
To: Ms. Mary Beth Marks – On Scene Coordinator/COR, Custer Gallatin National Forest

From: Shane Matolyak – Environmental Scientist/Project Manager, Tetra Tech

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Subject: 2018 Annual Activities Report (Contract AG-0343-B-12-0001, AG-0343-K-16-0020)

Introduction

The New World Mining District Response and Restoration Project entered a long-term (20-year) operations and maintenance phase in 2012. Activities that will occur during this phase of the project are described in detail in the Long-Term Operations and Maintenance Plan (Tetra Tech, 2012) and are summarized below;

- Annual high flow (June) surface water monitoring,
- Annual low flow (September) surface water monitoring,
- Annual groundwater monitoring (July),
- Aquatics / biological monitoring (2013, 2014, and 2015),
- Area-wide reclamation / revegetation monitoring (5-year intervals beginning in 2016),
- Maintenance and erosion control (as needed),
- Preparation of an annual water resources monitoring report, and
- Preparation of an annual activities report.

Operations and maintenance activities for the 2018 project year are complete. This Annual Activities Report summarizes project activities completed during the year and activities that will occur during the 2019 project year.

Maintenance and Erosion Control

No erosion or major maintenance issues were observed in 2018 and no maintenance was performed.

Repository Sump Drain Field Performance

A passive water disposal system (i.e. drain field) to dispose of water that accumulates in the Selective Source Repository sump was constructed in August 2017. This system eliminates the need for annual pumping and off-site disposal of sump fluid. Details of the system and its construction are provided in the Final Construction Completion Report submitted to USFS in April 2018 (Tetra Tech, 2018a).

Data from a data-logging water level meter installed within the Repository sump shows that water began accumulating in the sump shortly after the drain field was constructed. The water level rose to a depth of 20 inches in January 2018 at which point the water began discharging to the drain field. The water level has remained static at during the remainder of the 2018 monitoring season which indicates that the drain field is functioning as designed.

Water Resources Monitoring

Surface water monitoring activities were completed at the same locations and schedule described in the Long-Term Operations and Maintenance Plan. The high-flow monitoring event which typically occurs in late June was postponed until July due to a persistent snowpack which hindered access to some locations.

Groundwater monitoring activities were completed at the same locations described in the Long-Term Operations and Maintenance Plan although the monitoring schedule was postponed due to site conditions. Wells SBGW-107, -107T, and Tracer 5 were monitored in July to ensure that water levels were sufficient to allow sample collection since these wells tend to go dry in early July. The Repository Sump was also monitored in July. The remaining wells were sampled in August as a lingering snowpack prevented access in July.

Total recoverable and dissolved arsenic were added to the list of analyses for 2014 surface water samples to evaluate whether changing redox and pH conditions mobilize arsenic in area streams based on a January 2014 discussion with the Board of Environmental Review. To date, arsenic has been below analytical detection limits in all surface water samples collected in the District. Arsenic analysis was discontinued in 2018 and will not be conducted in 2019.

Surface water and groundwater monitoring will continue in 2019 in accordance with the Long-Term Operations and Maintenance Plan (Tetra Tech, 2012).

Water Resources Monitoring Report

The final 2018 water resources monitoring report was submitted to USFS in March 2019 (Tetra Tech, 2019). Data presented in the report show that 2018 monitoring results are similar to previous post-response action results and that water quality improvements have been maintained post-response. These data are discussed in greater detail in the annual water resources monitoring report.

Discontinuation of Groundwater Monitoring

The USDA-FS proposed discontinuing groundwater monitoring in 2018 at all sites except for SBGW-107 and -107T which monitor groundwater below the New World waste repository (Tetra Tech 2018b). MDEQ reviewed the proposal and stated that groundwater monitoring should be continued at least through the completion of MDEQ's Use Attainability Analysis in the event that groundwater data is needed to support that effort or during the subsequent process of approving site-specific surface water quality standards (MDEQ 2018).

The USDA-FS monitored groundwater during the 2018 work season and will revisit groundwater ARARs to determine the need for continued groundwater monitoring in 2019.

References

Montana Department of Environmental Quality (MDEQ). 2018. Email from Myla Kelly to Mary Beth Marks: Groundwater memo for DEQ. January.

Tetra Tech. 2012. Long-Term Operations and Maintenance Plan. New World Mining District Response and Restoration Project. June.

Tetra Tech. 2018a. Construction Completion Report. New World Repository Sump Drain Field. April.

Tetra Tech. 2018b. Memo: Proposal to discontinue monitoring at selected groundwater wells within the New World Mining District. January.

Tetra Tech. 2019. 2018 Surface Water and Groundwater Monitoring Report. New World Mining District Response and Restoration Project. March.

