HOMESTAKE

GRANTS OFFICE

ALAN D. COX
PROJECT MANAGER

August 30, 2004

Mr. Bill Von Till, Site Manager
c/o Document Control Desk
Chief of Fuel Cycle Facilities Branch (Mailstop T8-A33)
Division of Fuel Cycle Safety and Safeguards
Office of Nuclear Materials Safety and Safeguards
U.S. Nuclear Regulatory Commission
11545 Rockville Pike
Two White Flint North
Rockville, MD 20852-2738

RE: Homestake Mining Company Financial Surety, Source Materials License SUA-1471 – **Responses to Request for Additional Information (RAI)**

Dear Bill:

This letter provides HMC's responses to the August 4, 2004, Request for Additional Information (RAI) from the NRC relating to review of the Grants site life-of-project cost estimate filed with the agency in March, 2004. Two specific items are attached for review and reference that should address most of the questions presented in the RAI. First, a 3½" floppy disk is attached containing the electronic Excel workbook file that contains various spreadsheet details related to the cost estimate (three copies of the disk are enclosed for distribution to NRC staff if others are jointly reviewing the estimate data). Secondly, attached please find three hardcopy printouts of the "unit costs" spreadsheet portion of the estimate that details the basis for most unit costs utilized to develop the project estimate. Additional notes have been added to the March, 2004 'Unit Costs' spreadsheet to further explain their basis. Electronic notes contained in the "unit cost" spreadsheet tab of the electronic Excel file should provide the details that have been requested in the RAI; these notes are also hardcopy printed on pages 6 through 10 of the attached sheet printout.

Specific responses to questions outlined in the RAI are provided as follows:

1. Provide the basis for unit cost estimates. For example, provide specifics for the unit cost of "new tailings well" (page 1 of 4, Unit Costs Section).

Response: *A comment has been added to the electronic version of the 'Unit Costs' sheets for new tailings wells. This comment states that "tailings wells are 5" PVC, typically 110 feet deep, sand pack up to 30 feet with bentonite seal above sand. Cost estimate based on previous drilling cost." Additional comments have been added to other Unit items and additions have been added to some of the previous comments.*

2. Provide specifications of collection wellheads, valves, meters, and pumps.

Response: *Additional details have been added to the specification comment for the wellheads, valves, meters, and pumps.*

P.O. Box 98 / Highway 605, Grants, NM 87020 Tele: (505) 287-4456 FAX: (505) 287-9289 NMSS01

3. If third party estimates have been used as a basis, please provide a copy of the cost estimates.

Response: *The surface reclamation costs from a third party were developed for the physical reclamation and are presented in the two pages of 'Physical Reclamation Cost Estimate' as the last worksheet. Due to the fact that this portion of the cost estimate was developed on a present cost basis, this portion of the overall project cost estimate is updated annually through "Consumer Price Indexing" (CPI) indexing.*

4. Provide information about the site regarding quantities of items to reclaim. Topographic maps can be used to delineate areas to be reclaimed and to identify special features (wells, etc.)

Response: *The number of wells is presented in the fifth worksheet, 'Unit Costs and Quantities' on pages 4 and 6 under 'Drilling Costs' for the tailings water management and ground-water management. A total of 350 tailings, 56 perched, 360 alluvial, 23 Upper Chinle, 17 Middle Chinle, 2 Lower Chinle and 2 San Andres wells are planned to be abandoned. The areas and project facilities / features that are scheduled for final physical reclamation are listed in the last 'Physical Reclamation Costs' worksheet contained in the attached electronic cost estimate file. Quantities, etc. related to lump sum costs for specific activities are included on this worksheet.*

We trust that this information addresses the questions raised in the RAI. If you have any remaining questions or would like to discuss any specific items, please contact me in the Grants office at (505) 287-4456 (x17).

Sincerely yours,

HOMESTAKE MINING COMPANY OF CALIFORNIA
Alan D. Cox
Project Manager

Enclosure(s)

cc: R. Chase, SLC
J. Gleadle, Grants files
G. Hoffman, HYDRO-Engineering - Casper

UNIT COSTS

–Fuel–

	unit cost	units
Diesel	1.18	$/gal
Gasoline	1.48	$/gal

–Water Analysis–

	unit cost	units
A-LIST	61	$/sample
B-LIST	176	$/sample
C-LIST	36	$/sample
D-LIST	296	$/sample
E-LIST	61	$/sample
F-LIST	146	$/sample
G-LIST	66	$/sample
H-LIST	76	$/sample
I-LIST	71	$/sample
COLUMN TESTS	136	$/sample

–Vegetation Analysis–

unit cost	units
45.00	$/sample

–Soil Analysis–

unit cost	units
21.00	$/sample

–Utilities–

	unit cost	units
Electric	0.07	$/KWH
Natural Gas	0.58	$/CCF

–Driller Costs–

	unit cost	units
New Tailings Well	3,400.00	$/well
New Alluvial Well	3,100.00	$/well

GRANTS PROJECT
Unit Costs

New U. Chinle Well	7,300.00	$/well
New M. Chinle Well	7,300.00	$/well
New L. Chinle Well	7,300.00	$/well
Develop Tailings Well	400.00	$/well
Develop Alluvial Well	550.00	$/well
Develop U. Chinle Well	700.00	$/well
Develop M. Chinle Well	700.00	$/well
Develop L. Chinle Well	700.00	$/well
Abandon Tailings Well	640.00	$/well
Abandon Alluvial Well	750.00	$/well
Abandon Perched Alluvial Well	350.00	$/well
Abandon U. Chinle Well	1,300.00	$/well
Abandon M. Chinle Well	1,300.00	$/well
Abandon L. Chinle Well	1,300.00	$/well
Abandon San Andres Well	3,000.00	$/well
Abandon Sumps	500.00	$/sump

– Tailings Collection Parts and Supplies–

	unit cost	units
Collection Wellheads	500.00	$/wellhead
2" Valves	200.00	$/valve
3/4", 5/8", 1" Meters	50.00	$/meter
Submersible Pumps	350.00	$/pump
Vacuum Pumps	500.00	$/pump

– Tailings Sumps Parts and Supplies–

	unit cost	units
Collection Plumbing	500.00	$/wellhead
2", 3" Valves	200.00	$/valve
3/4", 5/8", 1" Meters	50.00	$/meter
Submersible Pumps	290.00	$/pump

– Tailings Injection Parts and Supplies–

	unit cost	units
Injection Wellheads	300.00	$/wellhead
2" Valves	200.00	$/valve
3/4", 5/8", 1" Meters	50.00	$/meter

– Alluvial/Chinle Collection Parts and Supplies–

	unit cost	units
Collection Wellheads	1,000.00	$/wellhead
2" Valves	200.00	$/valve
3/4", 5/8", 1" Meters	50.00	$/meter

Submersible Pumps	2,100.00	$/pump

– San Andres Collection Parts and Supplies–

	unit cost	units
Collection Wellheads	1,500.00	$/wellhead
6" Valves	450.00	$/valve
6" Meters	2,000.00	$/meter
Submersible Pumps	5,000.00	$/pump

– Alluvial/Chinle Injection Parts and Supplies–

	unit cost	units
Injection Wellheads	350.00	$/wellhead
2" Valves	200.00	$/valve
3/4", 5/8", 1" Meters	50.00	$/meter

– Irrigation Parts and Supplies–

	unit cost	units
Collection Wellheads	1,000.00	$/wellhead
2", 3" Valves	200.00	$/valve
6", 10", 12" Valves	600.00	$/valve
2", 3" Meters	500.00	$/meter
6", 10", 12" Meters	3,000.00	$/meter
Submersible Pumps	3,500.00	$/pump
Alfalfa	2.55	$/lb
Millet	0.40	$/lb
Oats-mixture	0.90	$/lb
Fertilizer	0.15	$/lb

– R.O. Plant Parts and Supplies–

	unit cost	units
Pumps	5,000.00	$/pump
Valves	4,000.00	$/valve
Meters	4,000.00	$/meter
Filters	10.32	$/filter
Membranes	683.00	$/membrane
Sand Filter Media	8,000.00	L.S.
Air Diffuser	2,000.00	L.S.
Caustic Soda	0.14	$/lb
Sulfuric Acid	0.080	$/lb
Anti-Scalent	21.50	$/gal
Citric Acid	20.00	$/gal
Test Reagents	0.00	$/?
Lime	0.06	$/lb

Muriatic Acid	3.78	$/gal

-- Evaporation Parts and Supplies--

	unit cost	units
Pumps	5,000.00	$/pump
Valves	1,000.00	$/valve
Meters	2,000.00	$/meter
Copper Sulfate	0.94	$/lb
Citric Acid	20.00	$/gal
Spray Nozzles	10.00	$/nozzle

-- In-situ Biotesting Parts and Supplies--

	unit cost	units
Pumps	2,100.00	$/pump
Valves	200.00	$/valve
Meters	50.00	$/meter
Molasses	1.00	$/gal
Phosphorous Source	1.00	$/lb
Carbon Source	0.00114	$/lb

-- Monitoring Parts and Supplies--

	unit cost	units
Bioassay Sample Bottles	10.00	$/bottle
TLD Badges	5.00	$/badge
Bioassay Samples	235.00	$/sample
TLD Badges Analysis	50.00	$/badge
High Vol Samples	235.00	$/sample
Radon Cups	20.00	$/cup
Radon Cup Analysis	70.00	$/sample
High Vol Filters	268.00	$/pack

Cell: E3
Comment: NOTE:
DO NOT CHANGE CELLS HIGHLIGHTED IN RED.

THE REST OF THE VALUES SHOULD BE CHANGED HERE.
CHANGING THE UNIT COST VALUES IN THIS SHEET WILL
CHANGE THE VALUES THROUGHOUT THE SPREADSHEET.

Cell: C15
Comment: Includes lab fees plus $16/sample for supplies.

Cell: C16
Comment: Includes lab fees plus $16/sample for supplies.

Cell: C17
Comment: Includes lab fees plus $16/sample for supplies.

Cell: C18
Comment: Includes lab fees plus $16/sample for supplies.

Cell: C19
Comment: Includes lab fees plus $16/sample for supplies.

Cell: C20
Comment: Includes lab fees plus $16/sample for supplies.

Cell: C21
Comment: Includes lab fees plus $16/sample for supplies.

Cell: C22
Comment: Includes lab fees plus $16/sample for supplies.

Cell: C23
Comment: Includes lab fees plus $16/sample for supplies.

Cell: C24
Comment: Includes lab fees plus $16/sample for supplies.

Cell: C30
Comment: Includes lab fees and supplies.

Cell: C36
Comment: Includes lab fees and supplies.

Cell: C49
Comment: Tailings wells are 5" PVC, typically 110' deep, sand pack up to 30' with bentonite seal above sand. Cost est. based on previous drilling cost.

Cell: C50
Comment: Alluvial wells 5" PVC, 60 to 120', sand pack to 30' with bentonite seal above. Cost est. based on previous drilling.

Cell: C51
Comment: U. Chinle wells 5" PVC, 120 to 240' deep
, sand pack 40' with bentonite seal above.

Cell: C52
Comment: M. Chinle 5 or 6" PVC, 120 to 360' deep, 60' of sand pack with bentonite seal above.

Cell: C53
Comment: L. Chinle wells 5" PVC, 160 to 380' deep, 60' sand pack with bentonite seal above.

Cell: C54
Comment: 3 hrs of rig time.

Cell: C55
Comment: 4 hrs of rig time

Cell: C56
Comment: 5 hrs of rig time

Cell: C57
Comment: 5 hrs of rig time

Cell: C58
Comment: 5 hrs of rig time

Cell: C59
Comment: 3 hrs rig time and materials

Cell: C60
Comment: 3 hrs rig time and materials

Cell: C61
Comment: 2 hrs rig time and materials

Cell: C62
Comment: 4 hrs rig time and materials

Cell: C63
Comment: 4 hrs rig time and materials

Cell: C64
Comment: 4 hrs rig time and materials

Cell: C65
Comment: 10 hrs rig time and materials

Cell: C66
Comment: Backfill and cover cost

Cell: C72
Comment: Includes all wellhead plumbing (tees, small valves, nipples, drop pipe, drawdown tube, rope, etc.)

Cell: C74
Comment: Assumes average cost of all three sizes of meters.

Cell: C75
Comment: Assumes average cost of different sizes of pumps.

Cell: C76
Comment: No vacuum pumps are planned to be used in the future.

Cell: C82
Comment: Includes all collection plumbing (tees, small valves, nipples, rope, drawdown tube, etc.)

Cell: C84
Comment: Assumes average cost of all three sizes of meters.

Cell: C85
Comment: Assumes average cost of different sizes of pumps.

Cell: C91
Comment: Includes all injection plumbing (tees, small valves, nipples, etc.)

Cell: C93
Comment: Assumes average cost of all three sizes of meters.

Cell: C99
Comment: Includes all wellhead plumbing (tees, small valves, nipples, drop pipe, drawdown tube, S.S. wire and etc.

Cell: C101
Comment: Assumes average cost of all three sizes of meters.

Cell: C102
Comment: Assumes average cost of different sizes of pumps.

Cell: C108
Comment: Includes all wellhead plumbing (tees, valves, nipples, drop pipe, drawdown tube, S.S. wire, etc. for large wells.

Cell: C111
Comment: Assumes average cost of different sizes of pumps.

Cell: C117
Comment: Includes all wellhead plumbing (tees, small valves, nipples, etc.

Cell: C119
Comment: Assumes average cost of all three sizes of meters.

Cell: C125
Comment: Includes all wellhead plumbing (tees, valves, nipples, drop pipe, drawdown tube, S.S. wire, etc. for 2" and 3" discharge pipe.

Cell: C126
Comment: Assumes average of 2" and 3" valves.

Cell: C127
Comment: Assumes average of 6", 10", and 12" valves.

Cell: C128
Comment: Assumes average cost of 2" and 3" meters.

Cell: C129
Comment: Assumes average cost of 6", 10", and 12" meters.

Cell: C130
Comment: Assumes average cost of different sizes of pumps.

Cell: C140
Comment: Assumes average of all different types of pumps (R.O. Feed, Sump, R.O. Product, etc.).

Cell: C141
Comment: Assumes average of different sizes and types of valves.

Cell: C142
Comment: Assumes average of different types and sizes of meters.

Cell: C159
Comment: Assumes average of all different types and sizes of pumps.

Cell: C160
Comment: Assumes average of different sizes and types of valves.

Cell: C161
Comment: Assumes average of different types and sizes of meters.

Cell: C170
Comment: Assumes average of all different types of pumps.

Cell: C171
Comment: Assumes average of different sizes and types of valves.

Cell: C172
Comment: Assumes average of different types and sizes of meters.