MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY

AUTHORIZATION TO DISCHARGE UNDER THE
MONTANA POLLUTANT DISCHARGE ELIMINATION SYSTEM (MPDES)

In compliance with the Federal Water Pollution Control Act (the "Clean Water Act"), 33 U.S.C. § 1251et seq. and Montana Water Quality Act, Title 75, Chapter 5, Montana Code Annotated (MCA).

Tintina Montana, Inc.

is authorized to discharge from its **Black Butte Copper Project**

located **15 miles north of White Sulphur Springs, Meagher County, Montana**

to receiving waters named, **Alluvial ground water**, **Sheep Creek, Coon Creek, Little Sheep Creek, Brush Creek, and an unnamed ephemeral tributary to Little Sheep Creek.**

in accordance with discharge point(s), effluent limitations, monitoring requirements and other conditions set forth herein. Authorization for discharge is limited to those outfalls specifically listed in the permit.

This permit shall become effective on {to be determined}.

This permit and the authorization to discharge shall expire {five years from the effective date}.

FOR THE MONTANA DEPARTMENT OF
ENVIRONMENTAL QUALITY

DRAFT

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Jon Kenning, Chief
Water Protection Bureau
Water Quality Division

Issuance Date: To be determined

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1 AUTHORIZED DISCHARGES AND MIXING ZONES

The authorization to discharge provided under this permit is limited to those outfalls specifically designated below as discharge locations. Discharges at any location not authorized under an MPDES permit is a violation of the Montana Water Quality Act and could subject the person(s) responsible for such discharge to penalties under the Act. Knowingly discharging from an unauthorized location or failing to report an unauthorized discharge within a reasonable time from first learning of an unauthorized discharge could subject such person to criminal penalties as provided under Montana Water Quality Act, section 75-5-632.

Below is a description of the discharge locations authorized by this permit and any associated mixing zones.

Table 1. Discharge Locations

Outfall	Location	Latitude and Longitude	Receiving Water	Mixing Zone
001	End of pipe discharging to underground infiltration galleries	46° 46’ 47” N 110° 54’ 20” W	Ground Water, Sheep Creek, and Coon Creek	None
002	Storm Water Structure	46° 45’ 58.4” N 110° 55’ 19.5” W	Coon Creek	None
003	Storm Water Structure	46° 46’ 18.9” N 110° 55’ 4.5” W	Coon Creek	None
004	Storm Water Structure	46° 46’ 8.7” N 110° 54’ 35.5” W	Brush Creek	None
005	Storm Water Structure	46° 45’ 50.7” N 110° 54’ 39.7” W	Brush Creek	None
006	Storm Water Structure	46° 45’ 33.9” N 110° 54’ 55.2” W	Brush Creek	None
007	Storm Water Structure	46° 45’ 35.2” N 110° 54’ 36.8” W	Brush Creek	None
008	Storm Water Structure	46° 46’ 10.2” N 110° 54’ 55.8” W	Coon Creek	None
009	Storm Water Structure	46° 46’ 16.1” N 110° 53’ 37.3” W	Brush Creek	None
010	Storm Water Structure	46° 46’ 10” N 110° 53’ 57.7” W	Brush Creek	None
011	Storm Water Structure	46° 46’ 17.3” N 110° 53’ 14.7” W	Little Sheep Creek	None
012	Storm Water Structure	46° 45’ 58.68” N 110° 54’ 22.68” W	Brush Creek	None
013	Storm Water Structure	46° 46’ 2.28” N 110° 54’ 16.92” W	Brush Creek	None
014	Storm Water Structure	46° 45’ 47.16” N 110° 53’ 46.68” W	Unnamed Ephemeral Tributary of Little Sheep Creek	None

2 EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Beginning on the effective date and lasting through the term of this permit, the quality of effluent discharged shall, as a minimum, meet the limitations set forth in this Part. All monitoring shall be conducted as specified in this Part and in Part 4 of this permit. If no discharge occurs during an entire reporting period, the permittee shall state "No Discharge" on the Discharge Monitoring Report.

2.1 Effluent Limitations and Monitoring Requirements—Outfall 001

The quality of effluent discharged at Outfall 001 shall, at minimum, meet the limitations set forth below. Compliance with these limitations shall be reported on DMR 001-A.

Table 2. Final Effluent Limitations – Outfall -001

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
pH	s.u.	6.0 to 9.0	
Total Suspended Solids	mg/L	20	30
Aluminum, Dissolved	µg/L	11	21
Antimony, Total Recoverable	µg/L	0.8	0.8
Arsenic, Total Recoverable	µg/L	1.0	1.0
Barium, Total Recoverable	µg/L	150	150
Beryllium, Total Recoverable	µg/L	0.8	0.8
Cadmium, Total Recoverable	µg/L	0.8	0.8
Chromium, Total Recoverable	µg/L	15	15
Copper, Total Recoverable	µg/L	1.4	2.8
Iron, Total Recoverable	µg/L	205	416
Lead, Total Recoverable	µg/L	0.5	1.0
Mercury, Total Recoverable	µg/L	0.0005	0.0005
Nickel, Total Recoverable	µg/L	7.8	15
Selenium, Total Recoverable	µg/L	0.6	1.2
Silver, Total Recoverable	µg/L	0.05	0.10
Strontium, Total Recoverable	µg/L	600	600
Thallium, Total Recoverable	µg/L	0.04	0.04
Uranium	µg/L	0.7	0.7

Table 2. Final Effluent Limitations – Outfall -001			
Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
Zinc, Total Recoverable	µg/L	4.6	9.2
Cyanide, Total	µg/L	0.6	0.6
Ammonia, Total	mg/L	0.18	0.37
Nitrate plus Nitrite	mg/L	1.5	1.5
Phosphorus, Total as P [1]	mg/L	0.012	--
	lb/day	0.06	--
Nitrogen, Total, as N [1]	mg/L	0.09	--
	lb/day	0.43	
Footnotes: 1. Limit effective July 1 through September 30, annually.			

There shall be no discharge of process wastewater from the mill, except that a discharge may occur under the following conditions:

1. If, as a result of precipitation (rainfall or snowmelt), the facility has an overflow or discharge from the process water pond, a discharge may occur that is equal to the volume of water in excess of the pond capacity under normal operation plus the volume of water and runoff generated from a 10-year 24-hour storm event. The facility (PWP) must be designed, constructed, and maintained to contain the maximum volume of water in the pond during normal operations plus the 10-year 24-hour precipitation event. The design volume must include the facility and all areas contributing runoff to the process water pond. Any discharge resulting from this exception must comply with the final effluent limitations and monitoring requirements applicable to Outfall 001.

2. In the event there is a buildup of contaminants in the recycle water which significantly interferes with the ore recovery process and this interference cannot be eliminated through appropriate treatment of the recycle water, a discharge in an amount necessary to correct the interference may occur after installation of appropriate treatment. The facility shall have the burden of demonstrating to DEQ that the discharge is necessary to eliminate the interference in the ore recovery process and that the interference could not be eliminated through appropriate treatment of the recycle water. The permittee must request the discharge and provide the required justification in writing. The discharge may not occur until DEQ has provided written authorization. Any discharge resulting from this exception must comply with the final effluent limitations and monitoring requirements applicable to Outfall 001.

Monitoring Requirements – Outfall 001

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. If no discharge occurs during the entire monitoring period, it shall be stated on the Discharge Monitoring Report that no discharge or overflow occurred.

All analytical procedures, sampling, and preservation methods must comply with the requirements of the methods specified in 40 CFR 136, unless otherwise specified.

Monitoring at Outfall 001 shall occur at the end of pipe, after all treatment processes prior to discharge into the underground infiltration galleries and shall be representative of the volume and nature of the monitored discharge.

The Permittee must provide written notification to DEQ 30 days prior to commencement of discharge at Outfall 001.

Total Nitrogen is either calculated as the sum of total Kjeldahl nitrogen and nitrate plus nitrite or measured via persulfate digestion.

By June 15 of each year, the Permittee must provide written notification to DEQ of intent to either discharge from Outfall 001 or hold wastewater in the Treated Water Storage Pond during the growing season (July – September). Monitoring frequency for total nitrogen is increased to daily during the growing season. If total nitrogen exceeds the effluent limitation or if daily sample results are sufficiently high that compliance with the limitation will be difficult, the discharge must be rerouted to the Treated Water Storage Pond for the remainder of the growing season.

Table 3. Monitoring Requirements - Outfall 001

Parameter [(1)]	Units	Minimum Monitoring Frequency	Sample Type	Reporting Frequency [(2)]
Effluent Flow Rate	MGD	Continuous	Recording Device	Monthly
pH	s.u.	1/Week	Instantaneous	Monthly
Total Suspended Solids	mg/L	1/Week	Composite	Monthly
Temperature	° F	1/Week	Instantaneous	Monthly
Aluminum, Dissolved	µg/L	1/Week	Composite	Monthly
Antimony, Total Recoverable	µg/L	1/Week	Composite	Monthly
Arsenic, Total Recoverable	µg/L	1/Week	Composite	Monthly
Barium, Total Recoverable	µg/L	1/Week	Composite	Monthly
Beryllium, Total Recoverable	µg/L	1/Week	Composite	Monthly
Cadmium, Total Recoverable	µg/L	1/Week	Composite	Monthly
Chromium, Total Recoverable	µg/L	1/Week	Composite	Monthly
Copper, Total Recoverable	µg/L	1/Week	Composite	Monthly
Iron, Total Recoverable	µg/L	1/Week	Composite	Monthly

Table 3. Monitoring Requirements - Outfall 001				
Parameter [1]	**Units**	**Minimum Monitoring Frequency**	**Sample Type**	**Reporting Frequency** [2]
Lead, Total Recoverable	µg/L	1/Week	Composite	Monthly
Mercury, Total Recoverable	µg/L	1/Week	Composite	Monthly
Nickel, Total Recoverable	µg/L	1/Week	Composite	Monthly
Selenium, Total Recoverable	µg/L	1/Week	Composite	Monthly
Silver, Total Recoverable	µg/L	1/Week	Composite	Monthly
Strontium, Total Recoverable	µg/L	1/Week	Composite	Monthly
Thallium, Total Recoverable	µg/L	1/Week	Composite	Monthly
Uranium, Total Recoverable	µg/L	1/Week	Composite	Monthly
Zinc, Total Recoverable	µg/L	1/Week	Composite	Monthly
Cyanide, Total	µg/L	1/Week	Composite	Monthly
Ammonia, as N	mg/L	1/Week	Composite	Monthly
Nitrate+Nitrite, as N	mg/L	1/Week	Composite	Monthly
Total Nitrogen, as N (Oct. – June)	mg/L	1/Week	Composite	Monthly
Total Nitrogen, as N (Oct. – June)	lbs/day	1/Week	Calculate	Monthly
Total Nitrogen, as N (July – Sept.)	mg/L	1/Day	Composite	Monthly
Total Nitrogen, as N (July – Sept.)	lbs/day	1/Day	Calculate	Monthly
Phosphorus, Total as P	mg/L	1/Week	Composite	Monthly
Phosphorus, Total as P	lb/day	1/Week	Calculate	Monthly
Whole Effluent Toxicity, Chronic 7-day/3 brood, *Ceriodaphnia dubia*, IC-25	Percent Effluent	1/Quarter	Composite	Quarterly
Whole Effluent Toxicity, 7-day Chronic – *Pimephales promelas*, IC-25	Percent Effluent	1/Quarter	Composite	Quarterly
Footnotes: 1. All analyses must meet the applicable RRV in the latest version of Department Circular DEQ-7 2. Report average monthly and daily maximum values at the required frequency. Each quarterly WET test is reported quarterly.				

The Permittee must monitor the discharge, complete and submit Parts V and VI of U.S. EPA Form 2C, within 6 months of commencing the discharge from Outfall 001. Analytical results are required for all parameters listed in Part V – A, B, and C, including all GC/MS fractions in Table 2C-2. Part D must also be completed as required by the Form 2C instructions.

Whole Effluent Toxicity – Chronic Testing

Prior to commencement of the discharge at Outfall 001, the Permittee must collect samples of treated wastewater and conduct a two-species chronic WET test on *Ceriodaphnia dubia* and *Pimephales promelas*. The test must include effluent concentrations of 100, 75, 50, 25, and 12.5% effluent, plus a control. Moderately hard reconstituted water (see test methods) may be used for effluent dilutions and the control. The static renewal toxicity tests shall be conducted in general accordance with the procedures set out in the latest revision of *Methods for Measuring the Chronic Toxicity of Effluent to Freshwater and Marine Organisms*, EPA-821-R-02-013. The

permittee shall conduct a three-brood (seven-day) survival and reproduction static renewal toxicity test using *Ceriodaphnia dubia* (test method 1002.0) and a seven-day growth and survival static renewal toxicity test using *Pimephales promelas* (test method 1000.0). Chronic toxicity occurs when the inhibition concentration to 25% of the test population (IC_{25}) is less than or equal to the 100% effluent concentration. Control survival and growth or reproduction must meet the requirements specified in the method.

Should the pre-discharge WET test above result in an IC_{25} less than or equal to 100 percent effluent, the Permittee must identify the cause of the toxicity, eliminate it, and achieve an IC_{25} greater than 100% effluent in a follow up test before the discharge may commence.

The discharge to Outfall 001 may commence after the initial, pre-discharge WET test is conducted and passed. Routine two-species WET testing must be conducted quarterly thereafter, as shown in the monitoring table above.

If chronic toxicity occurs in a routine test, an additional test shall be conducted within 14 days of the date of the initial sample. Should chronic toxicity occur in the second test, testing shall occur once a month until further notified by the Department. In all cases, the results of all toxicity tests must be submitted to the Department in accordance with Part 2 of this permit.

The quarterly results from the laboratory shall be reported along with the Discharge Monitoring Report (DMR) form submitted for the end of the reporting calendar quarter (e.g., whole effluent results for the reporting quarter ending March 31 shall be reported with the March DMR due April 28th with the remaining quarterly reports submitted with the June, September, and December DMR's). The format for the laboratory report shall be consistent with the latest revision of Region VIII Guidance for Acute Whole Effluent Reporting, and shall include all chemical and physical data as specified.

If the results for four consecutive quarters of testing indicate no toxicity, the permittee may request a reduction to semi-annual two-species chronic toxicity testing. The Department may approve or deny the request based on test 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.

Instream Monitoring in Sheep Creek and Coon Creek

Temperature monitoring is required in Sheep Creek and Coon Creek upstream and downstream of Outfall 001 as shown in Table 4. Temperature monitoring locations must be marked and used consistently during each monitoring event. The upstream locations must be upstream of and outside the area of influence of Outfall 001 and the underground infiltration galleries. The downstream location in Sheep Creek is at surface water monitoring site SW-1 and the downstream site on Coon Creek is immediately upstream of the confluence with Sheep Creek.

Table 4. Monitoring Requirements in Sheep Creek (RIV-A) and Coon Creek (RIV-B)					
Parameter	**Units**	**Minimum Monitoring Frequency**	**Sample Type**	**RRV**	**Basis**
Temperature, upstream of Outfall 001	° F	1/Month	Instantaneous	--	Report Only
Temperature, downstream of Outfall 001	° F	1/Month	Instantaneous	--	Report Only

2.2 Effluent Limitations and Monitoring Requirements—

Storm Water Outfalls 002-014

The shall be no discharge of process wastewaters or mine drainage at Outfalls 002 – 014.

Outfalls 002 – 014 are subject to the BMP requirements for storm water discharges (See Special Conditions). The Permittee must comply with all BMP requirements (see Special Conditions) and develop, implement, and maintain a Storm Water Pollution Prevention Plan (SWPPP) (see Special Conditions) identifying all BMPs selected for storm water control and submit the SWPPP for DEQ review. The Permittee must receive DEQ written approval of the SWPPP prior to construction of Outfalls 002 - 014.

Storm water discharges at Outfalls 002 – 014 must employ the use of detention basins designed to detain the 10-year 24-hour precipitation event or achieve storm water effluent quality equivalent to that achieved after detention of the 10-year 24-hour event.

The Permittee must re-evaluate the SWPPP and adjust or add BMPs when, based on monitoring results, turbidity in the discharge at any Outfall 002-014 exceeds the upstream turbidity of the associated receiving water during each discharge event. The Permittee must adjust or add BMPs before the next storm event if possible or within a maximum timeframe of 14 days of receiving the monitoring results. If it is infeasible to adjust or add BMPs within 14 days the Permittee may request additional from DEQ. The request must be in writing, outline the reasons why the 14 day timeframe is infeasible, and may not exceed a total of 45 days. The extension request must be approved by DEQ in writing. The Permittee must notify DEQ, in writing, of the amended SWPPP and resulting BMP changes.

Outfalls 003, 006, 009, and 011
Up to twice a year during a precipitation event that causes a discharge, the Permittee must conduct additional monitoring for Outfalls 003, 006, 009, and 011. During the same storm events, monitoring must also occur on Brush Creek upstream of Outfall 006, Little Sheep Creek upstream of Outfall 011, and Coon Creek upstream of Outfall 003. The Permittee must re-evaluate the SWPPP and adjust or add BMPs to improve control of the pollutant in the discharge when, based on monitoring results, any parameter in Table 6 in the discharge at Outfalls 003, 006, 009 or 011 exceeds the upstream parameter concentration of the associated receiving water. The Permittee must adjust or add BMPs before the next storm event if possible or within a maximum timeframe of 14 days of receiving the monitoring results. If it is infeasible to adjust or add BMPs within 14 days the Permittee may request additional from DEQ. The request must be in writing, outline the reasons why the 14 day timeframe is infeasible, and may not exceed a total

of 45 days. The extension request must be approved by DEQ in writing. The Permittee must notify DEQ, in writing, of the amended SWPPP and resulting BMP changes.

Monitoring Requirements – Outfall 002 – 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. If no discharge occurs during the entire monitoring period, it shall be stated on the Discharge Monitoring Report that no discharge or overflow occurred.

All analytical procedures, sampling, and preservation methods must comply with the requirements of the methods specified in 40 CFR 136, unless otherwise specified.

Monitoring at Outfalls 002 - 014 shall occur at the outfall structure, after all BMPs. Samples must be representative of the volume and nature of the monitored discharge.

Attach laboratory reports and analytical results for each monitored storm event to the DMR.

The parameters in Table 5 must be monitored for each storm event that causes a discharge at the storm water outfall.

Table 5. Monitoring Requirements at Outfalls 002 - 014

Parameter [(1)]	Units	Minimum Monitoring Frequency	Sample Type	Reporting Frequency [(2)]
Flow Rate	MGD	1/Discharge	Estimate	Quarterly
pH	s.u.	1/Discharge	Grab	Quarterly
Total Suspended Solids	mg/L	1/Discharge	Grab	Quarterly
Turbidity	NTU	1/Discharge	Grab	Quarterly

Footnotes:
1. All analyses must achieve the applicable RRV in the latest revision of Department Circular DEQ-7
2. Report the average of all discharges and the maximum during the monitoring period.

The parameters in Table 6 must be monitored from one storm event that causes a discharge at the specified outfalls during each semi-annual monitoring period. Monitoring periods are January – June and July – December. Attach the laboratory report and analytical results for each monitored storm event to the DMR.

Table 6. Additional Monitoring Requirements at Outfalls 003, 006, 009, 011				
Parameter [1]	**Units**	**Minimum Monitoring Frequency**	**Sample Type**	**Reporting Frequency**
Flow Rate	MGD	Twice/Year	Estimate	Twice/Year
Aluminum, Dissolved	µg/L	Twice/Year	Grab	Twice/Year
Antimony, Total Recoverable	µg/L	Twice/Year	Grab	Twice/Year
Arsenic, Total Recoverable	µg/L	Twice/Year	Grab	Twice/Year
Beryllium, Total Recoverable	µg/L	Twice/Year	Grab	Twice/Year
Cadmium, Total Recoverable	µg/L	Twice/Year	Grab	Twice/Year
Copper, Total Recoverable	µg/L	Twice/Year	Grab	Twice/Year
Iron, Total Recoverable	µg/L	Twice/Year	Grab	Twice/Year
Lead, Total Recoverable	µg/L	Twice/Year	Grab	Twice/Year
Mercury, Total Recoverable	µg/L	Twice/Year	Grab	Twice/Year
Nickel, Total Recoverable	µg/L	Twice/Year	Grab	Twice/Year
Selenium, Total Recoverable	µg/L	Twice/Year	Grab	Twice/Year
Silver, Total Recoverable	µg/L	Twice/Year	Grab	Twice/Year
Zinc, Total Recoverable	µg/L	Twice/Year	Grab	Twice/Year
Chemical Oxygen Demand	mg/L	Twice/Year	Calculate	Twice/Year
Total Nitrogen, as N	mg/L	Twice/Year	Calculate or Grab	Twice/Year

Footnotes:
1. All analyses must achieve the applicable RRV in the latest revision of Department Circular DEQ-7.

Instream Monitoring for Storm Water Discharges

Monitoring requirements for storm water receiving waters are shown in the following tables. All parameters must be monitored at the following designated locations for DMR reporting purposes.

CRK-A: Little Sheep Creek upstream of Outfall 011
CRK-B: Brush Creek upstream of Outfall 006
CRK-C: Coon Creek upstream of Outfall 003
CRK-D: Unnamed drainage upstream of Outfall 014

Attach the laboratory report and analytical results to the DMR.

Monitoring samples for the parameters in Table 7, must be collected during the same storm events as the corresponding discharge samples for Outfalls 002 – 014 in Table 5 above.

Table 7. Monitoring Requirements CRK-A, CRK-B, CRK-C, CRK-D

Parameter [1]	Units	Minimum Monitoring Frequency	Sample Type	Reporting Frequency [2]
pH	s.u.	1/Discharge	Grab	Quarterly
Total Suspended Solids	mg/L	1/Discharge	Grab	Quarterly
Turbidity	NTU	1/Discharge	Grab	Quarterly

Footnotes:
1. All analyses must achieve the applicable RRV in the latest revision of Department Circular DEQ-7.
2. Report the average of all samples and the maximum during the monitoring period

Monitoring samples for the parameters in Table 8, must be collected during the same storm event as the corresponding discharge samples in Table 6 above.

Table 8. Monitoring Requirements CRK-A, CRK-B, CRK-C

Parameter [1]	Units	Minimum Monitoring Frequency	Sample Type	Reporting Frequency
Aluminum, Dissolved	µg/L	Twice/Year	Grab	Twice/Year
Antimony, Total Recoverable	µg/L	Twice/Year	Grab	Twice/Year
Arsenic, Total Recoverable	µg/L	Twice/Year	Grab	Twice/Year
Beryllium, Total Recoverable	µg/L	Twice/Year	Grab	Twice/Year
Cadmium, Total Recoverable	µg/L	Twice/Year	Grab	Twice/Year
Copper, Total Recoverable	µg/L	Twice/Year	Grab	Twice/Year
Iron, Total Recoverable	µg/L	Twice/Year	Grab	Twice/Year
Lead, Total Recoverable	µg/L	Twice/Year	Grab	Twice/Year
Mercury, Total Recoverable	µg/L	Twice/Year	Grab	Twice/Year
Nickel, Total Recoverable	µg/L	Twice/Year	Grab	Twice/Year
Selenium, Total Recoverable	µg/L	Twice/Year	Grab	Twice/Year
Silver, Total Recoverable	µg/L	Twice/Year	Grab	Twice/Year
Zinc, Total Recoverable	µg/L	Twice/Year	Grab	Twice/Year

Table 8. Monitoring Requirements CRK-A, CRK-B, CRK-C				
Parameter [(1)]	**Units**	**Minimum Monitoring Frequency**	**Sample Type**	**Reporting Frequency**
Chemical Oxygen Demand	mg/L	Twice/Year	Grab	Twice/Year
Total Nitrogen, as N [2]	mg/L	Twice/Year	Grab	Twice/Year
Footnotes: 1. All analyses must achieve the applicable RRV in the latest revision of Department Circular DEQ-7. 2. Persulfate digestion				

2.3 Monitoring and Reporting Requirements

In addition to the standard monitoring and reporting requirements given above and in Part 4 of this permit, the permittee shall meet the general monitoring and reporting requirements included below.

2.3.1 Mass Load Calculations

Effluent limitations or monitoring requirements that are expressed in terms of load (lb/day), must be based on total mass of the discharge in accordance with the definition of daily discharge in Part 5 of this permit, including days of zero flow. The total mass shall be calculated using the following equations:

Load (lb/day) = Avg. discharge concentration (mg/L) x Avg. Monthly Flow (MGD) x 8.34

Similarly for the maximum daily load, the total mass shall be calculated using the following equation:

Load (lb/day) = Avg. discharge concentration (mg/L) x Highest daily flow (MGD) x 8.34

2.3.2 Composite Sample

Composite samples shall, as a minimum, be composed of four or more discrete aliquots (samples) of equal volume and time collected in a 24-hour period. The aliquots shall be combined in a single container for analysis (simple composite). The time between the collection of the first sample and the last sample shall not be less than six (6) hours nor more than 24 hours.

2.3.3 Whole Effluent Toxicity Testing

In addition to the WET requirements in Part 2, the permittee shall conduct whole effluent toxicity sampling and testing in accordance with the following.

Quality Assurance. Quality assurance, instructions, and other recommendations and requirements are found in Section 4 of the test method manual previously cited. If either the reference toxicant or effluent toxicity tests to do not meet the acceptability criteria in the test method manual, then the permittee must resample and retest within 14 days.

Reporting of Test Results. The permittee shall submit a laboratory report for all toxicity testing as an attachment to the DMR for the month in which the toxicity test was conducted.
The format for the laboratory report shall be consistent with the latest revision of Region VIII Acute Whole Effluent Reporting Form and shall include all chemical and physical data as specified. In addition the report shall include a copy of all results for effluent parameters monitored concurrently with the toxicity tests and progress reports on any TRE/TIE investigations required by this permit.

Notification. The permittee shall notify the DEQ (Water Protection Bureau) in writing within 14 days of a failing a repeat WET test. This notification shall describe the steps the permittee has taken or will take to investigate, identify, and correct the causes of toxicity; the status of actions required by this permit; and schedule for actions not yet completed; or reasons no action has been taken.

2.3.4 Monitoring and Reporting Schedule

Reporting periods begin and end on the first and last days of the calendar month, quarter, semi-annual period, or year. For example, if the reporting periods for a parameter are semiannual, the permittee must report results for monitoring conducted between January 1 and June 30 and between July 1 and December 31.

2.3.5 Discharge Monitoring Reports

All monitoring results shall be summarized and reported on a Discharge Monitoring Report (DMR) form electronically via netDMR no later than the 28th day of the calendar month following the completed reporting period.

If no discharge occurs during the reporting period, the permittee shall report “No Discharge”.

NetDMR submissions and all other reports required herein shall be signed and certified in accordance with the “Signatory Requirement” of this permit (see Standard Conditions in Section 4.), and submitted to the DEQ and at the following addresses:

Montana Department of Environmental Quality
Water Protection Bureau
PO Box 200901
Helena, Montana 59620-0901
Phone: (406) 444-5546

2.3.6 Reporting of Non-quantified Analytical Results

Compliance with numeric effluent limitations in this permit shall be determined as specified below. At minimum, analytical methods used by the permittee for compliance purposes, must

achieve the required reporting value (RRV) specified in this permit. For analytical results which are not quantified, compliance is determined as follows.

(a) Single values (i.e., instantaneous or a maximum daily limitations for which compliance is determined using a single sample): For concentration-based limitations, a result of "less than" the RRV is considered in compliance. The discharge also would be considered in compliance with any mass-loading limitation derived from the same concentration-based limitation. The permittee must report the analytical reporting value (RRV) achieved and reported by the laboratory with a less than ("<") symbol preceding the value. For mass-load limitations, the load should be calculated as given in Section 2.5.2 using the reported analytical value and reported with a less than ("<") symbol preceding the value. If the permittee has not used a method that meets the specified RRV, the result is considered invalid.

(b) Average values (i.e., average limitations that are based on multiple samples within a given time period): For a result of "less than" the RRV, the permittee should calculate the average using the RRV to determine an average concentration or mass discharge and report the average on the Discharge Monitoring Report form with a less than ("<") symbol. If required, the permittee must also report individual values in addition to the average following the procedures listed above for single values.

2.4 Notification Requirements

Notification shall be provided to the DEQ (Water Protection Bureau) as soon as the permittee knows of, or has reason to believe any of the following conditions are applicable.

(a) That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

One hundred micrograms per liter (100 µg/l);

Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/l) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;

Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or

The level established by the DEQ in accordance with 40 CFR 122.44(f).

(b) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

Five hundred micrograms per liter (500 µg/l);

One milligram per liter (1 mg/l) for antimony;

Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or the level established by the DEQ in accordance with 40 CFR 122.44(f).

3 SPECIAL CONDITIONS

The permittee shall comply with the special conditions described below.

3.1 Toxicity Identification Evaluation / Toxicity Reduction Evaluation (TRE/TIE)

If chronic toxicity is confirmed in a repeat WET test required in Part 2, the permittee shall initiate a TRE using as guidance, based on the type of treatment facility, either EPA manual *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants* (EPA/833/B-99/002), 1999) or EPA manual *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations* (EPA/600/2-88/070, 1989). In conjunction with the TRE, the permittee shall develop and implement a detailed work plan which shall include: further actions undertaken by the permittee to investigate, identify, and correct the causes of toxicity; actions the permittee will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and a schedule for these actions.

The permittee may initiate a Toxicity Identification Evaluation (TIE) as part of a TRE to identify the causes of toxicity using the same species and test method and as guidance, EPA test method manuals: *Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures* (EPA/600/6-91/003, 1991); *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080, 1993); and *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Sampling Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993).

3.2 Best Management Practices and Pollution Prevention

3.2.1 BMPs

A number of sites and activities found at metal mining facilities require the implementation of BMPs to prevent the contamination of storm water. Implementation of BMPs are required not only for mineral extraction sites and material piles, but for discharges from roads accessing these sites. BMPs must be selected and implemented that address, at a minimum, the following areas:

- Good Housekeeping Practices;
- Minimizing Exposure;
- Erosion and Sediment Control; and
- Management of Runoff and Run-on.

An overview of the BMPs that are applicable to the facility (haul or access roads; pits or quarries; overburden, waste rock, and raw material piles; and reclamation activities) is discussed below. These BMPs are adapted from EPA's *Industrial Stormwater Fact Sheet, Sector G: Metal Mining (Ore Mining and Dressing) Facilities* (EPA-833-F-06-022, December 2006) and must be referenced and incorporated by the permittee into the facility's storm water pollution prevention plan (SWPPP).

EPA has identified a wide variety of BMPs to mitigate discharges of contaminants at mines. These controls to prevent erosion and control sedimentation are the most effective if they are installed at the inception of operations and maintained throughout active operations and

reclamation of the site. The following categories describe the BMPs available for reducing pollutants in storm water discharges at metal mining facilities:

Discharge Diversions

Discharge diversions provide the first line of defense in preventing the contamination of discharges and subsequent contamination of receiving waters. Discharge diversions are temporary or permanent structures installed to divert flow, store flow, or limit storm water run-on and runoff. Diversion dikes, curbs, and berms are temporary or permanent diversion structures that prevent runoff from passing beyond a certain point, and divert runoff away from its intended path. Dikes, curbs, or berms may be used to surround and isolate areas of concern, diverting flow around piles of overburden, waste rock, and storage areas to minimize discharge contact with contaminated materials and to limit discharges of contaminated water from confined areas.

Drainage/Storm Water Conveyance Systems

Drainage or storm water conveyance systems can provide either a temporary or a permanent management practice which functions to channel water away from eroded or unstabilized areas, convey runoff without causing erosion, and/or carry discharges to more stabilized areas. The use of drainage systems as a permanent measure may be most appropriate in areas with extreme slopes, areas subject to high velocity runoff, and other areas where the establishment of substantial vegetation is infeasible or impractical. Some examples of drainage/storm water conveyance systems include: channels or gutters; open top box culverts and waterbars; rolling dips and road sloping; roadway surface water deflector; and culverts. Drainage and conveyance systems should be inspected periodically for blockages and erosion. Erosion and/or sedimentation that compromise the ability of these structures to convey storm water should be addressed. Where blockage or erosion occurs, more frequent maintenance of these structures may be required.

Runoff Dispersion

Drainage systems are most effective when used in conjunction with runoff dispersion devises designed to slow the flow of water discharged from a site. These devices also aid storm water infiltration into the soil and flow attenuation. Some examples of velocity dissipation devices include: check dams; rock outlet protection; level spreaders; serrated slopes and benched slopes; contouring; and drop structures.

Sediment Control and Collection

Erosion and sediment controls limit movement and retain sediments, preventing transportation offsite. Several structural collection devices have been developed to remove sediment from runoff before it leaves the site. Several methods of removing sediment from site runoff involve diversion mechanisms previously discussed, supplemented by a trapping or storage device. Structural practices typically involve filtering diffuse storm water flows through temporary structures such as straw bale dikes, silt fences, brush barriers, or vegetated areas. Structural practices are typically low in cost. However, structural practices require periodic removal of sediment to remain functional. Several examples of sediment control and collection BMPs include: gabions, riprap, and native rock retaining walls; biotechnical stabilization; straw bale barrier; vegetated buffer strips; silt fence/filter fence; siltation berms; brush sediment barriers; sediment traps or catch basins; and sediment/settling ponds. Sediment

ponds or traps located at final discharge points are designed to detain runoff from a 10-year, 24-hour precipitation event during active mining operations or achieve an effluent quality equivalent to that achieved after retention of the 10-year 24-hour event.

Vegetation Practices

Vegetation practices involve establishing a sustainable ground cover by permanent seeding, mulching, sodding, and other such practices. A vegetative cover reduces the potential for erosion of a site by: absorbing the kinetic energy of raindrops which would otherwise impact soil; intercepting water so it can infiltrate into the ground instead of running off and carrying contaminated discharges; and by slowing the velocity of runoff to promote on-site deposition of sediment. These practices include: topsoiling; broadcast seeding and drill seeding; willow cutting establishment; plastic matting, plastic netting and erosion control blankets; mulch-straw or wood chips; and compaction. Given the limited capacity to accept large volumes of runoff and potential erosion problems associated with large concentrated flows, vegetative controls should typically be used in combination with other management practices. Reclaimed vegetative cover must be similar to pre-mining vegetative cover. Permanent vegetation cover appropriate for the site typically is established by the end of the third growing season following initial seeding, although the reclaimed plant community will continue to develop. From a hydrologic perspective the objective is 75 percent cover, including litter, which defines "good" hydrologic condition for runoff and sediment modeling purposes.

Capping

Capping or sealing of waste materials is designed to prevent infiltration, as well as to limit contact between discharges and potential sources of contamination. Ultimately, capping should reduce or eliminate the contaminants in discharges. In addition, by reducing infiltration, the potential for seepage and leachate generation may also be lessened.

Treatment

In some cases (e.g., low pH and/or high metals concentrations), BMPs and sediment and erosion controls may not be adequate to produce an acceptable quality of storm water discharge. Under those circumstances additional physical or chemical treatment systems may be necessary to protect the receiving waters. Treatment practices are those methods of control which normally are thought of as being applied at the “end of the pipe” to reduce the concentration of pollutants in storm water before it is discharged. This is in contrast to many BMPs, where the emphasis is on keeping the water from becoming contaminated. Treatment practices may be required where flows are currently being affected by exposed materials and other BMPs are insufficient to meet discharge goals. These practices are usually the most resource intensive as they often require significant construction costs and monitoring and maintenance on a frequent and regular basis.

Haul Roads and/or Access Roads

Placement of haul roads or access roads should occur as far as possible from natural drainage areas, lakes, ponds, wetlands, or floodplains where soil will naturally be less stable for heavy vehicle traffic. If a haul road must be constructed near water, as little vegetation as possible should be removed from between the road and the waterway as vegetation is a useful buffer against erosion and is an efficient sediment collection mechanism. The width and grade of haul or access roads should be minimal and designed to match natural contours of the area. Construction of haul roads should be supplemented by BMPs that divert runoff from road

surfaces, minimize erosion, and direct flow to appropriate channels for discharge to treatment areas or other well-stabilized areas.

Equipment/Vehicle Fueling and Maintenance

Fueling and maintenance activities should be conducted indoors or under cover on an impermeable surface. Berms, curbs, or similar means should be used to ensure that storm water runoff from other parts of the facility does not flow over maintenance and fueling areas. Runoff from fueling and maintenance areas should be collected and treated or recycled. Proper waste management and spill prevention and response procedures must be implemented. Select good housekeeping procedures to minimize the amount of contaminated runoff generated (e.g. use dry cleanup methods, use drip pans, and drain parts of fluids before disposal). Conduct inspections of fueling areas to prevent problems before they occur.

Overburden, Waste Rock, and Raw Material Piles

Overburden, topsoil, and waste rock, as well as raw material and intermediate and final product stockpiles, should be located away from surface waters, other sources of water, and from geologically unstable areas. In addition surface waters and storm water should be diverted around the piles. As many piles as possible should be revegetated (even if only on a temporary basis). At closure, remaining piles should be reclaimed.

Reclamation Activities

When a mineral deposit is depleted and operations cease, a mine site must be reclaimed according to appropriate state or federal standards. Closure activities typically include restabilization of disturbed areas such as access or haul roads, pits or quarries, sedimentation ponds or work-out pits, and remaining waste piles. Overburden and topsoil stockpiles may be used to fill in a pit or quarry (where practical). Recontouring and revegetation should be performed to stabilize soils and prevent erosion. Major reclamation activities such as recontouring roads and filling in a pit or quarry can only be performed after operations have ceased. However, reclamation activities such as stabilization of banks, reseeding, and revegetation should be implemented in mined out portions or inactive areas of a site as active mining moves to new areas.

A combination of preventive and treatment BMPs will yield the most effective storm water management for minimizing the discharge of pollutants via storm water runoff. BMPs must also address preventive maintenance records or logbooks, regular facility inspections, spill prevention and response, and employee training. All BMPs require regular maintenance to function as intended. Some management measures have simple maintenance requirements, others are quite involved. BMPs must be regularly inspected to ensure they are operating properly, including during runoff events. As soon as a problem is found, action to resolve it should be initiated immediately.

The categories discussed above are not an exhaustive list of BMPs. The permittee may identify and implement any additional BMPs that minimize and/or eliminate the generation of pollutants and the potential discharge of pollutants into state waters through normal operations and ancillary activities. Additional guidance on BMPs is available in EPA's *Guidance Manual for Developing Best Management Practices* (EPA 833-B-93-004, October 1993) and the Forest

Service's *National Best Management Practices for Water Quality Management on National Forest System Lands* (USDA, Forest Service, FS-990a, April 2012).

3.2.2 Storm Water Management

The permittee must develop, maintain, and implement a Storm Water Pollution Prevention Plan (SWPPP) that describes the facility, BMPs, control measures, and monitoring procedures that will ensure compliance with the terms and conditions of the MPDES permit. The BMPs implemented at the facility may be structural or non-structural in nature. The SWPPP must be submitted to DEQ no later than 60 days after the effective date of the permit and must be approved by DEQ prior to construction and implementation. SWPPPs are intended to be maintained such that they are updated and adjusted to reflect current conditions, activities, and any storm water issues identified at the facility. The SWPPP and any updates must be maintained onsite. Periodic evaluation of the SWPPP (once per year minimum) and the ongoing improvements to the facility, as documented in the SWPPP, will serve to improve the quality of storm water runoff.

The SWPPP must contain a narrative evaluation of the appropriateness of storm water management practices that divert, infiltrate, reuse, or otherwise manage storm water runoff such as to reduce the discharge of pollutants. The SWPPP must document, at minimum, the following:

Storm Water Pollution Prevention Team and SWPPP Administrator

The permittee must identify the staff members that comprise the facility's storm water pollution prevention team, as well as their individual responsibilities. This team must include, and the SWPPP specify, a "SWPPP Administrator." The SWPPP Administrator is the lead responsible person for ensuring the development, implementation, and maintenance of the SWPPP. The SWPPP Administrator also serves as the primary contact person regarding the SWPPP. The facility's storm water pollution prevention team is responsible for assisting the facility manager in developing and revising the facility's SWPPP as well as maintaining control measures and taking corrective actions where required. Each member of the storm water pollution prevention team must have ready access to this permit and the SWPPP.

Site Description

The SWPPP must provide a description of the nature of the industrial activities at the facility. The SWPPP must document the mining and associated activities with the potential to impact the storm water discharges covered by this permit.

Site Map

The SWPPP must include a legible map(s) of sufficient scale which clearly shows current conditions including the following:

- Map scale;
- North arrow;
- The site boundaries for the facility or activity;
- Locations of all receiving waters in the immediate vicinity of the facility;
- The location and extent of structures and impervious surfaces;
- Directions of storm water flow (use arrows);
- Locations of all existing structural storm water control measures;
- Locations of all storm water conveyances including ditches, pipes, and swales;

- Locations of all storm water outfall and monitoring points;
- Locations of storm water inlets and outfalls, with a unique identification code for each outfall;
- Locations of potential pollutant sources;
- Locations where spills or leaks have occurred;
- Locations and descriptions of all non-storm water discharges;
- Locations and sources of run-on to the facility from adjacent property that contains pollutants; and
- Locations of the following activities where such activities are exposed to precipitation:
  - 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 and storage areas;
  - Immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility;
  - Major permanent facility structures; transfer areas for substances in bulk; and
  - Machinery.

In addition to the above items, the SWPPP must document the locations of the following (as appropriate):

- Mining or milling site boundaries;
- Access and haul roads;
- Outline of the drainage areas of each storm water outfall within the facility with indications of the types of discharges from the drainage areas;
- Location(s) of all permitted discharges covered under an individual MPDES permit;
- Outdoor equipment storage, fueling, and maintenance areas;
- Materials handling areas;
- Outdoor manufacturing, outdoor storage, and material disposal areas;
- Outdoor chemicals and explosives storage areas;
- Overburden, materials, soils, or waste storage areas;
- Location of mine drainage (where water leaves the mine) or other process water;
- Tailings piles and ponds (including proposed ones);
- Heap leach pads; off-site points of discharge for mine drainage and process water;
- Surface waters;
- Boundary of tributary areas that are subject to effluent limitations guidelines; and
- Location(s) of reclaimed areas.

Summary of any Potential Pollutant Sources

The permittee must document in the SWPPP areas at the facility where industrial materials or activities are exposed to storm water and from which allowable non-storm water discharges are released. Industrial materials or activities include, but are not limited to: material handling equipment or activities; industrial machinery; raw materials; industrial production and processes; and intermediate products, byproducts, final products, and waste products. Material handling activities include, but are not limited to: the storage, loading and unloading, transportation,

disposal, or conveyance of any raw material, intermediate product, final product or waste product. For each area identified, the description must include:

- A list of the industrial activities exposed to storm water (e.g., material storage; equipment fueling, maintenance, and cleaning);
- A list of the pollutant(s) or pollutant constituents (e.g. crankcase oil, zinc, sulfuric acid, and/or cleaning solvents) associated with each identified activity. The pollutant list must include materials that have been handled, treated, stored, or disposed, and that have been exposed to storm water in the 3 years prior to the date of the SWPPP; and
- Documentation of where potential spills and leaks may occur that might contribute pollutants to storm water discharges, and the corresponding outfall(s) potentially affected by such spills and leaks. The permittee must document spills and leaks of oil or toxic or hazardous pollutants that actually occurred at exposed areas or that drained to a storm water conveyance, in the 3 years prior to the date of the SWPPP.

Each facility component or system must be examined for its waste minimization opportunities and its potential for discharge to state waters due to equipment failure, improper operation, and natural phenomena. This examination must include, at a minimum, all normal operations and ancillary activities including (as appropriate) material storage areas, plant site runoff, in-plant transfer, process and material handling areas, loading or unloading operations, spillage or leaks, sludge and waste disposal, or drainage from raw material storage.

Description of Control Measures and BMPs

The permittee must document in the SWPPP the location and types of control measures installed and implemented at the facility and describe how the control measure selection and design considerations were addressed. This documentation must describe how the control measures address both the pollutant sources identified and any storm water run-on that commingles with any discharges covered under this permit. Documentation of control measures must include design and maintenance criteria for permanent and temporary structural control measures (i.e. plans, detail drawings, cross-sections, specifications, narrative description, etc.) and an appropriate maintenance schedule. The selection, design, installation, and implementation of these control measures must be in accordance with good engineering practices and/or manufacturer's specifications, and the SWPPP should reference all source(s) used in BMP design, installation, implementation, and maintenance specifications (i.e. EPA, Montana Department of Transportation, or other BMP manuals). Note that the permittee may deviate from such manufacturer's specifications as long as the permittee provides justification for any deviation and includes documentation of the rationale in the part of the SWPPP that describes control measures. In addition, any other requirements for other programs or permitting activities which would meet the SWPPP requirements may be incorporated. If the permittee finds that any control measures are not achieving their intended effect of minimizing pollutant discharges, then the permittee must modify these control measures as expeditiously as practicable.

Control measures that must be documented in the SWPPP and implemented by the permittee must, at a minimum, include:

- Good Housekeeping Procedures. Keep clean all exposed areas that are potential sources of pollutants using such measures as sweeping at regular intervals, keeping materials orderly and labeled, and storing materials in appropriate containers.
- Maintenance. Regularly inspect, test, maintain, and repair all industrial equipment and systems to avoid situations that may result in leaks, spills, and other releases of pollutants in storm water discharged to receiving waters. All control measures that are used to achieve the effluent limits required by this permit must be maintained in effective operating condition. Non-structural control measures must also be diligently maintained (e.g., spill response supplies available and personnel appropriately trained). If control measures need to be replaced or repaired, then the permittee must make the necessary repairs or modifications before the next storm event.
- Spill Prevention and Response Procedures. Minimize the potential for leaks, spills and other releases that may be exposed to storm water and develop plans for effective response to such spills if or when they occur. At a minimum, the SWPPP must document and the permittee must implement the following:
  - Procedures for plainly labeling containers (e.g., "Used Oil," "Spent Solvents," "Fertilizers and Pesticides," etc.) that may be susceptible to spillage or leakage to encourage proper handling and facilitate rapid response if spills or leaks occur;
  - Preventative measures such as barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling;
  - Procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases. Employees who may cause, detect, or respond to a spill or leak must be trained in these procedures and have necessary spill response equipment available; and
  - Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies.
- Erosion and Sediment Controls. The permittee must stabilize exposed areas and contain runoff using structural and/or non-structural control measures to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants. Among other actions, flow velocity dissipation devices must be placed at discharge locations and within outfall channels where necessary to reduce erosion and/or settle out pollutants. In selecting, designing, installing, and implementing appropriate control measures, the permittee is encouraged to consult with available guidance resources relating to BMPs for erosion and sedimentation, including industrial sector-specific information.
- Management of Runoff. The permittee must divert, infiltrate, reuse, contain, or otherwise reduce storm water runoff, to minimize pollutants in any discharges. In selecting, designing, installing, and implementing appropriate control measures, the permittee is encouraged to consult with available guidance resources relating to storm water BMPs for runoff management, including industrial sector-specific information.

Additionally, the permittee must address and implement the following in their SWPPP:

- The number and quantity of pollutants and the toxicity of effluent generated, discharged, or potentially discharged at the facility must be minimized by the permittee to the extent feasible by managing each influent waste stream in the most appropriate manner;
- Storm water control measures must be designed, operated, and maintained to maximize the chemical and/or physical processes that reduce or eliminate the discharge of any pollutants to state surface waters;

- Sediment ponds must be clearly staked to indicate sediment accumulation;
- The permittee must ensure proper operation and maintenance of any control and/or discharge structures;
- To the maximum extent possible, 100-foot setbacks or 35-foot vegetated buffer strips between roads and/or other impervious surfaces and any downgradient surface waters or other conduits to surface waters will be established and/or maintained;
- Where experience indicates a reasonable potential for equipment failure (e.g., a tank overflow or leakage), natural condition (e.g., precipitation), or other circumstances that may result in significant amounts of pollutants reaching state waters, the SWPPP should include a prediction of the direction, rate of flow and total quantity of pollutants that could be discharged from the facility as a result of each condition or circumstance;
- The permittee must take into account and control sediment from snow plowed or sediment removed from the mine, ancillary facilities, and roads;
- The permittee must avoid the sidecasting of soils or snow. The sidecasting of road material is prohibited on road segments within or abutting Riparian Habitat Conservation Areas in priority watersheds; and
- Discharges to frozen or snow-covered ground must be minimized or eliminated.

Any Schedules and/or Standard Operating Procedures

The SWPPP must document any control measure inspections, routine maintenance, and/or procedures that impact the potential generation and/or discharge of pollutants by the facility. The permittee must conduct a facility inspection once every 30 days and within 24 hours of a significant precipitation event of 0.5 inches or greater. At a minimum, the documentation of each routine facility inspection must include the following:

- The inspection date and time;
- The name(s) and signature(s) of the inspector(s);
- Weather information;
- A description of any discharges occurring at the time of the inspection;
- Any previously unidentified discharges of pollutants from the site;
- Any observations of obvious indicators of storm water pollution;
- Any control measures needing maintenance or repairs;
- Any failed control measures that need replacement;
- Any incidents of noncompliance observed; and
- Any additional control measures needed to comply with the permit requirements.

An inspection for a significant storm event may also be used and credited towards one of the monthly inspections.

Corrective Actions

If any of the following conditions occur, the permittee must review and revise the selection, design, installation, implementation, and maintenance of the facility's control measures to ensure that the condition is eliminated and will not be repeated in the future:

- An unauthorized release or discharge (e.g., spill, leak, or discharge of non-storm water not authorized by this or another MPDES permit) occurs at the facility;

- The permittee become aware, or DEQ determines, that the control measures are not stringent enough for the discharge to meet applicable water quality standards;
- An inspection or evaluation of the facility by a DEQ representative determines that modifications to the control measures are necessary to meet the non-numeric effluent limits in this permit; or
- An inspection finds that the control measures are not being properly operated and maintained.

Corrective Action Deadlines

If an inspection or other observation identifies storm water pollution or control measures needing repair or replacement, the permittee must document these conditions within 24 hours of making such discovery. Subsequently, within 14 days of such discovery, the permittee must document any corrective actions taken or needed, any further investigation of the deficiency, or the basis for determining that no further action is needed. If the permittee determines that any changes are necessary following the review, any modifications to the control measures must be made before the next storm event if possible, or as soon as practicable following that storm event. The permittee must document the following:

- A summary of any corrective actions taken;
- Notice of whether any SWPPP modifications are required;
- The date any corrective action was initiated; and
- The date that the corrective action was completed.

These time intervals are not grace periods but are schedules considered reasonable for documenting any findings and for making necessary repairs and improvements. They are included in this permit to ensure that the conditions prompting the need for these repairs and improvements are not allowed to persist indefinitely.

Effect of Corrective Action

If the event triggering the corrective action review is a permit violation then correcting it does not remove the original violation. Additionally, failing to take corrective action in accordance with this section is an additional permit violation. DEQ will consider the appropriateness and promptness of corrective action in determining potential enforcement responses to permit violations.

Employee Training

The SWPPP Administrator must ensure all employees receive in-house training, including all members of the pollution prevention team who work in areas where industrial materials or activities are exposed to storm water, or who are responsible for implementing activities necessary to meet the conditions of this permit (e.g., inspectors, maintenance personnel). Training must cover both the specific control measures used to achieve the effluent limits in this permit and the monitoring, inspection, planning, reporting, and documentation requirements in other parts of this permit. Training must be conducted at least annually at a minimum and the date of the training and employees in attendance must be documented.

SWPPP Modifications and Updates

The SWPPP must be maintained and kept up-to-date to reflect current site conditions. If construction or a change in the design, operation, or maintenance at the facility either changes the nature of pollutants discharged in storm water from the facility, or increases the quantity of pollutants discharged, then the permittee must review the selection, design, installation, implementation, and maintenance of the facility's control measures to determine if any modifications to the SWPPP are necessary. Any SWPPP modification or update must be signed by a responsible corporate official as specified in ARM 17.30.1323.

The permittee is required to operate, build, and maintain the facility and storm water practices as identified in their SWPPP. The permittee may adjust or change the control measures used to improve storm water retention and treatment. This flexibility allows the permittee to adjust practices as necessary to ensure continued compliance with the permit. The SWPPP must be kept up-to-date to document any changes in BMPs, control measures, or corrective actions. Any changes to the SWPPP must be submitted to DEQ within 30 days for review. The approved SWPPP must be publicly available on the company's website.

3.3 Permit Modifications

If necessary, this permit may be reopened and modified (following proper administrative procedures) to include the appropriate effluent limitations and compliance schedules in accordance with the provisions of ARM 17.30.1361. Specific causes for reopening and modifying this permit include those described below.

3.3.1 Toxic Pollutants

This permit may be reopened and modified if a toxic standard or prohibition is established under Clean Water Act section 307(a) for a toxic pollutant that is present in the discharge and such standard or prohibition is more stringent than any limitation for such pollutant in this permit.

3.3.2 TIE/TRE Results

Based on the results of whole effluent toxicity testing and a toxicity identification evaluation (TIE) / toxicity reduction evaluation (TRE) conducted by the permittee, this permit may be reopened and modified to incorporate any additional WET or parameter-specific numeric limitations, a modified compliance schedule for WET limitations, if judged necessary by the DEQ, or a modified whole effluent toxicity protocol.

4 STANDARD CONDITIONS

The permittee shall meet the following standard conditions.

4.1 Duty to Comply

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Montana Water Quality 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 comply with effluent standards or prohibitions established under section 307(a) of the federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.

The Montana Water Quality Act at MCA 75-5-631 provides that in an action initiated by the DEQ to collect civil penalties against a person who is found to have violated a permit condition, the person is subject to a civil penalty not to exceed $25,000. Each day of violation constitutes a separate violation.

MCA 75-5-632 provides that any person who willfully or negligently violates a prohibition or permit condition is subject, upon conviction, to criminal penalties not to exceed $25,000 per day or one year in prison, or both, for the first conviction, and $50,000 per day of violation or by imprisonment for not more than two years, or both, for subsequent convictions.

MCA 75-5-611(9)(a) also provides for administrative penalties not to exceed $10,000 for each day of violation and up to a maximum not to exceed $100,000 for any related series of violations

4.2 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 first apply for and obtain a new permit. In accordance with ARM 17.30.1322(4), the application must be submitted at least 180 days before the expiration date of this permit.

4.3 Need to Halt or Reduce Activity Not a Defense

It may 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.

4.4 Duty to Mitigate

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

4.5 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) that 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 that are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

4.6 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.

4.7 Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.

4.8 Duty to Provide Information

The permittee shall furnish to the DEQ, within a reasonable time, any information that the DEQ 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 DEQ, upon request, copies of records required to be kept by this permit.

4.9 Inspection and Entry

The permittee shall allow the head of the DEQ, or an authorized representative upon the presentation of credentials and other documents as may be required by law, to:

(a) 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.

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit.

(c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit.

(d) Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the Montana Water Quality Act, any substances or parameters at any location.

4.10 Monitoring and Records

The permittee shall comply with the following conditions.

4.10.1 Representative Sample

Samples and measurements taken for the purpose of monitoring must be representative of the monitored activity.

4.10.2 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.

4.10.3 Records Contents

Records of monitoring information must include:

(a) The date, exact place, and time of sampling or measurements.

(b) The individual(s) who performed the sampling or measurements.

(c) The date(s) analyses were performed.

(d) The individual(s) who performed the analyses.

(e) The analytical techniques or methods used.

(f) The results of such analyses.

4.10.4 Test Procedures

Monitoring must be conducted according to test procedures approved under Title 40 of the Code of Federal Regulations (40 CFR) Part 136, unless other test procedures have been specified in this permit.

4.10.5 Falsification and Tampering

The Montana Water Quality Act at MCA 75-5-633 provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $25,000, or by imprisonment for not more than six months, or by both.

4.11 Signatory Requirement

All applications, reports or information submitted to the DEQ shall be signed and certified. (See ARM 17.30.1323.)

(a) For a corporation, the application must be signed by a responsible corporate officer, which means: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or, the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980

dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

(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. A principal executive office of a federal agency includes: the chief executive officer of the agency; or, a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

Authorized representatives. All reports required by the permit and other information requested by the DEQ shall be signed by a person described above or by a duly authorized representative of that person. A person is considered a duly authorized representative only if:

(a) The authorization is made in writing by a person described above.

(b) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or well field, 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 an individual occupying a named position).

(c) The written authorization is submitted to the DEQ.

Changes to authorization. If an authorization 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 above must be submitted to the DEQ prior to or together with any reports, information, or applications to be signed by an authorized representative.

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.*"

4.12 Reporting Requirements

The permittee shall comply with the reporting requirements identified in this Section.

4.12.1 Planned Changes

The permittee shall give notice to the DEQ as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

(a) The alteration or addition to the permitted facility may meet one of the criteria for determining whether a facility is a new source under ARM 17.30.1340(2).

(b) The alteration or addition could significantly change the nature or increase the quantity of pollutant discharged. This notification applies to pollutants that are subject neither to effluent limitations in the permit, nor to notification requirements under ARM 17.30.1343(1)(a).

4.12.2 Anticipated Noncompliance

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

4.12.3 Transfers

This permit is not transferable to any person except after notice to the DEQ. The DEQ may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Montana Water Quality Act. (See ARM 17.30.1360; in some cases, modification or revocation and reissuance is mandatory.)

In accordance with ARM 17.30.1360(2), this permit may be automatically transferred to a new permittee if:

(a) The current permittee notifies the DEQ at least 30 days in advance of the proposed transfer date.

(b) 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.

(c) The DEQ does not notify the existing permittee and the proposed new permittee of an intent to revoke or modify and reissue the permit. A modification may also be a minor modification under ARM 17.30.1362. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned above.

4.12.4 Monitoring Reports

Monitoring results shall be reported at the intervals specified in this permit.

Monitoring results must be reported on a Discharge Monitoring Report (DMR) form via netDMR.

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR Part 136 or as specified in this permit, the results of this monitoring must be included in the calculation and reporting of the data submitted in the Discharge Monitoring Report.

Calculations for all limitations that require averaging of measurements must use an arithmetic mean unless otherwise specified by the DEQ in the permit.

4.12.5 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 postmarked no later than 14 days following each schedule date.

4.12.6 Twenty-four Hour Reporting

The permittee shall report any noncompliance that might endanger health or the environment. Any information must be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. 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.

(d) Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

The following are included as information that must be reported within 24 hours under this provision:

(a) Any unanticipated bypass that exceeds any effluent limitation in the permit of this permit (see ARM 17.30.1342(7) and "Bypass" below);

(b) Any upset that exceeds any effluent limitation in the permit (see "Upset" below).

(c) Violation of a maximum daily discharge limitation for any of the pollutants listed by the DEQ in this permit to be reported within 24 hours (see ARM 17.30.1344 and 40 CFR 122.44(g)).

Oral notification. The report shall be made orally to the Water Protection Bureau at (406) 444-5546.

Waiver of written notification requirement. The DEQ may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the Water Protection Bureau, by phone, (406) 444-5546. Written reports shall be submitted to the following address:

Montana Department of Environmental Quality
Water Protection Bureau
PO Box 200901
Helena, Montana 59620-0901

4.12.7 Other Noncompliance

Instances of noncompliance not required to be reported within 24 hours shall be reported at the time monitoring reports are submitted. The reports shall contain the information listed above for written submissions under "Reporting Requirements—Twenty-four Hour Reporting."

4.12.8 Other Information

Where 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 DEQ, it shall promptly submit such facts or information.

4.13 Bypass

Definitions.

a) B*ypass* means the intentional diversion of waste streams from any portion of a treatment facility.

b) S*evere property damage* means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent damage to natural resources that 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.

Bypass Not Exceeding Limitations. The permittee may allow any bypass to occur that does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions under "Notice" and "Prohibition of Bypass" below.

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 ten (10) days before the date of the bypass.

(b) *Unanticipated Bypass*. The permittee shall submit notice of an unanticipated bypass as required under "Reporting Requirements—Twenty-four Hour Reporting" above.

Prohibition of Bypass. Bypass is prohibited and the DEQ may take enforcement action against a permittee for a bypass, unless:

(a) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage.

(b) 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 judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance.

(c) The permittee submitted notices as required above.

4.14 Upset

Definition. *Upset* means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations 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.

Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements outlined below under "Conditions Necessary for Demonstration of an Upset" below 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.

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:

An upset occurred and that the permittee can identify the cause(s) of the upset;
The permitted facility was at the time being properly operated;
The permittee submitted notice of the upset as required under "Reporting Requirements—Twenty-four Hour Reporting" above and
The permittee complied with any remedial measures required under "Duty to Mitigate" above.

Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

4.15 Fees

The permittee is required to submit payment of an annual fee as set forth in ARM 17.30.201

5 DEFINITIONS AND ABBREVIATIONS

The following definitions and abbreviations apply to terms used in this permit.

5.1 General Definitions and Abbreviations

"Act" means the Montana Water Quality Act, Title 75, chapter 5, MCA.

"Arithmetic mean" or "arithmetic average" for any set of related values means the summation of the individual values divided by the number of individual values.

"Average monthly limitation" means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

"BOD_5" means the five-day measure of pollutant parameter biochemical oxygen demand.

"$CBOD_5$" means the five-day measure of pollutant parameter carbonaceous biochemical oxygen demand.

"CFR" means the Code of Federal Regulations.

"Chronic toxicity" occurs when, during a chronic toxicity test, the 25% inhibition concentration (IC_{25}) for any tested species is less than or equal to the percent effluent represented by the effluent concentration in the receiving water after accounting for any allowable mixing zone.

"Clean Water Act" means the federal legislation at 33 USC 1251, et seq.

"Composite samples" means a sample composed of two or more discrete aliquots.

"Daily discharge" means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the average measurement of the pollutant over the day.

"Department" means the Montana Department of Environmental Quality (MDEQ). Established by 2-15-3501, MCA.

"Director" means the Director of the Montana Department of Environmental Quality.

"Discharge" means the discharge of a pollutant.

"Discharge of a pollutant" and "discharge of pollutants" each means any additional of any pollutant or combination of pollutants into state waters from any point source. This definition includes additions of pollutants into water of the state from: surface runoff which is collected or

channeled by man; discharges through pipes, sewers, or other conveyances owned by a state, municipality, or other person which do not lead to a treatment works. This term does not include an addition of pollutants by any "indirect discharger."

“EPA” or “USEPA” means the United States Environmental Protection Agency.

“Grab sample” means a sample that is taken from a waste stream on a one-time basis without consideration of flow rate of the effluent or without consideration for time.

“Instantaneous measurement” means a single reading, observation, or measurement.

“Lethal Concentration, 50 Percent (LC50) means the toxic or effluent concentration that would cause death in 50 percent of the test organisms over a specified period of time.

“Maximum Daily Limit” means the highest allowable discharge of a pollutant during a calendar day. Expressed as units of mass, the daily discharge is cumulative mass discharged over the course of the day. Expressed as a concentration, it is the arithmetic average of all measurements taken that day.

“Method Detection Level” (MDL) is defined at 40 CFR 136, Appendix B.

“Minimum Level” (ML) of quantitation means the lowest level at which the entire analytical system gives a recognizable signal and acceptable calibration point for the analyte. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all method specific sample weights, volumes and processing step have been followed. The ML may be equivalent to the Required Reporting Value (RRV) unless other wise specified in the permit.

“Mixing zone” means a limited area or volume of a water body where initial dilution of a discharge takes place and where certain numeric water quality standards may be exceeded.

“Outfall” means the place where a point source discharges effluent into the receiving water. For each outfall, there typically is at least one monitoring location. Although the monitoring location might or might not be at the actual point of discharge, samples taken at the monitoring location should be representative of the discharge.

“Process Wastewater” means 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.

“State Waters” is defined at 75-5-103, MCA.

“Toxicity Identification Evaluation” (TIE) is a set of site-specific procedures used to identify the specific chemical(s) causing effluent toxicity.

“TMDL” means the total maximum daily load limitation of a parameter, representing the estimated assimilative capacity for a water body before other designated uses are adversely

affected. Mathematically, it is the sum of wasteload allocations for point sources, load allocations for non-point and natural background sources, and a margin of safety.

"Toxicity Reduction Evaluation" (TRE) means a site-specific study conducted in a step-wise process to identify the causative agents of effluent toxicity, isolate the source of the toxicity, evaluate the effectiveness of the toxicity control options, and then confirm the reduction in effluent toxicity after the control measures are put in place.

"TSS" means the pollutant parameter total suspended solids.

"Whole Effluent Toxicity" (WET) means the aggregate toxicity of an effluent measured by a toxicity text.

5.2 Specialized Definitions and Abbreviations

"Active mining area" is a place where work or other activity related to the extraction, removal, or recovery of metal ore is being conducted, except, with respect to surface mines, any area of land on or in which grading has been completed to return the earth to desired contour and reclamation work has begun.

"Annual precipitation" and "annual evaporation" are the mean annual precipitation and mean annual lake evaporation, respectively., as established by the U.S. Department of Commerce, Environmental Science Services Administration, Environmental Data Services, or equivalent regional rainfall and evaporation data.

"Appropriate treatment of the recycle water" includes but is not limited to pH adjustment, settling and pH adjustment, settling, and mixed media filtration.

"Mill" is a preparation facility within which the metal ore is cleaned, concentrate, or otherwise processed before it is shipped to the customer, refiner, smelter, or manufacturer. A mill includes all ancillary operations and structures necessary to clean, concentrate or otherwise process metal ore, such as ore and gangue storage areas and loading facilities.

"Mine" is an active mining area, including all land and property placed under, or above the surface of such land, used in or resulting from the work of extracting metal ore or minerals from their natural deposits by and means or method, including secondary recovery of metal ore from refuse or other storage piles, wastes, or rock dumps and mill tailings derived from the mining, cleaning, or concentration of metal ores.

"Mine Drainage" means any water drained, pumped, or siphoned from a mine.
"Ten (10)-year, 24-hour precipitation event" is the maximum 24-hour precipitation event with a probable recurrence interval of once in 10 years as established by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, or equivalent regional rainfall probability information.