CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD

INSPECTION REPORT

19 June 2007

DISCHARGER: **Walker Mine**

LOCATION & COUNTY: Walker Mine, Plumas County

CONTACT(S): **None**

INSPECTION DATE: 11–12 June 2007

INSPECTED BY: Steve Rosenbaum/Jeff Huggins

ACCOMPANIED BY: NA

OBSERVATIONS AND COMMENTS:

Board staff performed the annual spring inspection of the Walker Mine in Plumas County as required by Walker Mine Operations and Maintenance Procedures (June 1997). A photo log of the inspection is attached.

MINE STRUCTURES

Board staff arrived on site at the Walker Mine Portal area at 10:00am. The portal door at the mine entrance was securely locked. There was some evidence of minor vandalism of the wooden planking (Photo 14) that covers the drainage conduit at the entry into the mine and one of the portal door locks. There were several new bullet holes in the steel portal door (Photo 15). Inspection of the ventilation fan, the ventilation ducting and the Telog pressure data recorder showed no apparent damage from the shooting. However, ventilation ducting suspended with large plastic zip ties from the 200 station to the 700 station has fallen to the ground and is unusable for ventilation purposes.

Board staff downloaded and analyzed pressure data from the Telog data recorder during the inspection. The Telog data recorder is connected via a 2,500-foot long electronic cable to a Druck pressure sensor at the mine seal. Once per day the data recorder measures and stores an electronic current measurement (mAmps) from the Druck pressure sensor. This data is converted mathematically by Board staff to feet of pressure head on the mine seal[1]. At the time of the inspection, a current measurement of 7.56 mAmps (163 feet of pressure head) was recorded. The maximum pressure head has continued to fall since the last inspection (24–25 October 2006). At that time a pressure head was 196 feet was recorded above the mine seal due to water and snowmelt recharging the mine workings.

The old batteries that power the Druck pressure sensor recorder were removed and replaced with new batteries during this inspection. As mentioned above, Board staff did perform a brief inspection of the access tunnel from the 200 station to the 700 station in order to assess the condition of the ventilation ducting beyond the corrugated metal pipe (187 feet into the main drift). Board staff did note that some timbered sections in the area between the 200 station

[1] (Note: The Druck pressure sensor is scaled to transmit 4 to 20 mAmps for 0 to 300 psi).

Approved:		

and the 700 station are in need of replacement. The complete timbered section, the unsupported section, and the mine seal were not inspected during the site visit.

The drainage channel inside the corrugated section of the mine tunnel was working effectively and was not obstructed. All four of the heavy-duty locks on the portal doors were securely locked upon leaving the mine portal.

WATER QUALITY MONITORING

Surface water samples were taken from 18 of the 25 sampling locations. There was no discharge from the settling pond (Photo 9), thus no sample was taken from this location (sample location number 19). All of the sample locations had sufficient surface water to sample, however water flow in general was low (Photo 2). Laboratory results are pending.

SUBSIDENCE AREAS

Staff inspected the diversion channel structures in the area of the Central and Piute orebody workings. There was very little water flowing in the diversion channels at the time of the inspection and it appeared that water flow has been minimal for some time. Some fallen trees and debris are partially obstructing the Central orebody diversion ditches (Photos 23–25). A vertical ventilation shaft was identified above the Central orebody (Photo 27–29). This shaft is unprotected and open at least several hundred feet deep. This shaft represents a high risk to anyone who unknowingly comes across the area.

SUMMARY:

A semi annual inspection was made of the Walker Mine site. Surface water monitoring was performed and water pressure measurements on the mine seal were obtained. New batteries were installed for the data logger. A brief inspection was made of the access tunnel from the 200 station to the 700 station in order to determine the extent of the fallen ventilation ducting. Drainage channels at the mine portal and Piute and Central orebody areas were inspected, and a vertical air shaft above the Central orebody was identified as a high risk area.

RECOMMENDATIONS:

At the Walker Mine portal, the ventilation ducting must be reinstalled properly between the 200 to 700 foot stations before any underground inspection can take place. An experience underground mine contractor should perform this work. Additionally, the timbered section and the unsupported section of the main access tunnel need to be inspected for signs of ground support deterioration. The mine seal and stainless steel piping and valves need to be inspected and physically tested to ensure their operability in accordance with the Board's Operations and Maintenance Plan for the Walker Mine.

The Central orebody diversion ditch needs to be cleared of fallen trees and debris in order to contain runoff within the shotcrete channel and prevent overflow and potential erosion of the surrounding area. This work could be accomplished using a small hand crew.

Finally, the open ventilation shaft identified above the Central orebody must be guarded or plugged. Board staff will contact the California Department of Conservation Office of Mine Reclamation, Abandoned Mine Lands Unit to request that they immediately act upon this information.

1. Sampling station #5. Little Grizzly Creek upstream of tailings at Road 24N60.

4. From sampling station #3 looking up Dolly Creek to the waste dumps.

2. Same as previous photo. Looking downstream.


5. Mine access road below the Walker Mine portal.


3. Near sampling station #3. Dolly Creek below the mine access road.

6. Walker Mine mill footings and tailings.

7. Sampling station #3. Dolly Creek below the mine access road.

10. Same view as previous photo. Note large waste dump on the right.

8. Same view as previous photo.

11. Open cut above the CMP section of the Walker Mine access level.

9. Small sediment pond below the Walker Mine portal.

12. Same view as previous photo. Note the poor vegetative cover and erosion from the cut slopes.

13. Walker Mine portal to the main access level.

14. Same view as previous photo.


15. Close-up view showing numerous bullet holes in the portal door. The portal access is repeatedly vandalized. Successful entry has been limited.


16. Walker Mine tailings impoundment located on USFS administered lands. Looking upstream at Dolly Creek.

17. Same location. Note the limited vegetative growth.


18. Small waste dump from the Central ore body of the Walker Mine. The South Branch of Ward Creek cuts the toe of the small waste dump.

19. South Branch of Ward Creek at the toe of a small waste dump from the Central ore body.

20. Close-up of previous photo showing copper leaching from the toe of the waste dump.

21. Same view as previous photo.

22. Photo of a tower structure for the former aerial tramway that moved supplies and materials between the Walker Mine and Quincy. Shotcrete-lined diversion ditch in the foreground.

23. Fallen tree and debris in the shotcrete-lined diversion ditches near the Central ore body.

24. Same view as previous photo.

25. Debris partially blocking the diversion ditch near the Central ore body.

26. One of the sinkholes of the Central ore body

27. Open air shaft of the Walker Mine workings. Located between the Central and Piute ore bodies. The airshaft opening is approximately 9 feet by 15 feet and is at least several hundred feet deep.

28. Another view of the previous photo.

29. Similar view of the previous photo.