STATE OF COLORADO

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DRMS Review 2023/2024 water year AHR

1 message

Reilley - DNR, Robin <robin.reilley@state.co.us> Tue, Jul 15, 2025 at 8:27 AM
To: "Kawcak, Miranda" <MKawcak@peabodyenergy.com>, Robin Reilley - DNR <robin.reilley@state.co.us>

Good Morning Miranda,

Please find the Division's review of the 2023/2024 water year AHR for the Yoast Site.

Thank you

Robin Reilley, M.S. GISP
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Review of Annual Hydrology Report

Mine: Yoast Mine Permit No:1994082

Report Year 2024
Date Received: 2 April 2025

Date Reviewed: 14 July 2025
Reviewed By: R. Reilley M.S, GISP
Submitted By: Seneca Property, LLC

Water Year 2023 October through 2024 September

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	CDRMS regulation 4.05.13(4)(c)	The Annual hydrology Report is required to be submitted by February 28 and was received by the Division on 2 April 2024 via electronic filling.
3. Filing frequency of NPDES Discharge Monitoring Reports	NPDES permit COG-0000221	Filling is quarterly and were relayed to DRMS in a timely manner.
4. Timely filing of Discharge Monitoring Reports	NPDES permit COG-0000221	Filling is quarterly although sampling frequency is monthly. Reports were relayed to DRMS in a timely manner.
5. Filing frequency of pond reports	CDRMS regulation 4.05.9(17)	The sediment ponds associated with C 1994082 include 010, 011, 011A, 012, 012A, 013, and 014. Quarterly pond inspections appear to have been conducted within the appropriate quarter.
6. Timely filing of pond reports	CDRMS regulation 4.05.9(17)	Quarterly pond inspection reports were not always submitted and received by the Division within an appropriate time frame.
7. Content of pond reports	CDRMS regulation 4.05.9(15)	Content appeared adequate.
8. Sampling frequency of NPDES outfalls	NPDES permit COG-0000221	It appears that frequency for sampling was complied with.
9. Parameters to be sampled for NPDES reporting	NPDES permit COG-0000221	All parameters were sampled as per permit requirements.
10. NPDES discharge limitations	NPDES permit COG-0000221	The Yoast Mine discharged from Ponds 010, 011, 012 and 13, during the water year, 014 did not discharge during the 2023/4 water year. Based on a Memorandum of Understanding between the Division of Reclamation, Mining and Safety and the Water Quality Control Division (WQCD), the WQCD will be responsible for enforcing CDPS permit conditions.

Requirement	Requirement citation	Comment
11. Basic Standards for Surface Water	CWQCC regulations 31.1.11	There were no exceedances of the agricultural use surface water standards. Based on CWQCC reg. 31, the standard of 0.2 mg/l, applies to plants grown in acidic soils (<6.0 pH). In alkaline soils, as found throughout the Yoast and Seneca IIW region, the EPA standard would be 10 mg/l. There was one exceedance of the Agricultural Use standard for dissolved manganese in segment 13j at YSG5, and one exceedance of both total iron and agricultural use selenium in Segment 13e. There were exceedances of the aquatic life and agricultural use standards in segment 13e for outfall 13 and none for outfalls 012, and 14.
12. Instream Numeric Standards	CWQCC regulation 33.0	Nine monitoring sites exist within the Sage and Grassy Creek Basins: YSSF3, NPDES12, NPDES13, NPDES14, and YSS2 are on Sage Creek. NPDES 10, NPDES11, YSGF5, and YSG5 are on Grassy Creek. In addition, spoil springs YSSPG3, YSSPG4, and YSSPG5 are found within the Sage Creek Basin and spoil springs YSSPG 1 and YSSPG2 are found within the Grassy Creek/Annand Draw Basin. The receiving stream standard (aquatic life) is in place for both Sage Creek segment 13e; and Grassy Creek on segments 13i and 13j of the Yampa River basin. A current conditions temporary modification of the chronic dissolved selenium standard in in place for segments 13i and 13j. There were two exceedances in segment 13i of the chronic total iron standard at YSG5, exceedances of the total recoverable iron standard, dissolved selenium and pH in segment 13e (Sage Creek) and appear to result from natural erosional processes. There were no known exceedances in segment 13j. Outfall 011 was not sampled for the correct parameters in May of 2023.
13. Sampling frequency at surface water sites.	Tab 15, Table 15-9 of CDRMS mining permit C1994-082	The report indicates that all frequencies were met. Sampling frequency for NPDES sites is monthly for water quality, and Semi annually for surface water sites.
14. Parameters to be sampled at surface water sites	Tab 15, Table 15-4 and 15-5 of CDRMS mining permit C-1994-082	Parameters to be sampled are conductivity (umhos/cm), pH (units), temperature (C), total recoverable iron (mg/I), dissolved manganese (mg/I), total mercury (ug/l), dissolved nitrate (mg/l), dissolved nitrite (mg/ I), total ammonia (mg/I), dissolved selenium (ug/l), dissolved sulfate (mg/l), total sulfide (mg/l), total suspended solids (mg/I) and total dissolved solids (mg/l). All required parameters were analyzed and standards met.

Requirement	Requirement citation	Comment
15. Sampling frequency of ground water monitoring wells	Tab 15, Table 15-8 of CDRMS mining permit C1994-082	Ground water samples are collected from numerous wells semiannually and annually. Semiannual monitoring took place as per the required frequency, with the exception of well YWC33 which has a damaged casing. Semiannual monitoring of discontinued wells YSAL12, YGAL 15, YWU16, YWU28, YW29, YOV 28, WWU29 andY0V29 should have occurred and was overlooked in 2023/2024 in anticipation of 2025 bond release.
16. Interim Narrative Standard for Ground Water	CWQCC regulation 41	Monitoring comprises 10 wells. It was determined that bedrock groundwater points of compliance are unwarranted at the Yoast Mine. Two points of compliance are established and monitored in alluvium; Well SGAL70 in Grassy Creek and YSAL3 in Sage Creek. No exceedances of the GWPOC standards occurred at YSAL3 for the 2023/4 water year. SGAL70 was monitored mistakenly for the short parameters list rather than the long list. For the data collected the results all fell well below the effluent standards.
17. Parameters to be analyzed in ground water samples	Tab 15, Table 15-4 of CDRMS mining permit C1994-082	Parameters to be sampled are conductivity (umhos/cm), pH (units), temperature (C), dissolved iron (mg/l), dissolved manganese (mg/l), dissolved fluoride (mg/l), dissolved nitrate (mg/l), dissolved nitrite (mg/l), dissolved selenium (ug/l), dissolved sulfate (mg/l), and total dissolved solids (mg/l). At sites sampled all parameters were measured.
18. Basic Standards for Ground Water	CWQCC regulations 41.4 and 41.5	The Yoast Mine did not generate significant amounts of leachates in 2023/4.
19. Restoration of ground water recharge to approximate pre-mining rate	CDRMS regulation 4.05.12(3)	Water levels are presented in Appendix B of the AHR. Well YWC33 casing is damaged and prevented water level measurements. For the 2023/24 water year, it appears that water levels at measured wells fell within their historic ranges. All alluvial wells displayed seasonal water level fluctuations in response to periods of precipitation recharge and long term drought. Water levels in the bedrock overburden and coal seams also fluctuate in response to recharge from seasonal precipitation and are partially influenced by groundwater in the reclaimed spoil.

20. Prevention of adverse impacts to ground water systems outside permit area	CDRMS regulation 4.05.11(1)	Compliance with the Basic Standards for ground water, as per item 10, indicate the permittee is preventing adverse impacts to ground water quality outside the permit area. All alluvial wells showed seasonal water level fluctuations in response to periods of precipitation or, lack thereof. Overburden and coal well water levels are fluctuating in response to the precipitation recharge and ground water flow from the reclaimed mine pits.
21. Prevention of impacts to ground water that adversely impact post-mining land use	CDRMS regulation 4.05.11(2)	No material damage has occurred, as discussed in item 20, above.
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 mining and reclamation at the Yoast Mine is the minimum that can be expected from a reclaimed surface mine at this location. The operators' use of best management practices indicates minimization of disturbance to the hydrologic balance.
23. Prevention of material damage to the hydrologic balance outside the permit area	CDRMS regulation 4.05.1(1)	**Surface water:** Appendix D of the AHR presents the surface water quality data. The full parameter list was not collected for May 2025. No exceedances of NPDES standards for outfalls 10 or 11 occurred during the water year. YSGF5 and YSG5 each exceeded the chronic recoverable iron standard once during the water year but did not exceed the baseline monitoring mean and appear to be a result of natural erosional processes. Outfall 13 exceeded the selenium standard during runoff (April 2024) the only time the pond discharges. An increase was predicted for TDS at various stream sites during the irrigation season (June-September), however mean TDS at all four sites was lower than predicted for the 2023/4 water year. Aquatic life standards are in place for the Yampa Segments 13i, 13j and 13e pertinent to the Yoast site; Reg 33. The temporary modification for the chronic dissolved selenium standard was removed for Segments 13i and 13j in 2023. **Ground water:** In TAB 17 of the PAP, predictions were made as to the expected TDS increases to be observed at various monitoring wells. Predicted TDS values were exceeded at 5 of the 6 measured sites with no measurement taken at site (YWC33). 2023/4 water year TDS values in the alluvial wells remained within the pre mine ambient measurements for Sage Creek alluvium or Grassy Creek Alluvium. The elevated measures could emanate from Lewis Shale bedrock or agriculture. No material damage has appeared to have occurred, as discussed in item 20, above.

Requirement	Requirement citation	Comment
24. Agreement of observed hydrologic impacts with probable hydrologic consequences projected in the permit.	CDRMS regulation 2.05.6(3) and requirement to keep current, CDRMS regulation 2.03 .3(1)	No local or regional impacts were identified in the AHR. This observation is consistent with the PHC. TDS in wells YAAL14, YGAL16, YSAL1, YSAL3 and YW30 all exceeded predicted levels in the Yoast PHC Tab 17 permit section. Well YWC33's casing was broken and samples were not collected. The values were within range of ambient, pre mine wells in these drainages.
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.
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.