

Section 17.24.645

GROUNDWATER MONITORING

(1) Determination of the Effects of Mining Operations

Groundwater levels, infiltration rates, subsurface flow and storage characteristics, and groundwater quality will be monitored in an approved manner to determine the effects of strip mining on the recharge capacity of reclaimed land, and on the quantity and quality of water in groundwater systems in the permit and adjacent areas. Groundwater levels and water quality are monitored as required using wells that adequately reflect changes in groundwater quantity and quality resulting from the mining operation. SCM has in the past through Annual Reports of Hydrologic Monitoring, documented significant changes in drainage conditions along South Fork Spring Creek Drainage Basin. SCM will continue to report changes and contributing factors as part of the Annual Report of Hydrologic Monitoring.

(2) Monitoring Plan

The current groundwater monitoring program at SCM includes collection of groundwater quality samples and measurement of water levels within monitoring wells.

- (a) the Plan includes the measurement of the quantity and quality of water in all disturbed or potentially affected geologic strata within and adjacent to the permit area.
- (b) the Plan is adequate to plan for modifications of the SCM operation, if necessary, to minimize disturbance of the prevailing hydrologic balance.

The Monitoring and Quality Assurance Plan (MQAP) contains the current groundwater monitoring program description as well as the discontinued groundwater monitoring program description. The MQAP is located as an addendum to Section 17.24.314. Refer to the MQAP for the list of wells monitored and the frequency of activity.

(3) Expansion of the Groundwater Monitoring System

SCM recognizes the potential to expand the monitoring network as necessary to characterize significant impacts to the hydrologic balance of the permit and adjacent areas. As specified and approved through the MDEQ, additional observations and analyses may be undertaken to demonstrate compliance of this rule.

Revised 10/14/2013; Reference – MR 191 - MQAP

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(4) Stratum Monitoring Waiver

If demonstrated through the use of probable hydrologic consequence determination and other available information that a particular water bearing stratum on permit or adjacent areas does not have a significant role in maintaining the hydrologic balance within the cumulative impact area, the MDEQ may waive monitoring of that stratum.

(5) Groundwater Monitoring Through Phase IV Bond Release

Monitoring of the current wells will continue through mining and until phase IV bond release. Modifications of the monitoring requirements, except those required by the Montana pollutant discharge elimination system permit, may be allowed if the operator or the MDEQ demonstrates that:

- (a)(i) the operation has minimized disturbance to the hydrologic balance in the permit and adjacent areas and prevented material damage to the hydrologic balance outside the permit area;
- (a)(ii) water quantity and quality are suitable to support approved post mining land uses; and
- (a)(iii) the water rights of other users have been protected or replaced;
- (b) monitoring is no longer necessary to achieve the purposes set forth in the monitoring plan approved under this rule; or
- (c) with regard to monitoring related to an alluvial valley floor, monitoring of the essential hydrologic function of the alluvial valley floor is ensured under the modified program.

(6) Analysis of Water Quality Samples

Methods of sample collection, preservation and sample analysis as well as parameters analyzed for, are described in the MQAP (addendum to Section 17.24.314).

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A quality assurance program for sampling and analyses is found in the MQAP (addendum to Section 17.24.314).

(7) Non-compliance Revelation

Should groundwater monitoring reveal a non-compliance condition with respect to the Act or MDEQ Regulation, SCM will take immediate steps to minimize adverse effects and shall notify the MDEQ within five (5) days of the discovery of the condition.

(8) Reporting Requirements

Monitoring results are reported to the MDEQ on a semi-annual basis (interim and annual), with a complete data analysis in the Annual Report of Hydrologic Monitoring. Any sample result indicating a permit violation will be reported to the MDEQ within 5 days of receipt of results.