



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

March 31, 2011

Todd Duex
General Manager, Homestake Open Cut
11457 Bobtail Gulch Street
Central City, SD 57754

RE: Surface Water Discharge Permit No.: SD0025933

Dear Mr Duex:

Please find enclosed the Surface Water Discharge permit for the Homestake Open Cut. This permit will become effective 07/01/2011. The preprinted Discharge Monitoring Report (DMR) forms for the enclosed permit are being processed and will be mailed to you before the due date of the first DMR. If you have not received these forms by that time, or if you have any questions regarding your Surface Water Discharge permit, please contact me at (605) 773-3351.

Sincerely,

Anthony Mueske
Natural Resources Project Engineer
Surface Water Quality Program
SDDENR

Enclosure

c: Wastewater Operator, Homestake Open Cut

**SOUTH DAKOTA DEPARTMENT OF ENVIRONMENT
AND NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL AVENUE
PIERRE, SOUTH DAKOTA 57501-3181**

**AUTHORIZATION TO DISCHARGE UNDER THE
SURFACE WATER DISCHARGE SYSTEM**

In compliance with the provisions of the South Dakota Water Pollution Control Act and the Administrative Rules of South Dakota (ARSD), Chapters 74:52:01 through 74:52:11,

Homestake Mining Company

is authorized to discharge to

Gold Run Creek, Whitewood Creek, Bobtail Gulch, Sawpit Gulch, and Deadwood Creek

from its inactive mining operation known as the "Open Cut and Grizzly Gulch Tailings Facility" located about one-half mile northwest of the Homestake underground workings in Lead, SD. The affected lands lie within Lawrence County, South Dakota in the following sections: West ½ of Section 27; Section 28; Section 29; Northeast ¼ of Section 32; and North ½ of Section 33, in Township 5 North, Range 3 East (Latitude 44.363716°; Longitude - 103.762650°) in accordance with discharge point(s), effluent limits, monitoring requirements and other conditions set forth herein. Authorization for discharge is limited to those outfalls specifically listed in the permit and the storm water discharges at the site. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the South Dakota Water Pollution Control Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

This permit shall become effective April 1, 2011

This permit and the authorization to discharge shall expire at midnight, March 31, 2016

Signed this day of May 6, 2011



Steven M. Pirner
Secretary
Department of Environment and Natural Resources

Amended: April 21, 2011
Effective: April 1, 2011

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DEFINITIONS

30-day (and monthly) average means the arithmetic average of all samples collected during a consecutive 30-day period or calendar month, whichever is applicable. The calendar month shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms.

7-day (and weekly) average means the arithmetic mean of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. The calendar week which begins on Sunday and ends on Saturday, shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for that calendar week shall be included in the data for the month that contains the Saturday.

Acute Toxicity occurs when 50 percent or more mortality is observed for either species (See Section 1.12) at any effluent concentration. Mortality in the control must simultaneously be 10 percent or less for the effluent results to be considered valid.

ARSD means the Administrative Rules of South Dakota.

An **Authorized Release** is a discharge from a permitted outfall that meets all permit conditions and effluent limits.

"Best Management Practices" ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the state. BMPs also include treatment requirements, operating procedures, and practices to control industrial site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

BOD₅ means Five-Day Biochemical Oxygen Demand. BOD is a measurement of the amount of oxygen utilized by the decomposition of organic material, over a specified time period (usually 5 days) in a sample.

A **Bypass** is the intentional diversion of waste streams from any portion of a treatment facility.

Composite samples shall be flow proportioned. The composite sample shall contain at least four samples collected over the compositing period. Unless otherwise specified, the time between the collection of the first sample and the last sample shall not be less than six hours nor more than 24 hours. Acceptable methods for preparation of composite samples are as follows:

1. Constant time interval between samples, sample volume proportional to flow rate at time of sampling;
2. Constant time interval between samples, sample volume proportional to total flow (volume) since last sample. For the first sample, the flow rate at the time the sample was collected may be used;
3. Constant sample volume, time interval between samples proportional to flow (i.e. sample taken every "X" gallons of flow); and
4. Continuous collection of sample, with sample collection rate proportional to flow rate.

Daily Maximum (Daily Max.) is the maximum value allowable in any single sample or instantaneous measurement.

DMR means Discharge Monitoring Report. EPA Form 3320-1, which is filled out to report sampling data.

EPA or U.S. EPA means United States Environmental Protection Agency.

Existing Source means any building, structure, facility or installation from which there is or may be a discharge of pollutants, which is not considered a New Source.

A grab sample, for monitoring requirements, is a single "dip and take" sample collected at a representative point in the discharge stream.

MGD is the measure of flow rate meaning million gallons per day.

New Source means any building, structure, facility or installation from which there is or may be a discharge of pollutants, the construction of which commenced after the publication of proposed Pretreatment Standards under Section 307(c) of the Federal Clean Water Act which will be applicable to such source if such Standards are thereafter promulgated in accordance with that section, provided that:

1. The building, structure, facility or installation is constructed at a site at which no other source is located; or
2. The building, structure, facility or installation totally replaces the process or production equipment that causes the discharge of pollutants at an existing source; or
3. The wastewater generating processes of the building, structure, facility, or installation are substantially independent of an existing source at the same site. In determining whether these are substantially independent; factors, such as the extent to which the new facility is integrated with the existing plant, and the extent to which the new facility is engaged in the same general type of activity as the existing source should be considered.

Construction on a site at which an existing source is located results in a modification rather than a new source if the construction does not create a new building, structure, facility or installation meeting the criteria of b or c of this section but otherwise alters, replaces, or adds to existing process or production equipment. Construction of a new source has commenced if the owner or operator has:

1. Begun, or caused to begin as part of a continuous onsite construction program:
 - a. Any placement, assembly, or installation of facilities or equipment; or
 - b. Significant site preparation work including clearing, excavation, or removal of existing buildings, structures, or facilities which is necessary for the placement, assembly, or installation of new source facilities or equipment.
2. Entered into a binding contractual obligation for the purchase of facilities or equipment which is intended to be used in its operation within a reasonable time. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts of feasibility, engineering, and design studies do not constitute a contractual obligation under this paragraph.

pH is the measure of the hydrogen ion concentration of water or wastewater; expressed as the negative log of the hydrogen ion concentration. A pH of 7 is neutral. A pH less than 7 is acidic, and a pH greater than 7 is basic.

Process Wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, by-product, or waste product.

SDDENR means the South Dakota Department of Environment and Natural Resources.

Secretary means the Secretary of the South Dakota Department of Environment and Natural Resources, or authorized representative.

Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can

reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

Sewage Sludge is any solid, semi-solid or liquid residue that contains materials removed from domestic sewage during treatment. Sewage sludge includes, but is not limited to, primary and secondary solids and sewage sludge products.

TSS means **Total Suspended Solids**. TSS is a measure of the filterable solids present in a sample.

Toxic Pollutant is any pollutant listed as toxic under §307(a)(1) of the federal Clean Water Act.

An **Unauthorized release** is a discharge from the lower end of the treatment or containment system through a release structure or over or through retention dikes that does not meet all permit conditions or effluent limits.

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limits because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

1.0 EFFLUENT LIMITS AND MONITORING REQUIREMENTS

1.1 Description of Discharge Points

The authorization to discharge provided under this permit is limited to those outfalls specifically designated below as discharge locations and storm water discharges at the site. Discharges at any location not authorized under a SWD permit is a violation of the South Dakota Water Pollution Control Act and could subject the person{s} responsible for such discharge to penalties under Section 34A-2-75 of the Act. Knowingly discharging from an unauthorized location or failing to report an unauthorized discharge within a reasonable time from the first learning of an unauthorized discharge could subject such person to criminal penalties as provided under the South Dakota Water Pollution Control Act.

Outfall

Serial Number

Description of Discharge Point

003N	Any discharge in Bobtail Gulch from the Bobtail Gulch collection system (Latitude 44.368333°, Longitude -103.761167°).
005N	Any discharge in Sawpit Gulch from the Sawpit Gulch collection system (Latitude 44.368167°, Longitude -103.773833°).
007N	Any discharge in Grizzly Gulch from the Grizzly Gulch Tailings impoundment (Latitude 44.369722°, Longitude -103.743056°).
008A	Any direct discharge from the Leachate Containment Pond (Latitude 44.363056°, Longitude -103.766389°).
009N	Any discharge in Blacktail Gulch from the Blacktail Gulch collection system (Latitude 44.368333°, Longitude -103.757500°).
010N	Any discharge in Gayville Gulch from the Gayville Gulch collection system (Latitude 44.368611°, Longitude -103.753333°).
011N	Any discharge in East Gayville Gulch from the East Gayville Gulch collection system (Latitude 44.369722°, Longitude -103.748889°).
012N	Any discharge in East Ravine from the East Ravine collection system (Latitude 44.3686110°, Longitude -103.747222°).
013A	Any discharge from the Blacktail Wastewater Treatment Facility (Latitude 44.369444°, Longitude -103.758611°).
014A	Any discharge from the Feed Pond Underdrain to the combined Blacktail Feed Pond Underdrain/Blacktail storm water outfall (Latitude 44.369444°, Longitude -103.757500°).

1.2 Effluent Limits – Outfalls 003, 005, 007, 009, 010, 011, and 012

There shall be **No Discharge** to waters of the state from Outfalls 003, 005, 007, 009, 010, 011, or 012 as detected by visual monitoring except in accordance with the emergency release, bypass, storm water, or other provisions of the permit.

1.3 Effluent Limits – Outfall 008

No discharge shall occur until permission for discharge is granted by the South Dakota Department of Environment and Natural Resources. Effective immediately and lasting through the life of this permit, the quality of effluent discharged by the facility shall, as a minimum, meet the limits as set forth below:

Effluent Characteristic	Effluent Limit	
	30-Day Average ¹	Daily Maximum ¹
Five-Day Biochemical Oxygen Demand (BOD ₅), mg/L	10	17.5
Total Suspended Solids (TSS), mg/L	10	17.5
Ammonia -- Nitrogen, mg/L	1.0	1.75
Total Recoverable Selenium, µg/L	4.6	12.8 ²
Total Dissolved Solids, mg/L	2,500	4,375
Conductivity, µmhos/cm	2,500	4,375
Oil and Grease, mg/L	N/A	10
The pH of the discharge shall not be less than 6.5 standard units nor greater than 9.0 standard units in any sample.		
There shall be no discharge of industrial wastes which produce floating solids, scum, oil slicks, material discoloration, visible gassing, sludge deposits, sediments, slimes, algal blooms, fungus growths, or other offensive effects.		
Oil and Grease shall not impart a visible film or sheen to the surface of the water or the adjoining shorelines.		
There shall be no acute toxicity in the discharge, as measured by the whole effluent toxicity test.		
There shall be no discharge of sanitary wastewater.		

¹ See Definitions.

² The acute standard for selenium in µg/L = $1/[(f1/185.9 \text{ µg/L}) + (f2/12.82 \text{ µg/L})]$, where f1 and f2 are the fractions of selenite and selenate, respectively. **If sample results are less than 12.8 µg/L, speciation to determine compliance with the standard is not required.**

1.4 Effluent Limits – Outfall 013

Effective immediately and lasting through the life of this permit, the quality of effluent discharged by the facility shall, as a minimum, meet the limits as set forth below:

Effluent Characteristic	Effluent Limit	
	30-Day Average ¹	Daily Maximum ¹
Five-Day Biochemical Oxygen Demand (BOD ₅), mg/L	10	17.5
Total Suspended Solids (TSS), mg/L	10	17.5
Ammonia – Nitrogen, lbs/day		
May 1 st – February 29 th	1.68	2.94
March 1 st – April 30 th	7.81	13.7
Total Recoverable Selenium, µg/L	4.6	12.8 ²
Total Dissolved Solids, mg/L	2,908	4,375
Conductivity, µmhos/cm	2,828	4,375
Oil and Grease, mg/L	N/A	10
The pH of the discharge shall not be less than 6.5 standard units nor greater than 9.0 standard units in any sample.		
There shall be no discharge of industrial wastes which produce floating solids, scum, oil slicks, material discoloration, visible gassing, sludge deposits, sediments, slimes, algal blooms, fungus growths, or other offensive effects.		
Oil and Grease shall not impart a visible film or sheen to the surface of the water or the adjoining shorelines.		
There shall be no acute toxicity in the discharge, as measured by the whole effluent toxicity test.		
There shall be no discharge of sanitary wastewater.		

¹ See Definitions.

² The daily maximum limit for selenium is based on the fractions of selenite, f1; and selenate, f2. CMC = $1 / [(f1/CMC1) + (f2/CMC2)]$, where CMC1 and CMC2 are 185.9 µg/L and 12.82 µg/L respectively. If sample results are less than 12.8 µg/L, speciation to determine compliance with the standard is not required.

$$f1 = \% \text{ selenite as fraction}$$

$$f2 = \% \text{ selenate as fraction}$$

1.5 Effluent Limits – Outfall 014

Effective immediately and lasting through the life of this permit, the quality of effluent discharged by the facility shall, as a minimum, meet the limits as set forth below:

Effluent Characteristic	Effluent Limit	
	30-Day Average ¹	Daily Maximum ¹
Five-Day Biochemical Oxygen Demand (BOD ₅), mg/L	10	17.5
Total Suspended Solids (TSS), mg/L	10	17.5
Ammonia – Nitrogen, lbs/day		
May 1 st – February 29 th	1.68	2.94
March 1 st – April 30 th	7.81	13.7
Total Recoverable Selenium, µg/L	4.6	12.8 ²
Total Dissolved Solids, mg/L	2,500	4,375
Conductivity, µmhos/cm	2,500	4,375
The pH of the discharge shall not be less than 6.5 standard units nor greater than 9.0 standard units in any sample.		
There shall be no discharge of industrial wastes which produce floating solids, scum, oil slicks, material discoloration, visible gassing, sludge deposits, sediments, slimes, algal blooms, fungus growths, or other offensive effects.		
Oil and Grease are not to exceed 10 mg/L or impart a visible film or sheen to the surface of the water or the adjoining shorelines.		
There shall be no acute toxicity in the discharge, as measured by the whole effluent toxicity test.		
There shall be no discharge of sanitary wastewater.		

¹ See Definitions.

² The daily maximum limit for selenium is based on the fractions of selenite, f1; and selenate, f2. $CMC = 1/[(f1/CMC1) + (f2/CMC2)]$, where CMC1 and CMC2 are 185.9 µg/L and 12.82 µg/L respectively. If sample results are less than 12.8 µg/L, speciation to determine compliance with the standard is not required.

1.6 Self-Monitoring Requirements – Outfalls 003, 005, 007, 009, 010, 011, and 012

The proposed permit does not authorize a discharge from the Grizzly Gulch tailings impoundment (Outfall 007) or the Sawpit or East Waste Rock drainages (Outfalls 003, 005, 009, 010, 011, and 012), as detected by visual monitoring. Monitoring shall consist of **monthly** inspections of the facility and outfall to verify that proper operation and maintenance procedures are being practiced and whether or not there is a discharge occurring from this facility. Documentation of each of these visits shall be kept in a notebook or field sheets to be reviewed by SDDENR or EPA personnel when an inspection occurs. If a discharge is discovered, the proper authorities shall be notified in accordance with the *Twenty-Four Hour Notice of Noncompliance Reporting* (Section 3.9) requirements stated in the Surface Water Discharge permit.

Promptly upon discovery of a release or other discharge, the discharge shall be monitored as shown below:

Effluent Characteristic	Frequency	Reporting Values ¹	Sample Type ¹
✓ Flow, MGD ²	Daily	Daily Maximum	Instantaneous or Continuous
✓ Water Temperature, °C	Daily	Daily Maximum	Instantaneous ³
✓ pH, standard units	Daily	Daily Minimum; Daily Maximum	Instantaneous ⁴
✓ Visible Pollutants ⁵	Daily	Presence or Absence	Visual
✓ Oil and Grease, visual ⁶	Daily	Presence or Absence	Visual
✓ Oil and Grease (hexane ext), mg/L ⁶	Contingent	Daily Maximum	Grab
✓ Conductivity, µmhos/cm	Daily	Daily Maximum	Grab
✓ Total Dissolved Solids, mg/L	Daily	Daily Maximum	Grab
✓ Total Suspended Solids, mg/L	Daily	Daily Maximum	Grab
✓ Nitrates (as N), mg/L	Daily	Daily Maximum	Grab
✓ Hardness (as CaCO ₃), mg/L	Daily ⁷	Daily Maximum	Grab
✓ Total Recoverable Arsenic, µg/L	Daily	Daily Maximum	Grab
✓ Total Recoverable Cadmium, µg/L	Daily	Daily Maximum	Grab
✓ Total Recoverable Chromium, µg/L	Daily	Daily Maximum	Grab
✓ Total Recoverable Copper, µg/L	Daily	Daily Maximum	Grab
✓ Total Recoverable Iron, µg/L	Daily	Daily Maximum	Grab
✓ Total Recoverable Lead, µg/L	Daily	Daily Maximum	Grab
✓ Total Mercury, µg/L	Daily	Daily Maximum	Grab
✓ Total Recoverable Nickel, µg/L	Daily	Daily Maximum	Grab

¹ See Definitions. All of the samples collected during the 30-day period are to be used in determining the averages. If only one sample is collected during the monitoring period, it shall be considered the same as the average for that period. The permittee always has the option of collecting additional samples if appropriate.

² Flow rates shall be monitored in a manner to ensure that representative values are being obtained.

³ The water temperature of the effluent shall be taken as a field measurement. Measurement shall be made with a mercury-filled, or dial type thermometer, or a thermistor. Readings shall be reported to the nearest whole degree Celsius.

⁴ pH shall be taken within 15 minutes of sample collection with a pH meter. The pH meter must be capable of simultaneous calibration to two points on the pH scale that bracket the expected pH and are approximately three standard units apart. The pH meter must read to 0.01 standard units and be equipped with temperature compensation adjustment. Readings shall be reported to the nearest 0.1 standard units.

⁵ The outfall shall be monitored daily for the presence of visible pollutants. If visible pollutants are observed in the discharge, Homestake shall contact DENR within 24 hours. DENR may require additional monitoring if necessary to determine the nature of the discharge.

⁶ Oil and grease shall be visually monitored during discharge. In the event that an oil sheen or floating oil is observed during discharge, grab samples shall be taken immediately, analyzed and reported.

⁷ Hardness shall be sampled at the same time the metals samples are collected.

Amended: April 21, 2011
Effective: April 1, 2011

Effluent Characteristic	Frequency	Reporting Values ¹	Sample Type ¹
✓ Total Recoverable Selenium, µg/L	Daily	Daily Maximum ⁸	Grab
✓ Total Recoverable Silver, µg/L	Daily	Daily Maximum	Grab
✓ Total Recoverable Zinc, µg/L	Daily	Daily Maximum	Grab
✓ WAD Cyanide, mg/L	Daily	Daily Maximum	Grab

⁸ SDDENR considers the analytical detection level for total recoverable selenium to be 5 µg/L. If the effluent total recoverable selenium is less than the analytical detection level of 5 µg/L, "BD" shall be used for reporting and "0" shall be used for averaging purposes.

1.7 Pre-Discharge Sampling Requirements – Outfall 008

Prior to the start of any discharge from this Outfall, the permittee shall collect a grab sample and have the sample analyzed for the following parameters:

✓ Acute whole effluent toxicity (submit report)	✓ Total Recoverable Copper, µg/L
✓ BOD ₅ , mg/L	✓ Total Recoverable Iron, µg/L
✓ Total Suspended Solids, mg/L	✓ Total Recoverable Lead, µg/L
✓ Total Dissolved Solids, mg/L	✓ Total Mercury, µg/L
✓ pH, s.u.	✓ Total Recoverable Nickel, µg/L
✓ Nitrates, mg/L	✓ Total Recoverable Selenium, µg/L
✓ Hardness, mg/L	✓ Total Recoverable Silver, µg/L
✓ Asbestos, fibers/L	✓ Total Recoverable Zinc, µg/L
✓ Total Recoverable Arsenic, µg/L	✓ Weak Acid Dissociable Cyanide, mg/L
✓ Total Recoverable Cadmium, µg/L	✓ Organic Toxic Pollutants (submit report)
✓ Total Recoverable Chromium, µg/L	

The results of the analyses, along with a request to discharge, shall be submitted to the Secretary. The request to discharge shall explain why a discharge is needed, when the discharge would start, the expected duration of the discharge, and the approximate volume of water to be discharged. The estimated flow condition of the receiving water shall also be reported (i.e. dry, low, normal, high). **No discharge shall occur until permission has been granted by the Secretary.**

See Section 1.12 for Acute whole effluent toxicity information.

1.8 Self-Monitoring Requirements – Outfall 008

At a minimum, during a discharge Homestake shall monitor Outfall 008 for the parameters listed below at the specified frequencies and with the types of samples indicated. The department may require additional testing as a condition of authorization to discharge, if pre-discharge sampling indicates elevated levels of any parameters. If no discharge occurs during the entire monitoring period, it shall be stated on the Discharge Monitoring Report Form (EPA No. 3320-1) that no discharge or overflow occurred.

Effluent Characteristic	Frequency	Reporting Values ¹	Sample Type ¹
✓ Flow Rate, MGD ²	Daily	Daily Maximum; 30-Day Average	Instantaneous
✓ Water Temperature, °C	Daily	Daily Maximum; 30-Day Average	Instantaneous ³
✓ pH, standard units	Daily	Daily Minimum; Daily Maximum	Instantaneous ⁴
✓ Visible Pollutants ⁵	Daily	Presence or Absence	Visual
✓ Oil and Grease, visual	Daily	Presence or Absence	Visual
✓ Oil and Grease (hexane ext), mg/L	Daily	Daily Maximum	Grab
✓ Conductivity, µmhos/cm	Daily	Daily Maximum; 30- Day Average	Grab
✓ Total Dissolved Solids (TDS), mg/L	Daily	Daily Maximum; 30- Day Average	Grab
✓ Total Suspended Solids (TSS), mg/L	Daily	Daily Maximum; 30-Day Average	Grab
✓ Five-Day Biochemical Oxygen Demand (BOD ₅), mg/L	Daily	Daily Maximum; 30- Day Average	Grab
✓ Ammonia - Nitrogen (as N), mg/L	Daily	Daily Maximum; 30- Day Average	Grab
✓ Total Nitrates (as N), mg/L	Daily	Daily Maximum; 30- Day Average	Grab
✓ Hardness (as CaCO ₃), mg/L	Weekly ⁶	Daily Maximum	Grab
✓ Total Recoverable Arsenic, µg/L	Weekly	Daily Maximum; 30- Day Average	Grab
✓ Total Recoverable Cadmium, µg/L	Weekly	Daily Maximum; 30- Day Average	Grab
✓ Total Recoverable Chromium, µg/L	Weekly	Daily Maximum; 30- Day Average	Grab
✓ Total Recoverable Copper, µg/L	Weekly	Daily Maximum; 30- Day Average	Grab
✓ Total Recoverable Iron, µg/L	Weekly	Daily Maximum; 30- Day Average	Grab
✓ Total Recoverable Lead, µg/L	Weekly	Daily Maximum; 30- Day Average	Grab
✓ Total Mercury, µg/L	Weekly	Daily Maximum; 30- Day Average	Grab

¹ See Definitions. All of the samples collected during the 30-day period are to be used in determining the averages. If only one sample is collected during the monitoring period, it shall be considered the same as the average for that period. The permittee always has the option of collecting additional samples if appropriate.

² Flow rates shall be monitored in a manner to ensure that representative values are being obtained.

³ The water temperature of the effluent shall be taken as a field measurement. Measurement shall be made with a mercury-filled, or dial type thermometer, or a thermistor. Readings shall be reported to the nearest whole degree Celsius.

⁴ pH shall be taken within 15 minutes of sample collection with a pH meter. The pH meter must be capable of simultaneous calibration to two points on the pH scale that bracket the expected pH and are approximately three standard units apart. The pH meter must read to 0.01 standard units and be equipped with temperature compensation adjustment. Readings shall be reported to the nearest 0.1 standard units.

⁵ The outfall shall be monitored daily for the presence of visible pollutants. If visible pollutants are observed in the discharge, Homestake shall contact DENR within 24 hours. DENR may require additional monitoring if necessary to determine the nature of the discharge.

⁶ Hardness shall be sampled at the same time the metals samples are collected.

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Effluent Characteristic	Frequency	Reporting Values ¹	Sample Type ¹
✓ Total Recoverable Nickel, µg/L	Weekly	Daily Maximum; 30-Day Average	Grab
✓ Total Recoverable Selenium, µg/L	Weekly	Daily Maximum; 30-Day Average ⁷	Grab
✓ Total Recoverable Silver, µg/L	Weekly	Daily Maximum; 30-Day Average	Grab
✓ Total Recoverable Zinc, µg/L	Weekly	Daily Maximum; 30-Day Average	Grab
✓ WAD Cyanide, mg/L	Weekly	Daily Maximum; 30-Day Average	Grab

⁷ SDDENR considers the analytical detection level for total recoverable selenium to be 5 µg/L. If the effluent total recoverable selenium is less than the analytical detection level of 5 µg/L, "BD" shall be used for reporting and "0" shall be used for averaging purposes.

1.9 Self-Monitoring Requirements – Outfalls 013 and 014

As a minimum, upon the effective date of this permit, the following constituents shall be monitored at the frequency and with the type of measurement indicated; samples or measurements shall be representative of the volume and nature of the monitored discharge. If no discharge occurs during the entire monitoring period, it shall be stated on the Discharge Monitoring Report Form (EPA No. 3320-1) that no discharge or overflow occurred.

Effluent Characteristic	Frequency	Reporting Values ¹	Sample Type ¹
✓ Flow, MGD ²	Daily	Daily Maximum; 30-Day Average	Instantaneous
✓ Water Temperature, °C	Daily	Daily Maximum; 30-Day Average	Instantaneous ³
✓ pH, standard units	Daily	Daily Minimum; Daily Maximum	Instantaneous ⁴
✓ Visible Pollutants ⁵	Daily	Presence or Absence	Visual
✓ Oil and Grease, visual ⁶	Daily	Presence or Absence	Visual
✓ Oil and Grease (hexane ext), mg/L ⁶	Contingent	Daily Maximum	Grab

¹ See Definitions. All of the samples collected during the 30-day period are to be used in determining the averages. If only one sample is collected during the monitoring period, it shall be considered the same as the average for that period. The permittee always has the option of collecting additional samples if appropriate.

² Flow rates shall be monitored in a manner to ensure that representative values are being obtained.

³ The water temperature of the effluent shall be taken as a field measurement. Measurement shall be made with a mercury-filled, or dial type thermometer, or a thermistor. Readings shall be reported to the nearest whole degree Celsius.

⁴ pH shall be taken within 15 minutes of sample collection with a pH meter. The pH meter must be capable of simultaneous calibration to two points on the pH scale that bracket the expected pH and are approximately three standard units apart. The pH meter must read to 0.01 standard units and be equipped with temperature compensation adjustment. Readings shall be reported to the nearest 0.1 standard units.

⁵ The outfall shall be monitored daily for the presence of visible pollutants. If visible pollutants are observed in the discharge, Homestake shall contact DENR within 24 hours. DENR may require additional monitoring if necessary to determine the nature of the discharge.

⁶ Oil and grease shall be visually monitored during discharge. In the event that an oil sheen or floating oil is observed during discharge, grab samples shall be taken immediately, analyzed and reported.

Effluent Characteristic	Frequency	Reporting Values ¹	Sample Type ¹
✓ Conductivity, $\mu\text{mhos/cm}$	Daily	Daily Maximum; 30-Day Average	Grab
✓ Five-Day Biochemical Oxygen Demand (BOD_5), mg/L	Weekly	Daily Maximum; 30-Day Average	Grab
✓ Total Dissolved Solids (TDS), mg/L	Weekly	Daily Maximum; 30-Day Average ⁷	Grab
✓ Total Suspended Solids (TSS), mg/L	Weekly	Daily Maximum; 30-Day Average	Grab
✓ Ammonia - Nitrogen (as N), lbs/day	Weekly	Daily Maximum; 30-Day Average	Grab ⁸
✓ Total Nitrates (as N), mg/L	Weekly	Daily Maximum; 30-Day Average	Grab
✓ Dissolved Oxygen, mg/L	Weekly	Daily Maximum	Instantaneous
✓ Process wastewater	Monthly	Presence/Absence	Certification ⁹
✓ Hardness (as CaCO_3), mg/L	Monthly ¹⁰	Daily Maximum	Grab
✓ Total Recoverable Selenium, $\mu\text{g/L}$	Monthly	Daily Maximum; 30-Day Average ¹¹	Grab
✓ WAD Cyanide, mg/L	Monthly	Daily Maximum; 30-Day Average	Grab
✓ Total Recoverable Arsenic, $\mu\text{g/L}$	Quarterly	Daily Maximum; 30-Day Average	Grab
✓ Total Recoverable Cadmium, $\mu\text{g/L}$	Quarterly	Daily Maximum; 30-Day Average	Grab
✓ Total Recoverable Chromium, $\mu\text{g/L}$	Quarterly	Daily Maximum; 30-Day Average	Grab
✓ Total Recoverable Copper, $\mu\text{g/L}$	Quarterly	Daily Maximum; 30-Day Average	Grab
✓ Total Recoverable Iron, $\mu\text{g/L}$	Quarterly	Daily Maximum; 30-Day Average	Grab
✓ Total Recoverable Lead, $\mu\text{g/L}$	Quarterly	Daily Maximum; 30-Day Average	Grab
✓ Total Mercury, $\mu\text{g/L}$	Quarterly	Daily Maximum; 30-Day Average	Grab
✓ Total Recoverable Nickel, $\mu\text{g/L}$	Quarterly	Daily Maximum; 30-Day Average	Grab
✓ Total Recoverable Silver, $\mu\text{g/L}$	Quarterly	Daily Maximum; 30-Day Average	Grab

⁷ In addition to reporting the total dissolved solids concentration, the permittee shall report the individual ions (sulfate, bicarbonate, chloride, calcium, potassium, magnesium, and sodium) associated with the total dissolved solids.

⁸ The pH and temperature of the effluent shall be determined when ammonia samples are collected.

⁹ The permittee shall certify monthly that there has not been a discharge of water pumped from the process areas.

¹⁰ Hardness shall be sampled at the same time the metals samples are collected.

¹¹ SDDENR considers the analytical detection level for total recoverable selenium to be 5 $\mu\text{g/L}$. If the effluent total recoverable selenium is less than the analytical detection level of 5 $\mu\text{g/L}$, "BD" shall be used for reporting and "0" shall be used for averaging purposes.

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Effluent Characteristic	Frequency	Reporting Values ¹	Sample Type ¹
✓ Total Recoverable Zinc, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
✓ Acute Whole Effluent Toxicity	Quarterly ¹²	Pass/Fail	Grab

¹² After ten tests, the permittee may request SDDENR reduce or eliminate the acute whole effluent toxicity testing requirements. The decision to modify the testing requirements will be based on the permittee's past monitoring data and may be made without additional public notice.

1.10 Self-Monitoring Requirements – Instream Monitoring

Homestake has a number of outfalls that discharge into Deadwood Creek. To ensure that Homestake is not causing or contributing to a violation of the SDSWQS, the proposed permit requires Homestake to conduct instream monitoring of Deadwood Creek. Homestake has a number of established instream sampling points on Deadwood Creek. At a minimum, Homestake shall monitor SW6 (upstream point on Deadwood Creek) and SW1 (downstream point on Deadwood Creek) for the parameters listed below at the specified frequencies and with the types of samples indicated. At least one sample per year at each instream point should be collected during a precipitation event of at least 0.5 inch.

Effluent Characteristic	Frequency ¹	Reporting Values ²	Sample Type ²
✓ Flow, MGD ³	Monthly	Daily Maximum; 30-Day Average	Instantaneous or Continuous
✓ Water Temperature, °C	Monthly	Daily Maximum; 30-Day Average	Instantaneous ⁴
✓ pH, standard units	Monthly	Daily Minimum; Daily Maximum	Instantaneous ⁵
✓ Visible Pollutants ⁶	Monthly	Presence or Absence	Visual
✓ Total Dissolved Solids, mg/L	Monthly	Daily Maximum; 30-Day Average ⁷	Grab
✓ Total Suspended Solids, mg/L	Monthly	Daily Maximum; 30-Day Average	Grab

¹ At least one sample per year at each outfall should be collected during a precipitation event. All of the samples collected during the month are to be used in determining the averages. If only one sample is collected during the monitoring period, it shall be considered the same as the average for that period. The permittee always has the option of collecting additional samples if appropriate.

² See Definitions.

³ Flow rates shall be made in a manner to ensure that representative values are being obtained.

⁴ The water temperature of the effluent shall be taken as a field measurement. Measurement shall be made with a mercury-filled, or dial type thermometer, or a thermistor. Readings shall be reported to the nearest whole degree Celsius.

⁵ pH shall be taken within 15 minutes of sample collection with a pH meter. The pH meter must be capable of simultaneous calibration to two points on the pH scale that bracket the expected pH and are approximately three standard units apart. The pH meter must read to 0.01 standard units and be equipped with temperature compensation adjustment. Readings shall be reported to the nearest 0.1 standard units.

⁶ Deadwood Creek shall be monitored monthly for the presence of visible pollutants. If visible pollutants are observed in the discharge, Homestake shall contact DENR within 24 hours. DENR may require additional monitoring if necessary to determine the nature of the discharge.

⁷ In addition to reporting the total dissolved solids concentration, the permittee shall report the individual ions (sulfate, bicarbonate, chloride, calcium, potassium, magnesium, and sodium) associated with the total dissolved solids.

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Effluent Characteristic	Frequency ¹	Reporting Values ²	Sample Type ²
✓ Nitrates (as N), mg/L	Monthly	Daily Maximum; 30-Day Average	Grab
✓ Hardness (as CaCO ₃), mg/L	Monthly ⁸	Daily Maximum; 30-Day Average	Grab
✓ Weak Acid Dissociable (WAD) Cyanide, mg/L	Monthly	Daily Maximum; 30-Day Average	Grab
✓ Total Recoverable Copper, µg/L	Monthly	Daily Maximum; 30-Day Average	Grab
✓ Total Recoverable Lead, µg/L	Monthly	Daily Maximum; 30-Day Average	Grab
✓ Total Recoverable Selenium, µg/L	Monthly	Daily Maximum; 30-Day Average ⁹	Grab
✓ Total Recoverable Silver, µg/L	Monthly	Daily Maximum; 30-Day Average	Grab
✓ Total Recoverable Arsenic, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
✓ Total Recoverable Cadmium, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
✓ Total Recoverable Chromium, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
✓ Total Recoverable Iron, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
✓ Total Mercury, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
✓ Total Recoverable Nickel, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
✓ Total Recoverable Zinc, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab

⁸ Hardness shall be sampled at the same time the metals samples are collected.

⁹ SDDENR considers the analytical detection level for total recoverable selenium to be 5 µg/L. If the effluent total recoverable selenium is less than the analytical detection level of 5 µg/L, "BD" shall be used for reporting and "0" shall be used for averaging purposes.

1.11 Biological Monitoring

Homestake developed an annual biomonitoring program for Deadwood Creek (including Bobtail Gulch and Sawpit Gulch) in cooperation with the Department of Environment and Natural Resources and the Department of Game, Fish and Parks.

Since the implementation of the program, Homestake has completed the construction of the Bobtail and Sawpit Water Collection Systems. Water no longer flows down Bobtail and Sawpit Gulches except briefly during a storm event or during an emergency bypass of the system; the Bobtail and Sawpit Gulches are, therefore, removed from the biomonitoring program.

The program includes at a minimum:

1. Habitat Assessment, including monitoring for stream bank vegetation, vegetation overhang, substrate composition, percent surface fines, and water depth.
2. Fish Populations to determine species composition, abundance, biomass, and size structure of the fish communities.
3. Benthic Invertebrate Populations shall be sampled quantitatively. The biomonitoring program shall include at least one metric from each of the following measures: Richness, Tolerance, Trophic

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Habitat, and Composition. Redundancy can be evaluated during the calibration phase to eliminate overlapping metrics.

4. Periphytic algae shall be sampled quantitatively at all monitoring sites. The program shall include at least one metric from each of the following measures: Richness, Tolerance, Trophic Habitat, and Composition. Redundancy can be evaluated during the calibration phase to eliminate overlapping metrics.

During the annual biomonitoring, Homestake shall also analyze the water quality at all sampling sites within 30 days of the fish flesh analysis. The location for the sampling is detailed in the plan previously submitted to the Department of Environment and Natural Resources. The sampling shall be conducted for the following parameters, at a minimum:

Flow Rate, MGD	Total Recoverable Iron, µg/L
Water Temperature, °C	Total Recoverable Lead, µg/L
pH, standard units	Total Mercury, µg/L
Visible Pollutants	Total Recoverable Nickel, µg/L
Total Dissolved Solids, mg/L	Total Recoverable Selenium, µg/L
Total Suspended Solids, mg/L	Total Recoverable Silver, µg/L
Nitrates (as N), mg/L	Total Recoverable Zinc, µg/L
Hardness (as CaCO ₃), mg/L	WAD Cyanide, mg/L
Total Recoverable Arsenic, µg/L	Selenate (Se6+)
Total Recoverable Cadmium, µg/L	Selenite (Se4+)
Total Recoverable Copper, µg/L	
Total Recoverable Chromium, µg/L	

Homestake must complete the annual biomonitoring plan by October 1st of each year.

Once the annual monitoring is complete, Homestake shall submit an annual report of the findings to the Department of Environment and Natural Resources and the Department of Game, Fish and Parks. The report shall include information on the current aquatic life populations and analyze any trends in the populations from previous years. Each annual report is due by April 15th of the following year.

1.12 Whole Effluent Toxicity Testing - Acute Toxicity

Effective immediately, the permittee shall, at least once each calendar quarter, conduct acute static replacement toxicity tests on a sample of the discharge. Quarterly samples shall be collected on a two day progression; i.e., if the first quarterly sample is on a Monday, during the next quarter, sampling shall be on a Wednesday, etc.

The replacement static toxicity test shall be conducted in accordance with the procedure set out in the latest revision of "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms," Fifth Edition, October 2002 (EPA-821-R-02-012). The permittee shall conduct an acute 48-hour static toxicity test using *Ceriodaphnia dubia* and an acute 96-hour static toxicity test using *Pimephales promelas* (fathead minnows).

Acute toxicity occurs when 50 percent or more mortality is observed for either species at any effluent concentration. If more than 10 percent control mortality occurs, the test shall be repeated until satisfactory control survival is achieved.

If acute toxicity occurs, an additional test shall be conducted within two weeks of the date of when the permittee learned of the failed test. If only one species fails, retesting may be limited to this species. Should

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acute toxicity occur in the second test, testing shall occur once a month until further notified by the department.

Actual test results including all chemical and physical data shall be submitted along with the Discharge Monitoring Report (DMR) that is submitted for the end of the reporting calendar quarter (e.g., whole effluent results for the calendar quarter ending March 31 shall be reported with the DMR due April 28, with the remaining reports submitted with DMRs due each July 28, October 28, and January 28).

If the results for ten consecutive quarters/tests of testing indicate no acute toxicity, the permittee may request the permit issuing authority to allow a reduction to quarterly acute toxicity testing on only one species on an alternating basis. The permit issuing authority may approve or deny the request based on the results and other available information without an additional public notice. If the request is approved, the test procedures are to be the same as specified above for the test species.

**1.13 Toxicity Reduction Evaluation (TRE)
Toxicity Identification Evaluation (TIE)**

If acute and/or chronic toxicity occurs, an additional test shall be conducted within two weeks of the date of when the permittee learned of the test. If only one species fails, retesting may be limited to this species. Should acute toxicity and/or chronic toxicity occur in the second test, a TIE-TRE shall be undertaken by the permittee to establish the cause of the toxicity, locate the source(s) of the toxicity, and develop control of, or treatment for the toxicity. Failure to initiate, or conduct an adequate TIE-TRE, or delays in the conduct of such tests, shall not be considered a justification for noncompliance with the whole effluent toxicity limits contained in Sections 1.4 and 1.5 of this permit. A TRE plan needs to be submitted to the permitting authority within 45 days after confirmation of the continuance of effluent toxicity.

1.14 Chronic Toxicity Limit-Reopener Provision

This permit may be reopened and modified (following proper administrative procedures) to include chronic whole effluent toxicity limits if any other information or data are developed indicating that chronic whole effluent toxicity limits are needed. Also see Section 1.12 of this permit for additional whole effluent toxicity reopener provisions.

If acceptable to the permit issuing authority, and if in conformance with current regulations, this permit may be reopened and modified to incorporate TRE conclusions relating to additional numerical limits, a modified compliance schedule, and or modified whole effluent protocol.

1.15 Inspection Requirements

Homestake shall conduct two types of inspections: a comprehensive site compliance evaluation at least once a year and quarterly compliance inspections. The comprehensive site compliance evaluation shall include:

Areas contributing to a storm water discharge shall be visually inspected for evidence of, or the potential for, pollutants entering the drainage system. Measures to reduce pollutant loadings shall be evaluated to determine whether they are adequate and properly implemented or whether additional control measures are needed. Structural controls, sediment and erosion controls, and other structural pollution prevention measures identified in the plan shall be observed to ensure that they are operating correctly. A visual inspection of equipment needed to implement the plan, such as spill response equipment, shall be made.

Within two weeks of the inspection, the description of potential pollutant sources identified in the plan shall be revised based on the results of the inspection. Within 12 weeks after the inspection, the changes to the plan shall be implemented. Where a report does not identify any incidents of non-compliance, the permittee shall certify the facility is in compliance with the plan and this permit.

The report shall summarize the scope of the inspection, personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the plan, actions taken, and identification of any incidents of non-compliance. The report shall be signed in accordance with Part 3.14. All inspection reports shall be retained as part of the plan.

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In addition to the comprehensive site compliance evaluations described above, the quarterly site inspections shall be conducted during the period of March 1st through November 30th. The first inspection each calendar year will be conducted in March and the last inspection each year will be conducted in November. An appropriately trained person, familiar with the permit conditions and the pollution prevention plan, must conduct the inspections. The purpose of inspections is to: 1) determine whether structural and non-structural BMPs require maintenance or changes, and 2) evaluate the completeness and accuracy of the plan. At least one inspection each calendar year should be conducted while storm water is discharging from the facility. The permittee shall maintain a notebook or field sheets recording information obtained during the inspection. At a minimum, the notebook or field sheets shall include the following:

- a. Date and time of the inspection;
- b. Name of the inspector(s);
- c. Discharge status;
- d. Measured amount of pond freeboard, if applicable;
- e. Identification of operational problems and/or maintenance problems;
- f. Effectiveness of pollution prevention plan;
- g. Recommendations, as appropriate, to remedy identified problems;
- h. A brief description of any actions taken with regard to problems identified; and,
- i. Other information, as appropriate.

At least one inspection each calendar year should be conducted while storm water is discharging from the area. Homestake shall inspect its site when possible within 24 hours of the end of a rain storm that is 2.0 inch or greater, or a rain or snowmelt event that causes surface erosion. Documentation of each of these inspections shall be kept in a notebook or field sheets in accordance with proper recordkeeping procedures and the permittee shall make the notebook or field sheets available for inspection, upon request, by the Secretary or the U.S. Environmental Protection Agency.

If the permittee is not able to complete a site inspection within 24 hours of the end of a storm event or due to inaccessibility of the site, the relevant circumstances must be documented in the inspection notebook or field sheets, along with the reason(s) the site inspection was not conducted.

If, after at least one year of site inspections, the permittee can document that its pollution prevention plan is effective at minimizing surface erosion at the site, the department may allow less frequent inspections. The permittee must submit its documentation along with a request for less frequent inspections to the department for approval. If approved by the department, the permit may be modified to allow less frequent storm water inspections without additional public notice.

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2.0 STORM WATER POLLUTION PREVENTION PLAN

2.1 Description of Discharge Points

As part of Homestake's construction activities under the compliance schedule in the current permit, Homestake constructed specific outfall locations that discharge storm water. SDDENR requested Homestake identify each of these specific outfalls. These outfalls are in addition to other site-wide discharges of storm water not specifically identified herein and, as with all storm water covered by this permit, will be subject to the conditions of the storm water provisions.

- | | |
|-----|---|
| S01 | The Sawpit Gulch storm water collection system will collect storm water that will flow to Sawpit Gulch (Latitude 44.368170°, Longitude -103.77333°). |
| S02 | Storm water runoff from storm water diversions and north slope of the East Waste Rock Disposal Facility will be collected and conveyed to Bobtail Gulch (Latitude 44.369000°, -103.761330°) where it will continue to flow through the Bobtail Ponds and into Deadwood Creek. |
| S03 | Storm water runoff from two detention ponds up gradient of Shop Gulch drainage to Shop Gulch (Latitude 44.366670°, -103.765670°). |
| S04 | Storm water runoff from a detention pond up gradient of East Ravine will discharge to East Ravine (Latitude 44.369330°, -103.746330°). |
| S05 | Storm water runoff from two detention ponds up gradient of Gayville Gulch will discharge to Gayville Gulch (Latitude 44.36917°, -103.753000°). |
| S06 | Storm water runoff from a detention pond up gradient of Blacktail Gulch will discharge to Deadwood Creek through the combined Blacktail Feed Pond Underdrain/storm water outfall (Latitude 44.369500°, -103.757000°). |

2.2 Storm Water Pollution Prevention Plan

The Permittee shall develop and implement a site-wide comprehensive Storm Water Pollution Prevention Plan, also referred to as the plan or SWPPP, to address specific conditions at the site. The goal of the plan is to eliminate or minimize contact of storm water with materials or activities that may result in pollution of the runoff. If contact cannot be eliminated or reduced, storm water should be managed with Best Management Practices as identified in the plan before it is discharged from the site.

The plan is not submitted to SDDENR unless requested, but must be retained at the facility. The general requirements of the plan are included below. The plan must be updated within 30 days of the effective date of this permit.

2.3 Keeping Plans Current

The permittee shall modify the plan whenever there is a change in design, construction, operation, or maintenance that changes the potential for the discharge of pollutants to waters of the state. The plan shall also be modified if it proves to be ineffective in eliminating or minimizing pollutants present in storm water.

The Secretary may notify the permittee at any time that the plan does not meet one or more of the minimum requirements of the permit. This notification will identify the provisions of the permit that are not being met by the plan and identify which provisions require modifications in order to meet the minimum requirements. Within 30 days of notification, the permittee shall make the required changes to the plan and shall submit to the Secretary a written certification that the requested changes have been made. The Secretary may take appropriate enforcement action for the period of time the permittee was operating under a plan that did not meet the minimum requirements of this permit.

2.4 Contents of the Plan

The plan shall be retained on-site and include, at a minimum, the following items:

1. Personnel Responsibilities. Each plan shall identify personnel responsible for implementing, maintaining, and revising the plan, as well as those responsible for the reporting requirements of this permit. This should include the facility contact person indicated on the permit application. The plan shall clearly identify the responsibilities of personnel. Identified personnel must be available at reasonable times of operation. All aspects of the facility's plan must be addressed in the personnel activities and responsibilities.
2. Site Map. A site map shall be included with the plan and should indicate the following, if applicable:
 - a. Drainage areas and directions of storm water runoff (indicated by arrows);
 - b. Discharge outfalls from the site (structures that carry storm water runoff from the facility such as floor drain systems, ditches, culverts, or storm sewers);
 - c. The name and location of waters of the state that receive storm water runoff from the site (if waters of the state are too distant from the site to be indicated on the site map, indicate the name, direction and shortest distance to the lake, river, stream or wetland that receives runoff from your site);
 - d. Areas where materials are exposed to storm water;
 - e. Locations of storm sewer inlets (such as municipal storm sewers) and an indication of which, if any, structures have floor drains or loading dock drains that are connected to storm sewers;
 - f. Locations and types of Best Management Practices (BMPs) currently installed at the facility to reduce or eliminate pollutants to storm water;
 - g. Locations where spills or leaks have occurred; and
 - h. Areas of concern, including fueling stations, vehicle and equipment maintenance and/or cleaning areas; loading/unloading areas; locations used for the treatment, storage, or disposal of wastes; liquid storage tanks; processing areas; and storage areas.
3. Inventory of Exposed Materials. The plan shall include an inventory of the types of materials handled at the site that are potentially exposed to precipitation and potential pollutant sources. This inventory shall include:
 - a. A narrative description of materials that have been handled, treated, stored, or disposed of in a manner allowing exposure to storm water during the past three years;
 - b. The method(s) and location(s) of on-site storage or disposal;
 - c. Practices employed to minimize contact of materials with storm water runoff between the time of three years prior to the date of coverage under this general permit and the present;
 - d. A prediction of the direction of flow and an identification of the types of pollutants that are likely to be present in storm water discharges;
 - e. The toxicity of chemicals used produced, or stored;
 - f. A history of significant leaks or spills of toxic or hazardous pollutants;
 - g. The location and a description of existing control measures to reduce pollutants in storm water runoff;
 - h. Risk Identification and Summary of Potential Pollutant Sources. In creating the inventory of exposed materials, the permittee must, at a minimum, evaluate the following areas at the industrial site (as well as other areas where appropriate) to determine whether or not materials are exposed in these areas:
 - i. Vehicle and equipment maintenance, parking and storage areas, fueling areas, and washing/cleaning areas to determine if there is discolored soil evident as a result of fuel and lubricant leaks and spills;
 - ii. Liquid storage tanks and other bulk material stockpile areas;
 - iii. Loading and unloading areas;
 - iv. Outdoor manufacturing, processing or storage areas, and industrial plant yards to determine if there is discolored soil in these areas as a result of leaked or spilled solvents, fuels, or lubricants;
 - v. Dust or particulate generating areas, including dust collection devices that may release dust;

- vi. Rooftops contaminated by industrial activity or operation of a pollution control device;
 - vii. On-site waste disposal areas, such as waste ponds, dumpsters, solid waste storage or management areas; and
 - viii. Exposed (non-vegetated) soil areas where there is a potential for erosion to occur.
3. Pollutant Source Considerations. Each plan shall identify and describe all activities and materials that may be potential pollutant sources. The plan shall include a prediction of the direction of flow and an identification of the types of pollutants that are likely to be present in storm water discharges. Factors to consider include: the toxicity of chemicals; quantity of chemicals used, produced, or discharged; the likelihood of contact with storm water; and history of significant leaks or spills of toxic or hazardous pollutants.
 4. Spills and Leaks. The plan shall include a list of spills and leaks of toxic or hazardous pollutants that occurred in areas exposed to precipitation or drain to a storm water conveyance at the facility. This list shall contain information from three years prior to the effective date of this permit and updated as appropriate during the term of the permit.
 5. Sampling Data. A summary of existing sampling data describing pollutants in storm water discharges from the facility. This includes a summary of all sampling data collected during the term of this permit.

2.5 Storm Water Controls

The permittee shall develop, describe, prioritize, and implement appropriate storm water management controls for the facility. The description of the controls shall address the following minimum components, including a schedule for implementing the controls:

1. Best Management Practices. Describe appropriate Best Management Practices (BMPs), including structural and non-structural BMPs, that will be used at the facility to minimize or eliminate pollution of storm water at the site. The description must include an objective for each BMP, as well as a description of how to evaluate proper functioning of the BMP and any maintenance requirements of the BMP. BMPs should target materials and pollutant sources. The following general categories of BMPs shall be considered and incorporated, as appropriate, into the facility's plan, if materials are exposed to storm water on-site:
 - a. Source reduction: Reduce or eliminate the materials that are exposed to storm water. Materials management practices should be evaluated to determine if and how inventories of exposed materials can be reduced or eliminated. This can include clean-up of old equipment yards, periodic checking of dust control equipment to ensure there is no accumulation of dust in the area around the control equipment, removal and treatment of petroleum contaminated soil, consolidation of materials from many different areas into one area, and training employees regarding proper handling and disposal of materials. Materials may also be moved indoors or covered with a tarp or structure to eliminate contact with precipitation.
 - b. Diversion: Divert storm water drainage away from exposed materials through use of curbing, berms, sewers, or other forms of drainage control or elevate exposed significant material above surrounding drainage.
 - c. Treatment: Where contact of storm water with materials is unavoidable, use treatment devices to reduce the concentration and amount of pollutants in the discharged storm water. Such devices include oil/water separators, storm water detention/retention ponds, and vegetated swales.
2. Good Housekeeping. Good housekeeping requires maintaining, in a clean, orderly manner, any areas that may contribute pollutants to storm water discharges. A maintenance schedule shall be developed for these areas.

3. **Preventive Maintenance.** A preventive maintenance program must require regular inspections and maintenance of storm water management devices (e.g., cleaning oil/water separators, catch basins, etc.) and testing facility equipment and systems to uncover and prevent conditions that could cause breakdowns or failures (such as hydraulic leaks, torn bag-house filters, etc.) resulting in discharges of pollutants to surface waters.
4. **Spill Prevention and Response Procedures.** The plan shall clearly identify areas where potential spills that can contribute pollutants to storm water discharges, and their accompanying drainage points. Where appropriate, the plan should specify material handling procedures, storage requirements, and use of equipment such as diversion valves. Procedures for cleaning up spills shall be identified in the plan and made available to the appropriate personnel. The equipment necessary to implement a clean-up shall be available to personnel. The plan shall designate a person who is accountable for spill prevention at the facility and who will set up the necessary spill emergency procedures and reporting requirements so that spills and emergency releases of chemicals can be isolated and contained.
5. **Employee Training.** Employee training programs shall inform all personnel responsible of their role in implementing activities identified in the plan. Training should address topics such as spill response, good housekeeping, material management practices, truck wash out procedures, and equipment washdown procedures. The plan shall identify periodic dates for such training. Contractor or temporary personnel shall be informed of facility operation and design features in order to prevent discharges or spills from occurring.
6. **Recordkeeping Procedures.** The plan shall include a description of incidents (such as spills or other discharges) along with other information describing the quality and quantity of storm water discharges. Inspections and maintenance activities shall be documented and records of such activities shall be incorporated into the plan.
7. **Non-Storm Water Discharges.** The plan shall include a certification that the discharge has been tested or evaluated for the presence of non-storm water discharges. The certification shall include the identification of potential sources of non-storm water at the site, a description of the results of any tests or evaluation for the presence of non-storm water discharges, the evaluation criteria or testing method used, the date of any testing or evaluation, and the on-site drainage points that were directly observed during the test or evaluation. A discharger that is unable to provide the certification required by this paragraph must notify the Secretary.
8. **Dry Weather Screening.** Evaluate all discharge conveyances from the site (storm sewers, pipes, tile lines, ditches, etc.) to determine if liquids other than storm water are being discharged from these devices. This should be done during dry weather when storm water discharge is not occurring. The evaluation should cover sewer inlets and floor drains to determine which inlets/drains are connected to sanitary sewer lines, storm sewer lines, or septic tanks/drainage fields; appropriate methods such as dye or smoke testing or video imaging should be used to determine the source of discharges. Discharge of non-storm water (such as sanitary sewer or floor drain connections to storm sewers) is not authorized by this permit. Before such discharge may continue, authorization under an appropriate discharge permit must be obtained.
9. **Sediment and Erosion Control.** The plan shall identify areas that have a high potential for significant soil erosion, due to topography, activities, or other factors. The plan must also identify the structural, vegetative, or stabilization measures used to reduce or eliminate erosion.

2.6 Additional Requirements for Salt Storage

Storage piles of salt that generate a storm water discharge to waters of the state shall be enclosed or covered to prevent exposure to precipitation, except when adding or removing materials from the pile.

3.0 MONITORING, RECORDING AND REPORTING REQUIREMENTS

3.1 Representative Sampling

Samples taken in compliance with the monitoring requirements established under Sections 1.6 – 1.11 shall be collected from the effluent stream prior to discharge into the receiving waters. Samples and measurements shall be representative of the volume and nature of the monitored discharge.

3.2 Monitoring Procedures

Monitoring must be conducted according to test procedures approved under ARSD 74:52:03:06, a.b.r. 40 CFR, Part 136, unless other test procedures have been specified in this permit.

3.3 Reporting of Monitoring Results - Outfalls 003, 005, 007, 009, 010, 011, and 012

In the event of a discharge from one or more of these outfalls, monitoring results shall be summarized and reported on a photocopy of the Emergency Discharge Monitoring Form located at the end of this permit. The summary form must be postmarked no later than the 28th day of the month following the discharge. Legible copies of these, and all other reports required herein, shall be signed and certified in accordance with Section 3.15 and submitted to the SDDENR and EPA at the following addresses:

original to: SD Department of Environment & Natural Resources
Surface Water Quality
PMB 2020
Joe Foss Building
523 East Capitol
Pierre SD 57501-3182

copy to: US Environmental Protection Agency -- Region VIII
Planning and Targeting Program (ENF-PT)
1595 Wynkoop Street
Denver, Colorado 80202-1129

3.4 Reporting of Monitoring Results – Outfalls 008, 013, and 014

Effluent monitoring results obtained during the previous month shall be summarized and reported on separate Discharge Monitoring Report Forms (EPA No. 3320-1) and submitted to SDDENR on a **quarterly** basis. The DMRs must be postmarked no later than the 28th day of the month following the completed reporting period. If no discharge occurs during the reporting period, “no discharge” shall be reported. Whole Effluent Toxicity (biomonitoring) results must be reported on the most recent version of EPA Region VIII’s Guidance for Whole Effluent Reporting. Legible copies of these, and all other reports required herein, shall be signed and certified in accordance with Section 2.4 and submitted to the Secretary at the following address:

original to: Department of Environment & Natural Resources
Surface Water Quality
PMB 2020
Joe Foss Building
523 East Capitol
Pierre SD 57501-3182

3.5 Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on interim and final requirements contained in any Compliance Schedule of this permit shall be submitted no later than 14 days following each schedule date.

3.6 Additional Monitoring by the Permittee

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under ARSD 74:52:03:06, a.b.r. 40 CFR 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR. Such increased frequency shall also be indicated.

3.7 Records Contents

Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements;
2. The initials or name(s) of the individual(s) who performed the sampling or measurements;
3. The date(s) analyses were performed;
4. The time analyses were initiated;
5. The initials or name(s) of individual(s) who performed the analyses;
6. References and written procedures, when available, for the analytical techniques or methods used; and,
7. The results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc., used to determine these results.

3.8 Retention of Records

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report or application. This period may be extended by request of the Secretary at any time. Data collected on site, copies of Discharge Monitoring Reports, and a copy of this permit must be maintained on site during the duration of activity at the permitted location.

3.9 Twenty-four Hour Notice of Noncompliance Reporting

1. The permittee shall report any noncompliance which may endanger health or the environment as soon as possible, but no later than twenty-four (24) hours from the time the permittee first became aware of the circumstances. The report shall be made to the State of South Dakota at (605) 773-3231 and the EPA, Region VIII, Emergency Response Branch at (303) 293-1788.
2. The following occurrences of noncompliance shall be reported by telephone to the Secretary at (605) 773-3351 by the first workday (8:00 a.m. – 5:00 p.m. Central Time) following the day the permittee became aware of the circumstances:
 - a. Any unanticipated bypass which exceeds any effluent limit in the permit (See Section 4.7, Bypass of Treatment Facilities.);
 - b. Any upset which exceeds any effluent limit in the permit (See Section 4.8, Upset Conditions.); or,
 - c. Violation of a maximum daily discharge limit for any of the pollutants listed in the permit.
3. A written submission shall also be provided within five days of the time that the permittee becomes aware of the circumstances. The written submission shall contain:
 - a. A description of the noncompliance and its cause;
 - b. The period of noncompliance, including exact dates and times;
 - c. The estimated time noncompliance is expected to continue if it has not been corrected; and,
 - d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

4. The Secretary may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the Surface Water Quality Program, South Dakota Department of Environment and Natural Resources, Pierre, (605) 773-3351.
5. Reports shall be submitted to the address in Section 3.4, Reporting of Monitoring Results.

3.10 Other Noncompliance Reporting

Instances of noncompliance not required to be reported within 24 hours shall be reported at the time that monitoring reports for Section 3.3 or 3.4 are submitted. The reports shall contain the information listed in Section 3.9.

3.11 Changes in Discharge of Toxic Substances

The permittee shall notify the Secretary if any discharge of toxic pollutants has occurred or will occur. Notification is required if the permit does not contain a limit for the toxic pollutant and if the pollutant will exceed one of the following notification levels, as appropriate:

1. Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile;
2. Five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol;
3. One milligram per liter (1 mg/L) for antimony;
4. Five (5) times the maximum concentration value reported for that pollutant in the permit application; or
5. One hundred micrograms per liter (100 µg/L) for all other parameters.

3.12 Planned Changes

The permittee shall give notice to the Secretary as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when the alteration or addition could significantly change the nature or increase the quantity of pollutant discharged. This notification applies to pollutants which are not subject to effluent limits in the permit. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source (see ARSD, Chapter 74:52:01:01(30)).

3.13 Duty to Provide Information

The permittee shall furnish to the Secretary, within a reasonable time, any information which the Secretary may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Secretary, upon request, copies of records required to be kept by this permit.

3.14 Other Information

When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Secretary, it shall promptly submit such facts or information.

3.15 Signatory Requirements

All applications, reports or information submitted to the Secretary shall be signed and certified.

1. All permit applications shall be signed as follows:
 - a. For a corporation: by a responsible corporate officer;
 - b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively;
 - c. For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official.

2. All reports required by the permit and other information requested by the Secretary shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described above and submitted to the Secretary; and,
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)
3. Changes to authorization. If an authorization under paragraph 3.14.2 is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph 3.14.2 must be submitted to the Secretary prior to or together with any reports, information, or applications to be signed by an authorized representative.
4. Certification. Any person signing a document under this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

4.0 COMPLIANCE RESPONSIBILITIES

4.1 Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. The permittee shall give the director advance notice of any planned changes at the permitted facility or of an activity which may result in permit noncompliance.

4.2 Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

4.3 Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit. However, the permittee shall operate, as a minimum, one complete set of each main line unit treatment process whether or not this process is needed to achieve permit effluent compliance.

4.4 Need to Halt or Reduce Activity not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

4.5 Removed Substances

Collected screenings, grit, solids, sludges, or other pollutants removed in the course of treatment shall be disposed of in such a manner so as to prevent any pollutant from entering any waters of the state or creating a health hazard. Sludge/digester supernatant and filter backwash shall not be directly blended with or enter either the final plant discharge and/or waters of the State.

4.6 Inspection and Entry

The permittee shall allow the Secretary or EPA, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and,
4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the Act, any substances or parameters at any location.

4.7 Bypass of Treatment Facilities

1. Bypass not exceeding limits. The permittee may allow any bypass to occur which does not cause effluent limits to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2 and 3 of this section.
2. Notice:
 - a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 60 days before the date of the bypass.

- b. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required under Section 3.9, Twenty-four Hour Notice of Noncompliance Reporting.
- 3. Prohibition of bypass.
 - a. Bypass is prohibited and the Secretary may take enforcement action against a permittee for a bypass, unless:
 - (1) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - (2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgement to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and,
 - (3) The permittee submitted notices as required under paragraph 2 of this section.
 - b. The Secretary may approve an anticipated bypass, after considering its adverse effects, if the Secretary determines that it will meet the three conditions listed above in paragraph 3.a of this section.

4.8 Upset Conditions

- 1. ~~Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limits if the requirements of paragraph 2 of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review (i.e., Permittees will have the opportunity for a judicial determination on any claim of upset only in an enforcement action brought for noncompliance with technology-based permit effluent limits).~~
- 2. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - a. An upset occurred and that the permittee can identify the cause(s) of the upset;
 - b. The permitted facility was at the time being properly operated;
 - c. The permittee submitted notice of the upset as required under Section 3.9, Twenty-four Hour Notice of Noncompliance Reporting; and,
 - d. The permittee complied with any remedial measures required under Section 4.2, Duty to Mitigate.
- 3. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

4.9 Toxic Pollutants

The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Federal Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

4.10 Anticipated Noncompliance

The permittee shall give advance notice to the Secretary of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

4.11 Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

4.12 Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The application should be submitted at least 180 days before the expiration date of this permit.

4.13 Availability of Reports

Except for data determined to be confidential under ARSD 74:52:02:17, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of SDDENR and EPA. Permit applications, permits and effluent data shall not be considered confidential.

4.14 Property Rights

The Secretary's issuance of this permit, adoption of design criteria, and approval of plans and specifications, does not convey any property rights of any sort, any exclusive privileges, any authorization to damage, injure or use any private property, any authority to invade personal rights, any authority to violate federal, state or local laws or regulations, or any taking, condemnation or use of eminent domain against any property owned by third parties. The State does not warrant that the permittee's compliance with this permit, design criteria, approved plans and specifications, and operation under this permit, will not cause damage, injury or use of private property, an invasion of personal rights, or violation of federal, state or local laws or regulations. The permittee is solely and severally liable for all damage, injury or use of private property, invasion of personal rights, infringement of federal, state or local laws and regulations, or taking or condemnation of property owned by third parties, which may result from actions taken under the permit.

4.15 Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

4.16 Transfers

This permit may be automatically transferred to a new permittee if:

1. The current permittee notifies the Secretary at least 30 days in advance of the proposed transfer date;
2. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and,
3. The Secretary does not notify the existing permittee and the proposed new permittee of his or her intent to modify, or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph 2 above.

4.17 Reopener Provision

This permit may be reopened and modified (following proper administrative procedures) to include the appropriate effluent limits (and compliance schedule, if necessary), or other appropriate requirements if one or more of the following events occurs:

1. Water Quality Standards: The water quality standards of the receiving water(s) to which the permittee discharges are modified in such a manner as to require different effluent limits than contained in this permit.
2. Effluent Guidelines: Effluent limit guidelines are promulgated or revised for point sources covered by this permit;
3. Water Quality Management Plan: A revision to the current water quality management plan is approved and adopted which calls for different effluent limits than contained in this permit.

4. Total Maximum Daily Load: Additional controls in the permit are necessary to implement a total maximum daily load approved by the Secretary and/or EPA.
5. Whole Effluent Toxicity: Whole effluent toxicity is detected in the discharge.
6. Noncompliance: The discharger is a significant contributor of pollution to waters of the state, presents a health hazard, or is in noncompliance with the conditions of the permit; or
7. Other Changes: Other conditions or standards change so that the discharge no longer qualifies for this permit, such as the permittee being designated as a major discharger, changes in necessary influent or effluent pollutant monitoring, additional industrial pretreatment requirements become applicable to the permittee, or other items.

5.0 PENALTIES FOR NONCOMPLIANCE

5.1 Penalties for Violations of Permit Conditions

Any person who violates a permit condition shall, upon conviction, be punished by a Class 1 misdemeanor. In addition to a jail sentence authorized by SDCL 22-6-2, a Class 1 misdemeanor imposed by SDCL, Chapter 34A-2, is subject to a criminal fine not to exceed ten thousand dollars per day of violation. The violator is also subject to a civil penalty not to exceed ten thousand dollars per day of violation, for damages to the environment of this state. Except as provided in permit conditions on Section 4.7, Bypass of Treatment Facilities and Section 4.8, Upset Conditions, nothing in this permit shall be construed to relieve the permittee of the civil or criminal penalties for noncompliance.

5.2 Penalties for Tampering

Any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit is in violation of the provisions of SDCL 34A-2-77, and is subject to penalties under SDCL 34A-2-75. In addition to a jail sentence authorized by SDCL 22-6-2, such violators are subject to a criminal fine not to exceed ten thousand dollars per day of violation. The violator is also subject to a civil penalty not to exceed ten thousand dollars per day of violation, or for damages to the environment of this state.

5.3 Penalties for Falsification of Reports

Any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a Class 1 misdemeanor. In addition to a jail sentence authorized by SDCL 22-6-2, a Class 1 misdemeanor imposed by SDCL, Chapter 34A-2, is subject to a criminal fine not to exceed ten thousand dollars per day of violation. The violator is also subject to a civil penalty not to exceed ten thousand dollars per day of violation, for damages to the environment of this state, or both.

5.4 Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Federal Clean Water Act.

EMERGENCY DISCHARGE MONITORING FORM

This form shall be used to summarize effluent monitoring information for discharges under this permit.

Permit Name: Homestake Open Cut Outfall Number: _____

Permit No.: SD0025933

Address: _____

Facility Contact: _____ Phone: _____

Describe the events leading to the discharge, and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance (use attachment if insufficient space): _____

Time and Date Emergency and Noncompliance Reporting notice given to SDDENR: _____

Describe any adverse effects, such as fish kills, etc.: _____

Duration of discharge (include start and end dates and times, and number of days): _____

Total flow of discharge, million gallons: _____

ANALYTICAL RESULTS

Parameter	Sample 1	Sample 2	Sample 3	Sample 4
Date and time of sample				
Flow rate, MGD				
pH, standard units				
Water Temperature, °C				
Visible Pollutants, presence or absence				
Oil and Grease, visual				
Conductivity, µmhos/cm				
Total Dissolved Solids, mg/L				
Total Suspended Solids, mg/L				
Nitrates (as N), mg/L				
Hardness (as CaCO ₃), mg/L				
Total Recoverable Arsenic, µg/L				
Total Recoverable Cadmium, µg/L				
Total Recoverable Chromium, µg/L				
Total Recoverable Copper, µg/L				
Total Recoverable Iron, µg/L				
Total Recoverable Lead, µg/L				
Total Mercury, µg/L				

Amended: April 21, 2011
Effective: April 1, 2011

Total Recoverable Nickel, µg/L				
Total Recoverable Selenium, µg/L				
Total Recoverable Silver, µg/L				
Total Recoverable Zinc, µg/L				
WAD Cyanide, mg/L				

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name (print): _____ Title: _____

Signature: _____ Date: _____

Addendum #1

Applicant:	Homestake Mining Company
Permit Number:	SD0025933
Contact Person:	Todd Duex, Closure Manager 11457 Bobtail Gulch Street Central City, SD 57754
Phone:	(605) 578-1701 or 722-4875
Permit Type:	Minor Industrial Wastewater Treatment – Minor Modification

DESCRIPTION

This permit is being modified to correct several typographical errors.

The following changes are being made:

- Corrected units on conductivity to $\mu\text{mho}/\text{cm}$ instead of $\mu\text{mho}/\text{cm}^2$ in sections 1.3, 1.4, 1.5, 1.6, 1.8, 1.9, and the Emergency Discharge Monitoring Form.
- No longer require 30-day averages for outfalls in section 1.6.
- Specify the method for Oil and Grease in sections 1.6, 1.8, and 1.9.
- Specify the method for Hardness in sections 1.6, 1.8, 1.9, and 1.10.
- Corrected the Selenium detection limit to 5 $\mu\text{g}/\text{L}$ instead of 5 mg/L in sections 1.6, 1.8, 1.9, and 1.10.
- Require Oil and Grease visual to go along with the Oil and Grease visual limit in sections 1.6, 1.8, 1.9, and the Emergency Discharge Monitoring Form.
- Require Total Mercury instead of Total Recoverable Mercury in section 1.7.
- Updated the Section 1.12 references to the Region VIII WET Test guidance, which no longer exists.
- Due to the changes made above, page 20 had 6 lines added from the previous page. No other changes were made on this page.

This permit is being modified in accordance with the Administrative Rules of South Dakota (ARSD) section 74:52:04:06.

All other permit limits and conditions shall remain unchanged.

SELF MONITORING REQUIREMENTS

Outfalls 003, 005, 007, 009, 010, 011, and 012

The proposed permit does not authorize a discharge from the Grizzly Gulch tailings impoundment (Outfall 007) or the Sawpit or East Waste Rock drainages (Outfalls 003, 005, 009, 010, 011, and 012), as detected by visual monitoring. Monitoring shall consist of **monthly** inspections of the facility and outfalls to verify that proper operation and maintenance procedures are being practiced and to determine whether or not there is a discharge occurring from this facility. Documentation of each of these visits shall be kept in a notebook or on field sheets to be reviewed by SDDENR or EPA personnel when an inspection occurs. If a discharge is discovered, DENR shall be notified in accordance with the *Twenty-Four Hour Notice of Noncompliance Reporting* (Section 3.9) requirements stated in the Surface Water Discharge permit.

Promptly upon discovery of a release or other discharge, the discharge shall be monitored as shown below:

Effluent Characteristic	Frequency	Reporting Values ¹	Sample Type ¹
Flow, MGD ²	Daily	Daily Maximum	Instantaneous or Continuous
Water Temperature, °C	Daily	Daily Maximum	Instantaneous ³
pH, standard units	Daily	Daily Minimum; Daily Maximum	Instantaneous ⁴
Visible Pollutants ⁵	Daily	Presence or Absence	Visual
Oil and Grease, visual ⁶	Daily	Presence or Absence	Visual
Oil and Grease (hexane ext), mg/L ⁶	Contingent	Daily Maximum	Grab
Conductivity, µmhos/cm ²	Daily	Daily Maximum	Grab

¹ See Definitions. All of the samples collected during the 30-day period are to be used in determining the averages. If only one sample is collected during the monitoring period, it shall be considered the same as the average for that period. The permittee always has the option of collecting additional samples if appropriate.

² Flow rates shall be monitored in a manner to ensure that representative values are being obtained.

³ The water temperature of the effluent shall be taken as a field measurement. Measurement shall be made with a mercury-filled, or dial type thermometer, or a thermistor. Readings shall be reported to the nearest whole degree Celsius.

⁴ pH shall be taken within 15 minutes of sample collection with a pH meter. The pH meter must be capable of simultaneous calibration to two points on the pH scale that bracket the expected pH and are approximately three standard units apart. The pH meter must read to 0.01 standard units and be equipped with temperature compensation adjustment. Readings shall be reported to the nearest 0.1 standard units.

⁵ The outfall shall be monitored daily for the presence of visible pollutants. If visible pollutants are observed in the discharge, Homestake shall contact DENR within 24 hours. DENR may require additional monitoring if necessary to determine the nature of the discharge.

⁶ Oil and grease shall be visually monitored during discharge. In the event that an oil sheen or floating oil is observed during discharge, grab samples shall be taken immediately, analyzed and reported.

Effluent Characteristic	Frequency	Reporting Values ¹	Sample Type ¹
Total Dissolved Solids, mg/L	Daily	Daily Maximum	Grab
Total Suspended Solids, mg/L	Daily	Daily Maximum	Grab
Nitrates (as N), mg/L	Daily	Daily Maximum	Grab
Hardness (as CaCO ₃), mg/L	Daily ⁷	Daily Maximum	Grab
Total Recoverable Arsenic, µg/L	Daily	Daily Maximum	Grab
Total Recoverable Cadmium, µg/L	Daily	Daily Maximum	Grab
Total Recoverable Chromium, µg/L	Daily	Daily Maximum	Grab
Total Recoverable Copper, µg/L	Daily	Daily Maximum	Grab
Total Recoverable Iron, µg/L	Daily	Daily Maximum	Grab
Total Recoverable Lead, µg/L	Daily	Daily Maximum	Grab
Total Mercury, µg/L	Daily	Daily Maximum	Grab
Total Recoverable Nickel, µg/L	Daily	Daily Maximum	Grab
Total Recoverable Selenium, µg/L	Daily	Daily Maximum ⁸	Grab
Total Recoverable Silver, µg/L	Daily	Daily Maximum	Grab
Total Recoverable Zinc, µg/L	Daily	Daily Maximum	Grab
WAD Cyanide, mg/L	Daily	Daily Maximum	Grab

⁷ Hardness shall be sampled at the same time the metals samples are collected.

⁸ SDDENR considers the analytical detection level for total recoverable selenium to be 5 µg/L. If the effluent total recoverable selenium is less than the analytical detection level of 5 µg/L, "BD" shall be used for reporting and "0" shall be used for averaging purposes.

Outfall 008

Prior to requesting permission to discharge, the permittee shall collect a grab sample and have the sample analyzed for acute whole effluent toxicity (submit report), BOD₅ (mg/L), total suspended solids (mg/L), Oil and Grease (mg/L), conductivity (µmhos/cm²), total dissolved solids (mg/L), pH, ammonia (mg/L), nitrates (mg/L), hardness (mg/L), asbestos (fibers/L), total recoverable arsenic (ug/L), total recoverable cadmium (ug/L), total recoverable chromium (ug/L), total recoverable copper (ug/L), total recoverable iron (ug/L), total recoverable lead (ug/L), total mercury (ug/L), total recoverable nickel (ug/L), total recoverable selenium (ug/L), total recoverable silver (ug/L), total recoverable zinc (ug/L), WAD cyanide (ug/L), and the organic toxic pollutants (submit report, see Attachment 8). The results of the analyses along with a request to discharge shall be submitted to SDDENR. The request to discharge shall explain why a discharge is needed, when the discharge would start, the expected duration of the discharge, and the approximate volume of water to be discharged. **No discharge shall occur until permission has been granted by SDDENR.**

SDDENR has granted approval to Homestake to routinely transfer water between Blacktail Feed Pond and the leachate containment pond without additional sampling or further approval required. Such transfers do not constitute a discharge under for the purposes of this permit.

At a minimum, during a discharge Homestake shall monitor Outfall 008 for the parameters listed below at the specified frequencies and with the types of samples indicated. SDDENR may

require additional testing as a condition of authorization to discharge, if pre-discharge sampling indicates elevated levels of any parameters.

Effluent Characteristic	Frequency	Reporting Values ¹	Sample Type ¹
Flow Rate, MGD ²	Daily	Daily Maximum; 30-Day Average	Instantaneous
Water Temperature, °C	Daily	Daily Maximum; 30-Day Average	Instantaneous ³
pH, standard units	Daily	Daily Minimum; Daily Maximum	Instantaneous ⁴
Oil and Grease, visual	Daily	Presence or Absence	Visual
Visible Pollutants ⁵	Daily	Presence or Absence	Visual
Oil and Grease (hexane ext), mg/L	Daily	Daily Maximum	Grab
Conductivity, µmhos/cm ²	Daily	Daily Maximum; 30-Day Average	Grab
Total Dissolved Solids (TDS), mg/L	Daily	Daily Maximum; 30-Day Average	Grab
Total Suspended Solids (TSS), mg/L	Daily	Daily Maximum; 30-Day Average	Grab
Five-Day Biochemical Oxygen Demand (BOD ₅), mg/L	Daily	Daily Maximum; 30-Day Average	Grab
Ammonia - Nitrogen (as N), mg/L	Daily	Daily Maximum; 30-Day Average	Grab
Total Nitrates (as N), mg/L	Daily	Daily Maximum; 30-Day Average	Grab
Hardness (as CaCO ₃), mg/L	Weekly ⁶	Daily Maximum	Grab
Total Recoverable Arsenic, µg/L	Weekly	Daily Maximum; 30-Day Average	Grab

¹ See Definitions. All of the samples collected during the 30-day period are to be used in determining the averages. If only one sample is collected during the monitoring period, it shall be considered the same as the average for that period. The permittee always has the option of collecting additional samples if appropriate.

² Flow rates shall be monitored in a manner to ensure that representative values are being obtained.

³ The water temperature of the effluent shall be taken as a field measurement. Measurement shall be made with a mercury-filled, or dial type thermometer, or a thermistor. Readings shall be reported to the nearest whole degree Celsius.

⁴ pH shall be taken within 15 minutes of sample collection with a pH meter. The pH meter must be capable of simultaneous calibration to two points on the pH scale that bracket the expected pH and are approximately three standard units apart. The pH meter must read to 0.01 standard units and be equipped with temperature compensation adjustment. Readings shall be reported to the nearest 0.1 standard units.

⁵ The outfall shall be monitored daily for the presence of visible pollutants. If visible pollutants are observed in the discharge, Homestake shall contact DENR within 24 hours. DENR may require additional monitoring if necessary to determine the nature of the discharge.

⁶ Hardness shall be sampled at the same time the metals samples are collected.

Effluent Characteristic	Frequency	Reporting Values ¹	Sample Type ¹
Total Recoverable Cadmium, µg/L	Weekly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Chromium, µg/L	Weekly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Copper, µg/L	Weekly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Iron, µg/L	Weekly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Lead, µg/L	Weekly	Daily Maximum; 30-Day Average	Grab
Total Mercury, µg/L	Weekly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Nickel, µg/L	Weekly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Selenium, µg/L	Weekly	Daily Maximum; 30-Day Average ⁷	Grab
Total Recoverable Silver, µg/L	Weekly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Zinc, µg/L	Weekly	Daily Maximum; 30-Day Average	Grab
WAD Cyanide, mg/L	Weekly	Daily Maximum; 30-Day Average	Grab

⁷ SDDENR considers the analytical detection level for total recoverable selenium to be 5 µg/L. If the effluent total recoverable selenium is less than the analytical detection level of 5 µg/L, "BD" shall be used for reporting and "0" shall be used for averaging purposes.

Outfalls 013 and 014

As a minimum, upon the effective date of this permit, the following parameters shall be monitored at the frequency and with the type of measurement indicated; samples or measurements shall be representative of the volume and nature of the monitored discharge.

Effluent Characteristic	Frequency	Reporting Values ¹	Sample Type ¹
Flow, MGD ²	Daily	Daily Maximum; 30-Day Average	Instantaneous
Water Temperature, °C	Daily	Daily Maximum; 30-Day Average	Instantaneous ³
pH, standard units	Daily	Daily Minimum; Daily Maximum	Instantaneous ⁴
Visible Pollutants ⁵	Daily	Presence or Absence	Visual
Oil and Grease, visual ⁶	Daily	Presence or Absence	Visual
Oil and Grease (hexane ext), mg/L ⁶	Contingent	Daily Maximum	Grab
Conductivity, µmhos/cm ²	Daily	Daily Maximum; 30-Day Average	Grab
Five-Day Biochemical Oxygen Demand (BOD ₅), mg/L	Weekly	Daily Maximum; 30-Day Average	Grab
Total Dissolved Solids (TDS), mg/L	Weekly	Daily Maximum; 30-Day Average ⁷	Grab
Total Suspended Solids (TSS), mg/L	Weekly	Daily Maximum; 30-Day Average	Grab

¹ See Definitions. All of the samples collected during the 30-day period are to be used in determining the averages. If only one sample is collected during the monitoring period, it shall be considered the same as the average for that period. The permittee always has the option of collecting additional samples if appropriate.

² Flow rates shall be monitored in a manner to ensure that representative values are being obtained.

³ The water temperature of the effluent shall be taken as a field measurement. Measurement shall be made with a mercury-filled, or dial type thermometer, or a thermistor. Readings shall be reported to the nearest whole degree Celsius.

⁴ pH shall be taken within 15 minutes of sample collection with a pH meter. The pH meter must be capable of simultaneous calibration to two points on the pH scale that bracket the expected pH and are approximately three standard units apart. The pH meter must read to 0.01 standard units and be equipped with temperature compensation adjustment. Readings shall be reported to the nearest 0.1 standard units.

⁵ The outfall shall be monitored daily for the presence of visible pollutants. If visible pollutants are observed in the discharge, Homestake shall contact DENR within 24 hours. DENR may require additional monitoring if necessary to determine the nature of the discharge.

⁶ Oil and grease shall be visually monitored during discharge. In the event that an oil sheen or floating oil is observed during discharge, grab samples shall be taken immediately, analyzed and reported.

⁷ In addition to reporting the total dissolved solids concentration, the permittee shall report the individual ions (sulfate, bicarbonate, chloride, calcium, potassium, magnesium, and sodium) associated with the total dissolved solids.

Effluent Characteristic	Frequency	Reporting Values ¹	Sample Type ¹
Ammonia - Nitrogen (as N), lbs/day	Weekly	Daily Maximum; 30-Day Average	Grab ⁸
Total Nitrates (as N), mg/L	Weekly	Daily Maximum; 30-Day Average	Grab
Dissolved Oxygen, mg/L	Weekly	Daily Maximum	Instantaneous
Process wastewater	Monthly	Presence/Absence	Certification ⁹
Hardness (as CaCO ₃), mg/L	Monthly ¹⁰	Daily Maximum	Grab
Total Recoverable Selenium, µg/L	Monthly	Daily Maximum; 30-Day Average ¹¹	Grab
WAD Cyanide, mg/L	Monthly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Arsenic, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Cadmium, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Chromium, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Copper, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Iron, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Lead, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
Total Mercury, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Nickel, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Silver, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Zinc, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
Acute Whole Effluent Toxicity	Quarterly ¹²	Pass/Fail	Grab

⁸ The pH and temperature of the effluent shall be determined when ammonia samples are collected.

⁹ The permittee shall certify monthly that there has not been a discharge of water pumped from the process areas.

¹⁰ Hardness shall be sampled at the same time the metals samples are collected.

¹¹ SDDENR considers the analytical detection level for total recoverable selenium to be 5 µg/L. If the effluent total recoverable selenium is less than the analytical detection level of 5 µg/L, "BD" shall be used for reporting and "0" shall be used for averaging purposes.

¹² After ten tests of monitoring, the permittee may request SDDENR reduce or eliminate the acute whole effluent toxicity testing requirements. The decision to modify the testing requirements will be based on the permittee's past monitoring data and may be made without additional public notice.

Effluent monitoring results shall be summarized for each month and recorded on separate DMRs to be submitted to SDDENR on a **monthly** basis. If no discharge occurs during a month, it shall be stated as such on the DMR.

Instream Monitoring

Homestake has a number of outfalls that discharge into Deadwood Creek. To ensure that Homestake is not causing or contributing to a violation of the SDSWQS, the proposed permit requires Homestake to conduct instream monitoring of Deadwood Creek. Homestake has a number of established instream sampling points on Deadwood Creek. At a minimum, Homestake shall monitor SW6 (upstream point on Deadwood Creek) and SW1 (downstream point on Deadwood Creek) for the parameters listed below at the specified frequencies and with the types of samples indicated. At least one sample per year at each instream point should be collected during a precipitation event of at least 0.5 inch.

Effluent Characteristic	Frequency ¹	Reporting Values ²	Sample Type ²
Flow, MGD ³	Monthly	Daily Maximum; 30-Day Average	Instantaneous or Continuous
Water Temperature, °C	Monthly	Daily Maximum; 30-Day Average	Instantaneous ⁴
pH, standard units	Monthly	Daily Minimum; Daily Maximum	Instantaneous ⁵
Visible Pollutants ⁶	Monthly	Presence or Absence	Visual

¹ At least one sample per year at each outfall should be collected during a precipitation event. All of the samples collected during the month are to be used in determining the averages. If only one sample is collected during the monitoring period, it shall be considered the same as the average for that period. The permittee always has the option of collecting additional samples if appropriate.

² See Definitions.

³ Flow rates shall be made in a manner to ensure that representative values are being obtained.

⁴ The water temperature of the effluent shall be taken as a field measurement. Measurement shall be made with a mercury-filled, or dial type thermometer, or a thermistor. Readings shall be reported to the nearest whole degree Celsius.

⁵ pH shall be taken within 15 minutes of sample collection with a pH meter. The pH meter must be capable of simultaneous calibration to two points on the pH scale that bracket the expected pH and are approximately three standard units apart. The pH meter must read to 0.01 standard units and be equipped with temperature compensation adjustment. Readings shall be reported to the nearest 0.1 standard units.

⁶ Deadwood Creek shall be monitored monthly for the presence of visible pollutants. If visible pollutants are observed in the discharge, Homestake shall contact DENR within 24 hours. DENR may require additional monitoring if necessary to determine the nature of the discharge.

Effluent Characteristic	Frequency ¹	Reporting Values ²	Sample Type ²
Total Dissolved Solids, mg/L	Monthly	Daily Maximum; 30-Day Average ⁷	Grab
Total Suspended Solids, mg/L	Monthly	Daily Maximum; 30-Day Average	Grab
Nitrates (as N), mg/L	Monthly	Daily Maximum; 30-Day Average	Grab
Hardness (as CaCO ₃), mg/L	Monthly ⁸	Daily Maximum; 30-Day Average	Grab
Weak Acid Dissociable (WAD) Cyanide, mg/L	Monthly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Copper, µg/L	Monthly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Lead, µg/L	Monthly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Selenium, µg/L	Monthly	Daily Maximum; 30-Day Average ⁹	Grab
Total Recoverable Silver, µg/L	Monthly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Arsenic, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Cadmium, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Chromium, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Iron, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
Total Mercury, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Nickel, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Zinc, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab

⁷ In addition to reporting the total dissolved solids concentration, the permittee shall report the individual ions (sulfate, bicarbonate, chloride, calcium, potassium, magnesium, and sodium) associated with the total dissolved solids.

⁸ Hardness shall be sampled at the same time the metals samples are collected.

⁹ SDDENR considers the analytical detection level for total recoverable selenium to be 5 µg/L. If the effluent total recoverable selenium is less than the analytical detection level of 5 µg/L, "BD" shall be used for reporting and "0" shall be used for averaging purposes.

PERMIT EXPIRATION

The expiration date of March 31, 2016 will remain unchanged.

PERMIT CONTACT

Any questions pertaining to this statement of basis can be directed to Anthony Mueske, Natural Resources Project Engineer for the Surface Water Quality Program, at (605) 773-3351.

April 25, 2011

Addendum #2

Applicant:	Homestake Mining Company
Permit Number:	SD0025933
Contact Person:	Todd Duex, Closure Manager 11457 Bobtail Gulch Street Central City, SD 57754
Phone:	(605) 578-1701 or 722-4875
Permit Type:	Minor Industrial Wastewater Treatment – Minor Modification

DESCRIPTION

This permit is being modified to correct a typographical error, and change the wording of the process wastewater prohibition to better reflect how it appears on a report.

The following changes are being made:

- Dissolved Oxygen is currently listed as Daily Maximum, this should be Daily Minimum.
- The permit currently states “There shall be no discharge of process wastewater.” This shall be changed to “There shall be zero gallons of process wastewater discharged.”

This permit is being modified in accordance with the Administrative Rules of South Dakota (ARSD) section 74:52:04:06.

All other permit limits and conditions shall remain unchanged.

EFFLUENT LIMITS

The permittee shall comply with the effluent limits specified below. These limits are based on the SDSWQS, the coldwater marginal fish life propagation uses of Deadwood Creek, the fish and wildlife propagation, recreation, and stock watering classification of Bobtail Gulch, EPA's recommended approach for inactive ore mines, Best Professional Judgment (BPJ), and current permit limits.

Collection System

Outfall 003 – Any discharge in Bobtail Gulch from the Bobtail Gulch collection system (Latitude 44.368333°, Longitude -103.761167°, Permit Application).

Outfall 005 – Any discharge in Sawpit Gulch from the Sawpit Gulch collection system (Latitude 44.368167°, Longitude -103.773833°, Permit Application).

Outfall 007 – Any discharge in Grizzly Gulch from the Grizzly Gulch Tailings impoundment (Latitude 44.336200°, Longitude -103.743200°, Permit Application).

Outfall 009 – Any discharge in Blacktail Gulch from the Blacktail Gulch collection system (Latitude 44.368333°, Longitude -103.757500°, Permit Application).

Outfall 010 – Any discharge in Gayville Gulch from the Gayville Gulch collection system (Latitude 44.368611°, Longitude -103.753333°, Permit Application).

Outfall 011 – Any discharge in East Gayville Gulch from the East Gayville Gulch collection system (Latitude 44.369722°, Longitude -103.748889°, Permit Application).

Outfall 012 – Any discharge in East Ravine from the East Ravine collection system (Latitude 44.368611°, Longitude -103.747222°, Permit Application).

There shall be **No Discharge** to waters of the state from Outfalls 003, 005, 007, 009, 010, 011, or 012 as detected by visual monitoring except in accordance with the emergency release, bypass, storm water, or other provisions of the permit. This is based on the design of the collection system, past performance of the facility, and BPJ.

SDDENR reserves the right to reopen the permit to include additional limits and/or monitoring if Homestake's Storm Water Pollution Prevention Plan proves to be ineffective or sampling indicates elevated levels of any parameter.

Outfall 008

The federal Environmental Protection Agency has promulgated effluent guidelines for the landfill point source category. These regulations are found in Title 40 of the Code of Federal Regulations, Part 445 (40 CFR 445). 40 CFR 445 was reviewed to determine the applicability of these regulations to the landfill operated by Homestake. 40 CFR 445.1(e) states:

This part does not apply to discharges of landfill wastewater from landfills operated in conjunction with other industrial or commercial operations when the landfill only receives wastes generated by the industrial or commercial operation directly associated with the landfill.

SDDENR has granted approval to Homestake to routinely transfer water between the Blacktail Feed Pond and the leachate containment pond without additional sampling or further approval required. Water transferred to the Blacktail Feed Pond is treated and tested as necessary prior to discharge at Outfall 013. The water transfers do not constitute a discharge for the purposes of this permit.

This is based on the pollution potential for the wastewater, past performance of the facility, and BPJ. **The permittee shall comply with the effluent limits specified below.**

Outfall 008 - Any direct discharge from the Leachate Containment Pond to an unnamed tributary of Deadwood Creek (Latitude 44.363056°, Longitude -103.766389°, Permit Application).

1. The five-day Biochemical Oxygen Demand (BOD₅) concentration shall not exceed 10 mg/L (30-day average) or 17.5 mg/L (Daily Maximum). These limits are based on the coldwater marginal fish life propagation uses of Deadwood Creek, the SDSWQS, ARSD Section 74:51:01:32, BPJ, and current permit limits.
2. The Total Suspended Solids (TSS) concentration shall not exceed 10 mg/L (30-day average) or 17.5 mg/L (Daily Maximum). These limits are based on the coldwater marginal fish life propagation uses of Deadwood Creek, the SDSWQS, ARSD Section 74:51:01:32, BPJ, and current permit limits.
3. The pH shall not be less than 6.5 standard units or greater than 9.0 standard units in any single analysis and/or measurement. These limits are based on the coldwater marginal fish life propagation uses of Deadwood Creek, the SDSWQS (ARSD Section 74:51:01:32) BPJ. The maximum pH standard for cold water fisheries was raised to 9.0 standard units during a recent review of the state's water quality standards. Homestake has requested the maximum pH limit in its permit be raised from 8.8 to 9.0 standard units, in accordance with the change to the standards. This would result in less stringent pH limits for the proposed permit cycle than in the previous permit. However, backsliding is allowed in this case, per Sections 402(o)(1) and 303(d)(4) of the federal Clean Water Act. Deadwood Creek is currently meeting the SDSWQS for pH. The more stringent pH limits require Homestake to use increased treatment. In addition, the change

is not prohibited by *South Dakota's Antidegradation Implementation Procedure, 1999*. Therefore, SDDENR is proposing pH limits of 6.5 to 9.0 standard units in the permit.

Note: SDDENR specifies that pH analyses are to be conducted within 15 minutes of sample collection with a pH meter. Therefore, the permittee must have the ability to conduct onsite pH analyses. The pH meter used must be capable of simultaneous calibration to two points on the pH scale that bracket the expected pH and are approximately three standard units apart. The pH meter must read to 0.01 standard units and be equipped with temperature compensation adjustment. Readings shall be reported to the nearest 0.1 standard units.

4. There shall be no Acute Toxicity, as measured by the Whole Effluent Toxicity (WET) test. This limit is based on the SDSWQS, (ARSD Section 74:51:01:12), the USEPA-Region VIII Toxicity Training Tool, BPJ, and current permit limits.
5. The Oil and Grease concentration shall not exceed 10 mg/L (in any single analysis and/or measurement) nor impart a visible film or sheen to the surface of the water or the adjoining shorelines. These limits are based on the fish and wildlife propagation, recreation, and stock watering classification of Deadwood Creek and the SDSWQS, ARSD Section 74:51:01:52, and current permit limits.
6. The ammonia-nitrogen concentration shall not exceed 1.0 mg/L (30-day average) or 1.75 mg/L (Daily Maximum). These limits are based on the coldwater marginal fish life propagation uses of Deadwood Creek, the SDSWQS, ARSD Section 74:51:01:32), BPJ, and current permit limits.
7. The Total Recoverable Selenium concentration shall not exceed a concentration of 4.6 µg/L (as a 30-day average). The daily maximum limit for selenium is based on the fractions of selenite, f1; and selenate, f2. $CMC = 1/[(f1/CMC1) + (f2/CMC2)]$, where CMC1 and CMC2 are 185.9 µg/L and 12.82 µg/L respectively. If sample results are less than 12.8 µg/L, speciation to determine compliance with the standard is not required. These limits are based on current permit limits and BPJ.
8. The Total Dissolved Solids concentration shall not exceed 2,500 mg/L (30-Day Average) or 4,375 mg/L (Daily Maximum). These limits are based on the fish and wildlife propagation, recreation, and stock watering waters classification of Deadwood Creek, the SDSWQS, ARSD Section 74:51:01:52, and current permit limits.
9. The Conductivity shall not exceed 2,500 µmhos/cm² (30-Day Average) or 4,375 µmhos/cm² (Daily Maximum). These limits are based on the fish and wildlife propagation, recreation, and stock watering waters classification of Deadwood Creek, the SDSWQS, ARSD Section 74:51:01:52, and current permit limits.
10. There shall be no discharge of wastes that produce visible pollutants. This limit is based on the SDSWQS, (ARSD Section 74:51:01:06) and current permit limits.

11. There shall be zero gallons of process wastewater discharged. This limit is based on the fact this permit only authorizes the discharge of storm water associated with the reclamation of the mine site or surfacing ground water.
12. No chemicals, such as chlorine, shall be used without prior written permission. This limit is based on BPJ.

Effluent water temperature (°C), flow rate (million gallons per day; MGD), Dissolved Oxygen (mg/L), nitrates as nitrogen (mg/L), and hardness (mg/L) shall be monitored to characterize the nature of the discharge, but will not have a limit. Total Recoverable Arsenic (ug/L), Total Recoverable Cadmium (ug/L), Total Recoverable Chromium (ug/L), Total Recoverable Copper (ug/L), Total Recoverable Iron (ug/L), Total Recoverable Lead (ug/L), Total Mercury (ug/L), Total Recoverable Nickel (ug/L), Total Recoverable Silver (ug/L), Total Recoverable Zinc (ug/L), and Weak Acid Dissociable Cyanide (ug/L) shall also be monitored, but will not have a limit based on previous sampling showing there is not reasonable potential for impacts to water quality. Homestake treatment plant is not expected to alter the cyanide or metals content of the water, with the exception of Selenium. SDDENR reserves the right to reopen the permit to include additional limits and/or monitoring if the Storm Water Pollution Prevention Plan proves to be ineffective or sampling indicates elevated levels of any parameter.

Outfall 013

The permittee shall comply with the effluent limits specified below. Outfall 013 represents the combined flow from all capture systems (Outfalls 003, 005, 009, 010, 011, and 012) following treatment. These limits are based on the SDSWQS, the coldwater marginal fish life propagation uses of Deadwood Creek, the South Dakota mixing zone policy, current permit limits, and BPJ.

Outfall 013 – Any discharge from the Blacktail Wastewater Treatment Facility (Latitude 44.369444°, Longitude -103.758611°, Permit Application).

1. The five-day Biochemical Oxygen Demand (BOD₅) concentration shall not exceed 10 mg/L (30-day average) or 17.5 mg/L (Daily Maximum). These limits are based on the coldwater marginal fish life propagation uses of Deadwood Creek, the SDSWQS (ARSD Section 74:51:01:32), BPJ, and current permit limits.
2. The Total Suspended Solids (TSS) concentration shall not exceed 10 mg/L (30-day average) or 17.5 mg/L (Daily Maximum). These limits are based on the coldwater marginal fish life propagation uses of Deadwood Creek, the SDSWQS (ARSD Section 74:51:01:32) BPJ, and current permit limits.
3. The pH shall not be less than 6.5 standard units or greater than 9.0 standard units in any single analysis and/or measurement. These limits are based on the coldwater marginal fish life propagation uses of Deadwood Creek, the SDSWQS (ARSD Section 74:51:01:32) BPJ. The maximum pH standard for cold water fisheries was raised to 9.0 standard units during a recent review of the state's water quality standards. Homestake has requested the maximum pH limit in its permit be raised from 8.8 to 9.0 standard units, in accordance with the change to the standards. This would result in less

stringent pH limits for the proposed permit cycle than in the previous permit. However, backsliding is allowed in this case, per Sections 402(o)(1) and 303(d)(4) of the federal Clean Water Act. Deadwood Creek is currently meeting the SDSWQS for pH. The more stringent pH limits require Homestake to use increased treatment. In addition, the change is not prohibited by *South Dakota's Antidegradation Implementation Procedure, 1999*. Therefore, SDDENR is proposing pH limits of 6.5 to 9.0 standard units in the permit.

Note: SDDENR specifies that pH analyses are to be conducted within 15 minutes of sample collection with a pH meter. Therefore, the permittee must have the ability to conduct onsite pH analyses. The pH meter used must be capable of simultaneous calibration to two points on the pH scale that bracket the expected pH and are approximately three standard units apart. The pH meter must read to 0.01 standard units and be equipped with temperature compensation adjustment. Readings shall be reported to the nearest 0.1 standard units.

4. There shall be no Acute Toxicity, as measured by the Whole Effluent Toxicity (WET) test. This limit is based on the SDSWQS (ARSD Section 74:51:01:12), the USEPA-Region VIII Toxicity Training Tool, BPJ, and current permit limits.
5. The Oil and Grease concentration shall not exceed 10 mg/L (in any single analysis and/or measurement) nor impart a visible film or sheen to the surface of the water or the adjoining shorelines. These limits are based on the fish and wildlife propagation, recreation, and stock watering classification of Deadwood Creek, the SDSWQS (ARSD Section 74:51:01:52), and current permit limits.
6. The ammonia-nitrogen concentration shall not exceed the following loadings, based on the 30-day average and daily maximum flows and an allowable ammonia concentration of 1.0 mg/L:

Season	30-Day Average (lbs/day)	Daily Maximum (lbs/day)
May 1 st – February 29 th	1.68	2.94
March 1 st – April 30 th	7.81	13.7

All limits calculated based on the flows during the current permit cycle were less stringent than the current permit limits. These limits are based on the coldwater marginal fish life propagation uses of Deadwood Creek, the SDSWQS (ARSD Section 74:51:01:46), BPJ, and current permit limits to prevent backsliding.

7. The Total Recoverable Selenium concentration shall not exceed a concentration of 4.6 µg/L (as a 30-day average). The daily maximum limit for selenium is based on the fractions of selenite, f1; and selenate, f2. $CMC = 1/[(f1/CMC1) + (f2/CMC2)]$, where CMC1 and CMC2 are 185.9 µg/L and 12.82 µg/L respectively. If sample results are less than 12.8 µg/L, speciation to determine compliance with the standard is not required. These limits are based on the fish and wildlife propagation, recreation, and stock watering classification of Deadwood Creek and Bobtail Gulch, the SDSWQS (ARSD Chapter 74:51:01 Appendix B), and current permit limits.

8. The Total Dissolved Solids concentration shall not exceed 2,908 mg/L (30-Day Average) or 4,375 mg/L (Daily Maximum). These limits are based on the fish and wildlife propagation, recreation, and stock watering waters classification of Deadwood Creek, the SDSWQS (ARSD Section 74:51:01:52), and the South Dakota mixing zone policy (See Attachment 5).
9. The Conductivity shall not exceed 2,828 $\mu\text{mhos}/\text{cm}^2$ (30-Day Average) or 4,375 $\mu\text{mhos}/\text{cm}^2$ (Daily Maximum). These limits are based on the fish and wildlife propagation, recreation, and stock watering waters classification of Deadwood Creek, the SDSWQS (ARSD Section 74:51:01:52), and the South Dakota mixing zone policy (See Attachment 5).
10. There shall be no discharge of wastes that produce visible pollutants. This limit is based on the SDSWQS (ARSD Section 74:51:01:06), and current permit limits.
11. There shall be zero gallons of process wastewater discharged. This limit is based on the fact this permit only authorizes the discharge of storm water associated with the reclamation of the mine site or surfacing ground water.
12. No chemicals, such as chlorine, shall be used without prior written permission. Permission has been given for those chemicals routinely used for operation or maintenance in the Blacktail waste water treatment facility, including, but not limited to, phosphoric acid, yeast, molasses, caustic, antiscalents, polymers, coagulants and cleaners. This limit is based on BPJ.

Effluent water temperature ($^{\circ}\text{C}$), flow rate (million gallons per day; MGD), Dissolved Oxygen (mg/L), nitrates as nitrogen (mg/L), and hardness (mg/L) shall be monitored to characterize the nature of the discharge, but will not have a limit. Total Recoverable Arsenic (ug/L), Total Recoverable Cadmium (ug/L), Total Recoverable Chromium (ug/L), Total Recoverable Copper (ug/L), Total Recoverable Iron (ug/L), Total Recoverable Lead (ug/L), Total Mercury (ug/L), Total Recoverable Nickel (ug/L), Total Recoverable Silver (ug/L), Total Recoverable Zinc (ug/L), and Weak Acid Dissociable Cyanide (ug/L) shall also be monitored, but will not have a limit based on previous sampling showing there is no reasonable potential for impacts to Water Quality. Homestake treatment plant is not expected to alter the cyanide or metals content of the water, with the exception of Selenium. SDDENR reserves the right to reopen the permit to include additional limits and/or monitoring if Storm Water Pollution Prevention Plan proves to be ineffective or sampling indicates elevated levels of any parameter.

Outfall 014

The permittee shall comply with the effluent limits specified below. These limits are based on the SDSWQS, the coldwater marginal fish life propagation uses of Deadwood Creek, current permit limits, and BPJ.

Outfall 014 – Any discharge from the combined Blacktail Feed Pond Underdrain/Blacktail storm water outfall (Latitude 44.369444°, Longitude -103.757500°, Permit Application).

1. The five-day Biochemical Oxygen Demand (BOD₅) concentration shall not exceed 10 mg/L (30-day average) or 17.5 mg/L (Daily Maximum). These limits are based on the coldwater marginal fish life propagation uses of Deadwood Creek, the SDSWQS (ARSD Section 74:51:01:32), BPJ, and current permit limits.
2. The Total Suspended Solids (TSS) concentration shall not exceed 10 mg/L (30-day average) or 17.5 mg/L (Daily Maximum). These limits are based on the coldwater marginal fish life propagation uses of Deadwood Creek, the SDSWQS (ARSD Section 74:51:01:32), BPJ, and current permit limits.
3. The pH shall not be less than 6.5 standard units or greater than 9.0 standard units in any single analysis and/or measurement. These limits are based on the coldwater marginal fish life propagation uses of Deadwood Creek, the SDSWQS (ARSD Section 74:51:01:32) BPJ. The maximum pH standard for cold water fisheries was raised to 9.0 standard units during a recent review of the state's water quality standards. Homestake has requested the maximum pH limit in its permit be raised from 8.8 to 9.0 standard units, in accordance with the change to the standards. This would result in less stringent pH limits for the proposed permit cycle than in the previous permit. However, backsliding is allowed in this case, per Sections 402(o)(1) and 303(d)(4) of the federal Clean Water Act. Deadwood Creek is currently meeting the SDSWQS for pH. The more stringent pH limits require Homestake to use increased treatment. In addition, the change is not prohibited by *South Dakota's Antidegradation Implementation Procedure, 1999*. Therefore, SDDENR is proposing pH limits of 6.5 to 9.0 standard units in the permit.

Note: SDDENR specifies that pH analyses are to be conducted within 15 minutes of sample collection with a pH meter. Therefore, the permittee must have the ability to conduct onsite pH analyses. The pH meter used must be capable of simultaneous calibration to two points on the pH scale that bracket the expected pH and are approximately three standard units apart. The pH meter must read to 0.01 standard units and be equipped with temperature compensation adjustment. Readings shall be reported to the nearest 0.1 standard units.

4. There shall be no Acute Toxicity, as measured by the Whole Effluent Toxicity (WET) test. This limit is based on the SDSWQS (ARSD Section 74:51:01:12), the USEPA-Region VIII Toxicity Training Tool, BPJ, and current permit limits.
5. The Oil and Grease concentration shall not exceed 10 mg/L (in any single analysis and/or measurement) nor impart a visible film or sheen to the surface of the water or the adjoining shorelines. These limits are based on the fish and wildlife propagation, recreation, and stock watering classification of Deadwood Creek and the SDSWQS (ARSD Section 74:51:01:52), and current permit limits.

6. The ammonia-nitrogen concentration shall not exceed the following loadings, based on the average and peak design flows and an allowable ammonia concentration of 1.0 mg/L:

Season	30-Day Average (lbs/day)	Daily Maximum (lbs/day)
May 1 st – February 29 th	1.68	2.94
March 1 st – April 30 th	7.81	13.7

Flows from the current permit would be used, but there has been no discharge reported for Outfall 014 during the current permit cycle. These limits are based on the coldwater marginal fish life propagation uses of Deadwood Creek, the SDSWQS (ARSD Section 74:51:01:46), BPJ, and current permit limits.

7. The Total Recoverable Selenium concentration shall not exceed a concentration of 4.6 µg/L (as a 30-day average). The daily maximum limit for selenium is based on the fractions of selenite, f1; and selenate, f2. $CMC = 1/[(f1/CMC1) + (f2/CMC2)]$, where CMC1 and CMC2 are 185.9 µg/L and 12.82 µg/L respectively. If sample results are less than 12.8 µg/L, speciation to determine compliance with the standard is not required. These limits are based on the fish and wildlife propagation, recreation, and stock watering classification of Deadwood Creek and Deadwood Creek, the SDSWQS (ARSD Chapter 74:51:01 Appendix B), and current permit limits.
8. The Total Dissolved Solids concentration shall not exceed 2,500 mg/L (30-Day Average) or 4,375 mg/L (Daily Maximum). These limits are based on the fish and wildlife propagation, recreation, and stock watering waters classification of Deadwood Creek, the SDSWQS (ARSD Section 74:51:01:52), and current permit limits.
9. The Conductivity shall not exceed 2,500 µmhos/cm² (30-Day Average) or 4,375 µmhos/cm² (Daily Maximum). These limits are based on the fish and wildlife propagation, recreation, and stock watering waters classification of Deadwood Creek, the SDSWQS (ARSD Section 74:51:01:52), and current permit limits.
10. There shall be no discharge of wastes that produce visible pollutants. This limit is based on the SDSWQS (ARSD Section 74:51:01:06), and current permit limits.
11. There shall be zero gallons of process wastewater discharged. This limit is based on the fact this permit only authorizes the discharge of storm water associated with the reclamation of the mine site or surfacing ground water.
12. No chemicals, such as chlorine, shall be used without prior written permission. This limit is based on BPJ.

Effluent water temperature (°C), flow rate (million gallons per day; MGD), Dissolved Oxygen (mg/L), nitrates as nitrogen (mg/L), and hardness (mg/L) shall be monitored to characterize the nature of the discharge, but will not have a limit. Total Recoverable Arsenic (ug/L), Total Recoverable Cadmium (ug/L), Total Recoverable Chromium (ug/L), Total Recoverable Copper (ug/L), Total Recoverable Iron (ug/L), Total Recoverable Lead (ug/L), Total Mercury (ug/L),

Total Recoverable Nickel (ug/L), Total Recoverable Silver (ug/L), Total Recoverable Zinc (ug/L), and Weak Acid Dissociable Cyanide (ug/L) shall also be monitored, but will not have a limit based on previous sampling showing these parameters to be below levels of concern. Homestake treatment plant is not expected to alter the cyanide or metals content of the water, with the exception of Selenium. SDDENR reserves the right to reopen the permit to include additional limits and/or monitoring if Storm Water Pollution Prevention Plan proves to be ineffective or sampling indicates elevated levels of any parameter.

SELF MONITORING REQUIREMENTS

Outfalls 003, 005, 007, 009, 010, 011, and 012

The proposed permit does not authorize a discharge from the Grizzly Gulch tailings impoundment (Outfall 007) or the Sawpit or East Waste Rock drainages (Outfalls 003, 005, 009, 010, 011, and 012), as detected by visual monitoring. Monitoring shall consist of **monthly** inspections of the facility and outfalls to verify that proper operation and maintenance procedures are being practiced and to determine whether or not there is a discharge occurring from this facility. Documentation of each of these visits shall be kept in a notebook or on field sheets to be reviewed by SDDENR or EPA personnel when an inspection occurs. If a discharge is discovered, DENR shall be notified in accordance with the *Twenty-Four Hour Notice of Noncompliance Reporting* (Section 3.9) requirements stated in the Surface Water Discharge permit.

Promptly upon discovery of a release or other discharge, the discharge shall be monitored as shown below:

Effluent Characteristic	Frequency	Reporting Values ¹	Sample Type ¹
Flow Rate, MGD ²	Daily	Daily Maximum; 30-Day Average	Instantaneous
Water Temperature, °C	Daily	Daily Maximum; 30-Day Average	Instantaneous ³

¹ See Definitions. All of the samples collected during the 30-day period are to be used in determining the averages. If only one sample is collected during the monitoring period, it shall be considered the same as the average for that period. The permittee always has the option of collecting additional samples if appropriate.

² Flow rates shall be monitored in a manner to ensure that representative values are being obtained.

³ The water temperature of the effluent shall be taken as a field measurement. Measurement shall be made with a mercury-filled, or dial type thermometer, or a thermistor. Readings shall be reported to the nearest whole degree Celsius.

Effluent Characteristic	Frequency	Reporting Values ¹	Sample Type ¹
pH, standard units	Daily	Daily Minimum; Daily Maximum	Instantaneous ⁴
Visible Pollutants ⁵	Daily	Presence or Absence	Visual
Conductivity, $\mu\text{mhos}/\text{cm}^2$	Daily	Daily Maximum; 30-Day Average	Grab
Total Dissolved Solids (TDS), mg/L	Daily	Daily Maximum; 30-Day Average	Grab
Total Suspended Solids (TSS), mg/L	Daily	Daily Maximum; 30-Day Average	Grab
Total Nitrates (as N), mg/L	Daily	Daily Maximum; 30-Day Average	Grab
Hardness (expressed as Ca^{2+} and Mg^{2+}), mg/L	Daily ⁶	Daily Maximum	Grab
Total Recoverable Arsenic, $\mu\text{g}/\text{L}$	Daily	Daily Maximum; 30-Day Average	Grab
Total Recoverable Cadmium, $\mu\text{g}/\text{L}$	Daily	Daily Maximum; 30-Day Average	Grab
Total Recoverable Chromium, $\mu\text{g}/\text{L}$	Daily	Daily Maximum; 30-Day Average	Grab
Total Recoverable Copper, $\mu\text{g}/\text{L}$	Daily	Daily Maximum; 30-Day Average	Grab
Total Recoverable Iron, $\mu\text{g}/\text{L}$	Daily	Daily Maximum; 30-Day Average	Grab
Total Recoverable Lead, $\mu\text{g}/\text{L}$	Daily	Daily Maximum; 30-Day Average	Grab
Total Mercury, $\mu\text{g}/\text{L}$	Daily	Daily Maximum; 30-Day Average	Grab
Total Recoverable Nickel, $\mu\text{g}/\text{L}$	Daily	Daily Maximum; 30-Day Average	Grab
Total Recoverable Selenium, $\mu\text{g}/\text{L}$	Daily	Daily Maximum; 30-Day Average ⁷	Grab

⁴ pH shall be taken within 15 minutes of sample collection with a pH meter. The pH meter must be capable of simultaneous calibration to two points on the pH scale that bracket the expected pH and are approximately three standard units apart. The pH meter must read to 0.01 standard units and be equipped with temperature compensation adjustment. Readings shall be reported to the nearest 0.1 standard units.

⁵ The outfall shall be monitored daily for the presence of visible pollutants. If visible pollutants are observed in the discharge, Homestake shall contact DENR within 24 hours. DENR may require additional monitoring if necessary to determine the nature of the discharge.

⁶ Hardness shall be sampled at the same time the metals samples are collected.

⁷ The acute standard for selenium in $\mu\text{g}/\text{L} = 1/[(f1/185.9 \mu\text{g}/\text{L}) + (f2/12.82 \mu\text{g}/\text{L})]$, where f1 and f2 are the fractions of selenite and selenate, respectively. If sample results are less than 12.8 $\mu\text{g}/\text{L}$, speciation to determine compliance with the standard is not required.

Effluent Characteristic	Frequency	Reporting Values ¹	Sample Type ¹
Total Recoverable Silver, µg/L	Daily	Daily Maximum; 30-Day Average	Grab
Total Recoverable Zinc, µg/L	Daily	Daily Maximum; 30-Day Average	Grab
Weak Acid Dissociable (WAD) Cyanide, mg/L	Daily	Daily Maximum; 30-Day Average	Grab

Outfall 008

Prior to requesting permission to discharge, the permittee shall collect a grab sample and have the sample analyzed for acute whole effluent toxicity (submit report), BOD₅ (mg/L), total suspended solids (mg/L), Oil and Grease (mg/L), conductivity (µmhos/cm²), total dissolved solids (mg/L), pH, ammonia (mg/L), nitrates (mg/L), hardness (mg/L), asbestos (fibers/L), total recoverable arsenic (ug/L), total recoverable cadmium (ug/L), total recoverable chromium (ug/L), total recoverable copper (ug/L), total recoverable iron (ug/L), total recoverable lead (ug/L), total mercury (ug/L), total recoverable nickel (ug/L), total recoverable selenium (ug/L), total recoverable silver (ug/L), total recoverable zinc (ug/L), WAD cyanide (ug/L), and the organic toxic pollutants (submit report, see Attachment 8). The results of the analyses along with a request to discharge shall be submitted to SDDENR. The request to discharge shall explain why a discharge is needed, when the discharge would start, the expected duration of the discharge, and the approximate volume of water to be discharged. **No discharge shall occur until permission has been granted by SDDENR.**

SDDENR has granted approval to Homestake to routinely transfer water between Blacktail Feed Pond and the leachate containment pond without additional sampling or further approval required. Such transfers do not constitute a discharge under for the purposes of this permit.

At a minimum, during a discharge Homestake shall monitor Outfall 008 for the parameters listed below at the specified frequencies and with the types of samples indicated. SDDENR may require additional testing as a condition of authorization to discharge, if pre-discharge sampling indicates elevated levels of any parameters.

Effluent Characteristic	Frequency	Reporting Values ¹	Sample Type ¹
Flow Rate, MGD ²	Daily	Daily Maximum; 30-Day Average	Instantaneous

¹ See Definitions. All of the samples collected during the 30-day period are to be used in determining the averages. If only one sample is collected during the monitoring period, it shall be considered the same as the average for that period. The permittee always has the option of collecting additional samples if appropriate.

² Flow rates shall be monitored in a manner to ensure that representative values are being obtained.

Effluent Characteristic	Frequency	Reporting Values ¹	Sample Type ¹
Water Temperature, °C	Daily	Daily Maximum; 30-Day Average	Instantaneous ³
pH, standard units	Daily	Daily Minimum; Daily Maximum	Instantaneous ⁴
Oil and Grease, mg/L	Daily	Daily Maximum	Grab
Visible Pollutants ⁵	Daily	Presence or Absence	Visual
Conductivity, µmhos/cm ²	Daily	Daily Maximum; 30-Day Average	Grab
Total Dissolved Solids (TDS), mg/L	Daily	Daily Maximum; 30-Day Average	Grab
Total Suspended Solids (TSS), mg/L	Daily	Daily Maximum; 30-Day Average	Grab
Five-Day Biochemical Oxygen Demand (BOD ₅), mg/L	Daily	Daily Maximum; 30-Day Average	Grab
Ammonia - Nitrogen (as N), mg/L	Daily	Daily Maximum; 30-Day Average	Grab
Total Nitrates (as N), mg/L	Daily	Daily Maximum; 30-Day Average	Grab
Hardness (expressed as Ca ²⁺ and Mg ²⁺), mg/L	Weekly ⁶	Daily Maximum	Grab
Total Recoverable Arsenic, µg/L	Weekly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Cadmium, µg/L	Weekly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Chromium, µg/L	Weekly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Copper, µg/L	Weekly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Iron, µg/L	Weekly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Lead, µg/L	Weekly	Daily Maximum; 30-Day Average	Grab

³ The water temperature of the effluent shall be taken as a field measurement. Measurement shall be made with a mercury-filled, or dial type thermometer, or a thermistor. Readings shall be reported to the nearest whole degree Celsius.

⁴ pH shall be taken within 15 minutes of sample collection with a pH meter. The pH meter must be capable of simultaneous calibration to two points on the pH scale that bracket the expected pH and are approximately three standard units apart. The pH meter must read to 0.01 standard units and be equipped with temperature compensation adjustment. Readings shall be reported to the nearest 0.1 standard units.

⁵ The outfall shall be monitored daily for the presence of visible pollutants. If visible pollutants are observed in the discharge, Homestake shall contact DENR within 24 hours. DENR may require additional monitoring if necessary to determine the nature of the discharge.

⁶ Hardness shall be sampled at the same time the metals samples are collected.

Effluent Characteristic	Frequency	Reporting Values ¹	Sample Type ¹
Total Mercury, µg/L	Weekly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Nickel, µg/L	Weekly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Selenium, µg/L	Weekly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Silver, µg/L	Weekly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Zinc, µg/L	Weekly	Daily Maximum; 30-Day Average	Grab
WAD Cyanide, mg/L	Weekly	Daily Maximum; 30-Day Average	Grab

Outfalls 013 and 014

As a minimum, upon the effective date of this permit, the following parameters shall be monitored at the frequency and with the type of measurement indicated; samples or measurements shall be representative of the volume and nature of the monitored discharge.

Effluent Characteristic	Frequency	Reporting Values ¹	Sample Type ¹
Flow, MGD ²	Daily	Daily Maximum; 30-Day Average	Instantaneous
Water Temperature, °C	Daily	Daily Maximum; 30-Day Average	Instantaneous ³
pH, standard units	Daily	Daily Minimum; Daily Maximum	Instantaneous ⁴
Visible Pollutants ⁵	Daily	Presence or Absence	Visual
Conductivity, µmhos/cm ²	Daily	Daily Maximum; 30-Day Average	Grab
Five-Day Biochemical Oxygen Demand (BOD ₅), mg/L	Weekly	Daily Maximum; 30-Day Average	Grab
Total Dissolved Solids (TDS), mg/L	Weekly	Daily Maximum; 30-Day Average ⁶	Grab
Total Suspended Solids (TSS), mg/L	Weekly	Daily Maximum; 30-Day Average	Grab
Ammonia - Nitrogen (as N), lbs/day	Weekly	Daily Maximum; 30-Day Average	Grab
Total Nitrates (as N), mg/L	Weekly	Daily Maximum; 30-Day Average	Grab
Dissolved Oxygen, mg/L	Weekly	Daily Minimum	Instantaneous
Process wastewater	Monthly	Presence/Absence	Certification ⁷

¹ See Definitions. All of the samples collected during the 30-day period are to be used in determining the averages. If only one sample is collected during the monitoring period, it shall be considered the same as the average for that period. The permittee always has the option of collecting additional samples if appropriate.

² Flow rates shall be monitored in a manner to ensure that representative values are being obtained.

³ The water temperature of the effluent shall be taken as a field measurement. Measurement shall be made with a mercury-filled, or dial type thermometer, or a thermistor. Readings shall be reported to the nearest whole degree Celsius.

⁴ pH shall be taken within 15 minutes of sample collection with a pH meter. The pH meter must be capable of simultaneous calibration to two points on the pH scale that bracket the expected pH and are approximately three standard units apart. The pH meter must read to 0.01 standard units and be equipped with temperature compensation adjustment. Readings shall be reported to the nearest 0.1 standard units.

⁵ The outfall shall be monitored daily for the presence of visible pollutants. If visible pollutants are observed in the discharge, Homestake shall contact DENR within 24 hours. DENR may require additional monitoring if necessary to determine the nature of the discharge.

⁶ In addition to reporting the total dissolved solids concentration, the permittee shall report the individual ions (sulfate, bicarbonate, chloride, calcium, potassium, magnesium, and sodium) associated with the total dissolved solids.

⁷ The permittee shall certify monthly that there has not been a discharge of water pumped from the process areas.

Effluent Characteristic	Frequency	Reporting Values ¹	Sample Type ¹
Hardness (expressed as Ca ²⁺ and Mg ²⁺), mg/L	Monthly ⁸	Daily Maximum	Grab
Total Recoverable Selenium, µg/L	Monthly	Daily Maximum; 30-Day Average	Grab
WAD Cyanide, mg/L	Monthly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Arsenic, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Cadmium, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Chromium, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Copper, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Iron, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Lead, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
Total Mercury, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Nickel, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Silver, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
Total Recoverable Zinc, µg/L	Quarterly	Daily Maximum; 30-Day Average	Grab
Acute Whole Effluent Toxicity	Quarterly ⁹	Pass/Fail	Grab

⁸ Hardness shall be sampled at the same time the metals samples are collected.

⁹ After one year of monitoring, the permittee may request SDDENR reduce or eliminate the acute whole effluent toxicity testing requirements. The decision to modify the testing requirements will be based on the permittee's past monitoring data and may be made without additional public notice.

Effluent monitoring results shall be summarized for each month and recorded on separate DMRs to be submitted to SDDENR on a **monthly** basis. If no discharge occurs during a month, it shall be stated as such on the DMR.

PERMIT EXPIRATION

The expiration date of March 31, 2016 will remain unchanged.

PERMIT CONTACT

Any questions pertaining to this statement of basis can be directed to Anthony Mueske, Natural Resources Project Engineer for the Surface Water Quality Program, at (605) 773-3351.

October 18, 2011