

# MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY

## Water Quality Division

### Montana Pollutant Discharge Elimination System (MPDES)

#### 2020 Major Modification Fact Sheet

**Permittee:** Stillwater Mining Company

**Permit No.:** MT0026808

**Receiving Waters:** East Boulder River and Alluvial Ground Water

**Facility Information:**

Name: Stillwater East Boulder Mine

Location: McLeod, MT

Contact: Matt Wolfe, Environmental Supervisor

County: Sweetgrass

**Fee Information:**

Major/Minor: Minor

Type: Private

Outfalls: 3 (for fee determination only)

Outfall 001: Process Wastewater to East Boulder River

Outfall 002: Process Wastewater through Ground Water to  
East Boulder River

Outfall 003: Septic Drainfield

## 1 BACKGROUND

This fact sheet provides the principal facts considered in preparing a major modification of the Montana Pollutant Discharge Elimination System (MPDES) permit for the Stillwater Mining Company - East Boulder Mine. Only those conditions subject to modification are reopened as part of this permitting action.

### 1.1 Permit and Application Information

Stillwater Mining Company (SMC), a wholly owned subsidiary of Sibanye Stillwater, is the owner and operator of the East Boulder Mine. Discharge of the facility wastewater is regulated under MPDES Permit No. MT0026808, which became effective on November 1, 2015, and expires on October 31, 2020 (2015-issued permit).

On May 13, 2019, the Department of Environmental Quality (DEQ) received an application from SMC for a major modification to revise the Outfall 002 mixing zones and final effluent limits for metals. The application included ground water and surface water source-specific mixing zone demonstrations, updated Forms 1 and 2C, supplemental information, and the

\$3,000 major modification application fee. Submittal of this application package satisfied the 2015-issued permit Compliance Schedule in Part I.E.1, meeting the required deadline for submittal of a major modification request.

On April 27, 2020, DEQ received a request from SMC to amend their 2019 application. SMC requested to postpone any action on modifying the final effluent limits and new mixing zones for Outfall 002, and extend the effective date of the final effluent limits to September 1, 2023, for Outfalls 001, 002, and 003. The three-year extension allows time for SMC to complete the wastewater system upgrades, assure the stable operation of the 10-micron disc filtration, and allow collection of at least 12 months of representative effluent data.

## 1.2 Description of Facility and Discharges

The SMC East Boulder Mine is an underground platinum and palladium mine that began production in 2002. The mine is located within a 1,630-acre operating permit area, approximately 32 miles southeast of Big Timber, Montana, in Sweet Grass County. See **Figure 1** for an outline of the facility boundaries and monitoring locations.

The major source of wastewater is mine adit water, which is ground water that has infiltrated the underground mine workings. The mine water is treated by the facility wastewater treatment facility (WWTF). The WWTF has an average design rate of 500 gallons per minute (gpm) and consists of settling (underground), thickening and clarification followed by 100-micron bags, and nitrogen removal through biological nitrification and denitrification. Covered continuous backwash rock media cells and moving bed biofilm reactors (MBBRs) provide nitrogen treatment. The WWTF also has a heat exchanger system upstream of one of the treatment cells to improve treatment during the winter months and a limited volume reverse osmosis treatment system for redundancy in the case of a biological treatment system failure.

SMC has committed to install an additional polishing step by September 2020; a new 10-micron filtration system (a.k.a. disc filter). This filter is expected to remove up to 98% of the total recoverable metals based on bench scale testing. **Figure 2** provides a schematic of the WWTF system after completion.

## 1.3 Compliance Summary

DEQ conducted one compliance evaluation inspection at SMC - East Boulder Mine since the 2015-issued permit became effective. The inspection was completed on February 28, 2017. There were no violations found. There were no DMR exceedances or other DMR violations during the POR.

## 2 MAJOR MODIFICATION

The scope of the major modification is limited to extending the effective date of the final effluent limits. DEQ is not reopening any assumptions, calculations or decisions regarding the formulation of the final effluent limits in the 2015-final permit. SMC has made significant progress developing methods to lower pollutant concentrations over the past four years, but needs more time to develop further approaches. The final effluent limit effective date in the 2015-issued permit will be extended by three years, until September 1, 2023. The interim limits will remain in effect until that time.

SMC satisfied the application requirement in the compliance schedule by submitting a timely major modification request and this requirement shall be removed. The requirement for an annual report will remain valid.

### **3 PUBLIC PARTICIPATION**

In accordance with ARM 17.30.1372, DEQ issued Public Notice No. **MT-20-03**, dated June 1, 2020. The public notice states that a tentative decision has been made to issue an MPDES permit for Stillwater East Boulder Mine, and that a draft permit, fact sheet and environmental assessment (EA) have been prepared. Public comments are invited any time prior to the close of the business **July 1, 2020**.

Comments may be directed to:

DEQ Water Quality Division  
Water Protection Bureau  
PO Box 200901  
Helena, MT 59620

or [DEQWPBPublicNotices@mt.gov](mailto:DEQWPBPublicNotices@mt.gov)

All comments received or postmarked prior to the close of the public comment period will be considered in the formulation of the final permit. DEQ will respond to all substantive comments and issue a final decision within sixty days of the close of the public comment period, or as soon as possible thereafter.

All persons, including applicants, who believe any condition of a draft permit is inappropriate, or that DEQ's tentative decision to deny an application, terminate a permit, or prepare a draft permit is inappropriate, shall raise all reasonably ascertainable issues and submit all reasonably available arguments supporting their position by the close of the public comment period (including any public hearing) under ARM 17.30.1372.

#### **3.1 Notification of Interested Parties**

Copies of the public notice were mailed to the Permittee, state and federal agencies and interested persons who have expressed in interest in being notified of permit actions. A copy of the distribution list is available in the administrative record for this permit. In addition to mailing the public notice, a copy of the notice and applicable draft permit, fact sheet and EA were posted on DEQ website for 30 days.

Any person interested in being placed on the mailing list for information regarding this MPDES Permit should contact DEQ, reference this Facility, and provide a name, address, and phone number.

#### **3.2 Public Hearing Written Comments**

During the public comment period provided by the notice, DEQ will accept requests for a public hearing. A request for a public hearing must be in writing and must state the nature of the issue proposed to be raised in the hearing (ARM 17.30.1374).

### **3.3 Permit Appeal**

After the close of the public comment period DEQ will issue a final permit decision. A final permit decision means a final decision to issue, deny, modify, revoke and reissue, or, terminate a permit. A permit decision is effective 30 days after the date of issuance unless a later date is specified in the decision, a stay is granted pursuant to ARM 17.30.1379, or the applicant files an appeal pursuant to 75-5-403, MCA.

The Applicant may file an appeal within 30 days of DEQ's action to the following address:

Secretary, Board of Environmental Review  
Department of Environmental Quality  
1520 East Sixth Avenue  
PO Box 200901  
Helena, Montana 59620-0901

### **3.4 Additional Information**

Requests for additional information or questions regarding this permit should be directed to the Water Protection Bureau at (406) 444-5546.



