

## 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.:** MT0024716

**Receiving Waters:** Stillwater River and Alluvial Ground Water

**Facility Information:**

Name: Stillwater Mine

Location: Nye, MT

Contact: Lisa Boettcher, Permitting, Projects, and Planning  
Supervisor

County: Sweetgrass

**Fee Information:**

Major/Minor: Minor

Type: Private

Outfalls: 3 (for fee determination only)

Outfall 001: Mine Discharge to Stillwater River

Outfall 002: Mine Discharge to Ground Water and Stillwater River

Outfall 003: Mine Discharge to Ground Water and Stillwater River

## 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 – Stillwater 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 Stillwater Mine. Discharge of the facility wastewater is regulated under MPDES Permit MT0024716, which became effective on December 1, 2015, and expires on November 30, 2020 (2015-issued permit).

On September 27, 2019, the Department of Environmental Quality (DEQ) received SMC's *Application for Modification and Updated Mixing Zone Evaluation for Metals in Outfalls 001, 002, and 003*, for a major modification to revise the permit's mixing zones and final effluent limits for metals. The application included ground water and surface water source-specific mixing zone requests, updated Forms 1 and 2C, supplemental information, and the \$3,000 major modification application fee. The purpose of the modification request was to comply with the compliance schedule requirement at Part 3.2 of the permit and to re-evaluate the permit's water quality-based effluent limits (WQBEL) based on bench scale testing studies of proposed improvements to the mine wastewater treatment process.

On April 21, 2020, DEQ received electronic transmittal of a request from SMC to amend the 2019 application. A signed hard copy of the request was received on May 5, 2020. SMC requested to postpone any action on modifying the final effluent limits and new mixing zones for Outfalls 001, 002, and 003, and extend the effective date of the final effluent limits to September 1, 2023, for Outfalls 001, 002, and 003. The 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 Stillwater Mine is an underground platinum and palladium mine with an associated mill and lined tailings impoundment (Facility). The Facility is located near Nye, Montana, in Stillwater County. Facility operations are located within a 1,168-acre operating area and include various process and maintenance buildings, employee facilities, storage facilities, offices, and water treatment system. The Stillwater River divides the Facility into East and West sides, with an adit on each side.

The sources of wastewater at the Facility include adit water which is ground water that has infiltrated the underground mine workings, and storm water that infiltrates or runs off. Any process wastewater from the mill is directed to the tailings impoundment and no discharge from the tailings impoundment is authorized by this or any previous MPDES permit.

Wastewater treatment of mine adit water at the Facility consists of clarification and/or a moving bed bioreactor/biological treatment system (MBBR/BTS). The MMBR/BTS is composed of two moving bed bioreactor (MMBR) cells followed by the biological treatment system (BTS). Mine waters enter the oxygen enriched MMBR cells where ammonia is nitrified to nitrate, followed by denitrification in the BTS where methanol is added to enhance the denitrification process.

SMC made improvements to the clarification system including pre-mix tanks and automated dosing systems, which are currently being calibrated to address elevated dissolved aluminum concentrations. SMC has also committed to install a new 10-micron disc filtration system, which is expected to significantly reduce total recoverable metals and total nitrogen concentrations. DEQ will need data from these incremental improvements to understand if further upgrades are necessary. The time necessary for the installation, startup and subsequent collection of representative effluent data from this new system is the basis for this permit modification.

## 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. 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. The permittee must continue to submit annual reports updating progress on installing, troubleshooting, and operating the updated treatment system.

## 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 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.