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August 19, 1998

Richard Procunier (SFD 7-2)
U.S. Environmental Protection Agency, Region 9
75 Hawthorne Street
San Francisco, California 94105

Re: Atlas Mine Site Inspection, August 5, 1998

Dear Richard:

This letter documents the August 5, 1998, inspection of the Atlas Mine site. I performed the inspection accompanied by Richard Blubaugh of the Atlas Corporation, contractors to the Atlas Mine Site Committee (AMSC) George Robinson and David Pelser of Harding Lawson Associates, Robert Walter of TRW Inc., and Tim Moore of the Bureau of Land Management (BLM). Mr. Walter is the Acting Head of Environmental Control, Senior Counsel Environment, for TRW Inc., a company which has interest in the site due to its recent acquisition of Vinnell Mining and Minerals Corporation.

The purpose of the site visit was to survey and discuss the areas of concern that were identified during our inspection of the site on April 15, 1998, and which I itemized in my letter to you dated May 8, 1998. The site visit allowed the interested parties an opportunity to view the areas of concern, confirm their status, ask questions and discuss possible solutions. Several of the items on the list have been addressed already. The inspection revealed no new areas of concern, except for the sediment level in Pond A, which we did not inspect in April due to a fallen tree across the access road.

Richard Blubaugh and Tim Moore discussed some of the remaining items in terms of who would take responsibility for addressing them. No final determinations were made during our visit. Tim Moore did say that he considers to be addressed already those items for which BLM believes it is responsible. As you are aware, the AMSC intends to submit a work plan (to be prepared by Harding Lawson) to EPA to address the areas of concern for which the AMSC considers itself responsible. It could not be established from our discussions whether responsibility for addressing any of the items on the list is in dispute (between BLM and the AMSC).

The following summarizes the status of each item, as of August 5, 1998:

1) **Spanish Lake/BLM Gate**

Required Action: The perimeter fencing at the Spanish Lake/BLM gate needs to be repaired, reinforced, and extended to control site access effectively.

Status: BLM has repaired the fencing at this gate (see Photo 379:17A). No other action is required here at this time.

2) **Upper Site Gate**

Required Action: Near the upper site gate, the fence needs to be reinforced and repaired on the eastern side and it needs to be extended farther on the western side to provide additional site access restriction.

Status: Unchanged; work on the fence remains to be completed. See Photo 379:20A.

3) **BLM Warning Sign**

Required Action: The phone number for BLM needs to be corrected on the warning sign.

Status: The phone number has been updated (see Photo 379:17A). Other site perimeter warning signs have also been similarly updated. No other action is required here at this time.

4) **Fallen Tree**

Required Action: The tree needs to be removed from the road to ensure through travel to Pond A.

Status: The tree has been removed from the road and access is restored. No other action is required here at this time.

5) **Inspection of Pond A**

Required Action: Pond A needs to be inspected when the tree is removed and the upper access road is reopened.

Status: We inspected Pond A during this visit. To ensure the pond continues to have adequate capacity, sediments from Pond A need to be removed. The sediment level in the pond is uneven. Right at the staff gauge, sediments are just a few inches below the maximum sediment elevation marker (see Photo 379:24A). In some areas the sediment elevation appears to be above the marker (see Photo 379:25A).

6) **Sediments in Pond B**

Required Action: Sediments need to be removed from Pond B because they appear to have exceeded the maximum sediment elevation for which the pond was designed. A

method to gauge and/or control sediment accumulation in the pond needs to be designed and implemented.

Status: The status of Pond B has not changed appreciably since the April 15, 1998, inspection; sediments still need to be removed from the pond and a method to gauge and/or control sediment accumulation in the pond needs to be designed and implemented. The water level in the pond is a few feet lower than it was in April, but the maximum sediment level marker on the staff gauge is still not visible (see Photos 379:7A and 379:8A).

One idea that was discussed during the inspection was to use a siphon to drain the pond through the spillway. Another idea was to place a reflective marker on the staff gauge at the maximum sediment level marker, so that the point could be observed with a light through standing water.

7) **Sediments in Pond C**

Required Action: The drainage pipe that empties into Pond C needs to be cleared immediately. Additional sediments need to be removed from Pond C because they appear to have exceeded the maximum sediment elevation for which the pond was designed. A method to gauge and/or control sediment accumulation in the pond needs to be designed and implemented.

Status: The status of Pond C has not changed appreciably since the April 15, 1998, inspection. Unacceptable sediment buildup at the inlet to the pond has impacted its integrity and effectiveness and has contributed to damage to the road. Sediments still need to be removed from the pond (particularly at the inlet) and the drainage pipe still needs to be cleared. A method to gauge and/or control sediment accumulation in the pond still needs to be designed and implemented. The usability of the existing staff gauge assumes a more even distribution of sediments in the pond than is currently achieved. See Photos 407:15A, 407:19A, 407:20A, 407:21A, 407:22A.

8) **Drainage System to Pond C**

Required Action: To prevent sediment buildup in the drainage pipe that leads to Pond C, the position and extent of the pipe needs to be redesigned and re-engineered. To prevent further damage to the road, the drainage system to Pond C needs to be redesigned and reconstructed.

Status: The drainage system to Pond C still needs to be addressed for a permanent solution. The BLM has constructed temporary rock berms along the road between Pond C and Pond E to help divert flow to Pond C (see Photos 379:0A and 407:25A). Drainage to Pond C now enters through a new, aboveground inlet north of the original inlet (culvert) (see Photo 407:22A).

The temporary measures have diverted flow to Pond C around the original inlet, and have resulted in extending the northern boundary of the pond. After sediments are cleared from Pond A, the drainage pipe needs to be repositioned so that sediment buildup at the inlet to the pond is reduced and the southern part of the pond is more utilized (for a more even distribution of sediments). Berms or drainage ditches along the

road need to be installed (or replaced) to prevent road damage and ensure that drainage to the pond is accomplished as designed.

9) Upper Access Road Runoff Crossing

Required Action: To reduce the amount of flow through the ditch that follows the upper access road, the crossing ditch needs to be re-engineered to divert more runoff.

Status: Unchanged; work remains to be completed.

10) Drainage at the Upper Site Gate

Required Action: The drainage culvert that passes under the road needs to be cleared. To prevent the system from becoming clogged in the future, flow through this drainage system needs to be reduced (see Item 9 above) or the pipe and the ditches that feed the pipe need to be re-engineered to handle a heavier flow.

Status: During our inspection the culvert under the road at the upper site gate was almost completely clear (except for some sediment blockage at the mouth). See Photo 379:20A. The condition of the road leading to the upper site gate was improved. It appeared to have been reworked, filled, and compacted in areas where runoff had previously cut channels. The changes in the road may have resulted in improved drainage to the culvert. Some additional work to completely clear the mouth of the culvert and re-establish the drainage ditch leading to it needs to be done to ensure that the culvert will continue to remain clear during future storm events. See Photos 379:18A, 379:19A, and 379:20A.

11) Drainage Ditches Along the Road to Pond B

Required Action: The drainage ditches in the area west of the entrance to the road to Pond B need to be re-engineered to prevent further road damage.

Status: The main ditch across the entrance to the road to Pond B has been deepened to accommodate site runoff. Adjacent road cuts have been slightly filled in (see Photo 379:3A). A drainage ditch that ran alongside the road on its north side is no longer prominent (see Photo 379:4A). Under the dry conditions of this inspection, it wasn't possible to verify that the changes will prevent further road damage during future storm events. This area will need to be inspected again following a significant rainfall event, however, no other action is required here at this time.

12) Road Repair and Repavement

Required Action: An estimated 50 to 75 feet of road needs to be repaved on the main road just below the upper site gate. An estimated 10 feet of road needs repair just west of the gate to Pond B. An estimated 50 to 75 feet of road needs to be repaved between Pond E and Pond C. An estimated 50 to 75 feet of road needs to be repaved on the main road below Pond C.

Status: The main road just below the upper site gate has improved since the last inspection. It appears to have been reworked, filled, and compacted in areas where

runoff had previously cut channels. The road still needs to be repaved, however, to preserve the improvements. See Photos 379:18A, 379:19A, and 379:20A.

The road to Pond B has been repaired adequately near the entrance. No other work is required there at this time, although additional repair may be warranted in the future. See Photos 379:3A and 379:4A.

The condition of the road between Pond E and Pond C and below Pond C has not changed appreciably since the April 15, 1998, inspection, and still needs to be repaved. See Photos 379:00A and 379:1A.

13) Construction of Road to Rover Pit

Required Action: The road to the Rover Pit needs redesign and reconstruction where runoff has caused it to collapse. A drainage system needs to be designed and constructed to handle runoff so that the newly reconstructed road does not become damaged.

Status: Unchanged, except that new surface cracks indicate the possiblity for further collapse (see Photos 379:5A and 379:6A). Work remains to be completed.

14) Diversion Channel B Repair

Required Action: The entrance to Diversion Channel B needs to be repaired and re-engineered to protect against erosion. Slumping from the embankment along Diversion Channel B needs to be monitored during future inspections to ensure that conditions do not worsen significantly.

Status: Unchanged; work remains to be completed. See Photos 379:11A, 379:12A, and 379:13A.

15) Revegetation Efforts

Required Action: The revegetation effort needs to be re-evaluated to determine if another approach may prove more successful.

Status: The abundant rainfall at the site last winter and spring appears to have had a positive effect on the revegetation efforts that were conducted last winter. We observed that the newly revegetated areas are growing well. Areas that were revegetated in previous efforts were not fairing as well, although we did observe some new growth there also. See Photos 379:7A, 379:9A, 379:10A, 379:14A, 379:15A, 379:19A, 379:21A, 379:22A, 407:17A, and 407:18A.

Although the revegetation program as a whole was not re-evaluated, the efforts to date were assessed and documented in the "Report to Bureau of Land Management, Hollister RA: Preliminary Monitoring of Seedling Density on Hydroseeded Acreage," prepared by Bitterroot Consultants for BLM, dated May 13, 1998. The report confirms that the revegetation effort was substantially less successful in areas hydroseeded in December 1996 than the areas hydroseeded in December 1997. In addition to the wet weather during the 1997-98 season, one other factor that may have contributed to the success of the second phase is that the seed mix used was more diverse than what was used for the

first phase. The report also notes that plant discoloration was observed that may be indicative of a phosphorous deficiency or other problem.

To improve the success rate of the revegetation program as a whole, the areas hydroseeded during the first phase (Ponds C, D, and G) need to be reseeded with the seed mix that was utilized in the second phase. Further, the discoloration of plants needs to be investigated, including soil analysis where appropriate. If reseeding is performed at Pond D, drainage needs to be evaluated and adjusted, if necessary, to ensure that oversaturation doesn't negatively impact the effort (see Photos 9A and 10A in my letter to you dated February 12, 1998, regarding the inspection of the site January 15, 1998).

If you have any questions about this letter please call me at (415) 981-2811.

Sincerely,

Karen Ladd

Karen Ladd

Attachments

cc: Richard Blubaugh, Atlas Corporation
David Pelser, Harding Lawson Associates
Robert Walter, TRW Inc.
Tim Moore, BLM
Frank Lopez, Cal/EPA DTSC
Kara Christenson, U.S. EPA Region 9