91-_____

Prepared by:

Date: _____

Note: This worksheet was developed by the Office of Mine Reclamation to assist lead agencies and operators prepare a reclamation cost estimate and determine an appropriate amount for the financial assurance in conformance with Section 2773.1 of SMARA. It should be used in conjunction with the *Financial Assurance Guidelines* adopted by the State Mining and Geology Board.

Instructions

The worksheet is divided into seven sections to simplify the cost analysis process. Below is a list of instructions for each section. Please read them carefully before filling out the form. If a section is not applicable, please indicate so with a brief statement. An equipment list is provided after Section 7 for summarizing equipment used for reclamation. In addition, a page is provided at the end of the form for notes and calculations. Copies of supporting documentation such as contractor estimates should also be attached.

Section I - Primary Reclamation Activities

This section should be used to calculate direct costs associated with primary reclamation activities. These activities include, but are not limited to: establishing final slopes on all cuts and fills, removal of haul/access roads, constructing drainage/erosion controls, decompacting staging/stockpile areas, demolition and disposal of building foundations and other debris as well as underground structures (i.e. storage tanks and septic systems), cleanup of boneyard areas, well closure, topsoil replacement/redistribution, finish grading, remediation of any soil contamination, and establishing access restrictions.

Refer to the approved reclamation plan to determine the various tasks required to reclaim the site. If the reclamation plan is not specific enough to provide this information, the lead agency should be consulted to help determine your reclamation requirements. Using the form provided, estimate the costs for each task by: 1) briefly describing the reclamation task to be performed and the methods to be implemented; 2) completing the calculation tables; and 3) adding the results at the bottom of the page. It may make it easier to break large mine sites into smaller areas and address each area separately. If this is done, make copies of the worksheet page and fill them out for each reclamation task and area. Page numbers were intentionally left off for this purpose so be sure to number the pages as they are completed.

Section II - Revegetation

This section should be used to calculate direct costs associated with revegetating disturbed areas. Revegetation activities include, but are not limited to: soil preparation/amendment, mulching, installation of irrigation systems, custom seed/plant collection, nursery services, hydroseeding, seed/plant installation, plant protection, and remediation.

Refer to the approved reclamation plan or revegetation program to determine the various tasks and materials required to revegetate the site. Follow the procedures discussed in Section I to estimate the costs for each task. Be sure to provide the unit of measure (i.e. pallet, pound, ton) in the materials table for the type of material to be used.

Section III - Plant Structures and Equipment Removal

This section should be used to calculate the costs associated with dismantling and removal of plant structures and equipment. The Financial Assurance Guidelines adopted by the State Mining and Geology Board provide that the cost to reclaim the plant site may be net of the surplus/salvage value of the facilities to be reclaimed. Please note however, that the value of mined material stockpiles located within the plant site area cannot be used to offset the cost of their removal. This reclamation cost should be provided in the primary reclamation activities section.

EXAMPLE

Refer to the approved reclamation plan to determine the tasks required to reclaim and remove the plant structures and equipment. Estimate these costs using the tables provided. To establish the salvage value of the plant site an estimate, bid or cost calculation from an impartial company or contractor which provides industrial dismantling or equipment salvage services, or is in the business of buying and selling scrap metals or similar products, must be provided. The estimate, bid or cost calculation should contain the following information:

- | | |
|--|--|
| a. Name & location of company or contractor | e. Cost of such work |
| b. Statement of qualifications and experience | f. Net salvage value of equipment/material |
| c. Location of mine site & California Mine ID# | g. Effective period of estimate or bid |
| d. Description of work to be done | h. Signature of responsible party |

Follow the directions provided in subsection E to determine if the cost to remove the plant equipment may be offset by its salvage value.

Section IV - Miscellaneous Costs

This section should be used to list any miscellaneous costs for materials, labor or services required to complete final reclamation and closure of the site (i.e. plant decommissioning, lead agency final inspections, reclamation mitigation measures, etc.). Using the table provided, list the item or service needed, the quantity, its unit cost (if appropriate) and total cost. Indicate the sum of these costs at the bottom of the page.

Section V - Monitoring

This section should be used to list the costs associated with any required monitoring of the site once initial reclamation has been completed. This could include monitoring for successful revegetation and habitat establishment, slope stability, erosion control, access controls, or site remediation (i.e. process reagents/hydrocarbons). Monitoring required by other agencies (i.e. California Regional Water Quality Control Board) and covered under a separate financial assurance need not be listed. Using the table provided, list the monitoring task, the cost per site visit, the number of site visits per year, the number of monitoring years and total cost. Indicate the sum of these costs in the space provided below the table. If a consultant will be conducting the monitoring, provide a copy of his/her estimate or contract.

Section VI - Supervision / Profit & Overhead / Contingencies / Mobilization

This section includes the costs associated with supervision of reclamation activities, profit and overhead, contingencies (unforeseen costs) and mobilization (the cost of moving equipment to and from the site). These costs are based on a percentage of the total direct costs and normally decline as the value of the operation increases. Refer to [Graph 1](#) and [Graph 2](#) to determine the percentage rates to be used.

Section VII - Summary of Costs

This section should be used to determine the total cost of reclamation and the amount of the financial assurance. Add all the cost sheets from each section together and place their totals in the spaces provided. The lead agency should determine how much, if any, administrative cost is to be added.

I. PRIMARY RECLAMATION ACTIVITIES

Description of Task:

Methods to be Used:

Miscellaneous Information:

Overburden (cubic yards): _____ Topsoil (cubic yards): _____ Acres: _____
 Production Rate (cubic yards/hour): 1. _____ 2. _____ 3. _____ 4. _____
 Haul Distance (feet): 1. _____ 2. _____ 3. _____ 4. _____

A. Equipment - List all equipment required to complete identified task. For large reclamation jobs separate mine areas for ease of accounting.

Equipment	Quantity	\$/Hour	# of Hours	Cost (\$)
1.				
2.				
3.				
4.				

Total Equipment Cost for this Task \$ _____

B. Labor - List all labor categories to complete identified task.

Labor Category	Quantity	\$/Hour	# of Hours	Cost (\$)

Total Labor Cost for this Task \$ _____

C. Materials - List all materials required to complete identified task (include disposal costs).

Item	Quantity	\$/Unit	Cost (\$)

Total Materials Cost for this Task \$ _____

D. Direct Cost for this Task

Equipment Cost + Labor Cost + Materials Cost = \$ _____

II. REVEGETATION

Description of Task:

Methods to be Used:

A. Equipment - List all equipment required to complete identified task.

Equipment	Quantity	\$/Hour	# of Hours	Cost (\$)

Total Equipment Cost for this Task \$ _____

B. Labor - List all labor categories to complete identified task.

Labor Category	Quantity	\$/Hour	# of Hours	Cost (\$)

Total Labor Cost for this Task \$ _____

C. Materials - List all materials required to complete identified task.

Item / Plant Species	Unit of Measure	# of Units	\$/Unit	Cost (\$)

Total Materials Cost for this Task \$ _____

D. Direct Cost for this Task

Equipment Cost + Labor Cost + Materials Cost \$ _____

III. PLANT STRUCTURES AND EQUIPMENT REMOVAL

Description of Task:

Methods to be Used:

A. Equipment - List all equipment required to complete identified task.

Equipment	Quantity	\$/Hour	# of Hours	Cost (\$)

Total Equipment Cost for this Task \$ _____

B. Labor - List all labor categories to complete identified task.

Labor Category	Quantity	\$/Hour	# of Hours	Cost (\$)

Total Labor Cost for this Task \$ _____

C. Demolition - List all structures and equipment to be dismantled or demolished.

Structure / Equipment	Type of Material	Volume (cubic feet)	Unit Cost Basis	Disposal Cost	Cost (\$)

Total Materials Cost for this Task \$ _____

D. Direct Cost for this Task

Equipment Cost + Labor Cost + Demolition Cost = \$ _____

E. Surplus / Salvage Value

- 1. Total cost to reclaim plant structures and equipment pursuant to the approved reclamation plan. \$ _____
- 2. Net salvage value of the plant structures and equipment.* \$ _____
- 3. Subtract Line 2 from Line 1 \$ _____

4. If Line 3 is greater than \$0, enter this amount on the total plant structures and equipment removal cost line under Section VIII (Summary of Costs). If Line 3 is less than \$0, enter \$0 on the appropriate line in Section VIII.

***NOTE** This is the value of plant structures, buildings and equipment on a salvage basis -- e.g. after the structures and equipment have been removed for sale or use off-site. In order to include net salvage value in the financial assurance calculation, the operator must provide a letter of agreement, signed contract, bid or quote from an independent company which provides industrial dismantling or equipment salvage services, or is in the business of buying and selling scrap metals or similar products.

IV. MISCELLANEOUS COSTS

Examples of this type of cost could include temporary storage of equipment and materials off site, special one-time permits (i.e. transportation permits for extra wide or overweight loads, etc.), decommissioning a process mill (i.e. decontamination of equipment), or disposal of warehouse inventories.

Item / Task	Quantity	\$/Unit	Cost (\$)
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

Total Miscellaneous Costs \$ _____

V. MONITORING

Monitoring Task	\$/Visit	# of Monitoring		Cost (\$)
		# Visits/Year	Years	
1.				
2.				
3.				
4.				
5.				

Total Monitoring Costs \$ _____

VI. SUPERVISION/PROFIT & OVERHEAD/CONTINGENCIES/MOBILIZATION

A. Supervision - Supervision or reclamation management includes project inspection and supervision. These activities are usually performed by a consultant or staff member with experience in reclamation of disturbed lands. Reclamation management may include recommending change orders, verifying completed work, verifying compliance with project specifications, and other reclamation management oversight activities. Please refer to Graph No. 1 to determine the supervision cost factor.

B. Profit and Overhead - Where it becomes necessary for the Lead Agency or the Department of Conservation to complete reclamation of the mining site, a third party will be retained to do the actual reclamation work. Because profit and overhead costs are not included in the reclamation cost sheets, these costs must be added to the total reclamation estimate. Please refer to Graph No. 2 to determine the profit and overhead cost factor.

C. Contingencies - A contingency cost should be included in the financial assurance estimate to provide for project uncertainties and unexpected natural events. The U. S. Department of the Interior, Office of Surface Mining publishes the Handbook for Calculation of Reclamation Bond Amounts which recommends contingency percentages be based upon the level of direct costs, as shown below:

<u>Total Direct Cost (\$)</u>	<u>Contingency (%)</u>
0 - \$500,000	10
\$500,00 - 5 million	7
5 million - 50 million	4
Greater than 50 million	2

D. Mobilization - Mobilization costs are attributed to moving equipment to the project site for reclamation purposes. These costs normally range between one and five percent of the total direct cost of the reclamation operations. These costs will vary depending upon the site location and the total value of the reclamation operations to be performed. Please insert the percentage used to estimate mobilization costs under Section VIII - Summary of Costs.

VII. SUMMARY OF COST

Total of all Primary Reclamation Activities Costs	\$
Total of all Revegetation Costs	\$
Total of all Plant Structures & Equipment Removal Costs	\$
Total of all Miscellaneous Costs	\$
Total of all Monitoring Costs	\$ _____
Total of Direct Costs	\$
Supervision (_____%)	\$
Profit/Overhead (_____%)	\$
Contingencies (_____ %)	\$
Mobilization (_____ %)	\$ _____
Total of Indirect Costs	\$
Total of Direct and Indirect Costs	\$
Lead Agency Administrative Cost* (Determined by the Lead Agency)	\$ _____
Total Estimated Cost of Reclamation	\$ <u> </u>

***NOTE** The Financial Assurance Guidelines recommend that when reviewing and approving a financial assurance cost estimate, lead agencies should include their administrative cost to draw on the financial assurance and implement the reclamation plan, should it become necessary.

EXAMPLE

EQUIPMENT LIST

This attachment may be used to list the number and type of equipment to be used during reclamation. Write in the equipment under the general categories provided. If there is no category for the type of equipment to be used, please list it under the category entitled "Other Equipment".

TRACTORS	
MOTOR GRADERS	
LOADERS	
BACKHOES	
SCRAPERS	

EXCAVATORS	
ARTICULATED TRUCKS	
HAUL TRUCKS (Off Hwy)	
HAUL TRUCKS (On Hwy)	
WATER TRUCKS	

TRACTOR ATTACHMENTS	
OTHER EQUIPMENT	