State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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February 2, 1994

Mr. Alan Wilson
Senior Reclamation Engineer
Hecla Mining Company
6500 Mineral Drive
Box C-8000
Coeur d'Alene, Idaho 83814-1931

Re: Tentative Approval of Escalante Tailings Impoundment Reclamation Plan - Revision 2, Hecla Mining Company, Escalante Silver Mine, M/021/004, Iron County, Utah

Dear Mr. Wilson:

The Division has completed its review of your latest draft Tailings Impoundment reclamation proposal, received January 18, 1994. Hecla Mining Company has now satisfied the majority of the requirements as outlined in our previous reviews. Overall, the proposal is now conceptually complete and the Division is prepared to grant its approval of the latest proposal. We have consulted with the Bureau of Land Management and the State Division of Water Quality regarding their review of the proposal as well. As a result of those discussions, our approval will be based upon Hecla's acceptance of the following clarifications and conditions:

1, On page 3, Section 7.0 - Structures and Equipment, the plan indicates that after implementation of revegetation measures, the impoundment fencing will be modified to allow safe passage for wildlife, while restricting livestock usage.

For clarification, it is our interpretation that this statement means that the fence will be modified after successful establishment of revegetation on the impoundment, and not immediately following completion of the seeding efforts. The overall effectiveness of the proposed reclamation/closure plan, in preventing a leachate buildup within the impoundment, depends upon a successful and sustainable revegetation effort. Therefore, the Division recommends that the impoundment fence remain intact to discourage access to **both** livestock and wildlife until an acceptable level of vegetation is achieved. Following revegetation establishment, wildlife may have controlled access to the impoundment area. Installation of a one-way wildlife gate(s) allowing deer and/or antelope to exit the impoundment, should they manage to get inside the fence during or after revegetation establishment, may be appropriate. Should smaller mammals (i.e., rabbits, etc.) prove to be a problem in vegetation establishment, then supplemental measures may be required of Hecla to correct the situation. We recommend that Hecla seek assistance/advise from the Utah Division of Wildlife Resources in determining the design for the wildlife gate(s).

2. On page 4, Section 9.1 - Tailing Impoundment Reclamation, the plan indicates that after reclamation, the tailings underdrain will be capped and sealed.

Again for clarification, the underdrain should **not** be permanently capped and sealed until it is confirmed that all drainage from the impoundment has ceased. It is our understanding that the underdrain is still discharging leachate into the holding tanks at the millsite area.

3. On page 5, Section 9.2 - Subsoil Borrow Area Reclamation, the plan indicates that the cut slopes will be graded back to at least a two to one or flatter slope to blend in with the natural topography.

   The BLM is requesting that the cut slopes be recontoured to a 3H : 1V configuration or flatter, to help insure revegetative success. If steeper slopes are necessary to fit natural contours, then alternate methods of erosion and sediment control may be required.

4. Page 8, Section 10 - Closure Schedule, lists 2/1/95 as the anticipated date for bond release. For clarification, the Division previously agreed to Hecla's request for a **phased** release of the reclamation surety. A phased release would be based upon Division and BLM approval of a formal request from Hecla for release from those reclamation components determined successfully completed. The latest draft closure plan schedule should be revised to clarify Hecla's intentions in this regard. Full release of reclamation surety will not occur until all reclamation requirements (including meeting the revegetation standards) are achieved.

5. The reclamation surety must be increased to $771,000 (1999 dollars). The reclamation estimate has been recalculated to reflect the conditions described in the latest reclamation proposal. The Division's final approval will not be effective until the replacement surety is filed with and found acceptable by the Division and BLM. The reclamation surety will need to be made jointly payable to both the Division and BLM. We will seek concurrence and approval from the Board of Oil, Gas and Mining on the amount and form of revised surety at a regularly scheduled Board hearing, following our receipt of the surety and revised Reclamation Contract (FORM MR-RC). Please notify this office at your earliest convenience as to the form of surety Hecla will pursue. We will then send you the appropriate surety forms to be used.

Thank you for your cooperation and patience in finalizing this permitting action. Please contact me if you have questions regarding the requirements of this letter.

Sincerely,

D. Wayne Hedberg
Permit Supervisor
Minerals Regulatory Program

jb
Enclosure
cc: Gina Pack, BLM, Beaver River RA
Don Ostler, DWQ
Lowell Braxton, DOGM
M021004.imp

RECLAMATION ESTIMATE

Hecla Mining Company

Escalante Silver Mine - Mill Tailings Facility — Iron County

M/021/004 — last revision 02/01/94

Prepared by Utah State Division of Oil, Gas & Mining — filename M21-04RV.WQ1

Reclamation Details

-All structures and equipment to be removed from the office site (1.5 acre EST)

-Revised tailings cover: 10" capillary, 18" subsoil, 6" topsoil (65 acres)

-Hay incorporated into tailings subsoil & topsoil caps (2-3,000 lb/acre)

-Road to tailings reduced via ripping & seeding(5,800' x 12'= 1.6 acre)

-Impoundment runoff ditch constructed around tailings cap (7,200')

-Subsoil borrow areas ripped, topsoiled & seeded (HECLA ESTIMATE 31 acres)

-Surface layer of tailings to be compacted (ASSUME with a dozer)

-Rip topsoil stockpile area & drill seed (9 acre ESTIMATE)

-Monitor groundwater wells for 4 years after reclamation (quarterly)

-Fence maintenance 3 years (7,900 + ~10,000 LF, quarterly)

-Areas revegetated via drill seeding unless impractical (=>hand seeding)

-Disturbed acreage = office+tailings+borrow+roads+stockpile= **108**

Description	Amount		$/Unit	Cost-$
Structure demolition/removal	sum-ASSUMED		5,000	5,000
Compaction of tailings surface(0.60 MPH)*	65	acre	407	26,455
Waste rock capillary barrier 10" *	**87,389**	CY	2.46	**214,977**
Tailings subsoil cap 18" *	157,300	CY	1.51	237,523
Tailings topsoil cap 6" *	52,433	CY	1.55	81,272
Disc hay into tailings soils *	65	acre	250	16,250
Ripping tailings road (0.40 mph) **	1.6	acre	603	965
Runoff ditch construction **	7,200	ft	0.32	2,304
Ripping borrow areas (0.60 mph) **	**31**	acre	407	**12,617**
Rip topsoil stockpile area**	9.0	acre	407	3,663
Reseed all disturbed areas	**108**	acre	290	**31,320**
Monitor groundwater (quarterly)	4	yr	1,200	4,800
Fencing-borrow areas(LF estimated)	10,000	LF	1.00	10,000
Mobilization	5	units	1,000	5,000
Fence maintenance (quarterly)	3	yr	400	1,200
	SUBTOTAL			653,345
	+ 10% CONTINGENCY			65,335
		SUBTOTAL		718,680
	+5yr ESCAL (1.42%)			52,496
	TOTAL			771,176
	ROUNDED TOTAL IN 1999-$			**$771,000**

* Phase I Surety Reduction

** Phase II Surety Reduction

Average cost per acre = **7,139** *$/acre*