STATE OF COLORADO

**Musick - DNR, Jason <jason.musick@state.co.us>**

# Hayden Gulch Loadout, C-1992-081, 2016 AHR Review Letter

1 message

**Musick - DNR, Jason** <jason.musick@state.co.us> Mon, Jun 5, 2017 at 9:10 AM
To: Brian Watterson <BWatterson@peabodyenergy.com>

Good morning Brian,

Attached is the Division's review of the 2016 AHR associated with the Hayden Gulch Loadout.

Please let me know if you have any questions or comments.

Thanks,
Jason

**Jason Musick**
**Environmental Protection Specialist III**
Coal Regulatory Program

COLORADO
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**2016AHR_Review.pdf**
508K

COLORADO
Division of Reclamation, Mining and Safety
Department of Natural Resources

1313 Sherman Street, Room 215
Denver, CO 80203

June 5, 2017

Brian Watterson
Hayden Gulch Terminal, LLC
29515 Routt County Road 27
Oak Creek, CO 81467

**RE: Hayden Gulch Loadout (Permit No. C-1992-081)**
**2016 Annual Hydrology Report Review**

Dear Mr. Watterson,

The Division has completed its review of the above referenced report received on 30 March 2017. The Division finds the 2016 Annual Hydrology Report in compliance with the Division's requirements noted in the attached memo. The report fulfills the 2016 requirement to file an Nnual Hydrology Report.

Please feel free to contact me with any questions.
Sincerely,

Jason Musick
Environmental Protection Specialist
Jason.musick@state.co.us

Review of Annual Hydrology Report

Mine: Hayden Gulch Loadout
Permit No: C-1992-081
Musick
Report Year: 2016
Submitted By: Hayden Gulch Terminal
Date Received: March 30, 2017

Date Reviewed: 06/05/2017
Reviewed By: Jason

| Requirement | Requirement citation | Comment |
|---|---|---|
| 1. Filing frequency of hydrology report | CDRMS regulation 4.05.13(4)(c) | The Annual hydrology Report is required to be submitted yearly |
| 2. Timely filing of hydrology report | Tab 14, p. 3 of CDRMS mining permit C-92-081 | The Annual hydrology Report is required to be submitted by March 1 and was received by the Division via email on March 30, 2017. HGT requested and was granted approval for a submittal date extension to March 30. |
| 3. Filing frequency of NPDES Discharge Monitoring Reports | NPDES permit COG-850008 | The Division received copies of DMRs. All filing dates were met. |
| 4. Timely filing of Discharge Monitoring Reports | NPDES permit COG-850008 | The Division received copies of DMRs. All filing dates were met. |
| 5. Sampling frequency of NPDES outfalls | NPDES permit COG-850008 | All NPDES discharge points are monitored twice monthly for field parameters and lab parameters. |
| 6. Parameters to be sampled for NPDES reporting | NPDES permit COG-850008 | Field parameters include: temperature, pH, and conductivity. |
| 7. NPDES discharge limitations | NPDES permit COG-850008 | The Loadout did not discharge from either of the two outfalls 001 and 002 (NPDES1H and NPDES2H) during 2016. Therefore, no parameters of the NPDES outfalls were exceeded. |

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| 9. Instream Numeric Standards | CWQCC regulation 33.0 | The two outfalls discharge into Dry Creek which is on Segment 13h of the Yampa River basin. Two surface monitoring sites are located on the permit area, HGSD1 upstream of the permit area and HGSD3 downstream of the permit area.<br><br>Hayden Gulch Terminal tested selenium in three forms during the 2016 water year. Based on the information provided, the potentially dissolved form is applicable to NPDES sites and the dissolved form is applicable to stream sites with the total recoverable form conducted as a quality control check. The chronic selenium standard (4.6 ug/l) was exceeded in April (4.8 ug/l) and May (5.1 ug/l) at Site HGSD1 The chronic selenium standard was exceeded in May (5.0 ug/l) at Site HGSD3. The acute standard (18.4 ug/l) was not exceeded during the water year. Neither NPDES site was discharging at the time of the exceedance. |
| 10. Interim Narrative Standard for Ground Water | CWQCC regulation 41.6 | It was determined that groundwater points of compliance are unwarranted at the Hayden Gulch Loadout. It was determined that any leachate originating at the loadout would likely be of better quality than native groundwater in the Lewis Shale which has high concentrations of dissolved solids. |
| 11. Sampling frequency at surface water | Tab 13, p. 8 of CDRMS mining permit C-92-081 | The report indicates that all frequencies were met. |
| 12. Parameters to be sampled at surface water sites | Table 13-1 of CDRMS mining permit C-92-081 | All required parameters were analyzed. |
| 13. Filing frequency of pond reports | CDRMS regulation 4.05.9(17) | Sediment ponds associated with C-1992-081 include Ponds 001A (Truck Loop Pond) and 002A (Rail Loop Pond). Quarterly pond inspections were conducted within the appropriate quarter. |
| 14. Timely filing of pond reports | CDRMS regulation 4.05.9(17) | Quarterly pond inspection reports were submitted and received by the Division within an appropriate timeframe. |

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| 15. Content of pond reports | CDRMS regulation 4.05.9(15) | All required information was addressed on quarterly sediment pond inspection in water year 2013. |
| 16. Sampling frequency of ground water monitoring wells | Tab 13, p. 10 of CDRMS mining permit C-92-081 | Dry Creek alluvial water is monitored in two wells: HGDAL3 (down-gradient) and HGDAL4 (up-gradient). Monitored semi-annually |
| 17. Parameters to be analyzed in ground water samples | Table 13-2 of CDRMS mining permit C-92-081 | All required parameters were analyzed. |
| 18. Basic Standards for Ground Water | CWQCC regulations 41.4 and 41.5 | The Loadout did not generate significant amount of leachates in 2013. Well HGDAL3 is downgradient of the Loadout and well HGDAL4 is the upgradient well from the Loadout. The boron standard (750 ug/l) was exceeded in September. Based on the CDOH, Reg 41, the 750 ug/l standard ofor Bboron is for sensitive crops and the limit otherwise is 5000 ug/l. No boron sensitive plant species are grown commercially in the area of the Lodout and neith well displayed a boron value higher than 800 ug/l.<br><br>The manganese standard (0.2 mg/l) was exceeded at both wells in May and September. Although 0.2 mg/l is the standard used to protect crops grown in soils with a pH value lower than 6.0, the standard appropriate for the Loadout would be 10 mg/l based on the CDPHE revised standard for soils with a higher pH as found at the Loadout. Neither well displayed a manganese value higher than 6 mg/l during the water year.<br><br>TDS of alluvial ground water consistently exceeds 10,000 mg/l, indicating "Limited Use and Quality". Leachate originating from the Loadout would lack sufficient head to migrate into underlying bedrock. |
| 19. Restoration of ground recharge to | CDRMS regulation 4.05.12(3) | No mining or groundwater depletion has occurred at the site; however, for the 2016 water year, water levels at all wells fell within their historic ranges. |

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| approximate pre-mining rate | | |
| 20. Prevention of adverse impacts to ground water systems outside permit area | CDRMS regulation 4.05.11(1) | As noted in Item 10 above, it was determined that groundwater points of compliance are unwarranted at the Hayden Gulch Loadout. It was determined that any leachate originating at the loadout would likely be of better quality than native groundwater in the Lewis Shale which has high concentrations of dissolved solids. |
| 21. Prevention of impacts to ground water that adversely impact post-mining land use | CDRMS regulation 4.05.11(2) | No mining or groundwater depletion has occurred at the site. |
| 22. Minimize disturbance to hydrologic balance within and adjacent to the permit area | CDRMS regulation 4.05.1(1) | The disturbance to the hydrologic balance within and adjacent to the permit area caused by reclamation at the Hayden Gulch Loadout is the minimum that can be expected from a reclaimed surface loadout at this location. |
| 23. Prevention of material damage to the hydrologic balance outside the permit area | CDRMS regulation 4.05.1(1) | Surface water - No surface water impacts due to mining have occurred. Note Item No. 22 above<br><br>Ground water – No material damage has occurred, as discussed in item 20, above. |
| 24. Agreement of observed hydrologic impacts with "probable hydrologic consequences" projected in mining | CDRMS regulation 2.05.6(3) and requirement to keep current, CDRMS regulation 2.03.3(1) | No local or regional impacts were observed. This observation is consistent with the PHC. |
| 25. Adequacy of ground water monitoring program | CDRMS regulation 4.05.13(1) | The current ground water monitoring program continues to adequately address the protection of the hydrologic balance. |

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| 26. Adequacy of surface water monitoring program | CDRMS regulation 4.05.13(2) | The current surface water monitoring program continues to adequately address the protection of the hydrologic balance. |